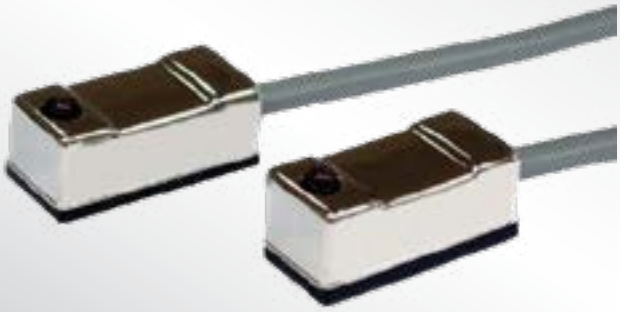
Lynch™ Electronics



Magnetic Sensors

Inductive, Photoelectric Proximity and Magnetic Switches

INFORMATION & TECHNICAL

SENSORS SERIES

MOUNTING BRACKET & CLAMP

QUICK CONNECTOR

SPECIAL VERSIONS ARE AVAILABLE

LS MG - 49 R H - FL02 - EX

Ex, Hi-Temp. Mark
- None : Standard Type
- EX : Flame-proof Type
- HT : HT125(150) High Temperature 125(150) degree C Type

Cable Length
- None : The length of cable is 1 M (Standard length)
- FL02 : The length of cable is 2 M
- FL05 : The length of cable is 5 M
- QD8 : M8 male quick connector (Cable length is 0.15 M)
- QD12 : M12 male quick connector (Cable length is 0.15 M)
- EZ : Easy quick connector (Cable length is 0.15 M)

Special Mark
- None : Standard type (N.O.)
- A : 300mA current output
- B : Normally close type (N.C.)
- F : Solid state type, FET large current output
- H : High sensitivity
- L : Low sensitivity
- X : No indicator (Large current output)

Sensor Type
- R : Reed switch 2 wire type
- DF : High speed 2 wire solid state type
- N : Solid state type (Current sinking)
- P : Solid state type (Current sourcing)
- S : 3 wire NPN\PNP automatic detection type
- RD : Reed switch 3 wire NPN\PNP type (sinking & sourcing)
- RT : 2 wire solid state output time delay type
- RV : Low V-drop type (large current output)

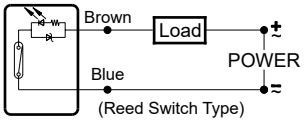
Sensor Model
- 01 :
- 03 :
- 72 :

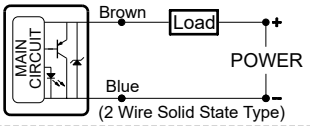
GENERAL TECHNICAL INFORMATION

Particular attention must be paid not to exceed the limits listed in the specification. Otherwise, permanent damage to sensor may occur.

1. For reed switch versions, these must be connected in series to a LOAD, or damage may occur.
2. Connect the brown wire from the power source in series with the LOAD to positive(+) and the blue wire to negative(-).
   If the polarity is inverted, the sensor will be functional but the LED will remain in an OFF state. Exchange the brown and blue wires.

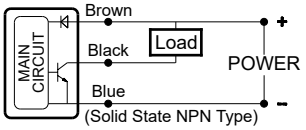
⟹ 2 wire standard connection

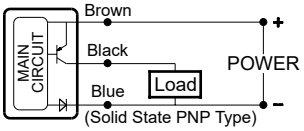




1. For solid-state type sensors, it must be used with DC power source.
2. Connect brown wire to positive(+) and the blue wire to negative(-) of DC power source. The black wire must be connected to the LOAD only.
3. If the black wire is connected to the power source directly, permanent damage to the sensor may occur.

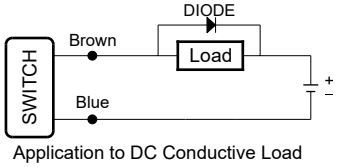
⟹ 3 wire standard connection



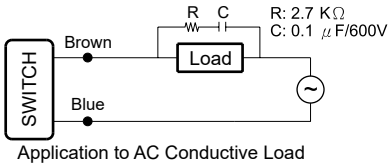


1. The external protection element is required if the sensor is used to switch conductive load, such as relay or solenoid valve.
2. For DC conductive load, attach an external diode parallel to the load as illustrated below.
3. For AC conductive load, use R-C circuit to parallel the load as illustrated below.
4. Please series LS MG-PT in line protection.

⟹ Inductive load protection



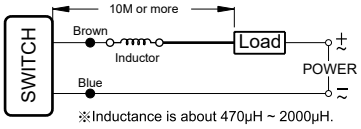
Application to DC Conductive Load



Application to AC Conductive Load

1. If the sensor is used to switch capacitive load or the cable length exceeds 10M.
2. Please series a inductor(47μH ~ 2000μH) as close to the sensor to prevent damage (sticking effect).
3. Please series LS MG-PT in line protection.

⟹ Capacitive load protection

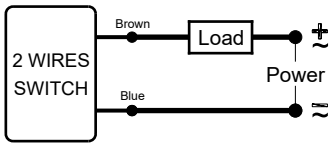


※Inductance is about 470μH ~ 2000μH.

< Keep sensor out of the strong magnetic field to get rid of interference. >

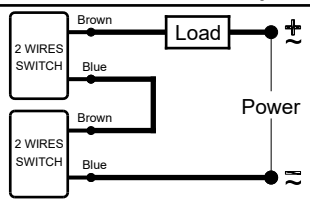
2 WIRES REED/SOLID STATE TYPE CONNECTION

General Connection



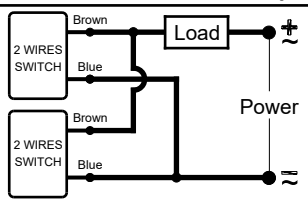
1. When connecting 2 wire switches, load must be connected in series with the sensor to prevent damage.
2. Connect the brown wire in series load with positive(+) and the blue wire to negative(-) of DC power source, otherwise the LED will not light.

Series Connection (And)



1. When 2 wire switches in series(AND) use. The voltage drop will be added up. (Typical Vdrop about 2.5V per switch)
2. When series too many switches, excessive voltage drop will cause non-operation of the load.
3. The quantity of switches in series due to the voltage of power source.

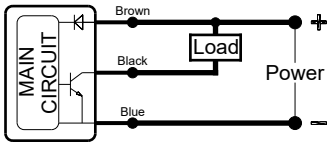
Parallel Connection (OR)



1. When 2 wire switches in parallel(OR) use. The current flow to the switch will be shared when switches all in active.
2. When connect too many switches in parallel use, possible concurrent operation will cause dim or off LED due to lower current distribution.
3. The quantity of switches in parallel due to the current of load.

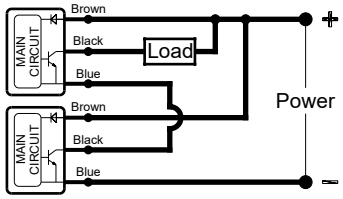
3 WIRES SOLID STATE NPN TYPE CONNECTION

General Connection



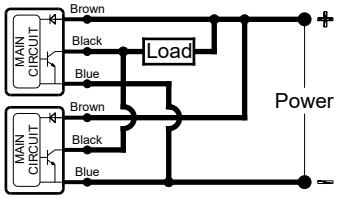
1. When connecting 3 wire switches, it must connect to DC power source. Pay attention to the wiring of black wire. Wrong connect will damage the switch.
2. Connect brown wire to the positive(+) and the blue to the negative(-). The black wire must series load and to positive(+) only.

Series Connection (And)



1. When 3 wire solid state switches in series (AND) use. Voltage drop will be added up. (Typical Vdrop about 1.5V per switch)
2. When series too many switches, excessive voltage drop will cause non-operation of the load.
3. The quantity of switches in series due to the voltage of power source.

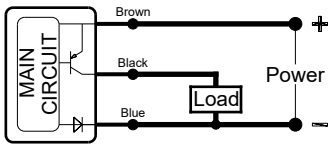
Parallel Connection (OR)



1. When 3-wire solid state switches in parallel(OR) use. Leakage current will be added up.
2. When parallel too many switches in use, possibly cause wrong operation due to lower load current.
3. The quantity of switches in parallel due to the current of load.

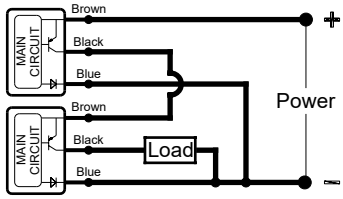
3 WIRES SOLID STATE PNP TYPE CONNECTION

General Connection



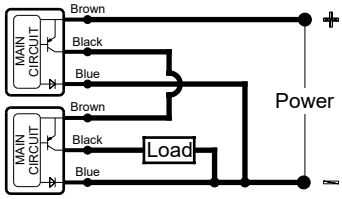
1. When connecting 3 wire switches, it must connect to DC power source. Pay attention to the wiring of black wire. Wrong connect will damage the switch.
2. Connect brown wire to the positive(+) and the blue to the negative(-). The black wire must series load and to negative(-) only.

Series Connection (And)



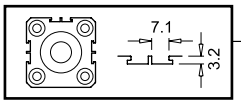
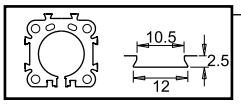
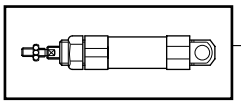
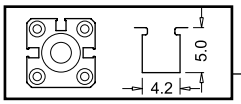
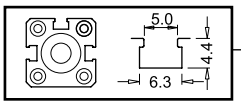
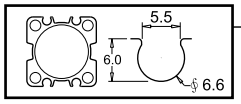
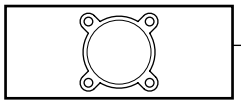
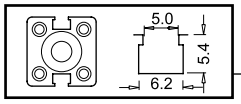
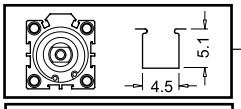
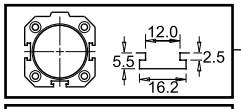
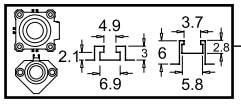
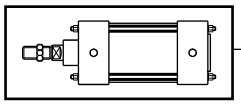
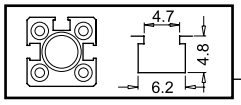
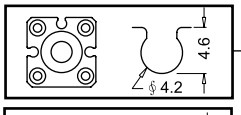
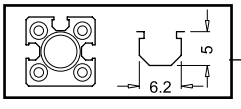
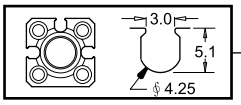
1. When 3 wire solid state switches in series (AND) use. Voltage drop will be added up. (Typical Vdrop about 1.5V per switch)
2. When series too many switches, excessive voltage drop will cause non-operation of the load.
3. The quantity of switches in series due to the voltage of power source.

Parallel Connection (OR)

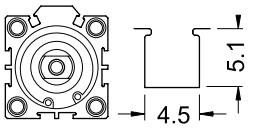
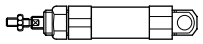
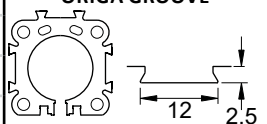
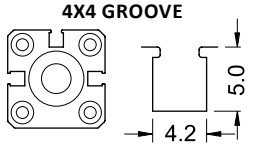
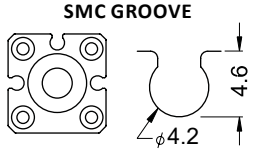
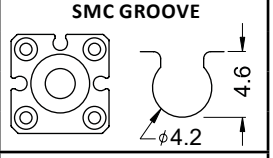
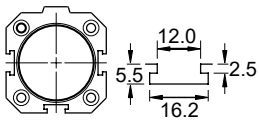
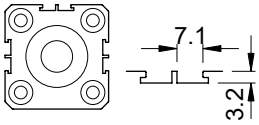
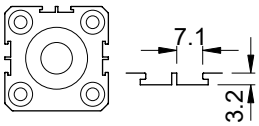
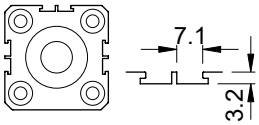
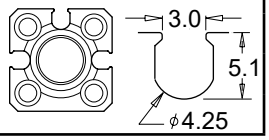


1. When 3-wire solid state switches in parallel(OR) use. Leakage current will be added up.
2. When parallel too many switches in use, possibly cause wrong operation due to lower load current.
3. The quantity of switches in parallel due to the current of load.

MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

Cylinder Groove Form	Applicable Sensor Series	Applicable Mounting Bracket
AIRTAC GROOVE 	LS MG-09, 10, 11 SERIES DFSJ SERIES	GROOVE TYPE, W/O BRACKET
ORIGA GROOVE 	LS MG-05, 40 SERIES	GROOVE TYPE, W/O BRACKET
	LS MG-49, 59 SERIES	PBL CLAMP
	LS MG-03, 15 SERIES	PBK & PBO CLAMP
ROUND CYLINDER 	LS MG-20, 21, DFSU SERIES	PAB CLAMP
	LS MG-13, DFSM SERIES	PBJ & PBG CLAMP
	LS MG-39, DFSE SERIES	PBI CLAMP
	LS MG-26, DFSH SERIES	PBC CLAMP
4 x 4 QUADRATE GROOVE 	LS MG-06 SERIES	GROOVE TYPE, W/O BRACKET
FESTO GROOVE 	LS MG-30, 31 SERIES LS MG-39, DFSE SERIES	GROOVE TYPE, W/O BRACKET
	LS MG-26, DFSH SERIES	PF ADAPTOR
NORGREN GROOVE 	LS MG-50, 51 SERIES	GROOVE TYPE, W/O BRACKET
	LS MG-49, 59 SERIES	PO BRACKET
	LS MG-20, 21, DFSU SERIES	PI BRACKET
MICKEYMOUSE 	LS MG-41~47 SERIES	SWITCH BUILT-IN FIXTURE
	LS MG-39, DFSE SERIES	PD BRACKET
	LS MG-26, DFSH SERIES	PC+PO BRACKET
SMC GROOVE (T SLOT) 	LS MG-35, 36 SERIES LS MG-39, DFSE SERIES	GROOVE TYPE, W/O BRACKET
	LS MG-26, DFSH SERIES	PS ADAPTOR
AIRTAC GROOVE 	LS MG-01, 14, 22 SERIES DFSG SERIES	GROOVE TYPE, W/O BRACKET
PNEUMAX GROOVE 	LS MG-08 SERIES	GROOVE TYPE, W/O BRACKET
SMC GROOVE 	LS MG-70, 71, 72 SERIES	GROOVE TYPE, W/O BRACKET
	LS MG-17, 18, 19 SERIES	SWITCH BUILT-IN FIXTURE
	LS MG-49, 59 SERIES	PCD & PCE BRACKET
TIE-ROD CYLINDER 	LS MG-20, 21, DFSU SERIES	PAC & PM BRACKET
	LS MG-41~48 SERIES	SWITCH BUILT-IN FIXTURE
	LS MG-39, DFSE SERIES	PN BRACKET
	LS MG-26, DFSH SERIES	PC+PCD BRACKET
CKD GROOVE 	LS MG-32 SERIES	GROOVE TYPE, W/O BRACKET
SMC GROOVE (C SLOT) 	DFSH SERIES LS MG-07, 07M SERIES LS MG-26, 28, 29 SERIES	GROOVE TYPE, W/O BRACKET
TAIYO GROOVE 	LS MG-32 SERIES	GROOVE TYPE, W/O BRACKET
KOGANEI GROOVE MINDMAN GROOVE 	LS MG-12 SERIES	GROOVE TYPE, W/O BRACKET

MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

MODEL	STYLES	SENSOR TYPE	VOLTAGE RANGE	OUTPUT RATING	CYLINDER TYPE
LS MG01R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	AIRTAC GROOVE 
LS MG01DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG01N		Solid State NPN / N.O.	5~30V DC	6W MAX.	
LS MG01P		Solid State PNP / N.O.	5~30V DC	200mA Max.	
LS MG03R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	
LS MG03DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG03N(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W MAX.	
LS MG03S		Solid State NPN/PNP / N.O.	5~30V DC	200mA Max.	
LS MG05R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	ORIGA GROOVE 
LS MG05DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG05N(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W MAX.	
LS MG05S		Solid State NPN/PNP / N.O.	5~30V DC	200mA Max.	
LS MG06R		Reed Switch / N.O.	5~120V DC/AC	10W / 100mA Max.	4X4 GROOVE 
LS MG06DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG06N(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W / 200mA Max.	
LS MG06S		Solid State NPN/PNP / N.O.	5~30V DC	3.5W / 100mA Max.	
LS MG07R		Reed Switch / N.O.	5~120V DC/AC	10W / 100mA Max.	SMC GROOVE 
LS MG07DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG07N(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W / 200mA Max.	
LS MG07S		Solid State NPN/PNP / N.O.	5~30V DC	3.5W / 100mA Max.	
LS MG07RM		Reed Switch / N.O.	5~120V DC/AC	10W / 100mA Max.	SMC GROOVE 
LS MG07DFM		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG07NM(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W / 200mA Max.	
LS MG07SM		Solid State NPN/PNP / N.O.	5~30V DC	3.5W / 100mA Max.	
LS MG08R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	PNEUMAX GROOVE 
LS MG08DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG08N		Solid State NPN / N.O.	5~30V DC	6W Max.	
LS MG08P		Solid State PNP / N.O.	5~30V DC	200mA Max.	
LS MG09R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	AIRTAC GROOVE 
LS MG09DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG09N(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W Max.	
LS MG09S		Solid State NPN/PNP / N.O.	5~30V DC	200mA Max.	
LS MG10R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	AIRTAC GROOVE 
LS MG10DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG10N(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W Max.	
LS MG10S		Solid State NPN/PNP / N.O.	5~30V DC	200mA Max.	
LS MG11R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	AIRTAC GROOVE 
LS MG11DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG11N(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W Max.	
LS MG11S		Solid State NPN/PNP / N.O.	5~30V DC	200mA Max.	
LS MG12R		Reed Switch / N.O.	5~120V DC/AC	10W / 100mA Max.	KOGANEI GROOVE 
LS MG12DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG12N		Solid State NPN / N.O.	5~30V DC	6W MAX.	
LS MG12P		Solid State PNP / N.O.	5~30V DC	200mA Max.	

MAGNETIC SENSORS
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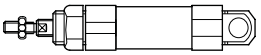
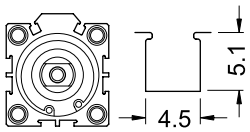
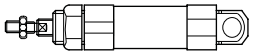
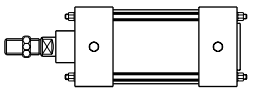
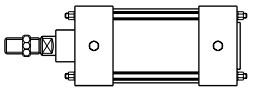
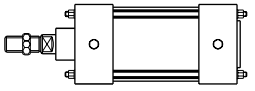
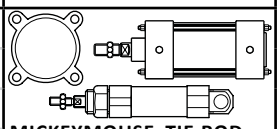
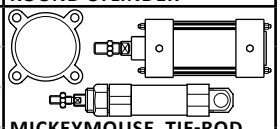
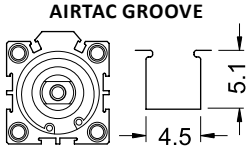
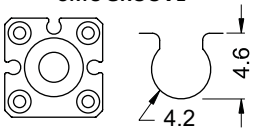
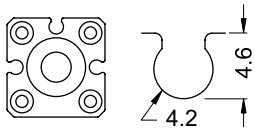
MODEL	STYLES	SENSOR TYPE	VOLTAGE RANGE	OUTPUT RATING	CYLINDER TYPE
LS MG13R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	 ALL ROUND CYLINDER
LS MG13DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG13N(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W MAX.	
LS MG13S		Solid State NPN/PNP / N.O.	5~30V DC	200mA Max.	
LS MG14R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	AIRTAC GROOVE 
LS MG14DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG14N		Solid State NPN / N.O.	5~30V DC	6W MAX.	
LS MG14P		Solid State PNP / N.O.	5~30V DC	200mA Max.	
LS MG15R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	 6ϕ - 63ϕ ROUND CYLINDER
LS MG15DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG15N(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W MAX.	
LS MG15S		Solid State NPN/PNP / N.O.	5~30V DC	200mA Max.	
LS MG17R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	 32ϕ ~125ϕ TIE-ROD
LS MG17DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG17N(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W Max.	
LS MG17S		Solid State NPN/PNP / N.O.	5~30V DC	200mA Max.	
LS MG18R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	 32ϕ ~125ϕ TIE-ROD
LS MG18DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG18N(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W Max.	
LS MG18S		Solid State NPN/PNP / N.O.	5~30V DC	200mA Max.	
LS MG19R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	 32ϕ ~125ϕ TIE-ROD
LS MG19DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG19N(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W Max.	
LS MG19S		Solid State NPN/PNP / N.O.	5~30V DC	200mA Max.	
LS MG20R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	 MICKEYMOUSE, TIE-ROD, ROUND CYLINDER
LS MG20DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG20N(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W Max.	
LS MG20S		Solid State NPN/PNP / N.O.	5~30V DC	200mA Max.	
LS MG21R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	 MICKEYMOUSE, TIE-ROD, ROUND CYLINDER
LS MG21DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG21N(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W Max.	
LS MG21S		Solid State NPN/PNP / N.O.	5~30V DC	200mA Max.	
LS MG22DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	AIRTAC GROOVE 
LS MG22DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG22N		Solid State NPN / N.O.	5~30V DC	6W Max.	
LS MG22P		Solid State PNP / N.O.	5~30V DC	200mA Max.	
LS MG26R		Reed Switch / N.O.	5~120V DC/AC	3.5W / 100mA Max.	SMC GROOVE 
LS MG26DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG26N(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W / 200mA MAX.	
LS MG26S		Solid State NPN/PNP / N.O.	5~30V DC	3.5W / 100mA Max.	
LS MG28R		Reed Switch / N.O.	5~120V DC/AC	3.5W / 100mA Max.	SMC GROOVE 
LS MG28DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG28N(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W / 200mA MAX.	
LS MG28S		Solid State NPN/PNP / N.O.	5~30V DC	3.5W / 100mA Max.	

MAGNETIC SENSORS
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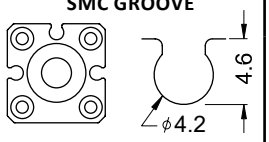
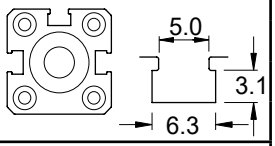
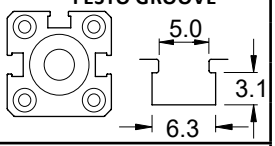
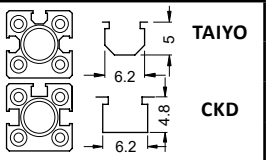
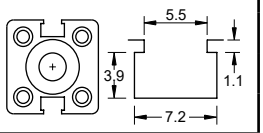
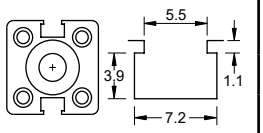
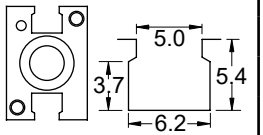
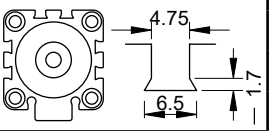
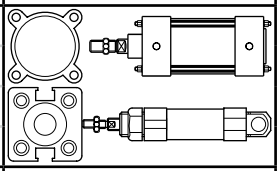
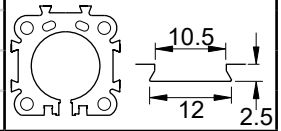
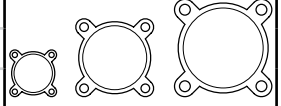
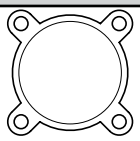
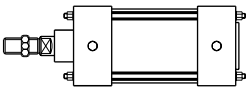
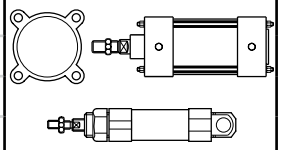
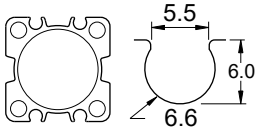
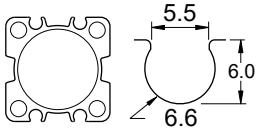
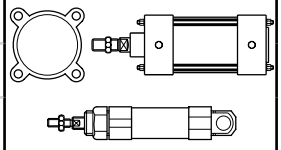
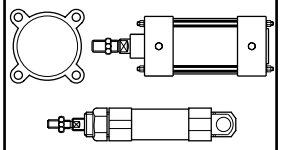
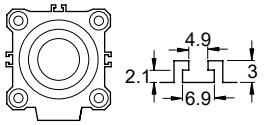
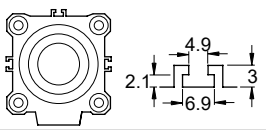
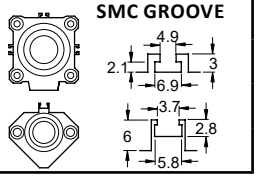
MODEL	STYLES	SENSOR TYPE	VOLTAGE RANGE	OUTPUT RATING	CYLINDER TYPE
LS MG29DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	SMC GROOVE 
LS MG29N		Solid State NPN / N.O.	5~30V DC	3W MAX.	
LS MG29P		Solid State PNP / N.O.	5~30V DC	100mA Max.	
LS MG30R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	FESTO GROOVE 
LS MG30DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG30N(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W MAX.	
LS MG30S		Solid State NPN/PNP / N.O.	5~30V DC	200mA Max.	
LS MG31R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	FESTO GROOVE 
LS MG31DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG31N(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W Max.	
LS MG31S		Solid State NPN/PNP / N.O.	5~30V DC	200mA Max.	
LS MG32R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	TAIYO CKD 
LS MG32DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG32N		Solid State NPN / N.O.	5~30V DC	6W Max.	
LS MG32P		Solid State PNP / N.O.	5~30V DC	200mA Max.	
LS MG33R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	SMC GROOVE 
LS MG33DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG33N(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W Max.	
LS MG33S		Solid State NPN/PNP / N.O.	5~30V DC	200mA Max.	
LS MG35R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	SMC GROOVE 
LS MG35DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG35N(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W Max.	
LS MG35S		Solid State NPN/PNP / N.O.	5~30V DC	200mA Max.	
LS MG36R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	SMC GROOVE 
LS MG36DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG36N(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W Max.	
LS MG36S		Solid State NPN/PNP / N.O.	5~30V DC	200mA Max.	
LS MG38R		Reed Switch / N.O.	5~120V DC/AC	3.5W / 100mA Max.	1/4 INCH 60° GROOVE 
LS MG38DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG38N		Solid State NPN / N.O.	5~30V DC	6W Max.	
LS MG38P		Solid State PNP / N.O.	5~30V DC	200mA Max.	
LS MG39R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	
LS MG39DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG39N(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W / 200mA MAX.	
LS MG39S		Solid State NPN/PNP / N.O.	5~30V DC	3.5W / 100mA Max.	
LS MG40R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	ORIGA GROOVE 
LS MG40DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG40N		Solid State NPN / N.O.	5~30V DC	6W MAX.	
LS MG40P		Solid State PNP / N.O.	5~30V DC	200mA Max.	
LS MG41~44R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	
LS MG41~44DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG41~44N(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W MAX.	
LS MG41~44S		Solid State NPN/PNP / N.O.	5~30V DC	200mA Max.	32ϕ~100ϕ MICKEYMOUSE

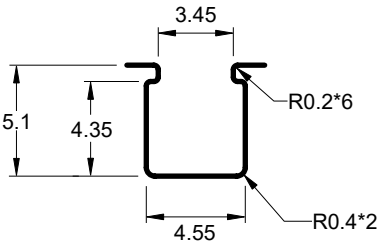
MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

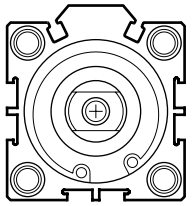
MODEL	STYLES	SENSOR TYPE	VOLTAGE RANGE	OUTPUT RATING	CYLINDER TYPE
LS MG45~47R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	 125ϕ~200ϕ MICKEYMOUSE
LS MG45~47DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG45~47N(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W Max.	
LS MG45~47S		Solid State NPN/PNP / N.O.	5~30V DC	200mA Max.	
LS MG48R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	 SGC CYLINDER BIG SIZE TIE-ROD CYLINDER
LS MG48DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG48N(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W Max.	
LS MG48S		Solid State NPN/PNP / N.O.	5~30V DC	200mA Max.	
LS MG49R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	
LS MG49DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG49N(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W Max.	
LS MG49S		Solid State NPN/PNP / N.O.	5~30V DC	200mA Max.	
LS MG50R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	NORGREN GROOVE 
LS MG50DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG50N(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W Max.	
LS MG50S		Solid State NPN/PNP / N.O.	5~30V DC	200mA Max.	
LS MG51R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	NORGREN GROOVE 
LS MG51DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG51N		Solid State NPN / N.O.	5~30V DC	6W Max.	
LS MG51P		Solid State PNP / N.O.	5~30V DC	200mA Max.	
LS MG59DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG59N(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W Max.	
LS MG59S		Solid State NPN/PNP / N.O.	5~30V DC	200mA Max.	
LS MG69AM		Strong Magnetic No Polarity 2 Wire Solid State / N.O.	10~30V DC	3W Max. 100mA Max.	
LS MG70R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	SMC GROOVE 
LS MG70DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG70N		Solid State NPN / N.O.	5~30V DC	6W MAX.	
LS MG70P		Solid State PNP / N.O.	5~30V DC	200mA Max.	
LS MG71R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	SMC GROOVE 
LS MG71DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG71N(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W MAX.	
LS MG71S		Solid State NPN/PNP / N.O.	5~30V DC	200mA Max.	
LS MG72R		Reed Switch / N.O.	5~240V DC/AC	10W / 100mA Max.	SMC GROOVE 
LS MG72DF		2 Wire Solid State / N.O.	10~28V DC	1.4W / 50mA Max.	
LS MG72N(P)		Solid State NPN(PNP) / N.O.	5~30V DC	6W MAX.	
LS MG72S		Solid State NPN/PNP / N.O.	5~30V DC	200mA Max.	

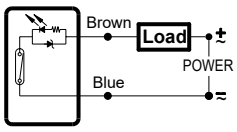
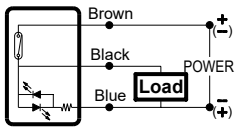
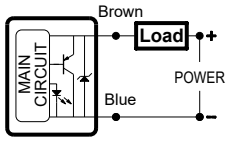
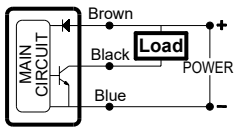
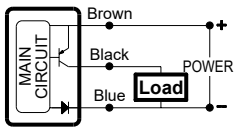
MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

GROOVE DIMENSION (AirTAC)

LS MG-01 Series can be replaced by
DFSG, LS MG-14 Series

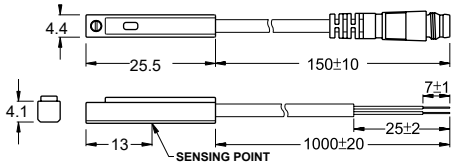




	LS MG - 01R	LS MG - 01RD	LS MG - 01DF	LS MG - 01N	LS MG - 01P
CONNECT DIAGRAM					

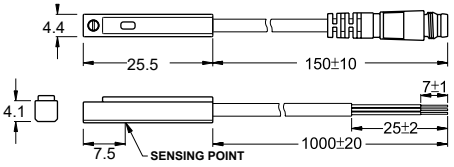
LS MG-01R
LS MG-01R-QD8
LS MG-01R-QD12
LS MG-01R-EZ2M

LS MG-01RD
LS MG-01RD-QD8
LS MG-01RD-QD12
LS MG-01RD-EZ2M



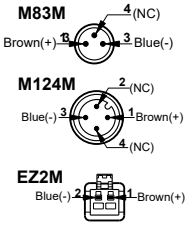
LS MG-01DF
LS MG-01DF-QD8
LS MG-01DF-QD12
LS MG-01DF-EZ2M

LS MG-01N(P)
LS MG-01N(P)-QD8
LS MG-01N(P)-QD12
LS MG-01N(P)-EZ3M

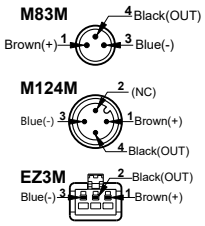


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring



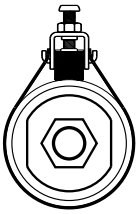
TYPE	LS MG - 01R	LS MG - 01RD	LS MG - 01DF	LS MG - 01N	LS MG - 01P
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking	PNP Current Sourcing
Operating Voltage	5~240V DC/AC	5~30V DC	10~28V DC	5~30V DC	
Switching Current	100 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.		1.4 W Max.	6 W Max.	
Current Consumption	-	10 mA Max. @ 24V	40 μA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100 mA DC	0.1V Max. @ 500 mA DC	2.65V Max. @ 50 mA DC	0.5V Max. @ 200 mA DC	
Leakage Current	-	-	90 μA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Dual Yellow LED	Red LED	Red LED	Green LED
Cable	2.9ø, 2C, Grey Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	2.9ø, 2C, Black Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	
Sensitivity	50 ~ 60 Gauss	50 ~ 60 Gauss	40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 °C		-10 ~ 70 °C	-10 ~ 70 °C	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)	IP 67 (EN60529)	IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	-	-	Surge Suppression	Power Reverse Polarity; Surge Suppression	

Note:
- The max. operating voltage of LS MG-01R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

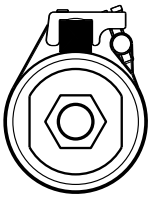
MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

MOUNTING CLAMP & BRACKET
LS MG-03 Series can be replaced by
DFSM, LS MG-13 Series

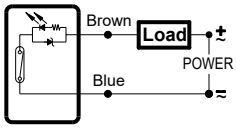
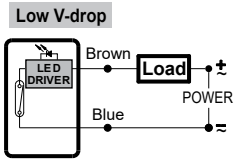
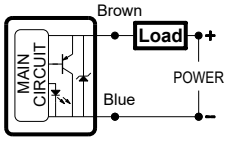
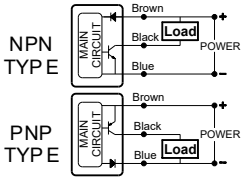
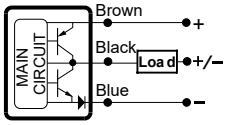
PBK CLAMP



PBO CLAMP

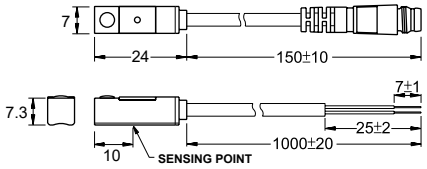


Apply to: 6ø to 63ø Round Cylinder

	LS MG - 03R	LS MG - 03RV	LS MG - 03DF	LS MG - 03N(P)	LS MG - 03S
CONNECT DIAGRAM					

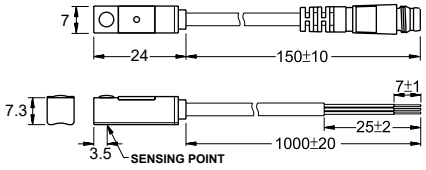
LS MG-03R(RV)
LS MG-03(RV)-QD8
LS MG-03R(RV)-QD12
LS MG-03R(RV)-EZ2M

LS MG-03DF
LS MG-03DF-QD8
LS MG-03DF-QD12
LS MG-03DF-EZ2M



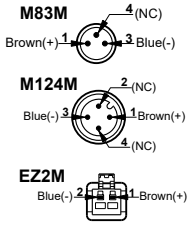
LS MG-03N(P)
LS MG-03N(P)-QD8
LS MG-03N(P)-QD12
LS MG-03N(P)-EZ3M

LS MG-03RD
LS MG-03RD-QD8
LS MG-03RD-QD12
LS MG-03RD-EZ2M

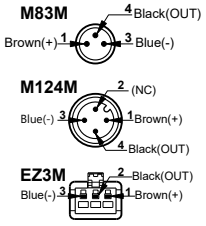


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring

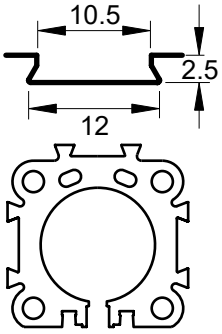


TYPE	LS MG - 03R	LS MG - 03RV	LS MG - 03DF	LS MG - 03N(P)	LS MG - 03S
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking PNP Current Sourcing	NPN/PNP Automatic Detection
Operating Voltage	5~240V DC/AC		10~28V DC	5~30V DC	
Switching Current	100 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.		1.4 W Max.	6 W Max.	
Current Consumption	-		40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100 mA DC	0.9V Max. @ 500 mA DC	2.65V Max. @ 50 mA DC	0.5V Max. @ 200 mA DC	1V Max. @ 200 mA DC
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Yellow LED	Red LED	Red LED (Green LED)	Red LED
Cable	2.9ø, 2C, Grey Oil Resistant PVC		2.9ø, 2C, Black Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	
Sensitivity	55 ~ 65 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ºC		-10 ~ 70 ºC	-10 ~ 70 ºC	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	-	-	Surge Suppression	Power Reverse Polarity; Surge Suppression	

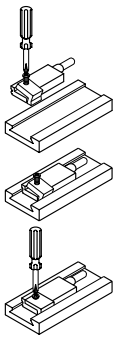
Note:
- The max. operating voltage of LS MG-03R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

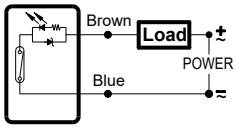
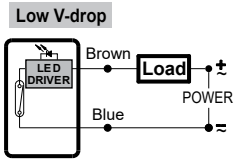
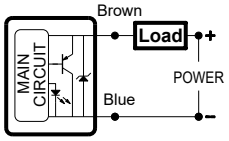
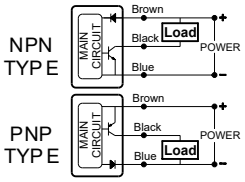
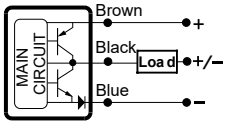
MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

ORIGA GROOVE



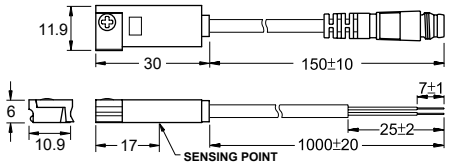
INSTALLATION



	LS MG - 05R	LS MG - 05RV	LS MG - 05DF	LS MG - 05N(P)	LS MG - 05S
CONNECT DIAGRAM					

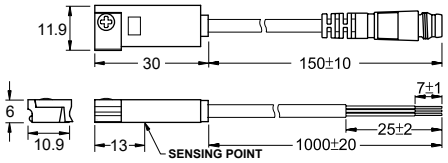
LS MG-05R(RV)
LS MG-05(RV)-QD8
LS MG-05R(RV)-QD12
LS MG-05R(RV)-EZ2M

LS MG-05RD
LS MG-05RD-QD8
LS MG-05RD-QD12
LS MG-05RD-EZ2M



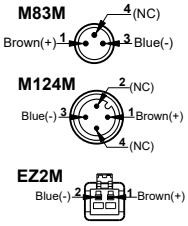
LS MG-05DF
LS MG-05DF-QD8
LS MG-05DF-QD12
LS MG-05DF-EZ2M

LS MG-05N(P)
LS MG-05N(P)-QD8
LS MG-05N(P)-QD12
LS MG-05N(P)-EZ3M

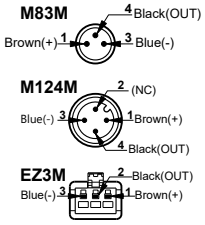


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



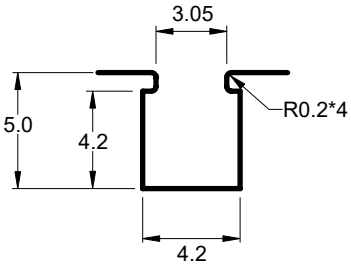
3 wire QD wiring

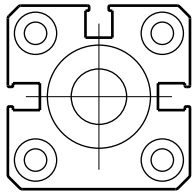


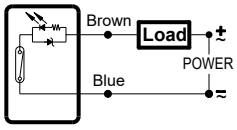
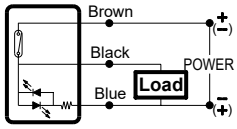
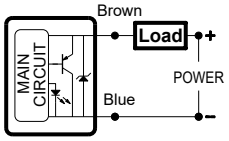
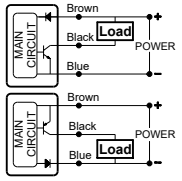
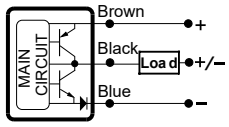
TYPE	LS MG - 05R	LS MG - 05RV	LS MG - 05DF	LS MG - 05N(P)	LS MG - 05S
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking PNP Current Sourcing	NPN/PNP Automatic Detection
Operating Voltage	5~240V DC/AC		10~28V DC	5~30V DC	
Switching Current	100 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.		1.4 W Max.	6 W Max.	
Current Consumption	-		40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100 mA DC	0.9V Max. @ 500 mA DC	2.65V Max. @ 50 mA DC	0.5V Max. @ 200 mA DC	1V Max. @ 200 mA DC
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Yellow LED	Red LED	Red LED (Green LED)	Red LED
Cable	2.9ø, 2C, Grey Oil Resistant PVC		2.9ø, 2C, Black Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	
Sensitivity	35 ~ 45 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	-	-	Surge Suppression	Power Reverse Polarity; Surge Suppression	

Note:
- The max. operating voltage of LS MG-05R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

GROOVE DIMENSION (4X4)

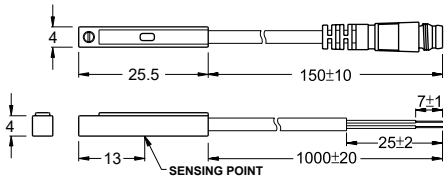




	LS MG - 06R	LS MG - 06RD	LS MG - 06DF	LS MG - 06N(P)	LS MG - 06S
CONNECT DIAGRAM				NPN TYPE  PNP TYPE	

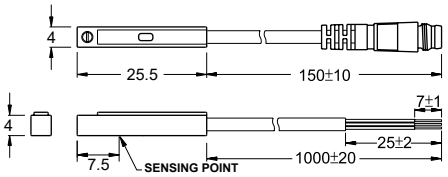
LS MG-06R
LS MG-06R-QD8
LS MG-06R-QD12
LS MG-06R-EZ2M

LS MG-06RD
LS MG-06RD-QD8
LS MG-06RD-QD12
LS MG-06RD-EZ2M



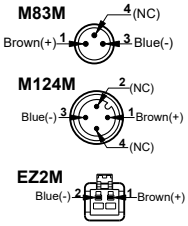
LS MG-06DF
LS MG-06DF-QD8
LS MG-06DF-QD12
LS MG-06DF-EZ2M

LS MG-06N(P)
LS MG-06N(P)-QD8
LS MG-06N(P)-QD12
LS MG-06N(P)-EZ3M

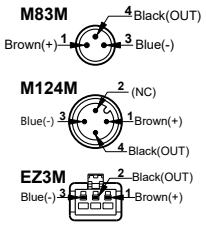


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring

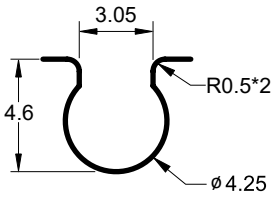


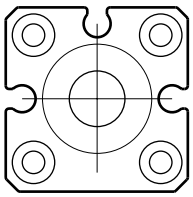
TYPE	LS MG - 06R	LS MG - 06RD	LS MG - 06DF	LS MG - 06N(P)	LS MG - 06S
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking PNP Current Sourcing	NPN/PNP Automation
Operating Voltage	5~120V DC/AC	5~30V DC	10~28V DC	5~30V DC	
Switching Current	100 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	100 mA Max.
Switching Rating	10 W Max.		1.4 W Max.	6 W Max.	3.5 W Max.
Current Consumption	-	10 mA Max. @ 24V	40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100 mA DC	0.1V Max. @ 500 mA DC	2.65V Max. @ 50 mA DC	0.5V Max. @ 200 mA DC	1V Max. @ 200 mA DC
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Dual Yellow LED	Red LED	Red LED (Green LED)	Red LED
Cable	2.9ø, 2C, Grey Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	2.9ø, 2C, Black Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	
Sensitivity	45 ~ 55 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	1000 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	-	-	Surge Suppression	Power Reverse Polarity; Surge Suppression	

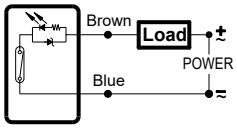
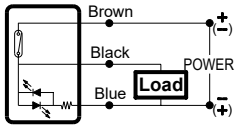
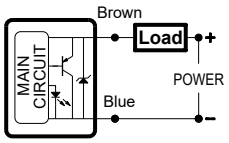
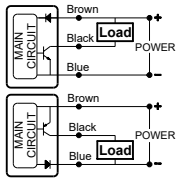
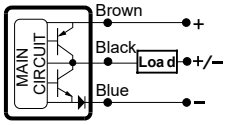
Note:
- The max. operating voltage of LS MG-06R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

GROOVE DIMENSION (4 ø SMC)

LS MG-07 Series can be replaced by
DFSH, LS MG-26 Series

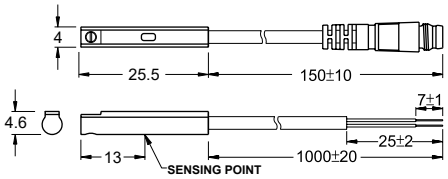




	LS MG - 07R	LS MG - 07RD	LS MG - 07DF	LS MG - 07N(P)	LS MG - 07S
CONNECT DIAGRAM					

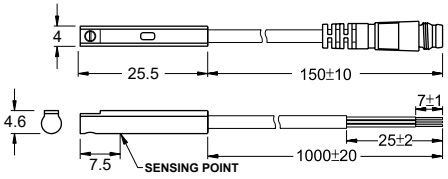
LS MG-07R
LS MG-07R-QD8
LS MG-07R-QD12
LS MG-07R-EZ2M

LS MG-07RD
LS MG-07RD-QD8
LS MG-07RD-QD12
LS MG-07RD-EZ2M



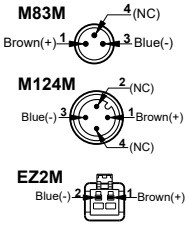
LS MG-07DF
LS MG-07DF-QD8
LS MG-07DF-QD12
LS MG-07DF-EZ2M

LS MG-07N(P)
LS MG-07N(P)-QD8
LS MG-07N(P)-QD12
LS MG-07N(P)-EZ3M

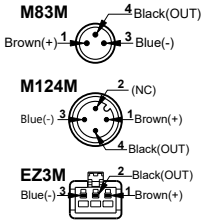


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring



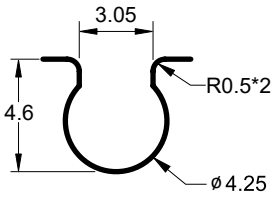
TYPE	LS MG - 07R	LS MG - 07RD	LS MG - 07DF	LS MG - 07N(P)	LS MG - 07S
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking PNP Current Sourcing	NPN/PNP Automation
Operating Voltage	5~120V DC/AC	5~30V DC	10~28V DC	5~30V DC	
Switching Current	100 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	100 mA Max.
Switching Rating	10 W Max.		1.4 W Max.	6 W Max.	3.5 W Max.
Current Consumption	-	10 mA Max. @ 24V	40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100 mA DC	0.1V Max. @ 500 mA DC	2.65V Max. @ 50 mA DC	0.5V Max. @ 200 mA DC	1V Max. @ 200 mA DC
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Dual Yellow LED	Red LED	Red LED (Green LED)	Red LED
Cable	2.9ø, 2C, Grey Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	2.9ø, 2C, Black Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	
Sensitivity	45 ~ 55 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	1000 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 °C		-10 ~ 70 °C	-10 ~ 70 °C	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	-	-	Surge Suppression	Power Reverse Polarity; Surge Suppression	

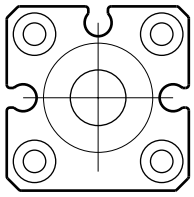
Note:
- The max. operating voltage of LS MG-07R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

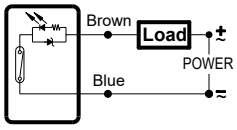
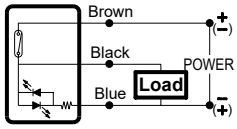
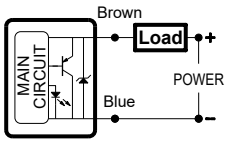
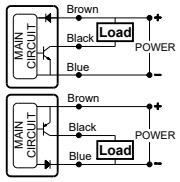
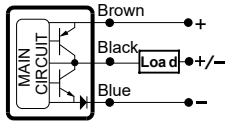
MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

GROOVE DIMENSION (4 ø SMC)

LS MG07xM series metal housing prevents the screw from being loose.

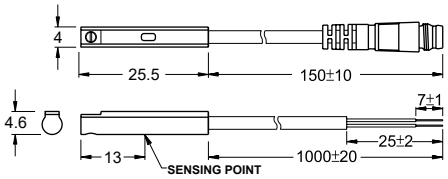




	LS MG - 07RM	LS MG - 07RDM	LS MG - 07DFM	LS MG - 07N(P)M	LS MG - 07SM
CONNECT DIAGRAM					

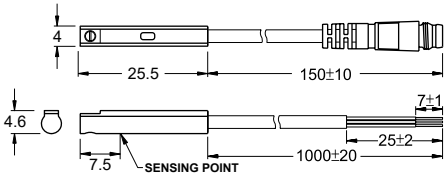
LS MG-07RM
LS MG-07RM-QD8
LS MG-07RM-QD12
LS MG-07RM-EZ2M

LS MG-07RDM
LS MG-07RDM-QD8
LS MG-07RDM-QD12
LS MG-07RDM-EZ2M



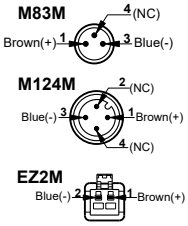
LS MG-07DFM
LS MG-07DFM-QD8
LS MG-07DFM-QD12
LS MG-07DFM-EZ2M

LS MG-07N(P)M
LS MG-07N(P)M-QD8
LS MG-07N(P)M-QD12
LS MG-07N(P)M-EZ3M

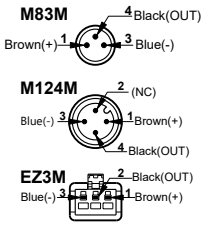


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring

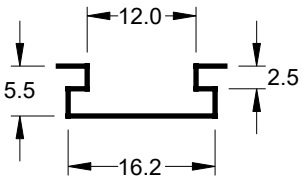


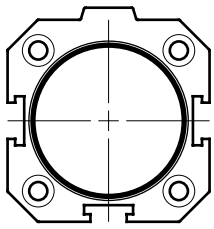
TYPE	LS MG - 07RM	LS MG - 07RDM	LS MG - 07DFM	LS MG - 07N(P)M	LS MG - 07SM
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking PNP Current Sourcing	NPN/PNP Automation
Operating Voltage	5~120V DC/AC	5~30V DC	10~28V DC	5~30V DC	
Switching Current	100 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	100 mA Max.
Switching Rating	10 W Max.		1.4 W Max.	6 W Max.	3.5 W Max.
Current Consumption	-	10 mA Max. @ 24V	40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100 mA DC	0.1V Max. @ 500 mA DC	2.65V Max. @ 50 mA DC	0.5V Max. @ 200 mA DC	1V Max. @ 200 mA DC
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Dual Yellow LED	Red LED	Red LED (Green LED)	Red LED
Cable	2.9ø, 2C, Grey Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	2.9ø, 2C, Black Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	
Sensitivity	45 ~ 55 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	1000 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	-	-	Surge Suppression	Power Reverse Polarity; Surge Suppression	

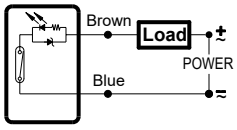
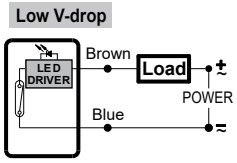
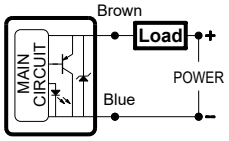
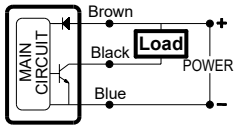
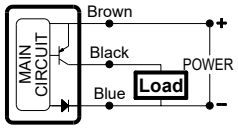
Note:
- The max. operating voltage of LS MG-07RM-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

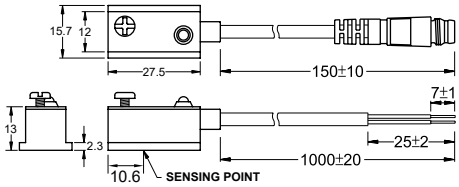
GROOVE DIMENSION (Pneumax)



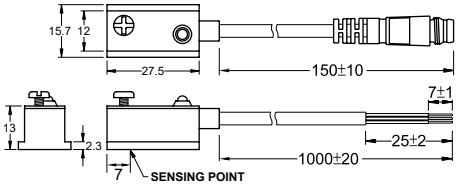


	LS MG - 08R	LS MG - 08RV	LS MG - 08DF	LS MG - 08N	LS MG - 08P
CONNECT DIAGRAM					

LS MG-08R(RV) **LS MG-08RD**
LS MG-08R(RV)-QD8 **LS MG-08RD-QD8**
LS MG-08R(RV)-QD12 **LS MG-08RD-QD12**
LS MG-08R(RV)-EZ2M **LS MG-08RD-EZ2M**

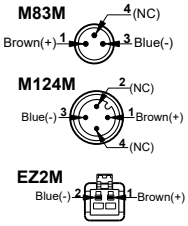


LS MG-08DF **LS MG-08N(P)**
LS MG-08DF-QD8 **LS MG-08N(P)-QD8**
LS MG-08DF-QD12 **LS MG-08N(P)-QD12**
LS MG-08DF-EZ2M **LS MG-08N(P)-EZ3M**

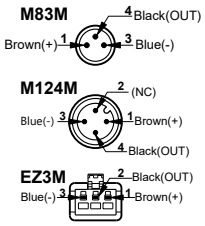


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring



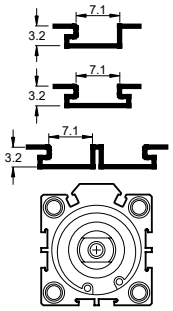
TYPE	LS MG - 08R	LS MG - 08RV	LS MG - 08DF	LS MG - 08N	LS MG - 08P
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking	PNP Current Sourcing
Operating Voltage	5~240V DC/AC		10~28V DC	5~30V DC	
Switching Current	500 mA Max.	1000 mA Max.	50 mA Max.	500 mA Max.	
Switching Rating	50 W Max.		1.4 W Max.	15 W Max.	
Current Consumption	-		40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100mA DC	1.0V Max. @ 1000mA DC	2.65V Max. @ 50 mA DC	1.0V Max. @ 500 mA DC	
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Yellow LED	Red LED	Red LED	Green LED
Cable	4.0ø, 2C, Oil Resistant PVC		4.0ø, 2C, Oil Resistant PVC	4.0ø, 3C, Oil Resistant PVC	
Sensitivity	55 ~ 65 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	-	-	Surge Suppression	Power Reverse Polarity; Surge Suppression, O/P Short Circuit Protect	

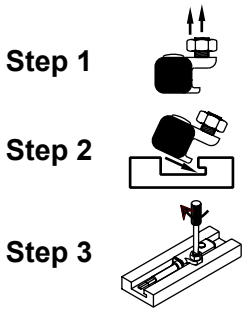
Note:
- The max. operating voltage of LS MG-08R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

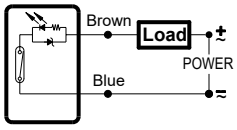
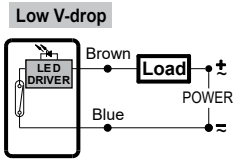
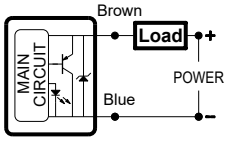
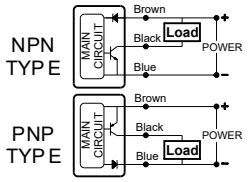
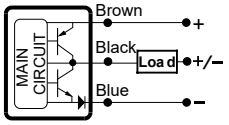
MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

GROOVE DIMENSION (Top installation with patent)

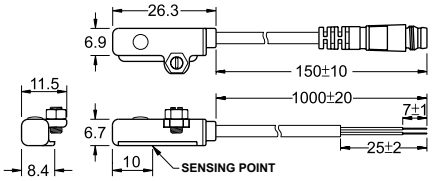
LS MG-09 Series can replace LS MG-10, 11 Series



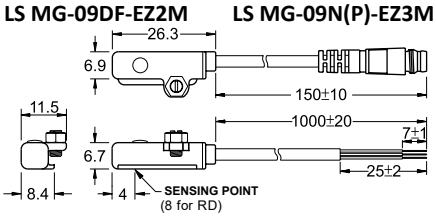


	LS MG - 09R	LS MG - 09RV	LS MG - 09DF	LS MG - 09N(P)	LS MG - 09S
CONNECT DIAGRAM					

LS MG-09R(RV) **LS MG-09RD**
LS MG-09R(RV)-QD8 **LS MG-09RD-QD8**
LS MG-09R(RV)-QD12 **LS MG-09RD-QD12**
LS MG-09R(RV)-EZ2M **LS MG-09RD-EZ2M**

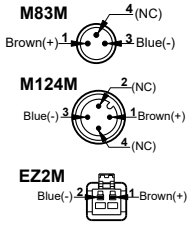


LS MG-09DF **LS MG-09N(P)**
LS MG-09DF-QD8 **LS MG-09N(P)-QD8**
LS MG-09DF-QD12 **LS MG-09N(P)-QD12**
LS MG-09DF-EZ2M **LS MG-09N(P)-EZ3M**

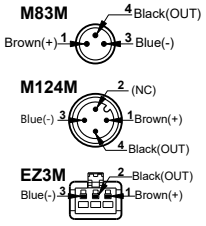


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



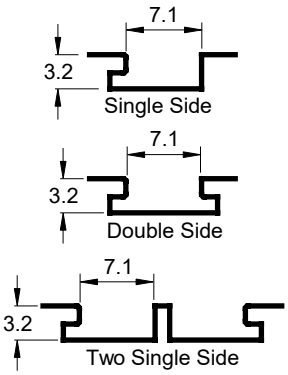
3 wire QD wiring



TYPE	LS MG - 09R	LS MG - 09RV	LS MG - 09DF	LS MG - 09N(P)	LS MG - 09S
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking PNP Current Sourcing	NPN/PNP Automation Detection
Operating Voltage	5~240V DC/AC		10~28V DC	5~30V DC	
Switching Current	100 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.		1.4 W Max.	6 W Max.	
Current Consumption	-		40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100 mA DC	0.9V Max. @ 500 mA DC	2.65V Max. @ 50 mA DC	0.5V Max. @ 200 mA DC	1V Max. @ 200 mA DC
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Yellow LED	Red LED	Red LED (Green LED)	Red LED
Cable	3.3ø, 2C, Oil Resistant PVC		3.3ø, 2C, Oil Resistant PVC	3.3ø, 3C, Oil Resistant PVC	
Sensitivity	40 ~ 50 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	-	-	Surge Suppression	Power Reverse Polarity; Surge Suppression	

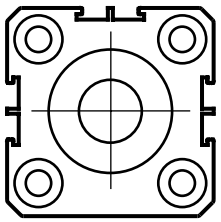
Note:
- The max. operating voltage of LS MG-09R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

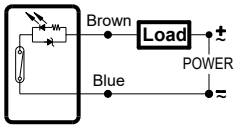
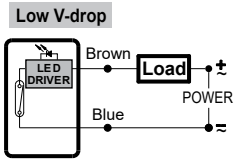
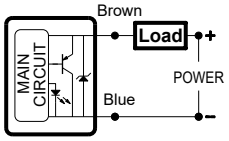
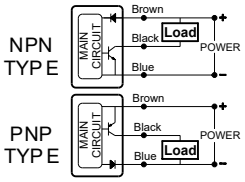
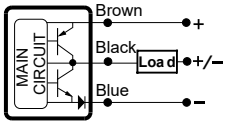
MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches



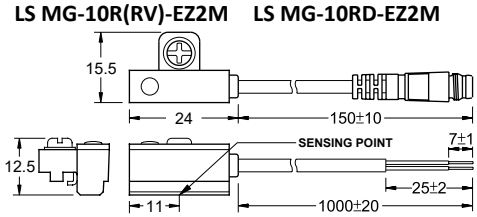
AIRTAC GROOVE

LS MG-10 Series can be replaced by DFSJ, LS MG-09 Series

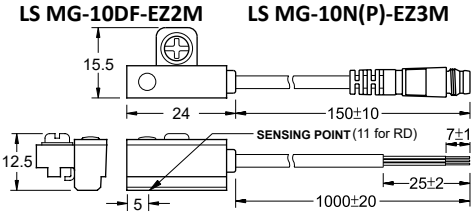


	LS MG - 10R	LS MG - 10RV	LS MG - 10DF	LS MG - 10N(P)	LS MG - 10S
CONNECT DIAGRAM					

LS MG-10R(RV) **LS MG-10RD**
LS MG-10R(RV)-QD8 **LS MG-10RD-QD8**
LS MG-10R(RV)-QD12 **LS MG-10RD-QD12**
LS MG-10R(RV)-EZ2M **LS MG-10RD-EZ2M**

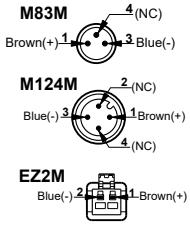


LS MG-10DF **LS MG-10N(P)**
LS MG-10DF-QD8 **LS MG-10N(P)-QD8**
LS MG-10DF-QD12 **LS MG-10N(P)-QD12**
LS MG-10DF-EZ2M **LS MG-10N(P)-EZ3M**

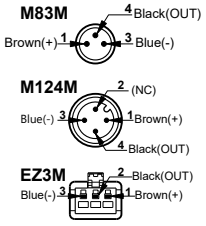


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



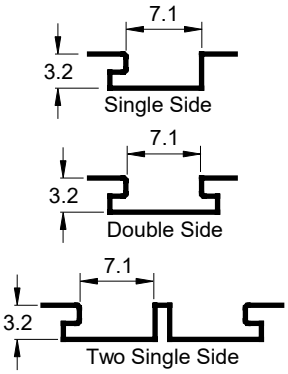
3 wire QD wiring



TYPE	LS MG - 10R	LS MG - 10RV	LS MG - 10DF	LS MG - 10N(P)	LS MG - 10S
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking / PNP Current Sourcing	NPN/PNP Automation Detection
Operating Voltage	5~240V DC/AC		10~28V DC	5~30V DC	
Switching Current	100 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.		1.4 W Max.	6 W Max.	
Current Consumption	-		40 μA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100 mA DC	0.9V Max. @ 500 mA DC	2.65V Max. @ 50 mA DC	0.5V Max. @ 200 mA DC	1V Max. @ 200 mA DC
Leakage Current	-		90 μA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Yellow LED	Red LED	Red LED (Green LED)	Red LED
Cable	3.3ø, 2C, Oil Resistant PVC		3.3ø, 2C, Oil Resistant PVC	3.3ø, 3C, Oil Resistant PVC	
Sensitivity	40 ~ 50 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 °C		-10 ~ 70 °C	-10 ~ 70 °C	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	-	-	Surge Suppression	Power Reverse Polarity; Surge Suppression	

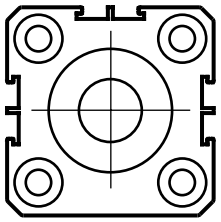
Note:
- The max. operating voltage of LS MG-10R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

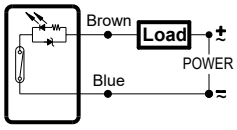
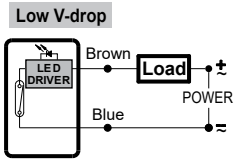
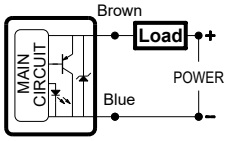
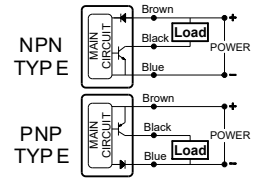
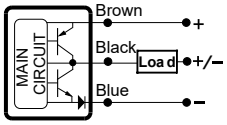
MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches



GROOVE DIMENSION

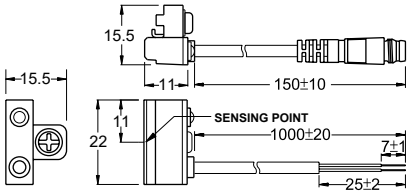
LS MG-11 Series can be replaced by DFSJ, LS MG-09 Series



	LS MG - 11R	LS MG - 11RV	LS MG - 11DF	LS MG - 11N(P)	LS MG - 11S
CONNECT DIAGRAM					

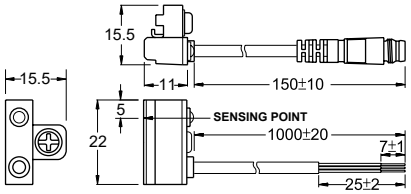
LS MG-11R(RV)
LS MG-11R(RV)-QD8
LS MG-11R(RV)-QD12
LS MG-11R(RV)-EZ2M

LS MG-11RD
LS MG-11RD-QD8
LS MG-11RD-QD12
LS MG-11RD-EZ2M



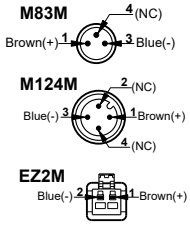
LS MG-11DF
LS MG-11DF-QD8
LS MG-11DF-QD12
LS MG-11DF-EZ2M

LS MG-11N(P)
LS MG-11N(P)-QD8
LS MG-11N(P)-QD12
LS MG-11N(P)-EZ3M

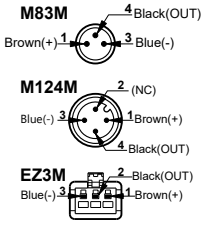


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring

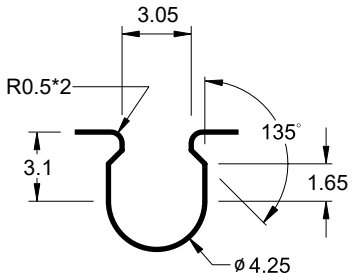


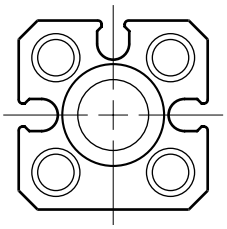
TYPE	LS MG - 11R	LS MG - 11RV	LS MG - 11DF	LS MG - 11N(P)	LS MG - 11S
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking PNP Current Sourcing	NPN/PNP Automation Detection
Operating Voltage	5~240V DC/AC		10~28V DC	5~30V DC	
Switching Current	100 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.		1.4 W Max.	6 W Max.	
Current Consumption	-		40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100 mA DC	0.9V Max. @ 500 mA DC	2.65V Max. @ 50 mA DC	0.5V Max. @ 200 mA DC	1V Max. @ 200 mA DC
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Yellow LED	Red LED	Red LED (Green LED)	Red LED
Cable	3.3ø, 2C, Oil Resistant PVC		3.3ø, 2C, Oil Resistant PVC	3.3ø, 3C, Oil Resistant PVC	
Sensitivity	40 ~ 50 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 °C		-10 ~ 70 °C	-10 ~ 70 °C	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	-	-	Surge Suppression	Power Reverse Polarity; Surge Suppression	

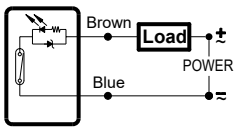
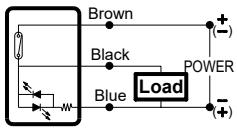
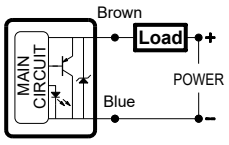
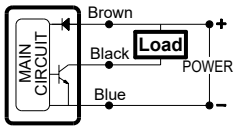
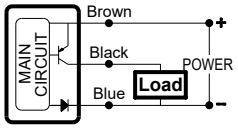
Note:
- The max. operating voltage of LS MG-11R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

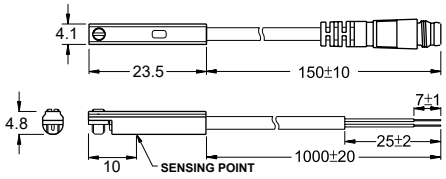
GROOVE DIMENSION (KOGANEI; MINDMAN)



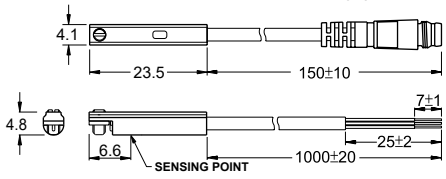


	LS MG - 12R	LS MG - 12RD	LS MG - 12DF	LS MG - 12N	LS MG - 12P
CONNECT DIAGRAM					

LS MG-12R **LS MG-12RD**
LS MG-12R-QD8 **LS MG-12RD-QD8**
LS MG-12R-QD12 **LS MG-12RD-QD12**
LS MG-12R-EZ2M **LS MG-12RD-EZ2M**

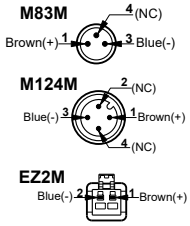


LS MG-12DF **LS MG-12N(P)**
LS MG-12DF-QD8 **LS MG-12N(P)-QD8**
LS MG-12DF-QD12 **LS MG-12N(P)-QD12**
LS MG-12DF-EZ2M **LS MG-12N(P)-EZ3M**

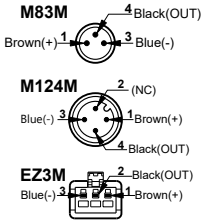


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring

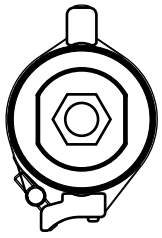


TYPE	LS MG - 12R	LS MG - 12RD	LS MG - 12DF	LS MG - 12N	LS MG - 12P
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking	PNP Current Sourcing
Operating Voltage	5~120V DC/AC	5~30V DC	10~28V DC	5~30V DC	
Switching Current	100 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.		1.4 W Max.	6 W Max.	
Current Consumption		10 mA Max. @ 24V	40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100 mA DC	0.1V Max. @ 500 mA DC	2.65V Max. @ 50 mA DC	0.5V Max. @ 200 mA DC	
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Dual Yellow LED	Red LED	Red LED	Green LED
Cable	2.9ø, 2C, Grey Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	2.9ø, 2C, Black Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	
Sensitivity	40 ~ 50 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	1000 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 °C		-10 ~ 70 °C	-10 ~ 70 °C	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	-	-	Surge Suppression	Power Reverse Polarity; Surge Suppression	

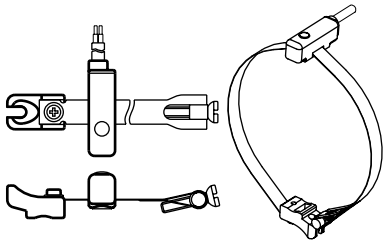
Note:
- The max. operating voltage of LS MG-12R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

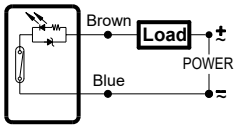
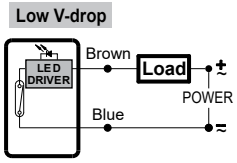
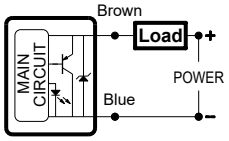
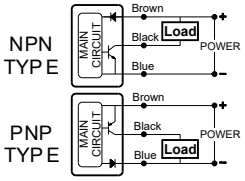
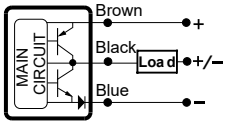
All Round Cylinder styles
Band does not cause stress on sensor
LS MG-13 Series can be replaced by DFSM Series



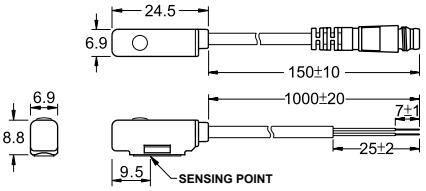
PBG CLAMP



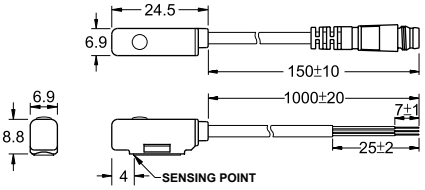
PBJ CLAMP

	LS MG - 13R	LS MG - 13RV	LS MG - 13DF	LS MG - 13N(P)	LS MG - 13S
CONNECT DIAGRAM					

LS MG-13R(RV) **LS MG-13RD**
LS MG-13R(RV)-QD8 **LS MG-13RD-QD8**
LS MG-13R(RV)-QD12 **LS MG-13RD-QD12**
LS MG-13R(RV)-EZ2M **LS MG-13RD-EZ2M**

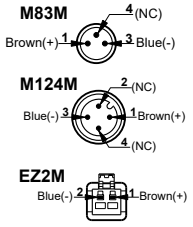


LS MG-13DF **LS MG-13N(P)**
LS MG-13DF-QD8 **LS MG-13N(P)-QD8**
LS MG-13DF-QD12 **LS MG-13N(P)-QD12**
LS MG-13DF-EZ2M **LS MG-13N(P)-EZ3M**

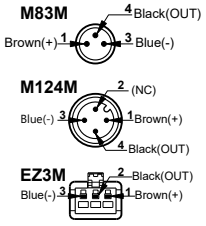


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring



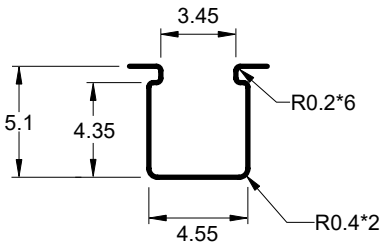
TYPE	LS MG - 13R	LS MG - 13RV	LS MG - 13DF	LS MG - 13N(P)	LS MG - 13S
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking PNP Current Sourcing	NPN/PNP Automatic Detection
Operating Voltage	5~240V DC/AC		10~28V DC	5~30V DC	
Switching Current	100 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.		1.4 W Max.	6 W Max.	
Current Consumption	-		40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100 mA DC	0.9V Max. @ 500 mA DC	2.65V Max. @ 50 mA DC	0.5V Max. @ 200 mA DC	1V Max. @ 200 mA DC
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Yellow LED	Red LED	Red LED (Green LED)	Red LED
Cable	3.3ø, 2C, Oil Resistant PVC		3.3ø, 2C, Oil Resistant PVC	3.3ø, 3C, Oil Resistant PVC	
Sensitivity	55 ~ 65 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 °C		-10 ~ 70 °C	-10 ~ 70 °C	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	-	-	Surge Suppression	Power Reverse Polarity; Surge Suppression	

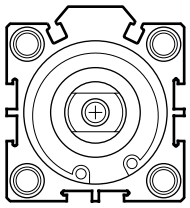
Note:
- The max. operating voltage of LS MG-13R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

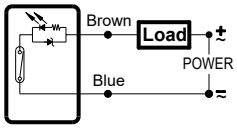
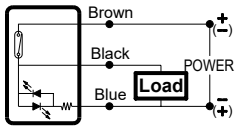
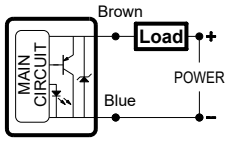
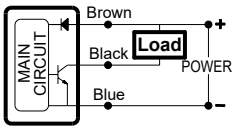
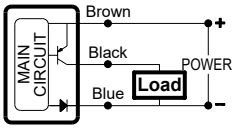
STRONG FIXING STRUCTURE

LS MG-14 Series can be replaced by DFSG Series

GROOVE DIMENSION (AirTAC)

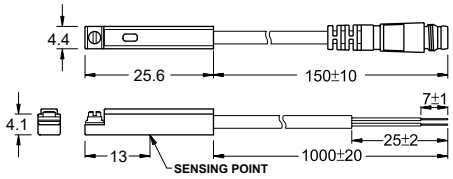




	LS MG - 14R	LS MG - 14RD	LS MG - 14DF	LS MG - 14N	LS MG - 14P
CONNECT DIAGRAM					

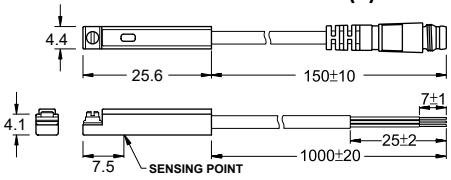
LS MG-14R
LS MG-14R-QD8
LS MG-14R-QD12
LS MG-14R-EZ2M

LS MG-14RD
LS MG-14RD-QD8
LS MG-14RD-QD12
LS MG-14RD-EZ2M



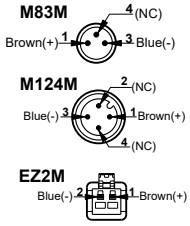
LS MG-14DF
LS MG-14DF-QD8
LS MG-14DF-QD12
LS MG-14DF-EZ2M

LS MG-14N(P)
LS MG-14N(P)-QD8
LS MG-14N(P)-QD12
LS MG-14N(P)-EZ3M

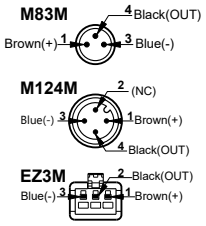


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring



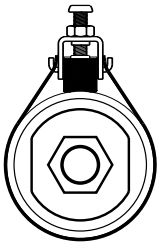
TYPE	LS MG - 14R	LS MG - 14RD	LS MG - 14DF	LS MG - 14N	LS MG - 14P
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking	PNP Current Sourcing
Operating Voltage	5~240V DC/AC	5~30V DC	10~28V DC	5~30V DC	
Switching Current	100 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.	10 W Max.	1.4 W Max.	6 W Max.	
Current Consumption	-	10 mA Max. @ 24V	40 μA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100 mA DC	0.1V Max. @ 500 mA DC	2.65V Max. @ 50 mA DC	0.5V Max. @ 200 mA DC	
Leakage Current	-		90 μA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Dual Yellow LED	Red LED	Red LED	Green LED
Cable	2.9ø, 2C, Grey Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	2.9ø, 2C, Black Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	
Sensitivity	50 ~ 60 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	-	-	Surge Suppression	Power Reverse Polarity; Surge Suppression	

Note:
- The max. operating voltage of LS MG-14R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

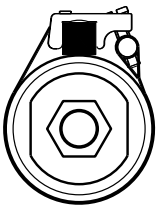
MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

MOUNTING CLAMP & BRACKET
LS MG-15 Series can be replaced by
DFSM, LS MG-13 Series

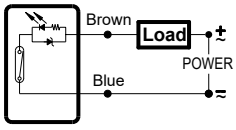
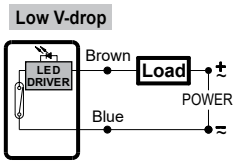
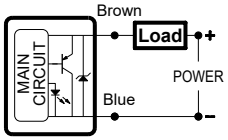
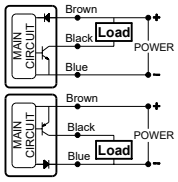
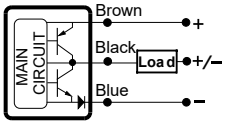
PBK CLAMP



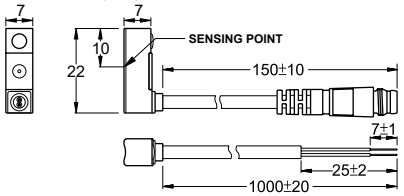
PBO CLAMP



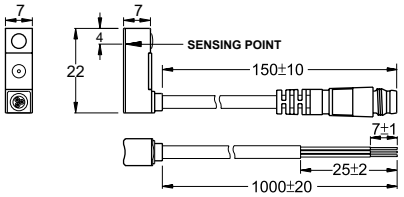
Apply to: 6ø to 63ø Round Cylinder

	LS MG - 15R	LS MG - 15RV	LS MG - 15DF	LS MG - 15N(P)	LS MG - 15S
CONNECT DIAGRAM					

LS MG-15R(RV) **LS MG-15RD**
LS MG-15R(RV)-QD8 **LS MG-15RD-QD8**
LS MG-15R(RV)-QD12 **LS MG-15RD-QD12**
LS MG-15R(RV)-EZ2M **LS MG-15RD-EZ2M**

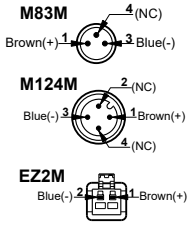


LS MG-15DF **LS MG-15N(P)**
LS MG-15DF-QD8 **LS MG-15N(P)-QD8**
LS MG-15DF-QD12 **LS MG-15N(P)-QD12**
LS MG-15DF-EZ2M **LS MG-15N(P)-EZ3M**

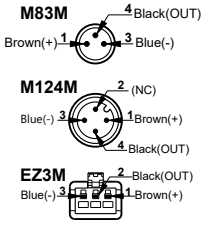


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



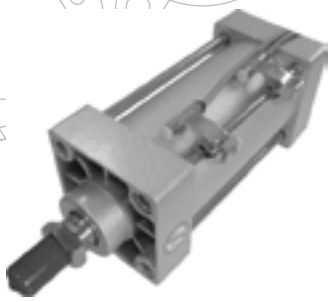
3 wire QD wiring



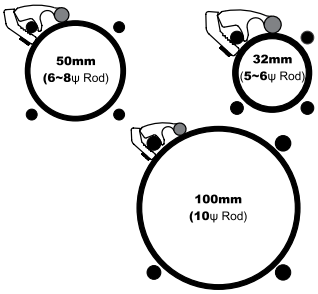
TYPE	LS MG - 15R	LS MG - 15RV	LS MG - 15DF	LS MG - 15N(P)	LS MG - 15S
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking PNP Current Sourcing	NPN/PNP Automatic Detection
Operating Voltage	5~240V DC/AC		10~28V DC	5~30V DC	
Switching Current	100 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.		1.4 W Max.	6 W Max.	
Current Consumption	-		40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100 mA DC	0.9V Max. @ 500 mA DC	2.65V Max. @ 50 mA DC	0.5V Max. @ 200 mA DC	1V Max. @ 200 mA DC
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Yellow LED	Red LED	Red LED (Green LED)	Red LED
Cable	2.9ø, 2C, Grey Oil Resistant PVC		2.9ø, 2C, Black Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	
Sensitivity	55 ~ 65 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	-	-	Surge Suppression	Power Reverse Polarity; Surge Suppression	

Note:
- The max. operating voltage of LS MG-15R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

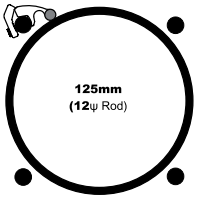
MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches



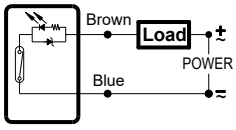
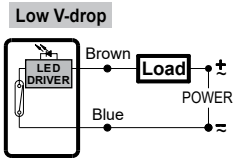
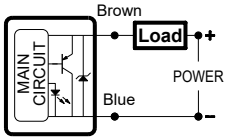
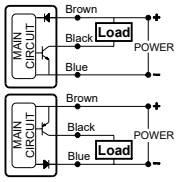
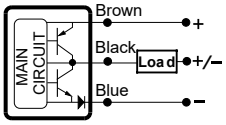
Sensor incorporated into metal bracket assembly for strength and protection



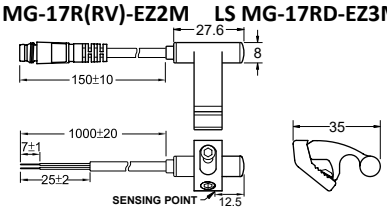
LS MG-17 Series can replace LS MG-20, 21 Series



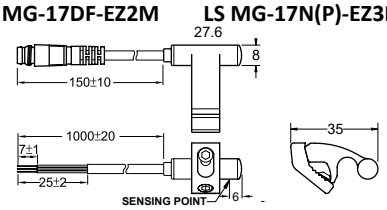
Apply to 32mm to 125mm Tie-Rod Cylinder

	LS MG - 17R	LS MG - 17RV	LS MG - 17DF	LS MG - 17N(P)	LS MG - 17S
CONNECT DIAGRAM					

LS MG-17R(RV) **LS MG-17RD**
LS MG-17R(RV)-QD8 **LS MG-17RD-QD8**
LS MG-17R(RV)-QD12 **LS MG-17RD-QD12**
LS MG-17R(RV)-EZ2M **LS MG-17RD-EZ3M**

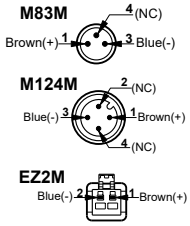


LS MG-17DF **LS MG-17N(P)**
LS MG-17DF-QD8 **LS MG-17N(P)-QD8**
LS MG-17DF-QD12 **LS MG-17N(P)-QD12**
LS MG-17DF-EZ2M **LS MG-17N(P)-EZ3M**

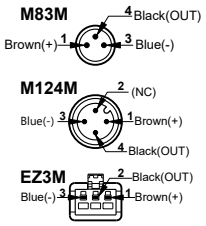


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring

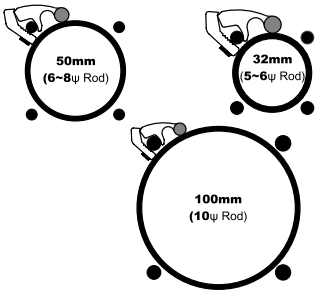


TYPE	LS MG - 17R	LS MG - 17RV	LS MG - 17DF	LS MG - 17N(P)	LS MG - 17S
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking PNP Current Sourcing	NPN/PNP Automatic Detection
Operating Voltage	5~240V DC/AC		10~28V DC	5~30V DC	
Switching Current	100 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.		1.4 W Max.	6 W Max.	
Current Consumption	-		40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100 mA DC	0.9V Max. @ 500 mA DC	2.65V Max. @ 50 mA DC	0.5V Max. @ 200 mA DC	1V Max. @ 200 mA DC
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Yellow LED	Red LED	Red LED (Green LED)	Red LED
Cable	3.3ø, 2C, Oil Resistant PVC		3.3ø, 2C, Oil Resistant PVC	3.3ø, 3C, Oil Resistant PVC	
Sensitivity	55 ~ 65 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	-	-	Surge Suppression	Power Reverse Polarity; Surge Suppression	

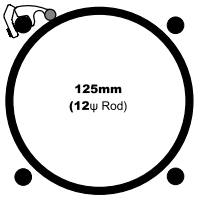
Note:
- The max. operating voltage of LS MG-17R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

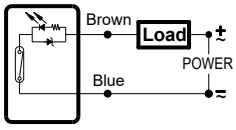
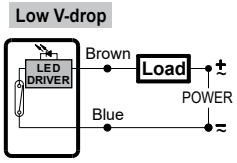
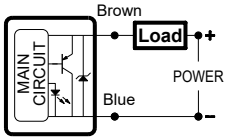
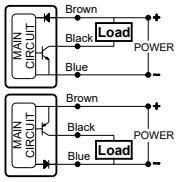
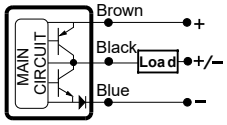
Sensor incorporated into metal bracket assembly for strength and protection



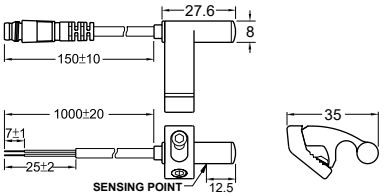
LS MG-18 Series can replace LS MG-20, 21 Series



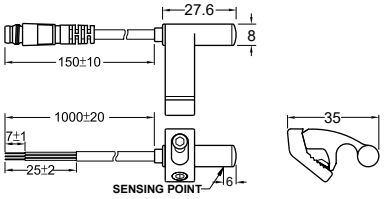
Apply to 32mm to 125mm Tie-Rod Cylinder

	LS MG - 18R	LS MG - 18RV	LS MG - 18DF	LS MG - 18N(P)	LS MG - 18S
CONNECT DIAGRAM					

LS MG-18R(RV) **LS MG-18RD**
LS MG-18R(RV)-QD8 **LS MG-18RD-QD8**
LS MG-18R(RV)-QD12 **LS MG-18RD-QD12**
LS MG-18R(RV)-EZ2M **LS MG-18RD-EZ3M**

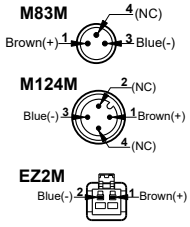


LS MG-18DF **LS MG-18N(P)**
LS MG-18DF-QD8 **LS MG-18N(P)-QD8**
LS MG-18DF-QD12 **LS MG-18N(P)-QD12**
LS MG-18DF-EZ2M **LS MG-18N(P)-EZ3M**

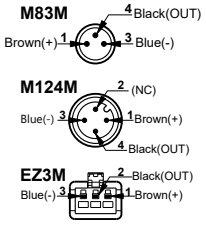


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring

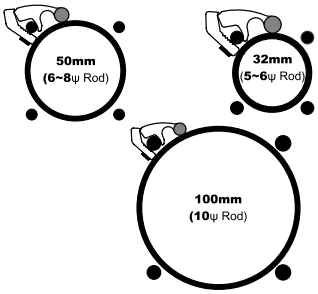


TYPE	LS MG - 18R	LS MG - 18RV	LS MG - 18DF	LS MG - 18N(P)	LS MG - 18S
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking PNP Current Sourcing	NPN/PNP Automatic Detection
Operating Voltage	5~240V DC/AC		10~28V DC	5~30V DC	
Switching Current	100 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.		1.4 W Max.	6 W Max.	
Current Consumption	-		40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100 mA DC	0.9V Max. @ 500 mA DC	2.65V Max. @ 50 mA DC	0.5V Max. @ 200 mA DC	1V Max. @ 200 mA DC
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Yellow LED	Red LED	Red LED (Green LED)	Red LED
Cable	3.3ø, 2C, Oil Resistant PVC		3.3ø, 2C, Oil Resistant PVC	3.3ø, 3C, Oil Resistant PVC	
Sensitivity	55 ~ 65 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	-	-	Surge Suppression	Power Reverse Polarity; Surge Suppression	

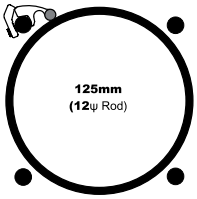
Note:
- The max. operating voltage of LS MG-18R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

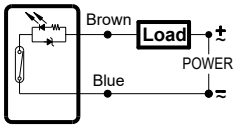
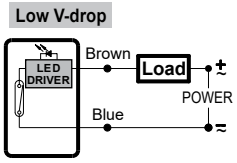
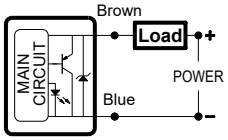
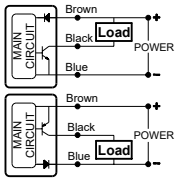
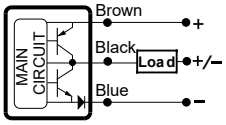
Sensor incorporated into metal bracket assembly for strength and protection



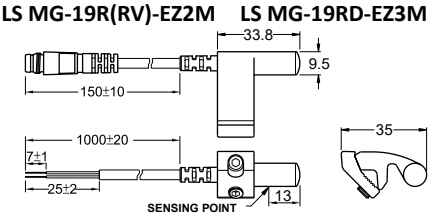
LS MG-19 Series can replace LS MG-20, 21 Series



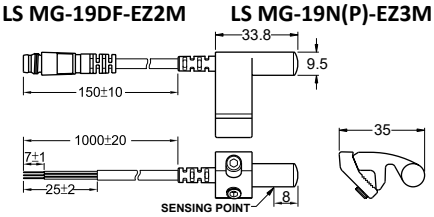
Apply to 32mm to 125mm Tie-Rod Cylinder

	LS MG - 19R	LS MG - 19RV	LS MG - 19DF	LS MG - 19N(P)	LS MG - 19S
CONNECT DIAGRAM					

LS MG-19R(RV) **LS MG-19RD**
LS MG-19R(RV)-QD8 **LS MG-19RD-QD8**
LS MG-19R(RV)-QD12 **LS MG-19RD-QD12**
LS MG-19R(RV)-EZ2M **LS MG-19RD-EZ3M**

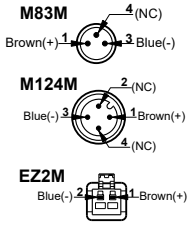


LS MG-19DF **LS MG-19N(P)**
LS MG-19DF-QD8 **LS MG-19N(P)-QD8**
LS MG-19DF-QD12 **LS MG-19N(P)-QD12**
LS MG-19DF-EZ2M **LS MG-19N(P)-EZ3M**

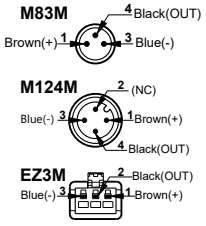


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring



TYPE	LS MG - 19R	LS MG - 19RV	LS MG - 19DF	LS MG - 19N(P)	LS MG - 19S
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking PNP Current Sourcing	NPN/PNP Automatic Detection
Operating Voltage	5~240V DC/AC		10~28V DC	5~30V DC	
Switching Current	100 mA Max.	1000 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.	50 W Max.	1.4 W Max.	6 W Max.	
Current Consumption	-		40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100 mA DC	1.0V Max. @ 1000 mA DC	2.65V Max. @ 50 mA DC	0.5V Max. @ 200 mA DC	1V Max. @ 200 mA DC
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Yellow LED	Red LED	Red LED (Green LED)	Red LED
Cable	4.0ø, 2C, Oil Resistant PVC		4.0ø, 2C, Oil Resistant PVC	4.0ø, 3C, Oil Resistant PVC	
Sensitivity	55 ~ 65 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	-	Surge Suppression	Surge Suppression	Power Reverse Polarity; Surge Suppression	

Note:
- The max. operating voltage of LS MG-19R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

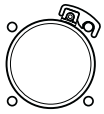
MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

LS MG-20 Series can be replaced by
DFSU, LS MG-49 Series

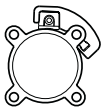
PAB CLAMP

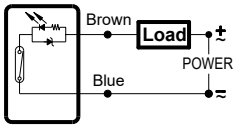
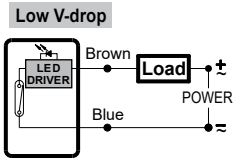
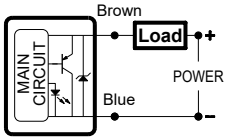
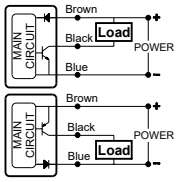
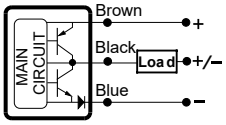
PAC BRACKET

PM BRACKET

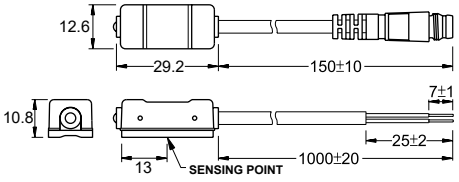


PI BRACKET

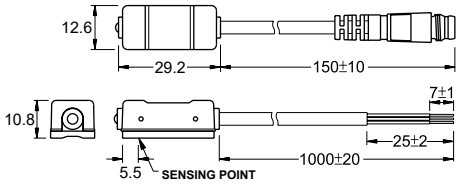


	LS MG - 20R	LS MG - 20RV	LS MG - 20DF	LS MG - 20N(P)	LS MG - 20S
CONNECT DIAGRAM					

LS MG-20R(RV) **LS MG-20RD**
LS MG-20R(RV)-QD8 **LS MG-20RD-QD8**
LS MG-20R(RV)-QD12 **LS MG-20RD-QD12**
LS MG-20R(RV)-EZ2M **LS MG-20RD-EZ3M**

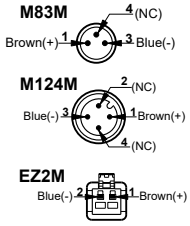


LS MG-20DF **LS MG-20N(P)**
LS MG-20DF-QD8 **LS MG-20N(P)-QD8**
LS MG-20DF-QD12 **LS MG-20N(P)-QD12**
LS MG-20DF-EZ2M **LS MG-20N(P)-EZ3M**

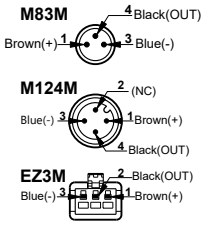


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring



TYPE	LS MG - 20R	LS MG - 20RV	LS MG - 20DF	LS MG - 20N(P)	LS MG - 20S
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking PNP Current Sourcing	NPN/PNP Automatic Detection
Operating Voltage	5~240V DC/AC		10~28V DC	5~30V DC	
Switching Current	100 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.		1.4 W Max.	6 W Max.	
Current Consumption	-		40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100 mA DC	0.9V Max. @ 500 mA DC	2.65V Max. @ 50 mA DC	0.5V Max. @ 200 mA DC	1V Max. @ 200 mA DC
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Yellow LED	Red LED	Red LED (Green LED)	Red LED
Cable	4.0ø, 2C, Oil Resistant PVC		4.0ø, 2C, Oil Resistant PVC	4.0ø, 3C, Oil Resistant PVC	
Sensitivity	55 ~ 65 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	-		Surge Suppression	Power Reverse Polarity; Surge Suppression	

Note:
- The max. operating voltage of LS MG-20R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

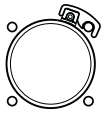
MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

LS MG-21 Series can be replaced by
DFSU, LS MG-49 Series

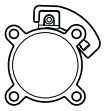
PAB CLAMP

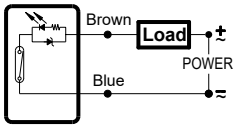
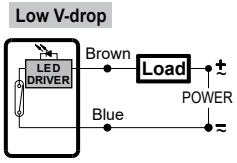
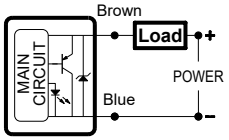
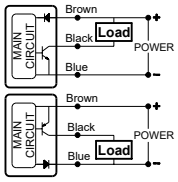
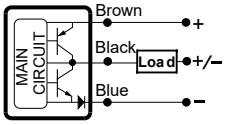
PAC BRACKET

PM BRACKET

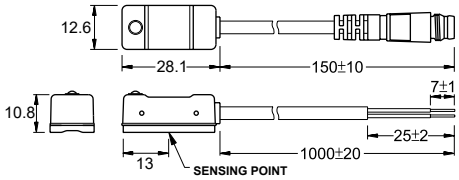


PI BRACKET

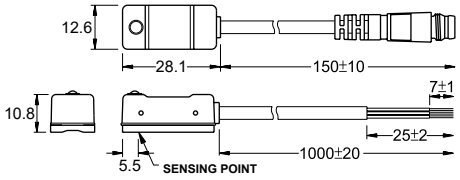


	LS MG - 21R	LS MG - 21RV	LS MG - 21DF	LS MG - 21N(P)	LS MG - 21S
CONNECT DIAGRAM					

LS MG-21R(RV) **LS MG-21RD**
LS MG-21R(RV)-QD8 **LS MG-21RD-QD8**
LS MG-21R(RV)-QD12 **LS MG-21RD-QD12**
LS MG-21R(RV)-EZ2M **LS MG-21RD-EZ3M**

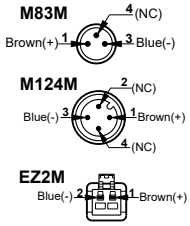


LS MG-21DF **LS MG-21N(P)**
LS MG-21DF-QD8 **LS MG-21N(P)-QD8**
LS MG-21DF-QD12 **LS MG-21N(P)-QD12**
LS MG-21DF-EZ2M **LS MG-21N(P)-EZ3M**

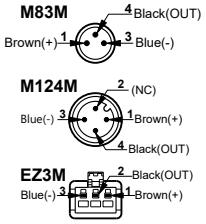


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring



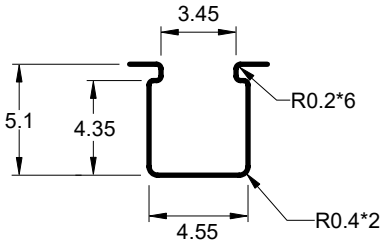
TYPE	LS MG - 21R	LS MG - 21RV	LS MG - 21DF	LS MG - 21N(P)	LS MG - 21S
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking PNP Current Sourcing	NPN/PNP Automatic Detection
Operating Voltage	5~240V DC/AC		10~28V DC	5~30V DC	
Switching Current	100 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.		1.4 W Max.	6 W Max.	
Current Consumption	-		40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100mA DC	0.9V Max. @ 500mA DC	2.65V Max. @ 50mA DC	0.5V Max. @ 200mA DC	1V Max. @ 200mA DC
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Yellow LED	Red LED	Red LED (Green LED)	Red LED
Cable	4.0ø, 2C, Oil Resistant PVC		4.0ø, 2C, Oil Resistant PVC	4.0ø, 3C, Oil Resistant PVC	
Sensitivity	55 ~ 65 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	-		Surge Suppression	Power Reverse Polarity; Surge Suppression	

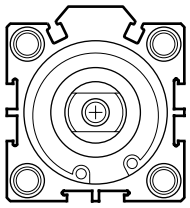
Note:
- The max. operating voltage of LS MG-21R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

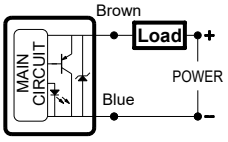
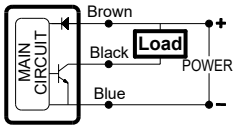
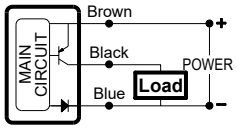
SHORT-STROK CYLINDERS

Strong fixing strength

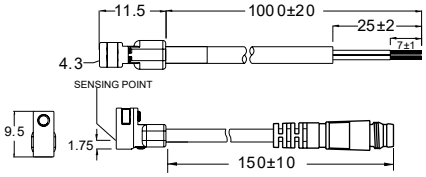
LS MG-22 Series can replace LS MG-01 Series



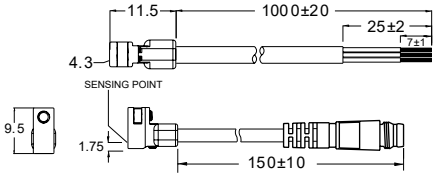


	LS MG - 22DF	LS MG - 22N	LS MG - 22P
CONNECT DIAGRAM			

LS MG-22DF
LS MG-22DF-QD8
LS MG-22DF-QD12
LS MG-22DF-EZ2M

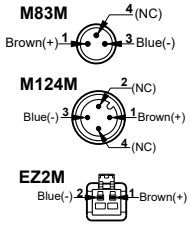


LS MG-22N(P)
LS MG-22N(P)-QD8
LS MG-22N(P)-QD12
LS MG-22N(P)-EZ3M

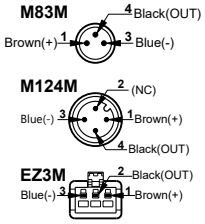


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring



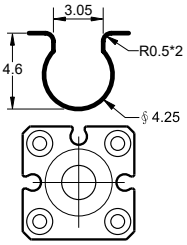
TYPE	LS MG - 22DF	LS MG - 22N	LS MG - 22P
Switching Logic	Normally Open	Solid State Output, Normally Open	
Sensor Type	2 Wire Solid State	NPN Current Sinking	PNP Current Sourcing
Operating Voltage	10~28V DC	5~30V DC	
Switching Current	50 mA Max.	100 mA Max.	
Switching Rating	1.4 W Max.	3 W Max.	
Current Consumption	40 µA Max. @ 24V	7.5 mA Max. @ 24V	7.5 mA Max. @ 24V
Voltage Drop	2.65V Max. @ 50mA DC	0.5V Max. @ 200mA DC	
Leakage Current	90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Red LED	Green LED
Cable	2.9ø, 2C, Oil Resistant PVC	2.9ø, 3C, Oil Resistant PVC	
Sensitivity	40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	1000 Hz	1000 Hz	
Temperature Range	-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	50 G	50 G	
Vibration	9 G	9 G	
Enclosure Classification	IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	Surge Suppression	Power Reverse Polarity; Surge Suppression	

Note: - Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

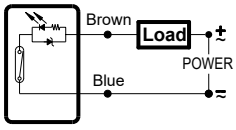
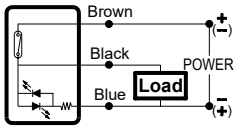
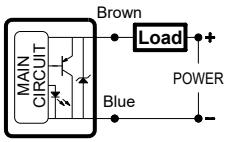
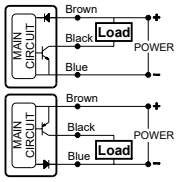
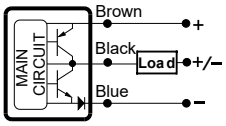
SHORT-STROK CYLINDERS
Strong fixing strength
LS MG-26 Series can replace LS MG-07 Series

GROOVE DIMENSION (SMC)



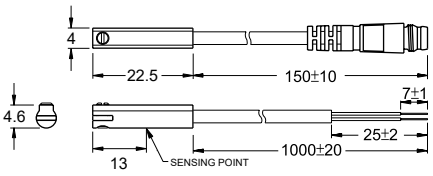
PC+PBL CLAMP

Apply to 6ø to 63ø Round Cylinder

	LS MG - 26R	LS MG - 26RD	LS MG - 26DF	LS MG - 26N(P)	LS MG - 26S
CONNECT DIAGRAM					

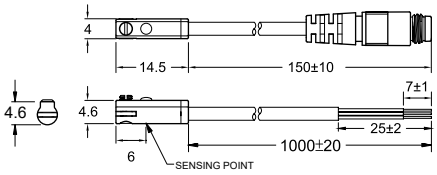
LS MG-26R
LS MG-26R-QD8
LS MG-26R-QD12
LS MG-26R-EZ2M

LS MG-26RD
LS MG-26RD-QD8
LS MG-26RD-QD12
LS MG-26RD-EZ3M



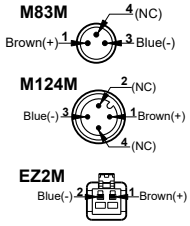
LS MG-26DF
LS MG-26DF-QD8
LS MG-26DF-QD12
LS MG-26DF-EZ2M

LS MG-26N(P)
LS MG-26N(P)-QD8
LS MG-26N(P)-QD12
LS MG-26N(P)-EZ3M

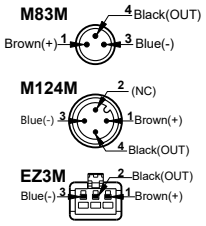


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring

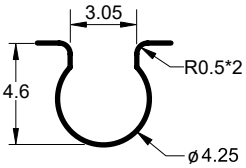


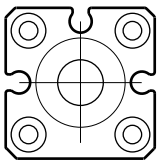
TYPE	LS MG - 26R	LS MG - 26RD	LS MG - 26DF	LS MG - 26N(P)	LS MG - 26S
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking PNP Current Sourcing	NPN/PNP Automatic Detection
Operating Voltage	5~120V DC/AC	5~30V DC	10~28V DC	5~30V DC	
Switching Current	100 mA Max.	300 mA Max.	50 mA Max.	200 mA Max.	100 mA Max.
Switching Rating	3.5 W Max.		1.4 W Max.	6 W Max.	3.5 W Max.
Current Consumption		10 mA Max. @ 24V	40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100 mA DC	0.1V Max. @ 300 mA DC	2.65V Max. @ 50 mA DC	0.5V Max. @ 200 mA DC	1V Max. @ 200 mA DC
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Dual Yellow LED	Red LED	Red LED (Green LED)	Red LED
Cable	2.6ø, 2C, Grey Oil Resistant PVC	2.6ø, 3C, Black Oil Resistant PVC	2.6ø, 2C, Black Oil Resistant PVC	2.6ø, 3C, Black Oil Resistant PVC	
Sensitivity	40 ~ 50 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	1000 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	-		Surge Suppression	Power Reverse Polarity; Surge Suppression	

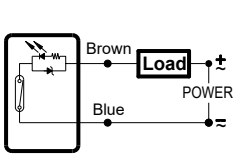
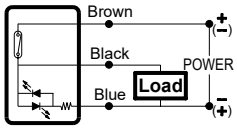
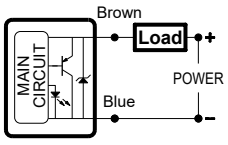
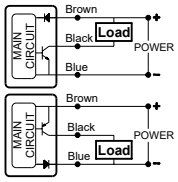
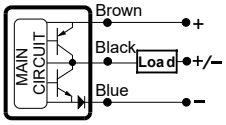
Note:
- The max. operating voltage of LS MG-26R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

SPECIFICALLY FOR SHORT-STROK CYLINDERS
Strong fixing strength

GROOVE DIMENSION (SMC)

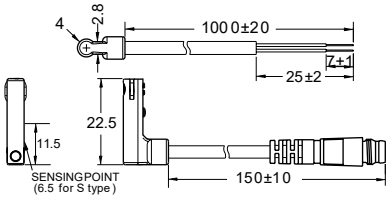




	LS MG - 28R	LS MG - 28RD	LS MG - 28DF	LS MG - 28N(P)	LS MG - 28S
CONNECT DIAGRAM					

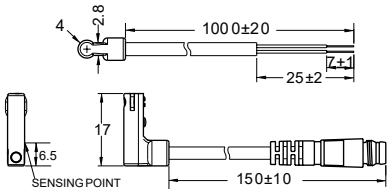
LS MG-28R
LS MG-28R-QD8
LS MG-28R-QD12
LS MG-28R-EZ2M

LS MG-28S
LS MG-28S-QD8
LS MG-28S-QD12
LS MG-28S-EZ3M



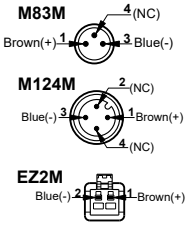
LS MG-28DF
LS MG-28DF-QD8
LS MG-28DF-QD12
LS MG-28DF-EZ2M

LS MG-28N(P)
LS MG-28N(P)-QD8
LS MG-28N(P)-QD12
LS MG-28N(P)-EZ3M

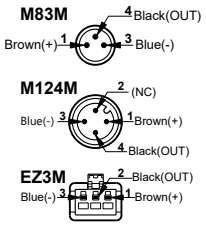


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring

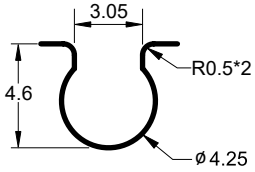


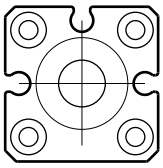
TYPE	LS MG - 28R	LS MG - 28RD	LS MG - 28DF	LS MG - 28N(P)	LS MG - 28S
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking PNP Current Sourcing	NPN/PNP Automatic Detection
Operating Voltage	5~120V DC/AC	5~30V DC	10~28V DC	5~30V DC	
Switching Current	100 mA Max.	300 mA Max.	50 mA Max.	200 mA Max.	100 mA Max.
Switching Rating	3.5 W Max.		1.4 W Max.	6 W Max.	3.5 W Max.
Current Consumption		10 mA Max. @ 24V	40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100 mA DC	0.1V Max. @ 300 mA DC	2.65V Max. @ 50 mA DC	0.5V Max. @ 200 mA DC	1V Max. @ 200 mA DC
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Dual Yellow LED	Red LED	Red LED (Green LED)	Red LED
Cable	2.9ø, 2C, Grey Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	2.9ø, 2C, Black Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	
Sensitivity	40 ~ 50 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	1000 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	-		Surge Suppression	Power Reverse Polarity; Surge Suppression	

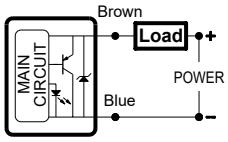
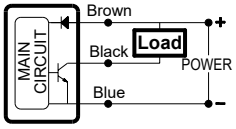
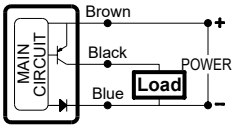
Note:
- The max. operating voltage of LS MG-28R-QD8 is 60V DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

SPECIFICALLY FOR SHORT-STROK CYLINDERS
Strong fixing strength

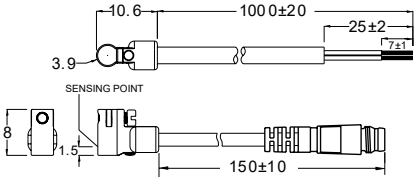
GROOVE DIMENSION (SMC)
LS MG-29 Series can replace LS MG-07 Series



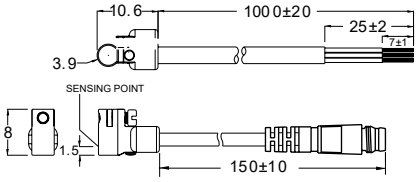


	LS MG - 29DF	LS MG - 29N	LS MG - 29P
CONNECT DIAGRAM			

LS MG-29DF
LS MG-29DF-QD8
LS MG-29DF-QD12
LS MG-29DF-EZ2M

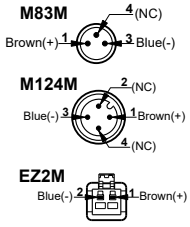


LS MG-29N(P)
LS MG-29N(P)-QD8
LS MG-29N(P)-QD12
LS MG-29N(P)-EZ3M

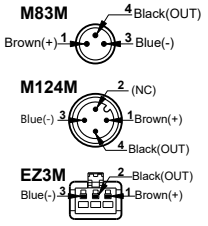


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring

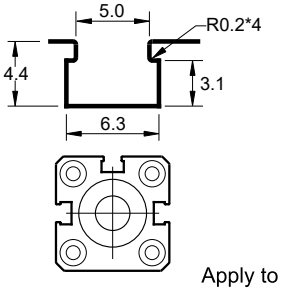


TYPE	LS MG - 29DF	LS MG - 29N	LS MG - 29P
Switching Logic	Normally Open	Solid State Output, Normally Open	
Sensor Type	2 Wire Solid State	NPN Current Sinking	PNP Current Sourcing
Operating Voltage	10~28V DC	5~30V DC	
Switching Current	50 mA Max.	100 mA Max.	
Switching Rating	1.4 W Max.	3 W Max.	
Current Consumption	40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.65V Max. @ 50 mA DC	0.5V Max. @ 200 mA DC	
Leakage Current	90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Red LED	Green LED
Cable	2.9ø, 2C, Oil Resistant PVC	2.9ø, 3C, Oil Resistant PVC	
Sensitivity	40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	1000 Hz	1000 Hz	
Temperature Range	-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	50 G	50 G	
Vibration	9 G	9 G	
Enclosure Classification	IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	Surge Suppression	Power Reverse Polarity; Surge Suppression	

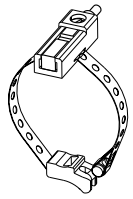
Note: - Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

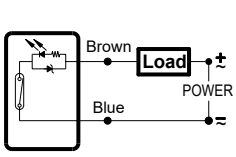
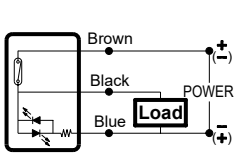
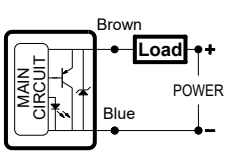
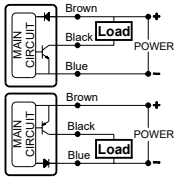
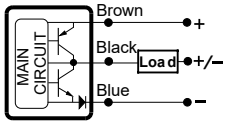
GROOVE DIMENSION (FESTO)
LS MG-30 Series can be replaced by LS MG-39 Series



PBI CLAMP

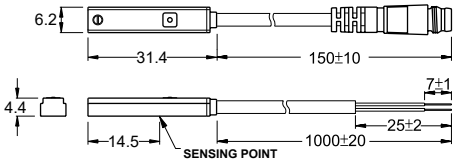


Apply to 6ø to 63ø Round Cylinder

	LS MG - 30R	LS MG - 30RD	LS MG - 30DF	LS MG - 30N(P)	LS MG - 30S
CONNECT DIAGRAM					

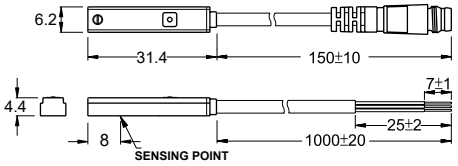
LS MG-30R
LS MG-30R-QD8
LS MG-30R-QD12
LS MG-30R-EZ2M

LS MG-30RD
LS MG-30RD-QD8
LS MG-30RD-QD12
LS MG-30RD-EZ3M



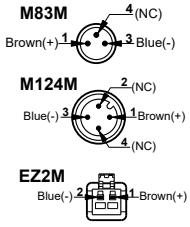
LS MG-30DF
LS MG-30DF-QD8
LS MG-30DF-QD12
LS MG-30DF-EZ2M

LS MG-30N(P)
LS MG-30N(P)-QD8
LS MG-30N(P)-QD12
LS MG-30N(P)-EZ3M

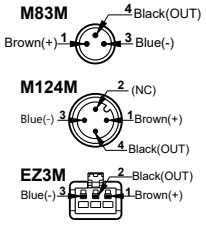


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring

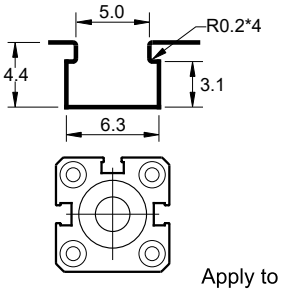


TYPE	LS MG - 30R	LS MG - 30RD	LS MG - 30DF	LS MG - 30N(P)	LS MG - 30S
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking PNP Current Sourcing	NPN/PNP Automatic Detection
Operating Voltage	5~240V DC/AC	5~30V DC	10~28V DC	5~30V DC	
Switching Current	100 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.		1.4 W Max.	6 W Max.	
Current Consumption	-	10 mA Max. @ 24V	40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100mA DC	0.1V Max. @ 500mA DC	2.65V Max. @ 50mA DC	0.5V Max. @ 200mA DC	1V Max. @ 200mA DC
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Dual Yellow LED	Red LED	Red LED (Green LED)	Red LED
Cable	2.9ø, 2C, Grey Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	2.9ø, 2C, Black Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	
Sensitivity	35 ~ 45 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	-		Surge Suppression	Power Reverse Polarity; Surge Suppression	

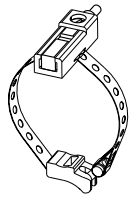
Note:
- The max. operating voltage of LS MG-30R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

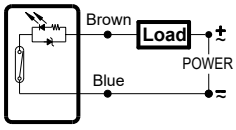
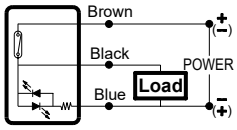
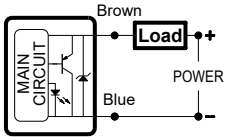
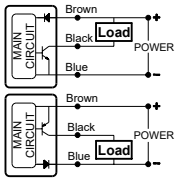
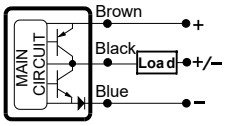
GROOVE DIMENSION (FESTO)
LS MG-30 Series can be replaced by LS MG-39 Series



PBI CLAMP

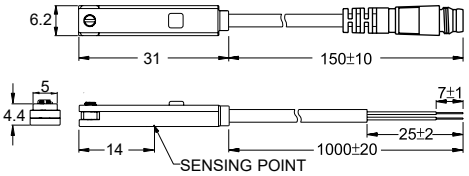


Apply to 6ø to 63ø Round Cylinder

	LS MG - 31R	LS MG - 31RD	LS MG - 31DF	LS MG - 31N(P)	LS MG - 31S
CONNECT DIAGRAM					

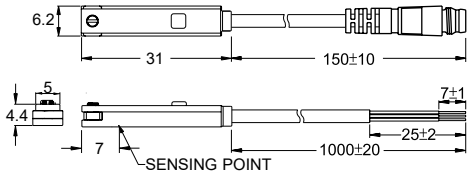
LS MG-31R
LS MG-31R-QD8
LS MG-31R-QD12
LS MG-31R-EZ2M

LS MG-31RD
LS MG-31RD-QD8
LS MG-31RD-QD12
LS MG-31RD-EZ3M



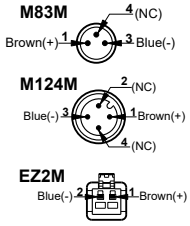
LS MG-31DF
LS MG-31DF-QD8
LS MG-31DF-QD12
LS MG-31DF-EZ2M

LS MG-31N(P)
LS MG-31N(P)-QD8
LS MG-31N(P)-QD12
LS MG-31N(P)-EZ3M

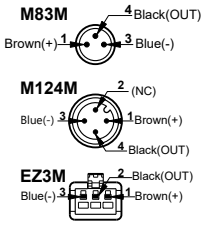


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring



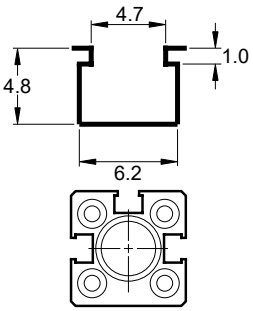
TYPE	LS MG - 31R	LS MG - 31RD	LS MG - 31DF	LS MG - 31N(P)	LS MG - 31S
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking PNP Current Sourcing	NPN/PNP Automatic Detection
Operating Voltage	5~240V DC/AC	5~30V DC	10~28V DC	5~30V DC	
Switching Current	100 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.		1.4 W Max.	6 W Max.	
Current Consumption	-	10 mA Max. @ 24V	40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100mA DC	0.1V Max. @ 500mA DC	2.65V Max. @ 50mA DC	0.5V Max. @ 200mA DC	1V Max. @ 200mA DC
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Dual Yellow LED	Red LED	Red LED (Green LED)	Red LED
Cable	2.9ø, 2C, Grey Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	2.9ø, 2C, Black Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	
Sensitivity	35 ~ 45 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	-		Surge Suppression	Power Reverse Polarity; Surge Suppression	

Note:
- The max. operating voltage of LS MG-31R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

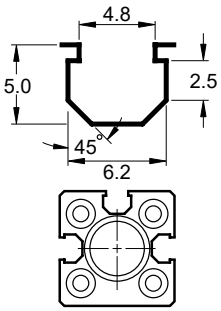
MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

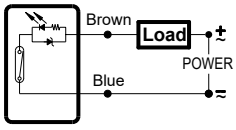
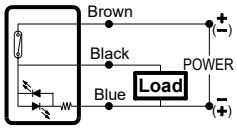
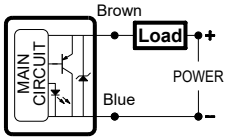
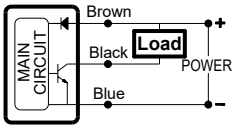
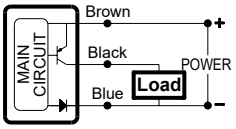
GROOVE DIMENSION

(CKD)



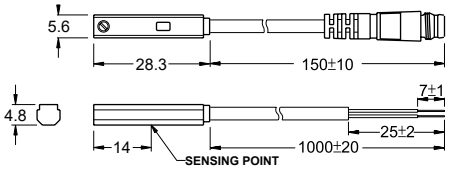
(TAIYO)



	LS MG - 32R	LS MG - 32RD	LS MG - 32DF	LS MG - 32N	LS MG - 32P
CONNECT DIAGRAM					

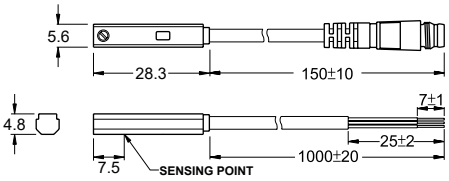
LS MG-32R
LS MG-32R-QD8
LS MG-32R-QD12
LS MG-32R-EZ2M

LS MG-32RD
LS MG-32RD-QD8
LS MG-32RD-QD12
LS MG-32RD-EZ3M



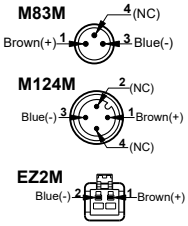
LS MG-32DF
LS MG-32DF-QD8
LS MG-32DF-QD12
LS MG-32DF-EZ2M

LS MG-32N(P)
LS MG-32N(P)-QD8
LS MG-32N(P)-QD12
LS MG-32N(P)-EZ3M

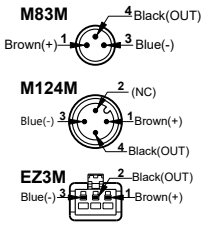


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring

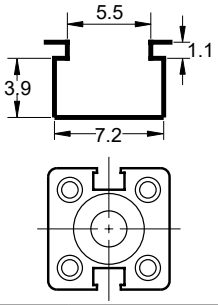


TYPE	LS MG - 32R	LS MG - 32RD	LS MG - 32DF	LS MG - 32N	LS MG - 32P
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking	PNP Current Sourcing
Operating Voltage	5~240V DC/AC	5~30V DC	10~28V DC	5~30V DC	
Switching Current	100 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.		1.4 W Max.	6 W Max.	
Current Consumption	-	10 mA Max. @ 24V	40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100mA DC	0.1V Max. @ 500mA DC	2.65V Max. @ 50mA DC	0.5V Max. @ 200mA DC	
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Dual Yellow LED	Red LED	Red LED	Green LED
Cable	2.9ø, 2C, Grey Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	2.9ø, 2C, Black Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	
Sensitivity	30 ~ 40 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	-		Surge Suppression	Power Reverse Polarity; Surge Suppression	

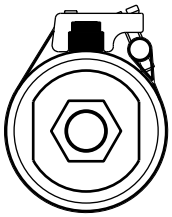
Note:
- The max. operating voltage of LS MG-32R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

GROOVE DIMENSION (SMC)

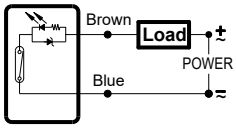
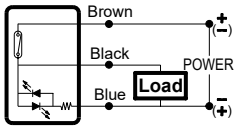
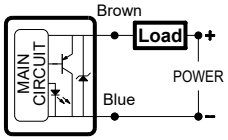
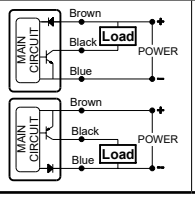
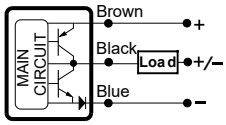
LS MG-33 Series can be replaced by LS MG-39 Series



PBS CLAMP

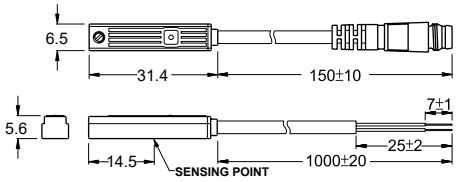


Apply to 6ø to 63ø Round Cylinder

	LS MG - 33R	LS MG - 33RD	LS MG - 33DF	LS MG - 33N(P)	LS MG - 33S
CONNECT DIAGRAM					

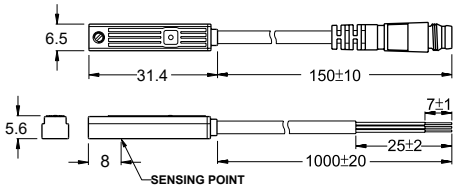
LS MG-33R
LS MG-33R-QD8
LS MG-33R-QD12
LS MG-33R-EZ2M

LS MG-33RD
LS MG-33RD-QD8
LS MG-33RD-QD12
LS MG-33RD-EZ3M



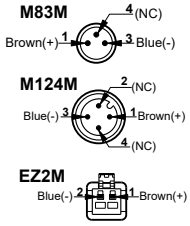
LS MG-33DF
LS MG-33DF-QD8
LS MG-33DF-QD12
LS MG-33DF-EZ2M

LS MG-33N(P)
LS MG-33N(P)-QD8
LS MG-33N(P)-QD12
LS MG-33N(P)-EZ3M

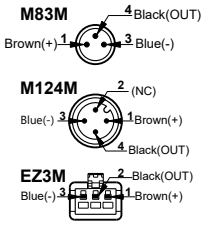


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring

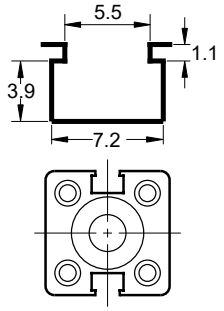


TYPE	LS MG - 33R	LS MG - 33RD	LS MG - 33DF	LS MG - 33N(P)	LS MG - 33S
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking PNP Current Sourcing	NPN/PNP Automatic Detection
Operating Voltage	5~240V DC/AC	5~30V DC	10~28V DC	5~30V DC	
Switching Current	100 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.		1.4 W Max.	6 W Max.	
Current Consumption	-	10 mA Max. @ 24V	40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100mA DC	0.1V Max. @ 500mA DC	2.65V Max. @ 50mA DC	0.5V Max. @ 200mA DC	1V Max. @ 200mA DC
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Dual Yellow LED	Red LED	Red LED(Green LED)	Red LED
Cable	2.9ø, 2C, Grey Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	2.9ø, 2C, Black Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	
Sensitivity	35 ~ 45 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	-		Surge Suppression	Power Reverse Polarity; Surge Suppression	

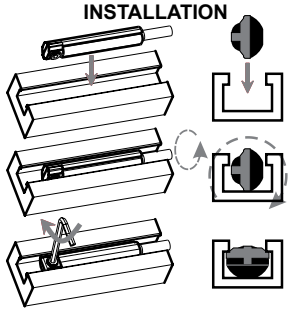
Note:
- The max. operating voltage of LS MG-33R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

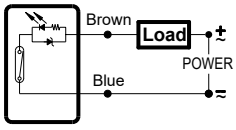
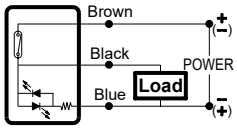
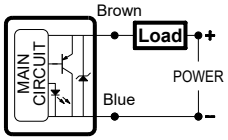
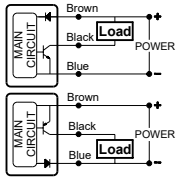
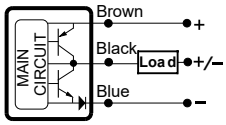
MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

GROOVE DIMENSION (SMC)
LS MG-35 Series can be replaced by LS MG-39 Series



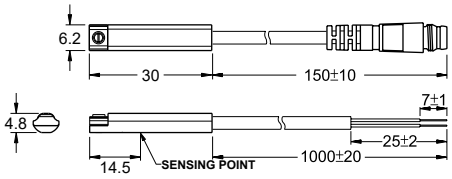
INSTALLATION



	LS MG - 35R	LS MG - 35RD	LS MG - 35DF	LS MG - 35N(P)	LS MG - 35S
CONNECT DIAGRAM					

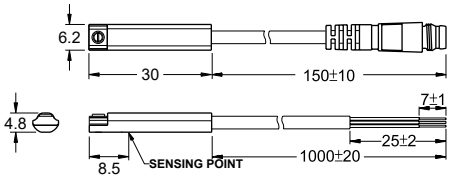
LS MG-35R
LS MG-35R-QD8
LS MG-35R-QD12
LS MG-35R-EZ2M

LS MG-35RD
LS MG-35RD-QD8
LS MG-35RD-QD12
LS MG-35RD-EZ3M



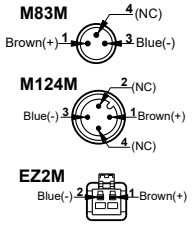
LS MG-35DF
LS MG-35DF-QD8
LS MG-35DF-QD12
LS MG-35DF-EZ2M

LS MG-35N(P)
LS MG-35N(P)-QD8
LS MG-35N(P)-QD12
LS MG-35N(P)-EZ3M

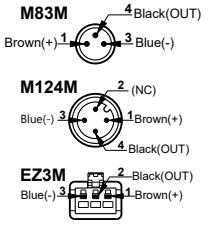


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring

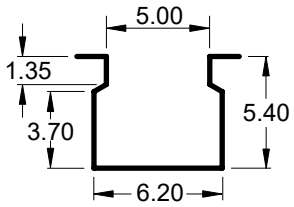


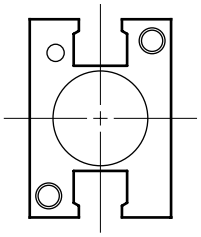
TYPE	LS MG - 35R	LS MG - 35RD	LS MG - 35DF	LS MG - 35N(P)	LS MG - 35S
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking PNP Current Sourcing	NPN/PNP Automatic Detection
Operating Voltage	5~240V DC/AC	5~30V DC	10~28V DC	5~30V DC	
Switching Current	100 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.		1.4 W Max.	6 W Max.	
Current Consumption	-	10 mA Max. @ 24V	40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100mA DC	0.1V Max. @ 500mA DC	2.65V Max. @ 50mA DC	0.5V Max. @ 200mA DC	1V Max. @ 200mA DC
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Dual Yellow LED	Red LED	Red LED(Green LED)	Red LED
Cable	2.9ø, 2C, Grey Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	2.9ø, 2C, Black Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	
Sensitivity	35 ~ 45 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	-		Surge Suppression	Power Reverse Polarity; Surge Suppression	

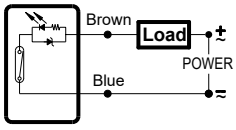
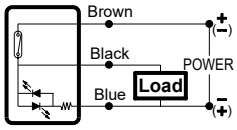
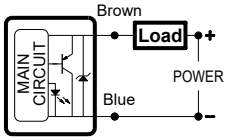
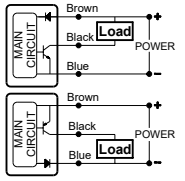
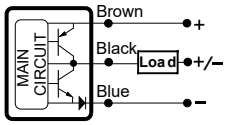
Note:
- The max. operating voltage of LS MG-35R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

GROOVE DIMENSION (SMC)

LS MG-36 Series can be replaced by LS MG-39 Series

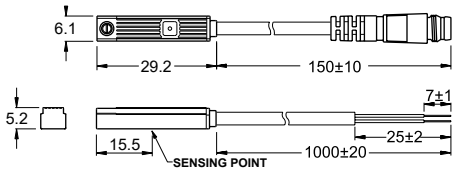




	LS MG - 36R	LS MG - 36RD	LS MG - 36DF	LS MG - 36N(P)	LS MG - 36S
CONNECT DIAGRAM					

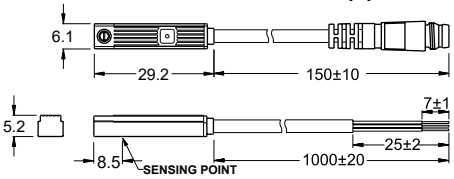
LS MG-36R
LS MG-36R-QD8
LS MG-36R-QD12
LS MG-36R-EZ2M

LS MG-36RD
LS MG-36RD-QD8
LS MG-36RD-QD12
LS MG-36RD-EZ3M



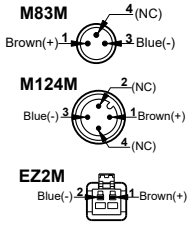
LS MG-36DF
LS MG-36DF-QD8
LS MG-36DF-QD12
LS MG-36DF-EZ2M

LS MG-36N(P)
LS MG-36N(P)-QD8
LS MG-36N(P)-QD12
LS MG-36N(P)-EZ3M

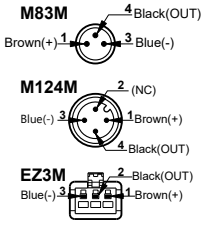


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



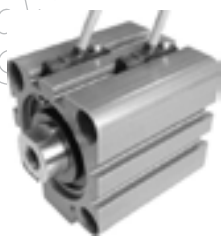
3 wire QD wiring



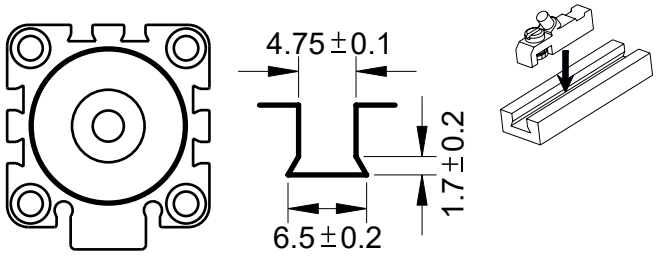
TYPE	LS MG - 36R	LS MG - 36RD	LS MG - 36DF	LS MG - 36N(P)	LS MG - 36S
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking PNP Current Sourcing	NPN/PNP Automatic Detection
Operating Voltage	5~240V DC/AC	5~30V DC	10~28V DC	5~30V DC	
Switching Current	100 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.		1.4 W Max.	6 W Max.	
Current Consumption	-	10 mA Max. @ 24V	40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100mA DC	0.1V Max. @ 500mA DC	2.65V Max. @ 50mA DC	0.5V Max. @ 200mA DC	1V Max. @ 200mA DC
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Dual Yellow LED	Red LED	Red LED(Green LED)	Red LED
Cable	2.9ø, 2C, Grey Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	2.9ø, 2C, Black Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	
Sensitivity	35 ~ 45 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	-		Surge Suppression	Power Reverse Polarity; Surge Suppression	

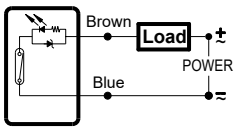
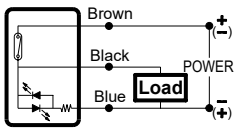
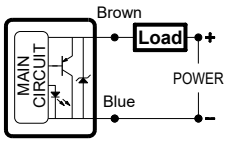
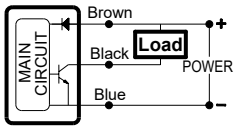
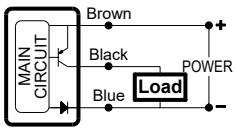
Note:
- The max. operating voltage of LS MG-36R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches



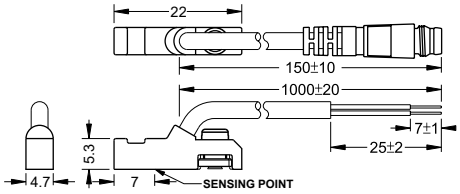
GROOVE DIMENSION
(1/4 INCH 60 DEGREE DOVETAIL))



	LS MG - 38R	LS MG - 38RD	LS MG - 38DF	LS MG - 38N	LS MG - 38P
CONNECT DIAGRAM					

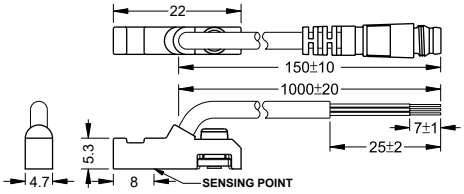
LS MG-38R
LS MG-38R-QD8
LS MG-38R-QD12
LS MG-38R-EZ2M

LS MG-38RD
LS MG-38RD-QD8
LS MG-38RD-QD12
LS MG-38RD-EZ3M



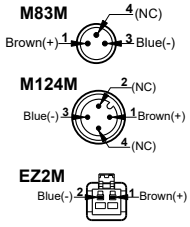
LS MG-38DF
LS MG-38DF-QD8
LS MG-38DF-QD12
LS MG-38DF-EZ2M

LS MG-38N(P)
LS MG-38N(P)-QD8
LS MG-38N(P)-QD12
LS MG-38N(P)-EZ3M

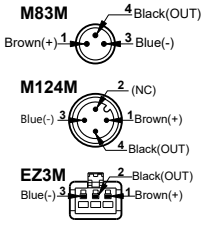


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring

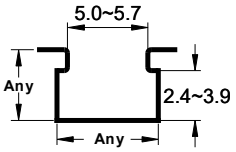


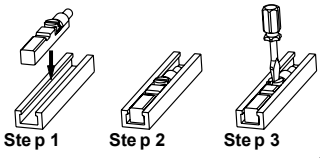
TYPE	LS MG - 38R	LS MG - 38RD	LS MG - 38DF	LS MG - 38N	LS MG - 38P
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking	PNP Current Sourcing
Operating Voltage	5~120V DC/AC	5~30V DC	10~28V DC	5~30V DC	
Switching Current	100 mA Max.	300 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	3.5 W Max.		1.4 W Max.	6 W Max.	
Current Consumption	-	10 mA Max. @ 24V	40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100mA DC	0.1V Max. @ 300mA DC	2.65V Max. @ 50mA DC	0.5V Max. @ 200mA DC	
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Dual Yellow LED	Red LED	Red LED	Green LED
Cable	2.9ø, 2C, Grey Oil Resistant PUR	2.9ø, 3C, Black Oil Resistant PUR	2.9ø, 2C, Black Oil Resistant PUR	2.9ø, 3C, Black Oil Resistant PUR	
Sensitivity	30 ~ 40 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	500 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	-		Surge Suppression	Power Reverse Polarity; Surge Suppression	

Note:
- The max. operating voltage of LS MG-38R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

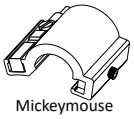
MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

FOR ALL - T SLOTS
(FESTO, SMC, PARKER etc.)

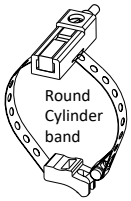


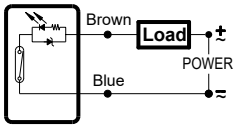
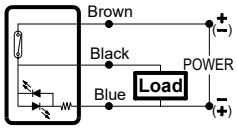
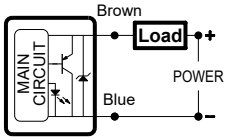
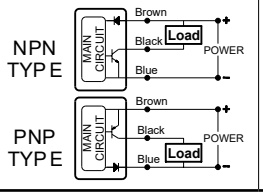
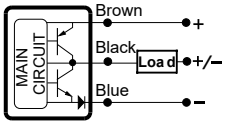


Tie-Rod
Cylinder Clamp



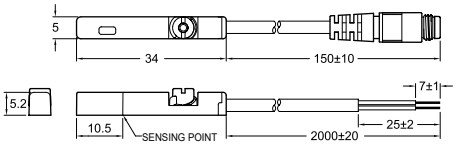
Mickeymouse
Cylinder Bracket



	LS MG - 39R	LS MG - 39RD	LS MG - 39DF	LS MG - 39N(P)	LS MG - 39S
CONNECT DIAGRAM					

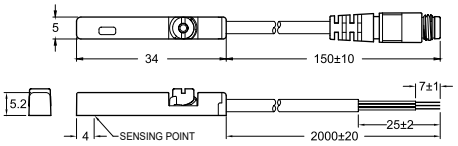
LS MG-39R
LS MG-39R-QD8
LS MG-39R-QD12
LS MG-39R-EZ2M

LS MG-39RD
LS MG-39RD-QD8
LS MG-39RD-QD12
LS MG-39RD-EZ3M



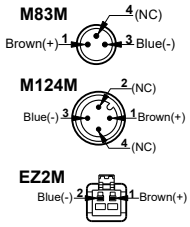
LS MG-39DF
LS MG-39DF-QD8
LS MG-39DF-QD12
LS MG-39DF-EZ2M

LS MG-39N(P)
LS MG-39N(P)-QD8
LS MG-39N(P)-QD12
LS MG-39N(P)-EZ3M

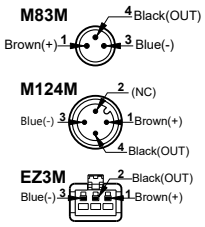


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring

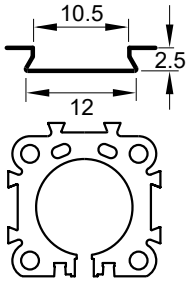


TYPE	LS MG - 39R	LS MG - 39RD	LS MG - 39DF	LS MG - 39N(P)	LS MG - 39S
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking PNP Current Sourcing	NPN/PNP Automatic Detection
Operating Voltage	5~240V DC/AC	5~30V DC	10~28V DC	5~30V DC	
Switching Current	100 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	100 mA Max.
Switching Rating	10 W Max.		1.4 W Max.	6 W Max.	3 W Max.
Current Consumption	-	10 mA Max. @ 24V	40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100mA DC	0.1V Max. @ 500mA DC	2.65V Max. @ 50mA DC	0.5V Max. @ 200mA DC	1V Max. @ 200mA DC
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Dual Yellow LED	Red LED	Red LED(Green LED)	Red LED
Cable	2.9ø, 2C, Grey Oil Resistant PUR	2.9ø, 3C, Black Oil Resistant PUR	2.9ø, 2C, Black Oil Resistant PUR	2.9ø, 3C, Black Oil Resistant PUR	
Sensitivity	35 ~ 45 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	-		Surge Suppression	Power Reverse Polarity; Surge Suppression	

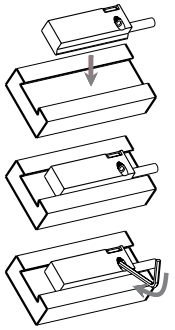
Note:
- The max. operating voltage of LS MG-39R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

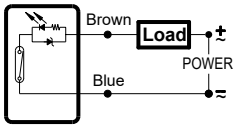
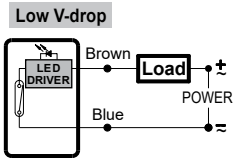
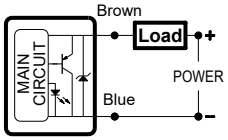
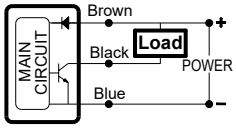
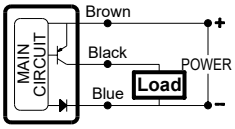
MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

GROOVE DIMENSION (ORIGA)

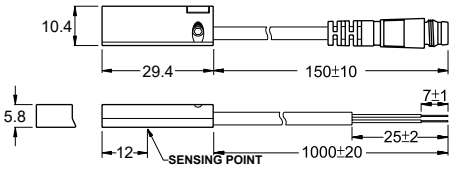


INSTALLATION

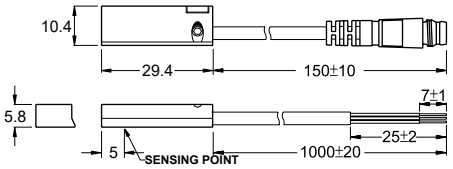


	LS MG - 40R	LS MG - 40RV	LS MG - 40DF	LS MG - 40N	LS MG - 40P
CONNECT DIAGRAM					

LS MG-40R(RV)
LS MG-40R(RV)-QD8
LS MG-40R(RV)-QD12
LS MG-40R(RV)-EZ2M
LS MG-40RD
LS MG-40RD-QD8
LS MG-40RD-QD12
LS MG-40RD-EZ3M

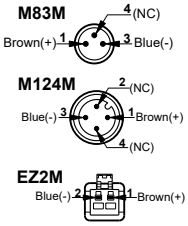


LS MG-40DF
LS MG-40DF-QD8
LS MG-40DF-QD12
LS MG-40DF-EZ2M
LS MG-40N(P)
LS MG-40N(P)-QD8
LS MG-40N(P)-QD12
LS MG-40N(P)-EZ3M

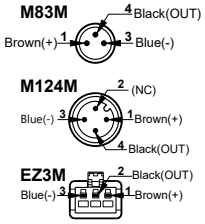


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring

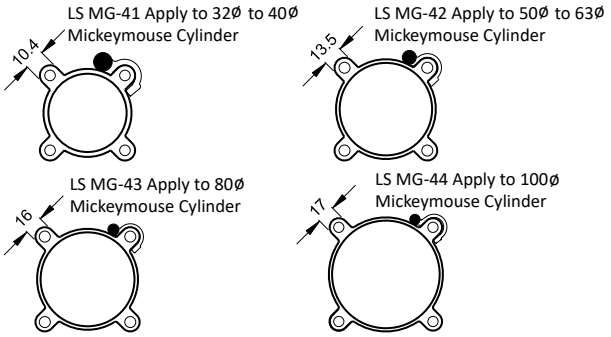


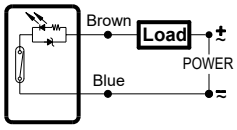
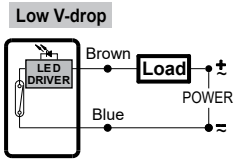
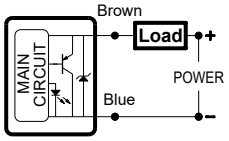
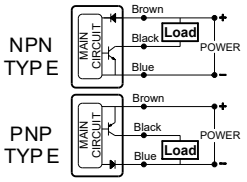
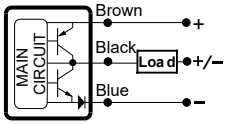
TYPE	LS MG - 40R	LS MG - 40RV	LS MG - 40DF	LS MG - 40N	LS MG - 40P
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking	PNP Current Sourcing
Operating Voltage	5~240V DC/AC		10~28V DC	5~30V DC	
Switching Current	200 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.		1.4 W Max.	6 W Max.	
Current Consumption	-		40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 200mA DC	0.9V Max. @ 500mA DC	2.65V Max. @ 50mA DC	1V Max. @ 200mA DC	
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Yellow LED	Red LED	Red LED	Green LED
Cable	2.9ø, 3C, Black Oil Resistant PVC		2.9ø, 2C, Black Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	
Sensitivity	35 ~ 45 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	-		Surge Suppression	Power Reverse Polarity; Surge Suppression; O/P Short Circuit Protect	

Note:
- The max. operating voltage of LS MG-40R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

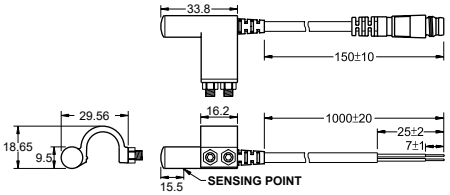
MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

LS MG-41~44 Series can replace LS MG-20, 21 Series

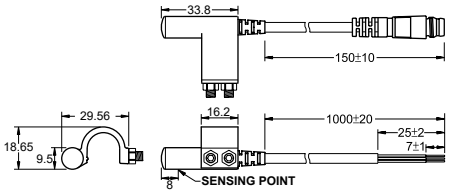


	LS MG - 41~44R	LS MG - 41~44RV	LS MG - 41~44DF	LS MG - 41~44N(P)	LS MG - 41~44S
CONNECT DIAGRAM					

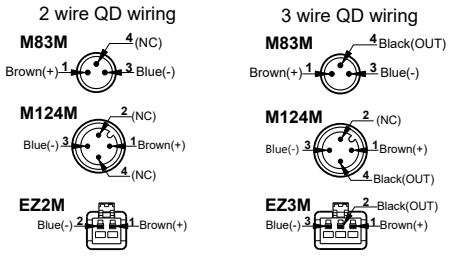
LS MG-41~44R(RV) **LS MG-41~44RD**
LS MG-41~44R(RV)-QD8 **LS MG-41~44RD-QD8**
LS MG-41~44R(RV)-QD12 **LS MG-41~44RD-QD12**
LS MG-41~44R(RV)-EZ2M **LS MG-41~44RD-EZ3M**



LS MG-41~44DF **LS MG-41~44N(P)**
LS MG-41~44DF-QD8 **LS MG-41~44N(P)-QD8**
LS MG-41~44DF-QD12 **LS MG-41~44N(P)-QD12**
LS MG-41~44DF-EZ2M **LS MG-41~44N(P)-EZ3M**



M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)



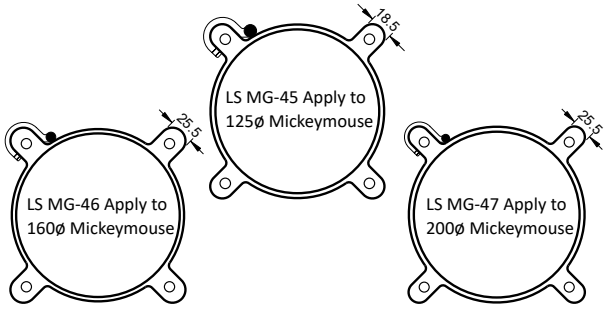
TYPE	LS MG - 41~44R	LS MG - 41~44RV	LS MG - 41~44DF	LS MG - 41~44N(P)	LS MG - 41~44S
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking PNP Current Sourcing	NPN/PNP Automatic Detection
Operating Voltage	5~240V DC/AC		10~28V DC	5~30V DC	
Switching Current	100 mA Max.	1000 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.	50 W Max.	1.4 W Max.	6 W Max.	
Current Consumption	-		40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100mA DC	1.0V Max. @ 1000mA DC	2.65V Max. @ 50mA DC	0.5V Max. @ 200mA DC	1V Max. @ 200mA DC
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Yellow LED	Red LED	Red LED(Green LED)	Red LED
Cable	4.0ø, 2C, Oil Resistant PVC		4.0ø, 2C, Oil Resistant PVC	4.0ø, 3C, Oil Resistant PVC	
Sensitivity	55 ~ 65 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit		Surge Suppression	Surge Suppression	Power Reverse Polarity; Surge Suppression	

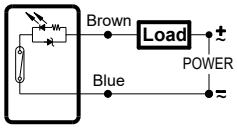
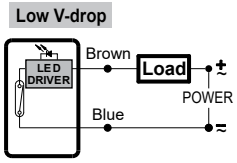
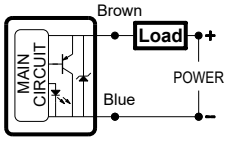
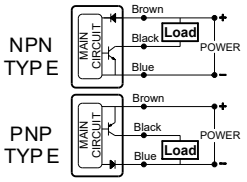
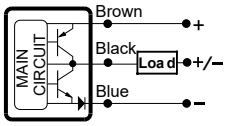
Note:
- The max. operating voltage of LS MG-41~44R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

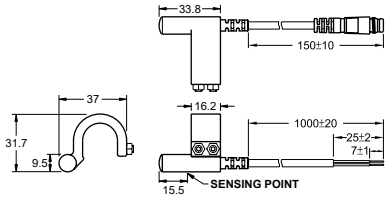
Apply to BIG SIZE Mickeymouse Cylinder

LS MG-45~47 Series can replace LS MG-20, 21 Series

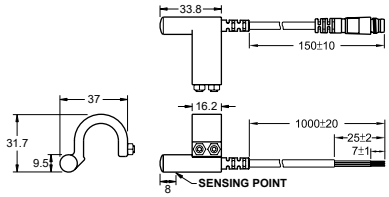


	LS MG - 45~47R	LS MG - 45~47RV	LS MG - 45~47DF	LS MG - 45~47N(P)	LS MG - 45~47S
CONNECT DIAGRAM					

LS MG-45~47R(RV) **LS MG-45~47RD**
LS MG-45~47R(RV)-QD8 **LS MG-45~47RD-QD8**
LS MG-45~47R(RV)-QD12 **LS MG-45~47RD-QD12**
LS MG-45~47R(RV)-EZ2M **LS MG-45~47RD-EZ3M**

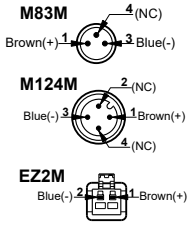


LS MG-45~47DF **LS MG-45~47N(P)**
LS MG-45~47DF-QD8 **LS MG-45~47N(P)-QD8**
LS MG-45~47DF-QD12 **LS MG-45~47N(P)-QD12**
LS MG-45~47DF-EZ2M **LS MG-45~47N(P)-EZ3M**

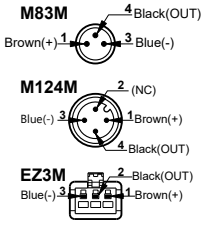


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring

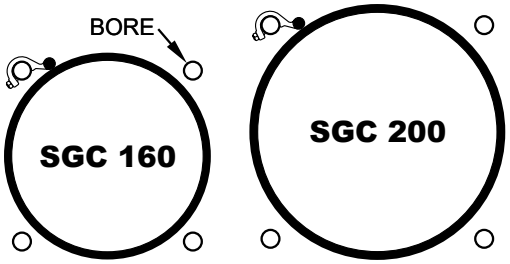


TYPE	LS MG - 45~47R	LS MG - 45~47RV	LS MG - 45~47DF	LS MG - 45~47N(P)	LS MG - 45~47S
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking PNP Current Sourcing	NPN/PNP Automatic Detection
Operating Voltage	5~240V DC/AC		10~28V DC	5~30V DC	
Switching Current	100 mA Max.	1000 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.	50 W Max.	1.4 W Max.	6 W Max.	
Current Consumption	-		40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100mA DC	1.0V Max. @ 1000mA DC	2.65V Max. @ 50mA DC	0.5V Max. @ 200mA DC	1V Max. @ 200mA DC
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Yellow LED	Red LED	Red LED(Green LED)	Red LED
Cable	4.0ø, 2C, Oil Resistant PVC		4.0ø, 2C, Oil Resistant PVC	4.0ø, 3C, Oil Resistant PVC	
Sensitivity	55 ~ 65 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit		Surge Suppression	Surge Suppression	Power Reverse Polarity; Surge Suppression	

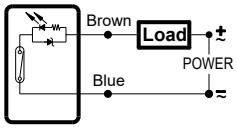
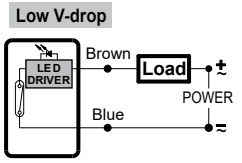
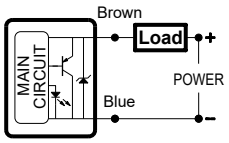
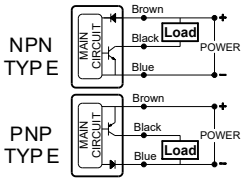
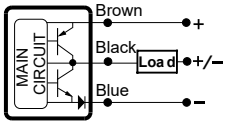
Note:
- The max. operating voltage of LS MG-45~47R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

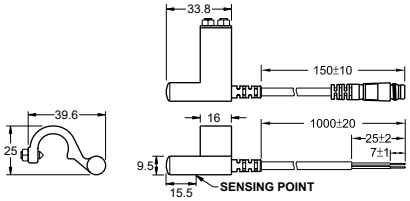
Apply to BIG SIZE
TIE-ROD(SGC) CYLINDER



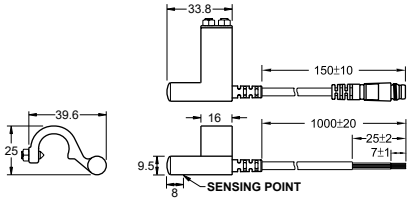
Apply to Bore Size from 14.5ø to 15ø

	LS MG - 48R	LS MG - 48R	LS MG - 48DF	LS MG - 48N(P)	LS MG - 48S
CONNECT DIAGRAM					

LS MG-48R(RV) **LS MG-48RD**
LS MG-48R(RV)-QD8 **LS MG-48RD-QD8**
LS MG-48R(RV)-QD12 **LS MG-48RD-QD12**
LS MG-48R(RV)-EZ2M **LS MG-48RD-EZ3M**

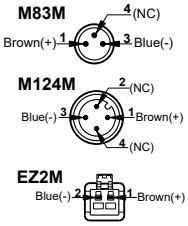


LS MG-48DF **LS MG-48N(P)**
LS MG-48DF-QD8 **LS MG-48N(P)-QD8**
LS MG-48DF-QD12 **LS MG-48N(P)-QD12**
LS MG-48DF-EZ2M **LS MG-48N(P)-EZ3M**

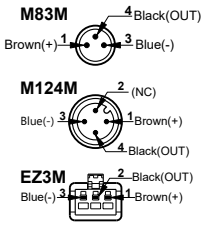


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring

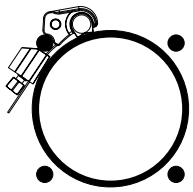


TYPE	LS MG - 48R	LS MG - 48RV	LS MG - 48DF	LS MG - 48N(P)	LS MG - 48S
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking PNP Current Sourcing	NPN/PNP Automatic Detection
Operating Voltage	5~240V DC/AC		10~28V DC	5~30V DC	
Switching Current	100 mA Max.	1000 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.	50 W Max.	1.4 W Max.	6 W Max.	
Current Consumption	-		40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100mA DC	1.0V Max. @ 1000mA DC	2.65V Max. @ 50mA DC	0.5V Max. @ 200mA DC	1V Max. @ 200mA DC
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Yellow LED	Red LED	Red LED(Green LED)	Red LED
Cable	4.0ø, 2C, Oil Resistant PVC		4.0ø, 2C, Oil Resistant PVC	4.0ø, 3C, Oil Resistant PVC	
Sensitivity	55 ~ 65 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit		Surge Suppression	Surge Suppression	Power Reverse Polarity; Surge Suppression	

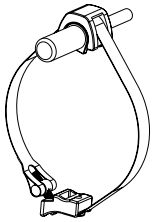
Note:
- The max. operating voltage of LS MG-48R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

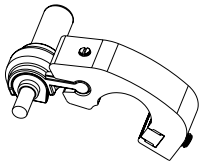
TIE-ROD, ROUND AND MICKEYMOUSE CYLINDER
LS MG-49 Series can replace LS MG-20, 21 Series



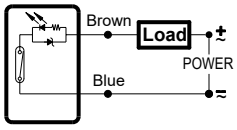
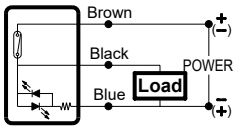
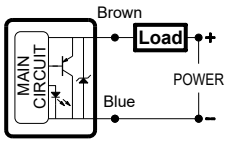
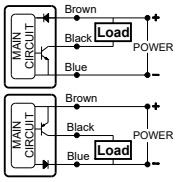
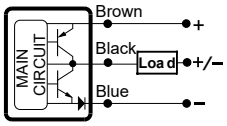
Tie-Rod Cylinder Clamp



Round Cylinder Band

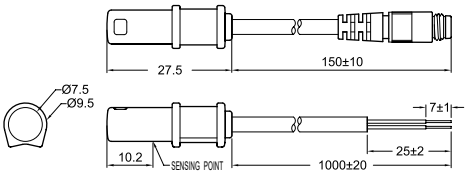


Mickymouse Cylinder Bracket

	LS MG - 49R	LS MG - 49RD	LS MG - 49DF	LS MG - 49N(P)	LS MG - 49S
CONNECT DIAGRAM					

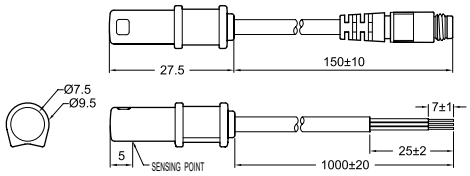
LS MG-49R(RV)
LS MG-49R(RV)-QD8
LS MG-49R(RV)-QD12
LS MG-49R(RV)-EZ2M

LS MG-49RD
LS MG-49RD-QD8
LS MG-49RD-QD12
LS MG-49RD-EZ3M



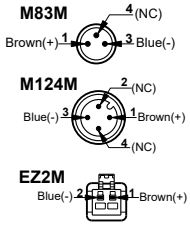
LS MG-49DF
LS MG-49DF-QD8
LS MG-49DF-QD12
LS MG-49DF-EZ2M

LS MG-49N(P)
LS MG-49N(P)-QD8
LS MG-49N(P)-QD12
LS MG-49N(P)-EZ3M

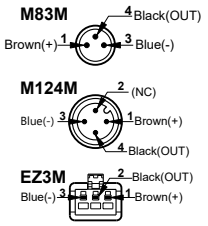


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring

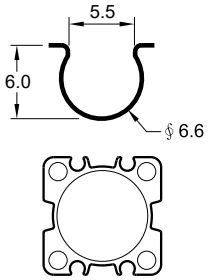


TYPE	LS MG - 49R	LS MG - 49RD	LS MG - 49DF	LS MG - 49N(P)	LS MG - 49S
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking PNP Current Sourcing	NPN/PNP Automatic Detection
Operating Voltage	5~240V DC/AC	5~30V DC	10~28V DC	5~30V DC	
Switching Current	100 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.		1.4 W Max.	6 W Max.	
Current Consumption	-		40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100mA DC	0.9V Max. @ 500mA DC	2.65V Max. @ 50mA DC	0.5V Max. @ 200mA DC	1V Max. @ 200mA DC
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Dual Yellow LED	Red LED	Red LED(Green LED)	Red LED
Cable	3.3ø, 2C, Oil Resistant PVC	4.0ø, 3C, Oil Resistant PVC	3.3ø, 2C, Black Oil Resistant PVC	3.3ø, 3C, Oil Resistant PVC	
Sensitivity	55 ~ 65 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit			Surge Suppression	Power Reverse Polarity; Surge Suppression	

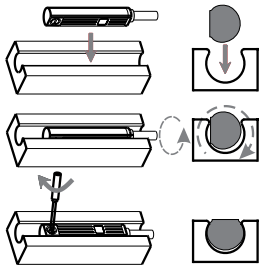
Note:
- The max. operating voltage of LS MG-49R (RA, RV)-QD8 is 60V DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

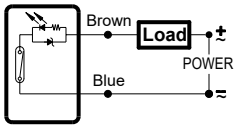
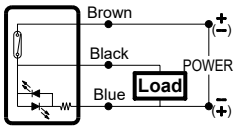
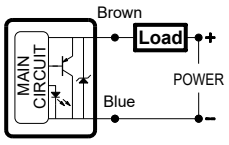
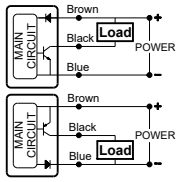
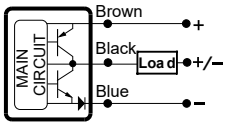
MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

GROOVE DIMENSION (NORGREN)
LS MG-50 Series can be replaced by LS MG-51 Series



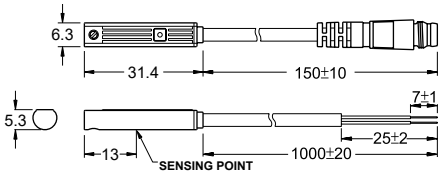
INSTALLATION



	LS MG - 50R	LS MG - 50RD	LS MG - 50DF	LS MG - 50N(P)	LS MG - 50S
CONNECT DIAGRAM					

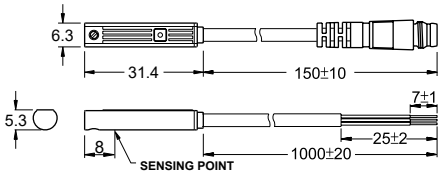
LS MG-50R
LS MG-50R-QD8
LS MG-50R-QD12
LS MG-50R-EZ2M

LS MG-50RD
LS MG-50RD-QD8
LS MG-50RD-QD12
LS MG-50RD-EZ3M



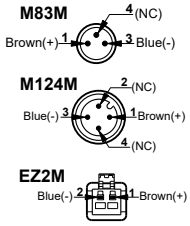
LS MG-50DF
LS MG-50DF-QD8
LS MG-50DF-QD12
LS MG-50DF-EZ2M

LS MG-50N(P)
LS MG-50N(P)-QD8
LS MG-50N(P)-QD12
LS MG-50N(P)-EZ3M

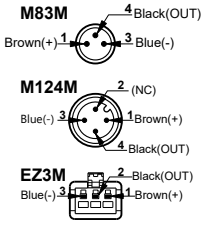


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring

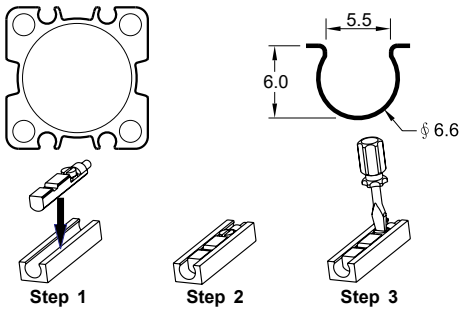


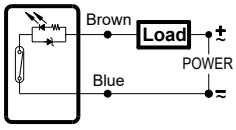
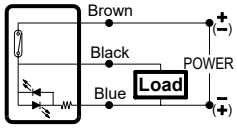
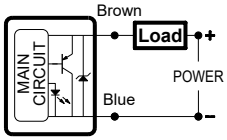
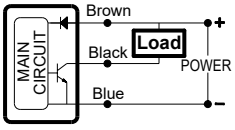
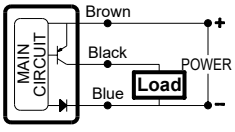
TYPE	LS MG - 50R	LS MG - 50RD	LS MG - 50DF	LS MG - 50N(P)	LS MG - 50S
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking PNP Current Sourcing	NPN/PNP Automatic Detection
Operating Voltage	5~240V DC/AC	5~30V DC	10~28V DC	5~30V DC	
Switching Current	100 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.		1.4 W Max.	6 W Max.	
Current Consumption		10 mA Max. @ 24V	40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100mA DC	0.1V Max. @ 500mA DC	2.65V Max. @ 50mA DC	0.5V Max. @ 200mA DC	1V Max. @ 200mA DC
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Dual Yellow LED	Red LED	Red LED(Green LED)	Red LED
Cable	2.9ø, 2C, Grey Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	2.9ø, 2C, Black Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	
Sensitivity	40 ~ 50 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit			Surge Suppression	Power Reverse Polarity; Surge Suppression	

Note:
- The max. operating voltage of LS MG-50R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

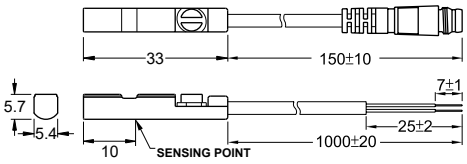
LS MG-51 Series can replace LS MG-50 Series
Apply for 6mm Round Groove (Norgren)



	LS MG - 51R	LS MG - 51RD	LS MG - 51DF	LS MG - 51N	LS MG - 51P
CONNECT DIAGRAM					

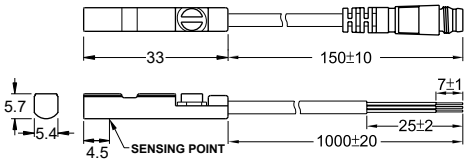
LS MG-51R
LS MG-51R-QD8
LS MG-51R-QD12
LS MG-51R-EZ2M

LS MG-51DF
LS MG-51DF-QD8
LS MG-51DF-QD12
LS MG-51DF-EZ2M



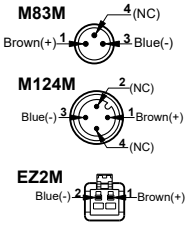
LS MG-51N(P)
LS MG-51N(P)-QD8
LS MG-51N(P)-QD12
LS MG-51N(P)-EZ3M

LS MG-51RD
LS MG-51RD-QD8
LS MG-51RD-QD12
LS MG-51RD-EZ3M

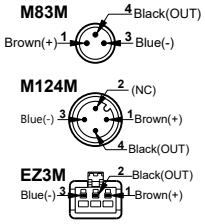


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring



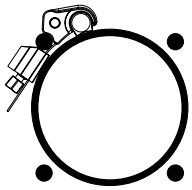
TYPE	LS MG - 51R	LS MG - 51RD	LS MG - 51DF	LS MG - 51N	LS MG - 51P
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking	PNP Current Sourcing
Operating Voltage	5~240V DC/AC	5~30V DC	10~28V DC	5~30V DC	
Switching Current	100 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.		1.4 W Max.	6 W Max.	
Current Consumption		10 mA Max. @ 24V	40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100mA DC	0.1V Max. @ 500mA DC	2.65V Max. @ 50mA DC	0.5 V Max. @ 200mA DC	
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Dual Yellow LED	Red LED	Red LED	Green LED
Cable	2.9ø, 2C, Grey Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	2.9ø, 2C, Black Oil Resistant PVC	2.9ø, 3C, Black Oil Resistant PVC	
Sensitivity	40 ~ 50 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit			Surge Suppression	Power Reverse Polarity; Surge Suppression	

Note:
- The max. operating voltage of LS MG-51R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

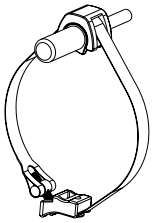
LS MG-59 series, the shortened version of LS MG-49 series are applicable to short-stroke cylinders

TIE-ROD, ROUND AND MICKEYMOUSE CYLINDER

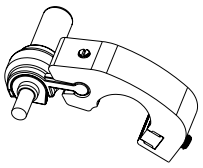
LS MG-59 Series can replace LS MG-20, 21 Series



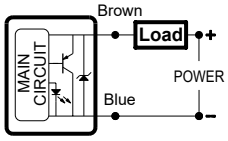
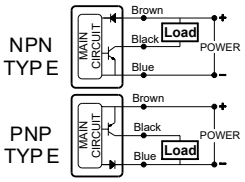
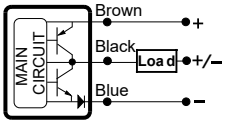
Tie-Rod Cylinder Clamp



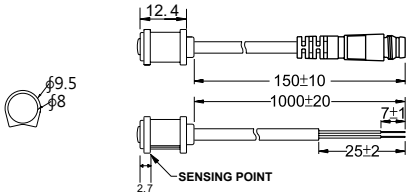
Round Cylinder Band



Mickymouse Cylinder Bracket

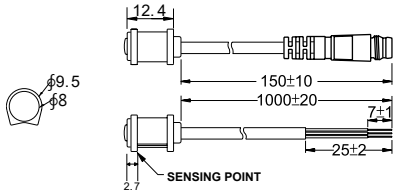
	LS MG - 59DF	LS MG - 59N(P)	LS MG - 59S
CONNECT DIAGRAM			

LS MG-59DF
LS MG-59DF-QD8
LS MG-59DF-QD12
LS MG-59DF-EZ2M



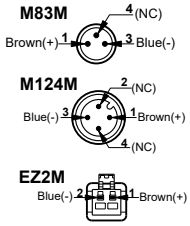
LS MG-59N(P)
LS MG-59N(P)-QD8
LS MG-59N(P)-QD12
LS MG-59N(P)-EZ3M

LS MG-59S
LS MG-59S-QD8
LS MG-59S-QD12
LS MG-59S-EZ3M

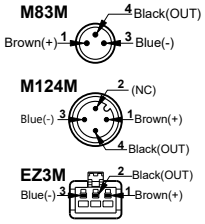


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring



TYPE	LS MG - 59DF	LS MG - 59N(P)	LS MG - 59S
Switching Logic	Normally Open	Solid State Output, Normally Open	
Sensor Type	2 Wire Solid State	NPN Current Sinking(PNP Current Sourcing)	NPN/PNP Automatic Detection
Operating Voltage	10~28V DC	5~30V DC	
Switching Current	50 mA Max.	200 mA Max.	
Switching Rating	1.4 W Max.	6 W Max.	
Current Consumption	40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.65V Max. @ 50mA DC	0.5V Max. @ 200 mA DC	1V Max. @ 200 mA DC
Leakage Current	90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Power: Green LED / Active: Red(Yellow) LED	
Cable	4.0ø, 2C, Black Oil Resistant PVC	4.0ø, 3C, Oil Resistant PVC	
Sensitivity	40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	50 G	50 G	
Vibration	9 G	9 G	
Enclosure Classification	IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit	Surge Suppression	Power Reverse Polarity; Surge Suppression	

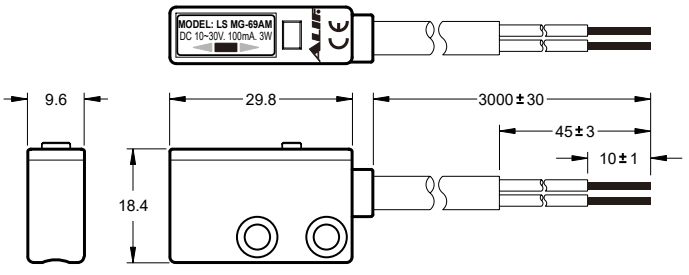
Note: - Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

Strong Magnetic Field Resistant Sensor

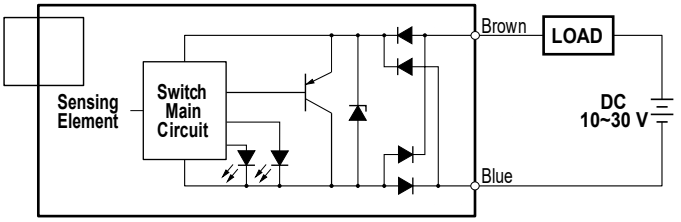
Can be used in locations subjected to disturbance by AC magnetic fields (areas near AC welders, etc.).

- NON-POLARITY Connection, Convenient
- All Solid State, Hi-Shock Resistant, Long Life
- Two Color Indicator, Easy Setting
- High Burn Rate Material, Conform to UL94-V0
- Variety Fixture, Fix on Many Kinds of Cylinders

TYPE	LS MG - 69AM
Switching Logic	Solid State Output, Normally Open
Sensor Type	Transistor / Two wire / Non-Polarity
Operating Voltage	10~30V DC
Switching Current	100 mA Max.
Switching Rating	3 W Max.
Magnetic Field Resistance	AC 17000A
Voltage Drop	4.3V Max. @ 100mA DC
Leakage Current	0.6 mA Max. @ 30 VDC
Indicator	Two Color LED (Red/Unstable ; Green/Setting)
Cable	5.3ø / 0.5SQx2Cx3M, Oil, Burning, Bend Resistant PVC
Sensitivity	30 ~ 40 Gauss
Switching Frequency	8 Hz
Temperature Range	-10 ~ 70 ℃
Shock	50 G
Vibration	9 G
Enclosure Classification	IP 67 (EN60529)
Protection Circuit	Power Non-Polarity; Surge Suppression
Burn Rate	UL94-V0
Available Bracket	PBH : Apply to Round Cylinder under 63ø PCH : Apply for 32ø & 125ø Tie-Rod Cylinder PE-1 : Apply to 32ø & 40ø ISO Profile Cylinder PE-2 : Apply to 50ø & 63ø ISO Profile Cylinder PE-3 : Apply to 80ø ISO Profile Cylinder PE-4 : Apply to 100ø ISO Profile Cylinder



INTERNAL CIRCUIT & EXTERNAL CONNECT DIAGRAM



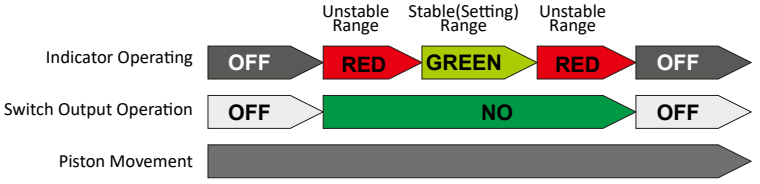
Internal Circuit External Circuit

(LS MG - 69AM is a Non-Polarity type. Connect either the brown or the blue lead wire to the load.)

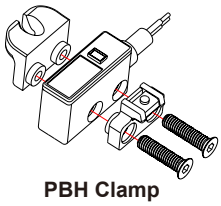
OUTLINE OF OPERATIONS

Magnetic Field	No Disturbance by an AC Magnetic Field		Disturbance by an AC Magnetic Field	
Sensor Switch	Without Magnet	With Magnet	Without Magnet	With Magnet
Sensor Element	OFF	ON	OFF←→ON	OFF←→ON
Sensor Switch Output	OFF	ON	OFF	ON

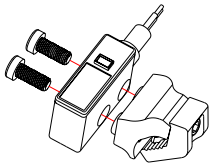
INDICATORS AND SWITCH OPERATION



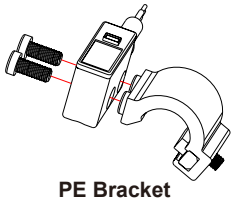
MOUNTING BRACKET ASSEMBLY



PBH Clamp

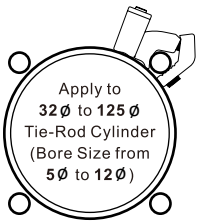


PCH Bracket



PE Bracket

PBH Clamp Assemble on Cylinder



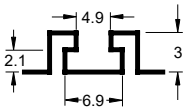
PCH Bracket Assemble on Cylinder

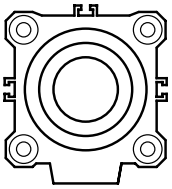
PE Bracket Assemble on Cylinder

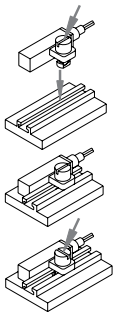
Note:
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

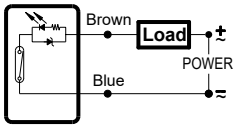
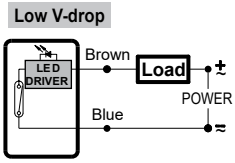
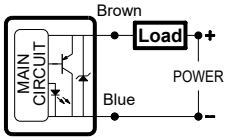
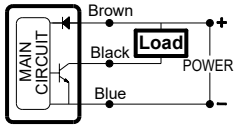
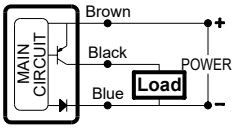
MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

FOR SMC GROOVE
LS MG-70 Series can replace LS MG-72 Series

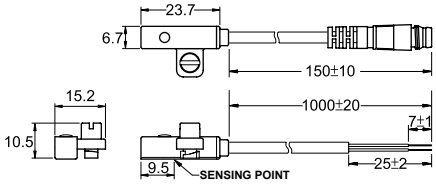




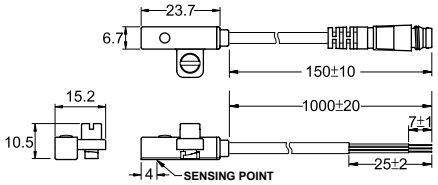


	LS MG - 70R	LS MG - 70RV	LS MG - 70DF	LS MG - 70N	LS MG - 70P
CONNECT DIAGRAM					

LS MG-70R(RV)
LS MG-70R(RV)-QD8
LS MG-70R(RV)-QD12
LS MG-70R(RV)-EZ2M
LS MG-70RD
LS MG-70RD-QD8
LS MG-70RD-QD12
LS MG-70RD-EZ3M

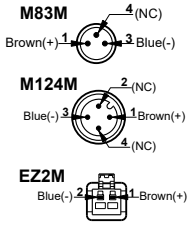


LS MG-70DF
LS MG-70DF-QD8
LS MG-70DF-QD12
LS MG-70DF-EZ2M
LS MG-70N(P)
LS MG-70N(P)-QD8
LS MG-70N(P)-QD12
LS MG-70N(P)-EZ3M

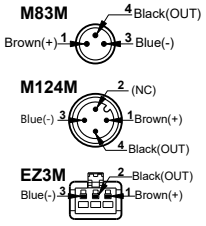


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring

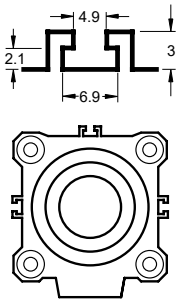


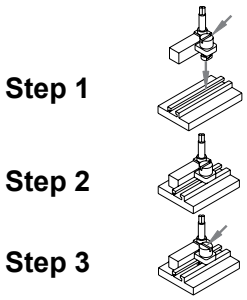
TYPE	LS MG - 70R	LS MG - 70RV	LS MG - 70DF	LS MG - 70N	LS MG - 70P
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking	PNP Current Sourcing
Operating Voltage	5~240V DC/AC		10~28V DC	5~30V DC	
Switching Current	100 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.		1.4 W Max.	6 W Max.	
Current Consumption	-		40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100mA DC	0.9V Max. @ 500mA DC	2.65V Max. @ 50mA DC	0.5V Max. @ 200mA DC	
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Yellow LED	Red LED	Red LED	Green LED
Cable	3.3ø, 2C, Oil Resistant PVC		3.3ø, 2C, Oil Resistant PVC	3.3ø, 3C, Oil Resistant PVC	
Sensitivity	40 ~ 50 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit			Surge Suppression	Power Reverse Polarity; Surge Suppression	

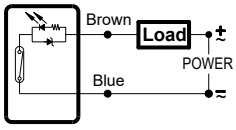
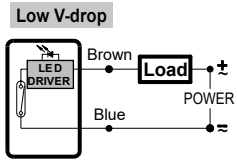
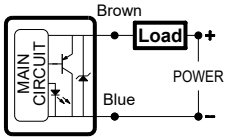
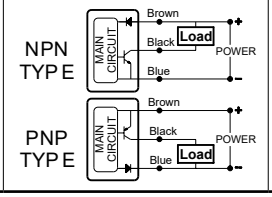
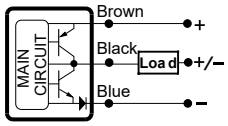
Note:
- The max. operating voltage of LS MG-70R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

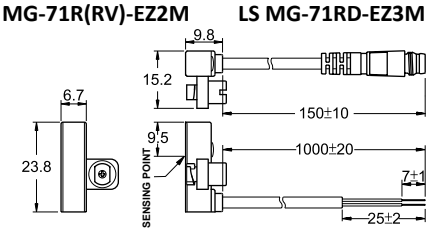
FOR SMC GROOVE
LS MG-71 Series can replace LS MG-72 Series



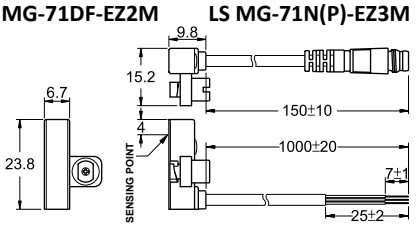


	LS MG - 71R	LS MG - 71RV	LS MG - 71DF	LS MG - 71N(P)	LS MG - 71S
CONNECT DIAGRAM					

LS MG-71R(RV)
LS MG-71R(RV)-QD8
LS MG-71R(RV)-QD12
LS MG-71R(RV)-EZ2M
LS MG-71RD
LS MG-71RD-QD8
LS MG-71RD-QD12
LS MG-71RD-EZ3M

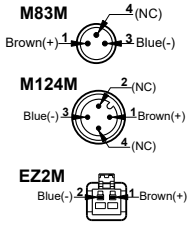


LS MG-71DF
LS MG-71DF-QD8
LS MG-71DF-QD12
LS MG-71DF-EZ2M
LS MG-71N(P)
LS MG-71N(P)-QD8
LS MG-71N(P)-QD12
LS MG-71N(P)-EZ3M

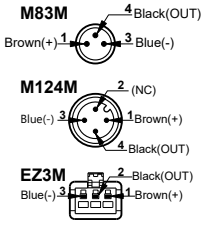


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring

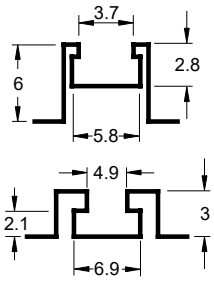


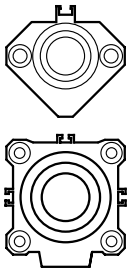
TYPE	LS MG - 71R	LS MG - 71RV	LS MG - 71DF	LS MG - 71N(P)	LS MG - 71S
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking / PNP Current Sourcing	NPN/PNP Automatic Detection
Operating Voltage	5~240V DC/AC		10~28V DC	5~30V DC	
Switching Current	100 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.		1.4 W Max.	6 W Max.	
Current Consumption	-		40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100mA DC	0.9V Max. @ 500mA DC	2.65V Max. @ 50mA DC	0.5V Max. @ 200mA DC	1V Max. @ 200mA DC
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Yellow LED	Red LED	Red LED (Green LED)	Red LED
Cable	3.3ø, 2C, Oil Resistant PVC		3.3ø, 2C, Oil Resistant PVC	3.3ø, 3C, Oil Resistant PVC	
Sensitivity	40 ~ 50 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit			Surge Suppression	Power Reverse Polarity; Surge Suppression	

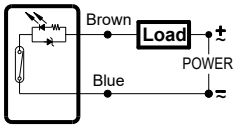
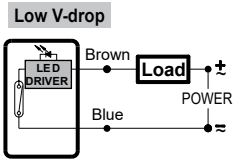
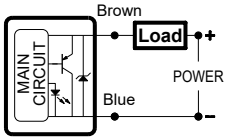
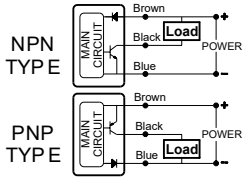
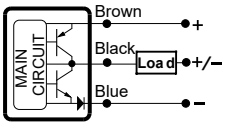
Note:
- The max. operating voltage of LS MG-71R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

MAGNETIC SENSORS
Inductive, Photoelectric Proximity and Magnetic Switches

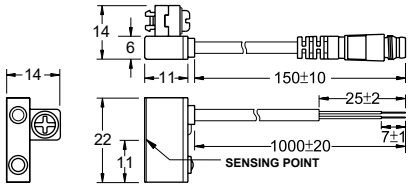
GROOVE DIMENSION (SMC)
LS MG-72 Series can be replaced by LS MG-71 Series



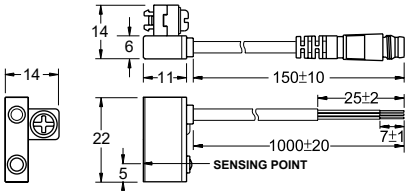


	LS MG - 72R	LS MG - 72RV	LS MG - 72DF	LS MG - 72N(P)	LS MG - 72S
CONNECT DIAGRAM					

LS MG-72R(RV)
LS MG-72R(RV)-QD8
LS MG-72R(RV)-QD12
LS MG-72R(RV)-EZ2M
LS MG-72RD
LS MG-72RD-QD8
LS MG-72RD-QD12
LS MG-72RD-EZ3M

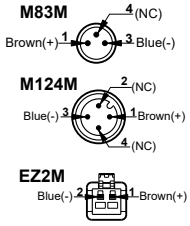


LS MG-72DF
LS MG-72DF-QD8
LS MG-72DF-QD12
LS MG-72DF-EZ2M
LS MG-72N(P)
LS MG-72N(P)-QD8
LS MG-72N(P)-QD12
LS MG-72N(P)-EZ3M

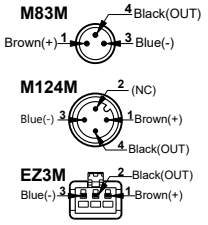


M8, M12, EZ QUICK CONNECTOR(IEC61076-2-101)

2 wire QD wiring



3 wire QD wiring



TYPE	LS MG - 72R	LS MG - 72RV	LS MG - 72DF	LS MG - 72N(P)	LS MG - 72S
Switching Logic	SPST Normally Open		Normally Open	Solid State Output, Normally Open	
Sensor Type	Reed Switch		2 Wire Solid State	NPN Current Sinking	NPN/PNP Automatic Detection
Operating Voltage	5~240V DC/AC		10~28V DC	5~30V DC	
Switching Current	100 mA Max.	500 mA Max.	50 mA Max.	200 mA Max.	
Switching Rating	10 W Max.		1.4 W Max.	6 W Max.	
Current Consumption	-		40 µA Max. @ 24V	7.5 mA Max. @ 24V	
Voltage Drop	2.5V Max. @ 100mA DC	0.9V Max. @ 500mA DC	2.65V Max. @ 50mA DC	0.5V Max. @ 200mA DC	1V Max. @ 200mA DC
Leakage Current	-		90 µA Max. @ 28V	0.01 mA Max.	
Indicator	Red LED	Yellow LED	Red LED	Red LED (Green LED)	Red LED
Cable	3.3ø, 2C, Oil Resistant PVC		3.3ø, 2C, Oil Resistant PVC	3.3ø, 3C, Oil Resistant PVC	
Sensitivity	40 ~ 50 Gauss		40 ~ 800 Gauss	40 ~ 800 Gauss	
Switching Frequency	200 Hz		1000 Hz	5000 Hz	
Temperature Range	-10 ~ 70 ℃		-10 ~ 70 ℃	-10 ~ 70 ℃	
Shock	30 G		50 G	50 G	
Vibration	9 G		9 G	9 G	
Enclosure Classification	IP 67 (EN60529)		IP 67 (EN60529)	IP 67 (EN60529)	
Protection Circuit			Surge Suppression	Power Reverse Polarity; Surge Suppression	

Note:
- The max. operating voltage of LS MG-72R-QD8 is 60V AC/DC (Based on IEC61076-2-101).
- Measuring standard target: 15.5 * 8 * 5t(Anisotropic Plastic Magnet).
- Sin Wave / X, Y, Z 3 Directions /3 Times Each Direction / 11mS Each Time.
- Double Amplitude 1.5mm / 10Hz~55Hz~10Hz(Sweep 1min) / X, Y, Z 3 Directions / 1Hour Each Time.

PBO CLAMP

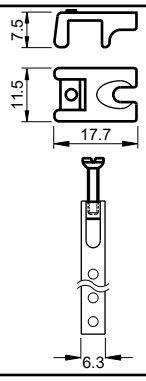
MOUNTING LS MG-03 & LS MG-15 SERIES ON ROUND CYLINDER

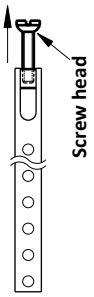
PBO

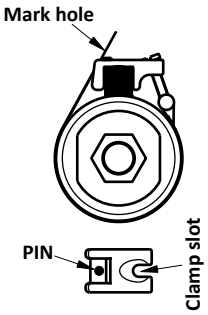
PBO-01
For 6Ø ~ 63Ø
Round Cylinder use

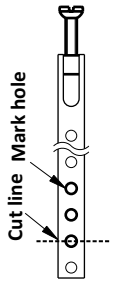
PBO-02
For 6Ø ~ 125Ø
Round Cylinder use

Step 1	Step 2	Step 3	Step 4
• Start by keeping screw 3 to 4 turns into barrel nut on the end of the band assembly.	• Place the screw head into the clamp and wrap the band around the cylinder. • Position the pin with the nearest hole on the band and mark the hole with a permanent marker.	• Remove clamp assembly. • Cut the band at next 2 adjacent hole from marked hole.	• Insert cut end of the band into flat slot opposite from the clamp slot. • Place the chosen hole over the pin and bend the band firmly down with thumb pressure. • Wrap the band around cylinder barrel and re-insert screw Head into clamp. • Position the switch and tighten.

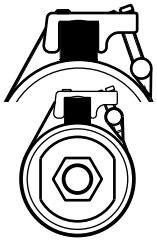








ATTENTION!
Do not over tighten
Damage to the switch
and/or cylinder may occur.



PBK CLAMP

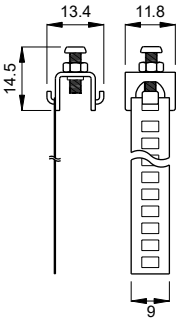
MOUNTING LS MG-03 & LS MG-15 SERIES ON ROUND CYLINDER

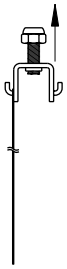
PBK

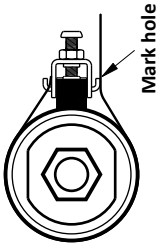
PBK-01
For 6Ø ~ 40Ø
Round Cylinder use

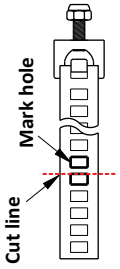
PBK-02
For 6Ø ~ 63Ø
Round Cylinder use

Step 1	Step 2	Step 3	Step 4
• Loosen screw & nut.	• Place sensor & wrap the band around the cylinder. • Position the hook with the nearest hole on the band and mark the hole with a permanent marker.	• Remove mounting-assembly. • Cut the band at the nearest edge of next hole.	• Re-place the sensor & mounting assembly. • Wrap the band & put the chosen hole on hook. • Position the switch and tighten. • Finally swivel nut for steadying.

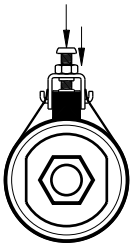








ATTENTION!
Do not over tighten
Damage to the switch
and/or cylinder may occur.



PAB CLAMP

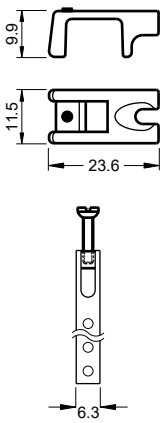
MOUNTING DFSU, LS MG-20, LS MG-21 SERIES ON ROUND CYLINDER

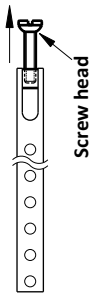
PAB

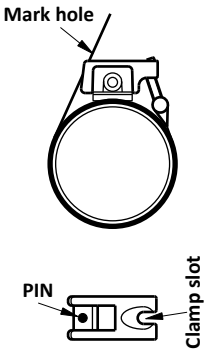
PAB-01
For 12ø ~ 63ø
Round Cylinder use

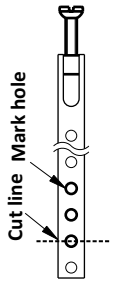
PAB-02
For 12ø ~ 125ø
Round Cylinder use

Step 1	Step 2	Step 3	Step 4
• Start by keeping screw 3 to 4 turns into barrel nut on the end of the band assembly.	• Getting band end throug the bottom hole of LS MG-13 • Place the screw head into the clamp and wrap the band around the cylinder. • Position the pin with the nearest hole on the band and mark the hole with a permanent marker.	• Remove clamp assembly. • Cut the band at next 2 adjacent hole from marked hole.	• Insert cut end of the band into flat slot opposite from the clamp slot. • Place the chosen hole over the pin and bend the band firmly down with thumb pressure. • Wrap the band around cylinder barrel and re-insert screw Head into clamp. • Position the switch and tighten.

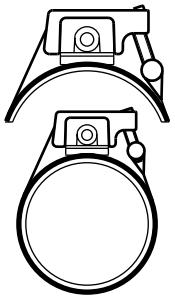








ATTENTION!
Do not over tighten
Damage to the switch
and/or cylinder may occur.



PBS CLAMP

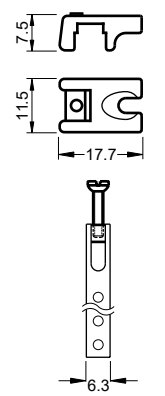
MOUNTING LS MG-33 SERIES ON ROUND CYLINDER

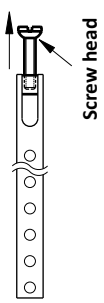
PBS

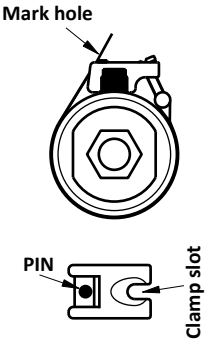
PBS-01
PBT-01
For 6ø ~ 63ø
Round Cylinder use

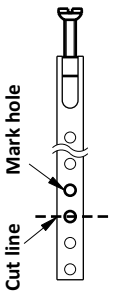
PBS-02
PBT-02
For 6ø ~ 125ø
Round Cylinder use

Step 1	Step 2	Step 3	Step 4
• Start by keeping screw 3 to 4 turns into barrel nut on the end of the band assembly.	• Place the screw head into the clamp and wrap the band around the cylinder. • Position the pin with the nearest hole on the band and mark the hole with a permanent marker.	• Remove clamp assembly. • Cut the band at next 1 adjacent hole from marked hole.	• Insert cut end of the band into flat slot opposite from the clamp slot. • Place the chosen hole over the pin and bend the band firmly down with thumb pressure. • Wrap the band around cylinder barrel and re-insert screw Head into clamp. • Position the switch and tighten.

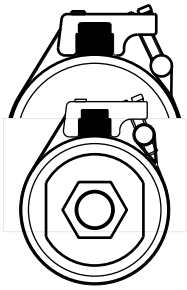








ATTENTION!
Do not over tighten
Damage to the switch
and/or cylinder may occur.

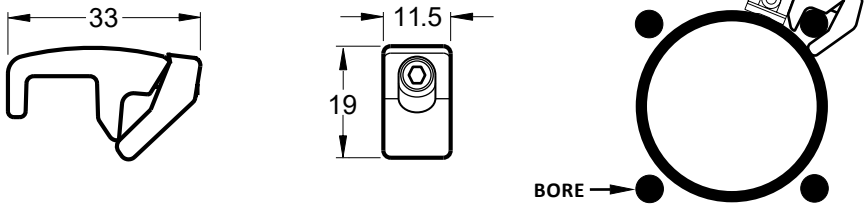


PAC BRACKET

MOUNTING DFSU, LS MG-20, LS MG-21 SERIES ON TIE-ROD CYLINDER

PAC

MATERIAL: ZINC DIE-CAST

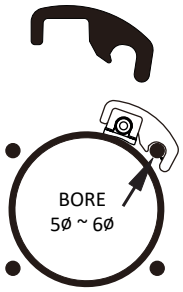


Apply to 32ø to 125ø Tie-Rod Cylinder (Bore Size from 5ø to 12ø)

PM BRACKET

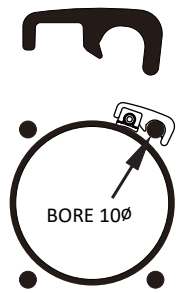
MOUNTING DFSU, LS MG-20, LS MG-21 SERIES ON TIE-ROD CYLINDER

PM-6

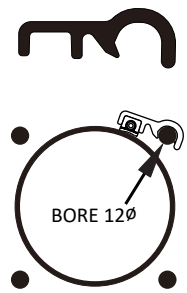


PM-8

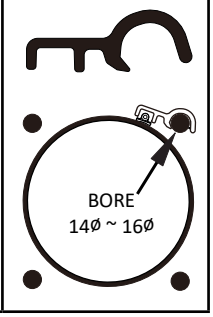
PM-10



PM-12

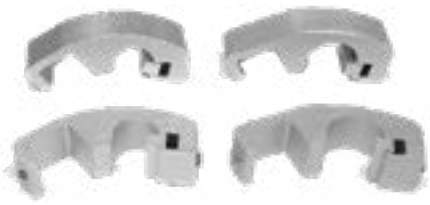


PM-16

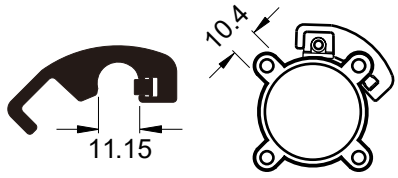


PI BRACKET

MOUNTING DFSU, LS MG-20, LS MG-21 SERIES ON MICKEYMOUSE CYLINDER

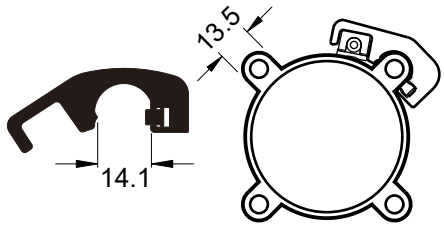


PI-1

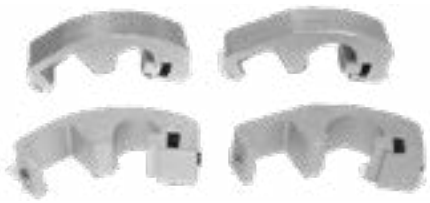


Apply to 32ø to 40ø Mickeymouse Cylinder

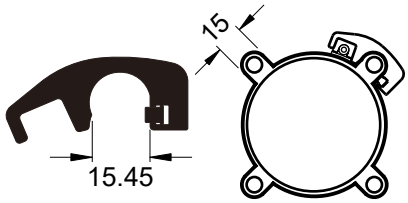
PI-2



Apply to 50ø to 63ø Mickeymouse Cylinder

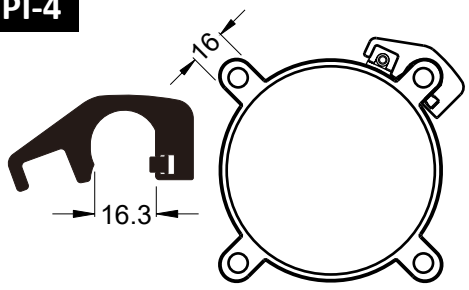


PI-3



Apply to 80ø Mickeymouse Cylinder

PI-4



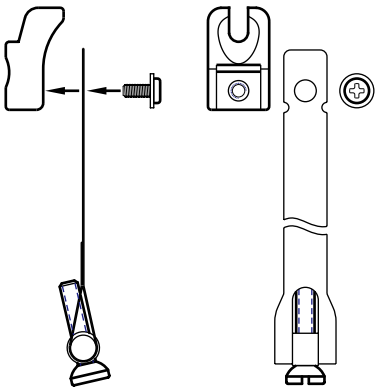
Apply to 100ø Mickeymouse Cylinder

PBJ CLAMP

MOUNTING DFSM, LS MG-13 SERIES ON ALL SIZE ROUND CYLINDER

PBJ

Apply to 6Ø ~ 63Ø
Stainless Steel, Aluminum Alloy
Round Cylinder



PBJ CLAMP ORDER INFORMATION

PBJ - S 06

- Barrel I.D.
  - 06 : 06mm I.D.
  - 08 : 08mm I.D.
  - 10 : 10mm I.D.
  - 12 : 12mm I.D.
  - 16 : 16mm I.D.
  - 20 : 20mm I.D.
  - 25 : 25mm I.D.
  - 32 : 32mm I.D.
  - 40 : 40mm I.D.
  - 50 : 50mm I.D.
  - 63 : 63mm I.D.
- Barrel Material
  - S : Stainless Steel
  - A : Aluminum Alloy
- PBJ Clamp

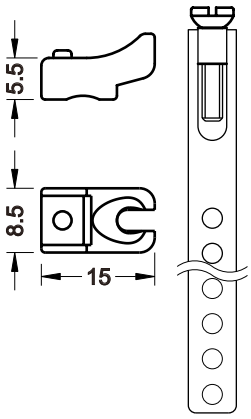
PBG CLAMP

MOUNTING DFSM, LS MG-13 SERIES FOR ABOVE 6Ø ROUND CYLINDER

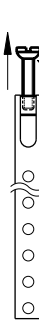
PBG

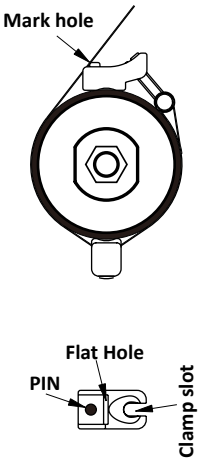
PBG-01
Apply to 6Ø ~ 63Ø

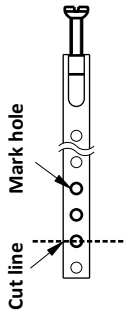
PBG-02
Apply to 6Ø ~ 125Ø



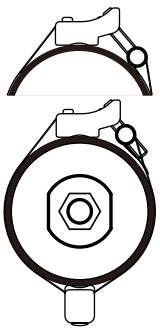
Step 1	Step 2	Step 3	Step 4
• Start by keeping screw 3 to 4 turns into barrel nut on the end of the band assembly.	• Get band end through bottom hole of LS MG-13 • Place the screw head into the clamp and wrap the band around the cylinder. • Position the pin with the nearest hole on the band and mark the hole with a permanent marker.	• Remove clamp assembly. • Cut the band at next 2 adjacent hole from marked hole.	• Insert cut end of the band into flat slot opposite from the clamp slot. • Place the chosen hole over the pin and bend the band firmly down with thumb pressure. • Wrap the band around cylinder barrel and re-insert screw Head into clamp. • Position the switch and tighten.







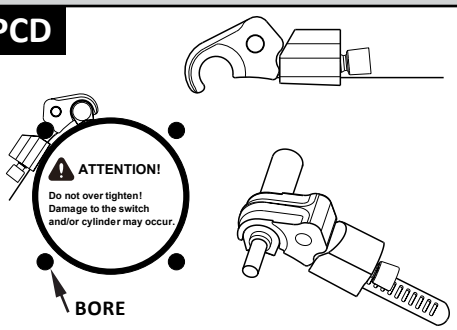
ATTENTION!
Do not over tighten
Damage to the switch and/or cylinder may occur.



PCD, PCE BRACKET

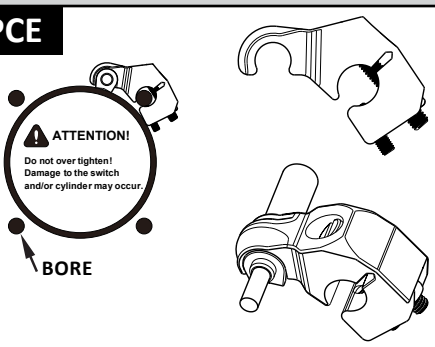
MOUNTING LS MG-49, LS MG-59 SERIES ON TIE-ROD CYLINDER

PCD



Apply to under 250ø Tie-Rod Cylinder

PCE

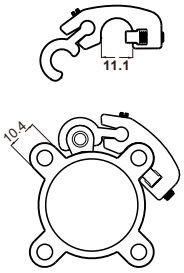


Apply to the bore size under 8ø Tie-Rod Cylinder

PO BRACKET

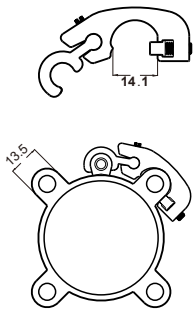
MOUNTING LS MG-49, LS MG-59 SERIES ON MICKEYMOUSE CYLINDER

PO-1



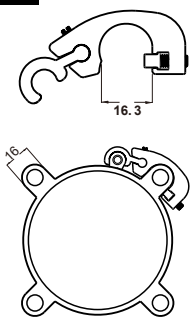
Apply to 32ø to 40ø
Mickeymouse Cylinder

PO-2



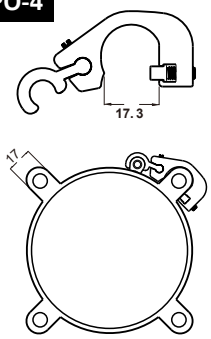
Apply to 50ø to 63ø
Mickeymouse Cylinder

PO-3



Apply to 80ø
Mickeymouse Cylinder

PO-4

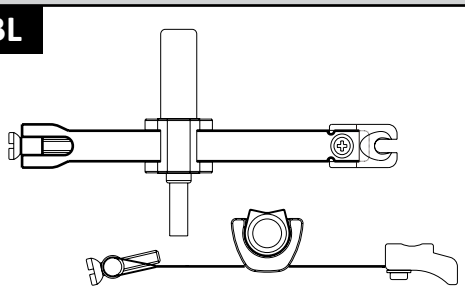


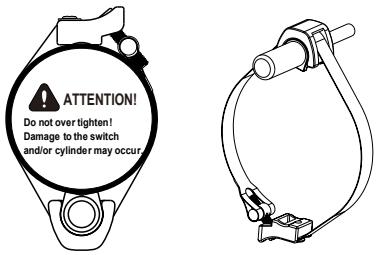
Apply to 100ø
Mickeymouse Cylinder

PBL CLAMP

MOUNTING LS MG-49, LS MG-59 SERIES ON ROUND CYLINDER

PBL

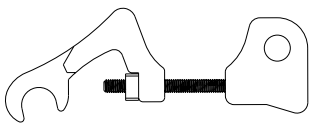


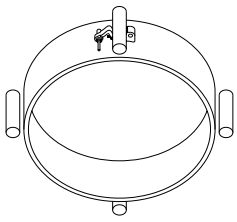


PCF BRACKET

MOUNTING LS MG-49, LS MG-59 SERIES ON 250Ø & 320Ø TIE-ROD CYLINDER

PCF



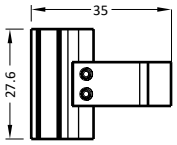


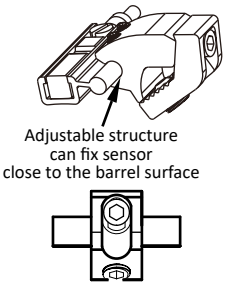
PCC BRACKET

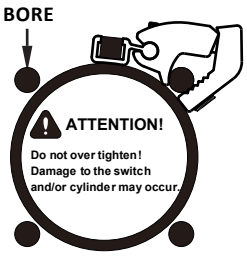
MOUNTING DFSE, LS MG-30, 31, 35, 39 SERIES ON TIE-ROD CYLINDER

PCC

Apply to 32ø to 125ø Tie-Rod Cylinder (Bore Size from 5ø to 12ø)



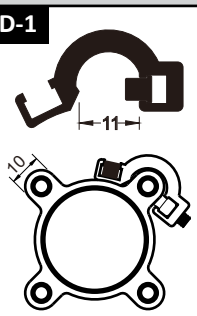




PD BRACKET

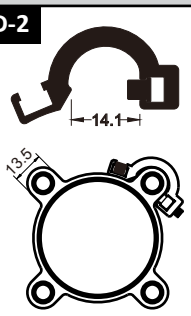
MOUNTING DFSE, LS MG-30, 31, 35, 39 SERIES ON MICKEYMOUSE CYLINDER

PD-1



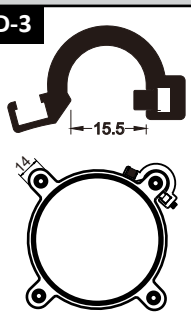
Apply to 32ø to 40ø
Mickeymouse Cylinder

PD-2



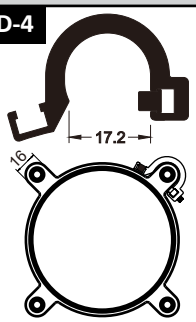
Apply to 50ø to 63ø
Mickeymouse Cylinder

PD-3



Apply to 80ø
Mickeymouse Cylinder

PD-4

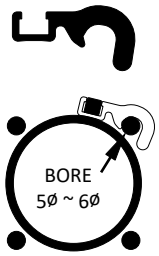


Apply to 100ø
Mickeymouse Cylinder

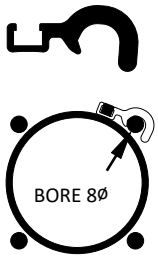
PN BRACKET

MOUNTING DFSE, LS MG-30, 31, 35, 39 SERIES ON TIE-ROD CYLINDER

PN-6



PN-8



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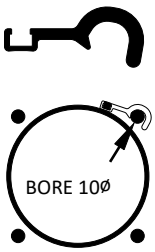

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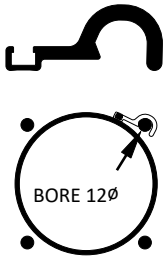
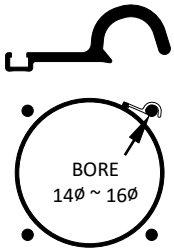


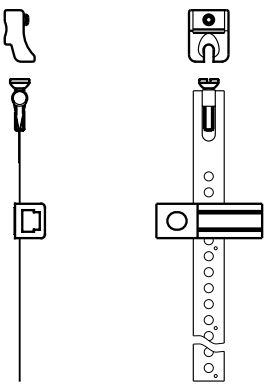
PN-16

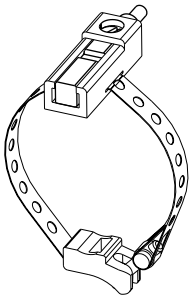


PBI BRACKET

MOUNTING DFSE, LS MG-39 SERIES ON ROUND CYLINDER

PBI





QUICK CONNECTOR ORDERING INFORMATION

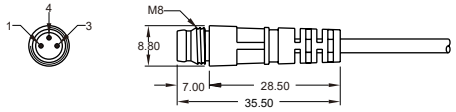
LS MG - M8 3 F 40 B 3 V 05

Cable Length	02	The length of cable is 2 M
	:	:
	05	The length of cable is 5 M
	10	The length of cable is 10 M
Cable Material	V	PVC Jacket
	U	PUR Jacket
	VS	PVC Jacket, Shield
	US	PUR Jacket, Shield
Wire Number	2	2 Wire in Cable
	3	3 Wire in Cable
	4	4 Wire in Cable
	5	5 Wire in Cable
Cable Color	B	Color of Cable is Black
	G	Color of Cable is Gray
Cable Diameter	29	Cable Diameter is 2.9 mm
	33	Cable Diameter is 3.3 mm
	40	Cable Diameter is 4.0 mm
	45	Cable Diameter is 4.5 mm
	52	Cable Diameter is 5.2 mm
Connector Type	M	Male, Straight Outlet
	MS	Male, Swivel Thread, Straight Outlet
	MSE	Male, Swivel Thread, Straight Outlet
	F	Female, Straight Outlet
	FL	Female, Angle Outlet
Connector Pin	2	2 Pin (Wire)
	3	3 Pin (Wire)
	4	4 Pin (Wire)
	5	5 Pin (Wire)
Connector Screw	M8	M8 x 1
	M12	M12 x 1

LS MGM83M

LS MGM83M

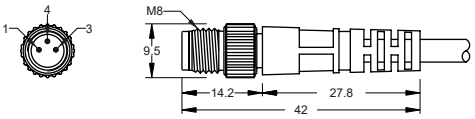
M8/3PIN/Male/Straight Type



LS MGM83MS

LS MGM83MS

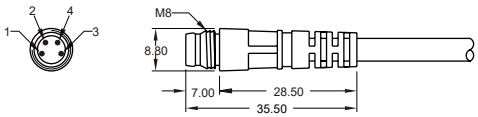
M8/3PIN/Male/Swivelthread/Straight Type



LS MGM84M

LS MGM84M

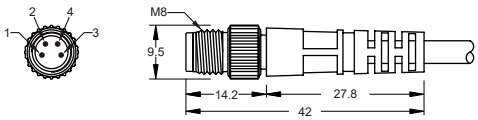
M8/4PIN/Male/Straight Type



LS MGM84MS

LS MGM84MS

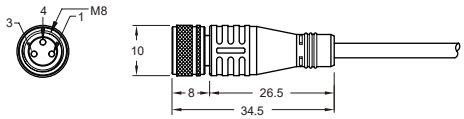
M8/4PIN/Male/ Swivelthread/Straight Type



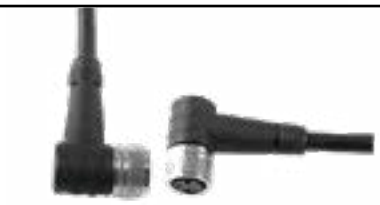
LS MGM83F

LS MGM83F

M8/3PIN/Female/Straight Type

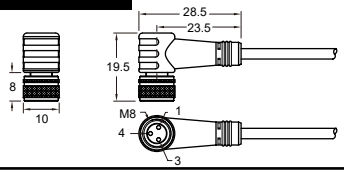


LS MGM83FL



LS MGM83FL

M8/3PIN/Female/Angle Type



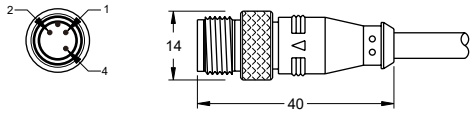
TYPE	LS MGM83M	LS MGM83F	LS MGM84M	LS MGM84F
PIN Out Diagram				
Connector Type	M8 3PIN Male	M8 3PIN Female	M8 4PIN Male	M8 4PIN Female
Lead Wire Color	PIN1: Brown, PIN2: White, PIN3: Blue, PIN4: Black			
Rated Voltage	60V AC/DC		30V AC/DC	
Rated Current	3 A			
Voltage Proof Between Contacts	1.0 KV			
Voltage Proof Between Contacts & Metal Screw	0.85 KV			
PIN Coating	5 µm Gold Coating			
Numbers Of Mechanical Operation Times	Over 100 times			
Temperature Range	-25 ºC ~ 85 ºC			
Cable Tension Force On Connected	30 N			
IP Degree Protection	IP 67 (IEC 60529)			
Standard	IEC 61076-2-101			

Note: - Lead wire color comparison with PIN out number, The PIN is no connection if connector without that PIN number.

LS MGM123MS

LS MGM123MS

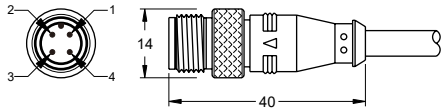
M12/3PIN/Male/ Swivelthread/Straight Type



LS MGM124MS

LS MGM124MS

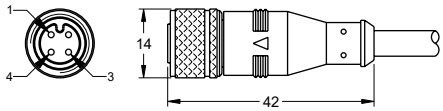
M12/4PIN/Male/Swivelthread/Straight Type



LS MGM123F

LS MGM123F

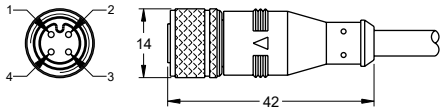
M12/3PIN/Female/Straight Type



LS MGM124F

LS MGM124F

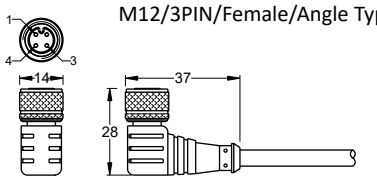
M12/4PIN/Female/Straight Type



LS MGM123FL

LS MGM123FL

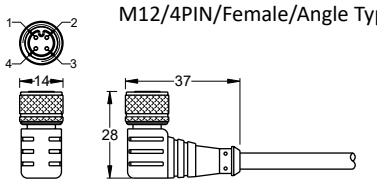
M12/3PIN/Female/Angle Type



LS MGM124FL

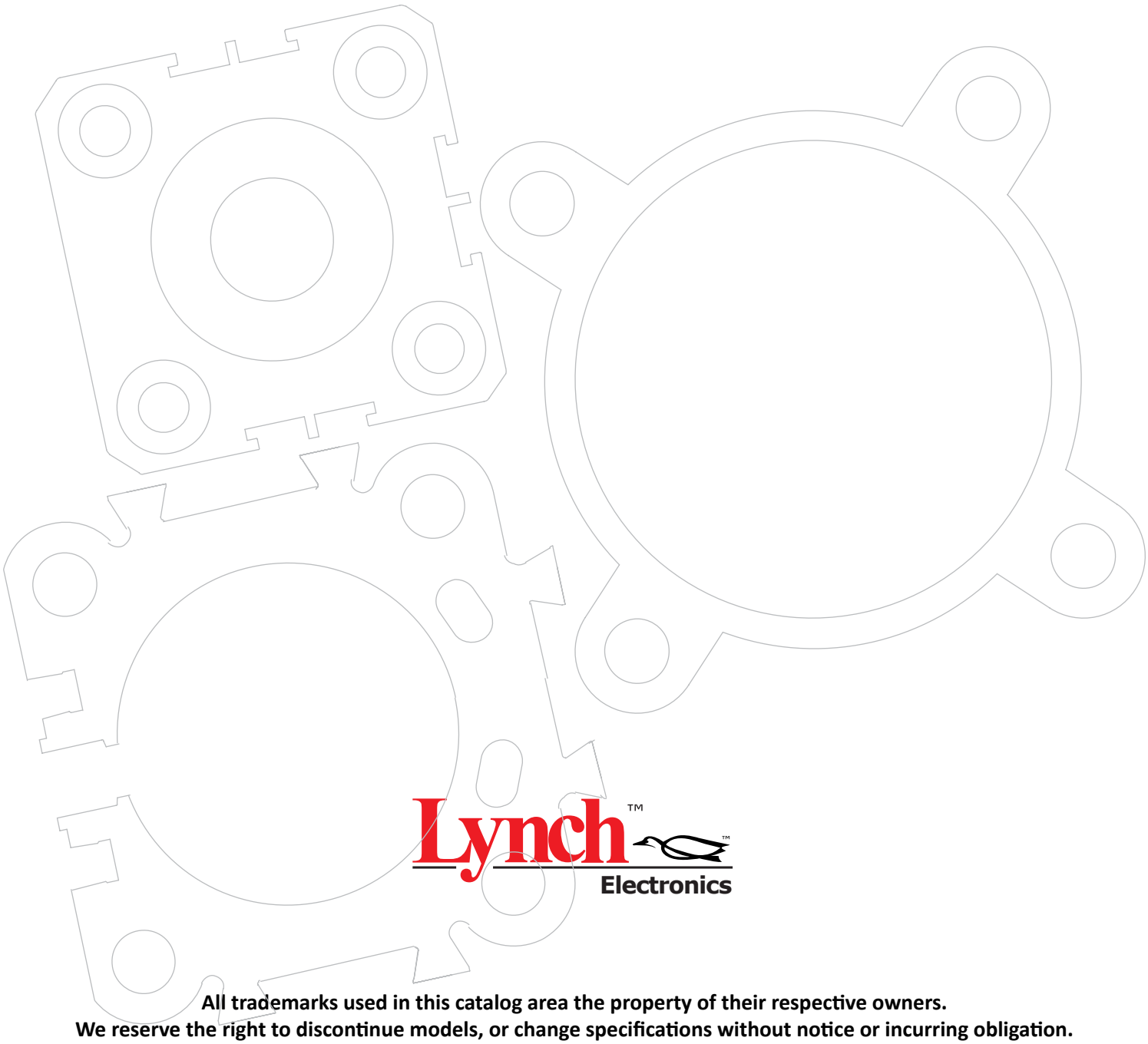
LS MGM124FL

M12/4PIN/Female/Angle Type



TYPE	LS MGM123M	LS MGM124M	LS MGM125M	LS MGM123F	LS MGM124F	LS MGM125F
PIN Out Diagram						
Connector Type	M12 3PIN Male	M12 4PIN Male	M12 5PIN Male	M12 3PIN Female	M12 4PIN Female	M12 5PIN Female
Lead Wire Color	PIN1: Brown, PIN2: White, PIN3: Blue, PIN4: Black, PIN5: Yellow-Green					
Rated Voltage	250V AC/DC					
Rated Current	4 A					
Voltage Proof Between Contacts	1.4 KV					
Voltage Proof - Contacts & Metal Screw	1.4 KV					
PIN Coating	5 µm Gold Coating					
Numbers Of Mechanical Operation Times	Over 100 times					
Temperature Range	-25 ºC ~ 85 ºC					
Cable Tension Force On Connected	30 N					
IP Degree Protection	IP 67 (IEC 60529)					
Standard	IEC 61076-2-101					

Note: - Lead wire color comparison with PIN out number, The PIN is no connection if connector without that PIN number.



Lynch™ Electronics

SAFETY CAUTION: The devices in this catalog must not be used in applications where the safety of people is dependent on their functioning.

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