



# Inductive Proximity Sensor/Switch Datasheet

## CGM8-12GM-L7 Series Cylinder-shaped Proximity Sensor with Longer Sensing Distance

### Introduction

- Inductive proximity switch is a device for realizing the non-electrical measurement by inductive winding or the change of coefficient of mutual induction.
- It has high resolution and accuracy for the monitoring and measurement of presence, movement and position of metallic objects.
- The operating distance of the sensor depends on the coil's size as well as the target's shape, size and material.
- It is divided into two categories according to the working state :  
NO - Normal Open type,  
NC - Normal Close type

### Features:

- ◆ Longer sensing distance, can be installed in narrow space, mechanical tolerances or through the protective film used in detection.
- ◆ Power supply reversal connection protection; short-circuit protection, can directly connect with PLC
- ◆ Newly added current over-load protection; the elements are made of imported chip
- ◆ Long service life, high reliability and strong resistance property to environment
- ◆ Red LED indicates that it's available to detect the sensor operating state
- ◆ Full thread shape to enlarge the installation space; can use wrench and clamp directly
- ◆ Countermeasure to improve the housing intensity and to solve disconnection
- ◆ IP67 protection structure(IEC specification)

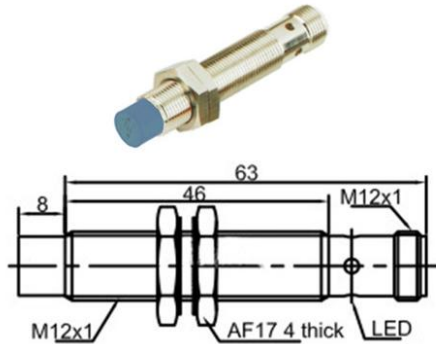
### Ordering Part Number:

Model	Detection distance	Switch point function	Working voltage
CGM8-12GM-N1-L7	8mm±10%	NPN NO	DC6-36V
CGM8-12GM-N2-L7	8mm±10%	NPN NC	DC6-36V
CGM8-12GM-N4-L7	8mm±10%	NPN NO+NC	DC6-36V
CGM8-12GM-P1-L7	8mm±10%	PNP NO	DC6-36V
CGM8-12GM-P2-L7	8mm±10%	PNP NC	DC6-36V
CGM8-12GM-P4-L7	8mm±10%	PNP NO+NC	DC6-36V
CGM8-12GM-D1-L7	8mm±10%	DC NO	DC10-30V
CGM8-12GM-D2-L7	8mm±10%	DC NC	DC10-30V
CGM8-12GM-A1-L7	8mm±10%	AC NO	AC90-250V
CGM8-12GM-A2-L7	8mm±10%	AC NC	AC90-250V



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## Structure Parameter:



## Technical Parameter:

Rated action distance (Sn)	8mm
Installation	Flush-mounting
Reliable movement distance (Sa)	0~7.2mm
Response frequency (N.P)	0.4kHz
Response frequency (D)	0.5kHz
Response frequency (A)	25HZ
Hysteresis (H)	Typical values%
Reverse polarity protection	Yes
Short circuit protection	Pulse
Working current (I <sub>L</sub> )	0~300 mA
Insulation impedance	50M Ω
Leakage current (I <sub>r</sub> )	0~0.5mA typical values 0.1uA, 25°C
No-load current (I <sub>D</sub> )	≤15mA
Indicator light	Red LED
environment temperature	-20°C~70°C(248-343K)
Connection form	Connector
Shell material	Brass, Nickel plating
Induction surface	PBT
Protection grade	IP65
Standard	EN 60947-1:2004

## Remarks:

- Inductive proximity sensors detect the metallic objects.
- The detection distance may fluctuate with the different materials of the detected target. Custom design in the different rated input current and the output voltage are available.
- Both the configuration parameters and the cable length can be customized. Standard cable length 2M.
- If no explicit requirement for the output polarity, the proximity sensor will be supplied based on NPN mode.

**WARNING : Incorrect wiring may cause damage to the sensor.**