



Capacitive Proximity Sensor/Switch Datasheet

CCM4-12GM Series Electrostatic Capacity Type Proximity Switch

Introduction

- Capacitive sensors measure the proximity of conductive as well as non-conductive objects with high resolution.
- Analogous to the function of an inductive proximity sensor, a capacitive proximity sensor generates an electrostatic field at the face of the sensor.
- Capacitive proximity sensors can be tuned to detect a wide range of powder, liquid or solid materials.
- It is also possible to detect the presence or absence of materials within a barrier or package when the dielectric of the material is greater than the barrier or packaging.
- Capacitive sensors can also be used as a limit switch, for level detection, object detection and for counting purposes.
- It is divided into two categories according to the working state :
NO - Normal Open type,
NC - Normal Close type

Features:

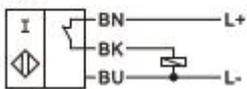
- ◆ Capacitive type, can detect any dielectric
- ◆ Power supply reversal connection protection; short-circuit protection, can directly connect with PLC
- ◆ Newly added current over-load protection; the elements are made of imported chip
- ◆ Long service life, high reliability and strong resistance property to environment
- ◆ Red LED status indicator provides easy-to-view output status.
- ◆ Simple operation with adjustable distance.
- ◆ The device can be powered by either an AC or DC power source.
- ◆ IP67 protection structure(IEC specification)

Ordering Part Number:

Model	Detection distance	Switch point function	Working voltage	Connection form
CCM4-12GM-N1	4mm±10%	NPN NO	DC6-36V	<p>NPN NO</p>
CCM4-12GM-N2	4mm±10%	NPN NC	DC6-36V	<p>NPN NC</p>
CCM4-12GM-P2	4mm±10%	PNP NO	DC6-36V	<p>PNP NO</p>



Capacitive Proximity Sensor/Switch Datasheet

CCM4-12GM-P2	4mm±10%	PNP NC	DC6-36V	<p>PNP NC</p> 
--------------	---------	--------	---------	---

Structure Parameter:



Technical Parameter:

Rated action distance (Sn)	4mm
Installation	Non-flush mounting
Reliable movement distance (Sa)	0~3.6mm
Switching frequency (f)	50Hz
Hysteresis (H)	Typical values%
Reverse polarity protection	Yes
Short circuit protection	Pulse
Voltage drop (Ud)	DC ≤ 1V
Voltage drop (Ud)	AC ≤ 7V
Working current (I _L)	0~300 mA
Leakage current (I _r)	0~0.5mA typical values 0.1uA, 25°C
No-load current (I _D)	≤ 15mA
Indicator light	Red LED
environment temperature	-20°C~70°C (248-343K)
Connection form	2m, PVC
Conductor cross-sectional area	0.14mm ²
Shell material	Brass, Nickel plating
Induction surface	PBT
Protection grade	IP67
Standard	EN 60947-1:2004



Capacitive Proximity Sensor/Switch Datasheet

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.

