

Inductive Proximity Sensor/Switch Datasheet

CJD05-17K Series Angular Columm Type Proximity Sensor

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:

- Functional type, equivalent to the same type of the other brands.
- 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
 - IP67 protection structure (IEC specification)

Ordering Part Number:					
Model	Detection distance	Switch point function	Working voltage	Connection form	
CJD05-17K-N1	5mm±10%	NPN NO	DC6-36V	NPN NO	
CJD05-17K-N2	5mm±10%	NPN NC	DC6-36V		
CJD05-17K-N4	5mm±10%	NPN NO+NC	DC6-36V	NPN NO+NC	
CJD05-17K-P1	5mm±10%	PNP NO	DC6-36V	PNP NO	
CJD05-17K-P2	5mm±10%	PNP NC	DC6-36V	PNP NC	
CJD05-17K-P4	5mm±10%	PNP NO+NC	DC6-36V	PNP NO+NC	
CJD05-17K-D1	5mm±10%	DC NO	DC10-30V		
CJD05-17K-D2	5mm±10%	DC NC	DC10-30V	DC NC I BN DL+	
CJD05-17K-A1	5mm±10%	AC NO	AC90-250V		

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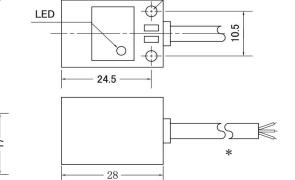


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CJD05-17K-A2	5mm±10%	AC NC	AC90-250V	
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Structure Parameter:





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Technical Parameter:

Rated action distance (Sn)5mmReliable movement distance (Sa) $O-4mm$ Switching frequency (f)ODC 0~500 HZSwitching frequency (f)AC 50/60HZSwitching frequency (f)AC 50/60HZHysteresis (H)Typical values%Reverse polarity protectionYesShort circuit protectionPulseVoltage drop (Ud)ODC $<$ 1VVoltage drop (Ud)AC \leq 7VWorking current (It) $O-300$ mANo-load current (Ip) $<$ 15mAIndicator lightCOC~70°C (248-343K)Connection form $O.14mm$ Shell materialOShell materialPBTInduction surfacePBTProtection gradeIP60947-11:2004				
(Sa)0-4mmSwitching frequency (f)DC0~500 HZSwitching frequency (f)AC50/60HZHysteresis (H)Typical values%Reverse polarity protectionYesShort circuit protectionPulseVoltage drop (Ud)DC ≤1VVoltage drop (Ud)AC ≤7VWorking current (I1)0~300 mALeakage current (Ir)0~0.5mA typical values 0.1uA, 25°CNo-load current (Ip)≤15mAIndicator lightRed LEDenvironment temperature-20°C ~70°C (248-343K)Conductor cross-sectional area0.14mmShell materialPBTInduction surfacePBTProtection gradeIP67	Rated action distance (Sn)	5mm		
(Sa)DCDC0~500 HZSwitching frequency (f)AC50/60HZHysteresis (H)Typical values%Reverse polarity protectionYesShort circuit protectionPulseVoltage drop (Ud)DC ≤1VVoltage drop (Ud)AC ≤7VWorking current (IL)0~300 mALeakage current (Ir)0~0.5mA typical values 0.1uA, 25°CNo-load current (Ip)≤15mAIndicator lightRed LEDenvironment temperature-20°C~70°C (248-343K)Conductor cross-sectional area0.14mmShell materialPBTInduction surfacePBTProtection gradeIP67	Reliable movement distance	0~4mm		
Switching frequency (f)AC 50/60HZHysteresis (H)Typical values%Reverse polarity protectionYesShort circuit protectionPulseVoltage drop (Ud)DC≤1VVoltage drop (Ud)AC≤7VWorking current (IL)0~300 mALeakage current (Ir)0~0.5mA typical values 0.1uA, 25°CNo-load current (ID)≤15mAIndicator lightRed LEDenvironment temperature-20°C~70°C (248-343K)Connection form2m, PVCConductor cross-sectional area0.14mmShell materialPBTInduction surfacePBTProtection gradeIP67	(Sa)			
Hysteresis (H)Typical values%Reverse polarity protectionYesShort circuit protectionPulseVoltage drop (Ud)DC≤1VVoltage drop (Ud)AC≤7VWorking current (I _L)0~300 mALeakage current (Ir)0~0.5mA typical values 0.1uA, 25°CNo-load current (I _D)≤15mAIndicator lightRed LEDenvironment temperature-20°C~70°C (248-343K)Connection form2m, PVCConductor cross-sectional area0.14mmShell materialPBTInduction surfacePBTProtection gradeIP67	Switching frequency (f)	DC 0~500 HZ		
Reverse polarity protectionYesShort circuit protectionPulseVoltage drop (Ud) $DC \leq 1V$ Voltage drop (Ud) $AC \leq 7V$ Working current (IL) $0\sim300$ mALeakage current (Ir) $0\sim0.5mA$ typical values $0.1uA, 25^{\circ}C$ No-load current (ID) $\leq 15mA$ Indicator lightRed LEDenvironment temperature $-20^{\circ}C \sim 70^{\circ}C (248-343K)$ Connection form $2m, PVC$ Conductor cross-sectional area $0.14mm$ Shell materialPBTInduction surfacePBTProtection gradeIP67	Switching frequency (f)	AC 50/60HZ		
Short circuit protectionPulseVoltage drop (Ud) $DC \leq 1V$ Voltage drop (Ud) $AC \leq 7V$ Working current (IL) $0~300 \text{ mA}$ Leakage current (Ir) $0~0.5\text{mA}$ typical values $0.1\text{uA}, 25^{\circ}C$ No-load current (ID) $\leq 15\text{mA}$ Indicator lightRed LEDenvironment temperature $-20^{\circ}C~70^{\circ}C(248-343\text{ K})$ Connection form2m, PVCConductor cross-sectional area 0.14 mm Shell materialPBTInduction surfacePBTProtection gradeIP67	Hysteresis (H)	Typical values%		
Voltage drop (Ud) $DC \leq 1V$ Voltage drop (Ud) $AC \leq 7V$ Working current (IL) $0 \sim 300 \text{ mA}$ Leakage current (Ir) $0 \sim 0.5 \text{mA}$ typical values $0.1 \text{uA}, 25^{\circ}\text{C}$ No-load current (ID) $\leq 15 \text{mA}$ Indicator lightRed LEDenvironment temperature $-20^{\circ}\text{C} \sim 70^{\circ}\text{C}(248-343\text{K})$ Connection form2m, PVCConductor cross-sectional area 0.14 mm Shell materialPBTInduction surfacePBTProtection gradeIP67	Reverse polarity protection	Yes		
Voltage drop (Ud) $AC \leq 7V$ Working current (IL) $0 \sim 300 \text{ mA}$ Leakage current (Ir) $0 \sim 0.5 \text{mA}$ typical values $0.1 \text{uA}, 25^{\circ}\text{C}$ No-load current (ID) $\leq 15 \text{mA}$ Indicator lightRed LEDenvironment temperature $-20^{\circ}\text{C} \sim 70^{\circ}\text{C}(248-343\text{K})$ Connection form2m, PVCConductor cross-sectional area 0.14 mm Shell materialPBTInduction surfacePBTProtection gradeIP67	Short circuit protection	Pulse		
Working current (IL)0~300 mALeakage current (Ir)0~0.5mA typical values 0.1uA, 25°CNo-load current (ID)≤15mAIndicator lightRed LEDenvironment temperature-20°C~70°C (248-343K)Connection form2m, PVCConductor cross-sectional area0.14mmShell materialPBTInduction surfacePBTProtection gradeIP67	Voltage drop (Ud)	DC≤1V		
Leakage current (Ir)0~0.5mA typical values 0.1uA, 25°CNo-load current (I _D)≤15mAIndicator lightRed LEDenvironment temperature-20°C~70°C (248-343K)Connection form2m, PVCConductor cross-sectional area0.14mmShell materialPBTInduction surfacePBTProtection gradeIP67	Voltage drop (Ud)	AC≤7V		
No-load current (ID)<15mAIndicator lightRed LEDenvironment temperature-20°C~70°C(248-343K)Connection form2m, PVCConductor cross-sectional area0.14mmShell materialPBTInduction surfacePBTProtection gradeIP67	Working current (I _L)	0~300 mA		
Indicator lightRed LEDenvironment temperature-20°C~70°C (248-343K)Connection form2m, PVCConductor cross-sectional area0.14mmShell materialPBTInduction surfacePBTProtection gradeIP67	Leakage current (Ir)	0~0.5mA typical values 0.1uA, 25℃		
environment temperature-20°C~70°C(248-343K)Connection form2m, PVCConductor cross-sectional area0.14mmShell materialPBTInduction surfacePBTProtection gradeIP67	No-load current (I _D)	≤15mA		
Connection form2m, PVCConductor cross-sectional area0.14mmShell materialPBTInduction surfacePBTProtection gradeIP67	Indicator light	Red LED		
Conductor cross-sectional area0.14mmShell materialPBTInduction surfacePBTProtection gradeIP67	environment temperature	-20°C~70°C(248-343K)		
Shell materialPBTInduction surfacePBTProtection gradeIP67	Connection form	2m, PVC		
Induction surfacePBTProtection gradeIP67	Conductor cross-sectional area	0.14mm		
Protection grade IP67	Shell material	PBT		
	Induction surface	PBT		
Standard EN 60947-1:2004	Protection grade	IP67		
	Standard	EN 60947-1:2004		





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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.

