CR12X series cylindrical capacitive sensor



Feature description

- One-piece housing with high-brightness LED indicator
- IP67 protection class which is effectively moisture-proof and dust-proof
- Enhance detection distance. Sensitivity adjustment adopts multi-turn potentiometer so as to reach higher adjustment accuracy
- High reliability, excellent EMC design with protection against short circuit, overloaded and reverse polarity
- Widely used in both metal and non-metal (plastic, powder, liquid, etc.) material testing



Model specification

NPN NO	CR12XCN08DNOY	PNP NO	CR12XCN08DPOY
NPN NC	CR12XCN08DNCY	PNP NC	CR12XCN08DPCY

Specifications

Adjust the distance312mmWhen storing:-3080°C(No icing, No condensation)Adjust the distanceSingle-turn potentiometerEnvironment humidity3595%RH(No icing, No condensation)Standard test objectFe 24*24*1t(Grounded)®Vibration resistant1055Hz,Dual amplitude 1mm(2 hours)Supply voltage1030VDCeach in X, Y, and Z directions)Load current≤200mAImpulse withsand30g/11ms,3 times each for X,Y,Z directionResidual voltage≤2VHigh pressure resistant1000V/AC 50/60Hz 60sConsumption current≤20mAInsulation resistance≤50MΩ(500VDC)Switch point offset [%/Sn]≤±10%Shape specificationM12*1*68mmTemperature drift [%/Sr]≤±20%Housing materialNickel copper alloyHysteresis range [%/Sr]320%Housing materialNickel copper alloyRepetitive error [R]≤5%Connection type2m PVC Cable	Specifications			
Ensure distance Sa\$5.76mmAmbient temperatureWhen working:-2570°C(No icing, No condensationAdjust the distance312mmImage: CondensationWhen storing:-3080°C(No icing, No condensationAdjust the distanceSingle-turn potentiometerEnvironment humidity5595%RH(No icing, No condensation)Standard test objectFe 24*24*11(Grounded)@Vibration resistant1055Hz,Dual amplitude 1mm(2 hoursSupply voltage1030VDCeach in X, Y, and Z directions)Image: CondensationLoad current\$200mAImpulse withsand30g/11ms,3 times each for X,Y,Z directionResidual voltage\$2VHigh pressure resistant1000V/AC 50/60Hz 60sSwitch point offset [%/Sn]\$±10%Shape specificationM12*1*68mmFemperature drift [%/Sr]\$±20%Protection degreeIP67Hysteresis range [%/Sr]320%Connection type2m PVC CableRepetitive error [R]\$5%Connection type2m PVC CableCircuit protectionShort circuit protection, Overload protectionAccessoriesM12 nuts-2, Slotted screwdriver, Operation manual	Installation type	Non-flush	Indicator	Output indication:Yellow LED
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Adjustment methodSingle-turn potentiometerEnvironment humidity3595%RH(No icing, No condensation)Standard test objectFe 24*24*1t(Grounded)@Vibration resistant1055Hz,Dual amplitude 1mm(2 hours)Supply voltage1030VDCeach in X, Y, and Z directions)Load current≤200mAImpulse withsand30g/11ms,3 times each for X,Y,Z directionResidual voltage≤2VHigh pressure resistant1000V/AC 50/60Hz 60sConsumption current≤20mAInsulation resistance≥50MΩ(500VDC)Switch point offset [%/Sr]≤±10%Shape specificationM12*1*68mmTemperature drift [%/Sr]≤±20%Housing materialNickel copper alloyHysteresis range [%/Sr]320%Connection type2m PVC CableRepetitive error [R]≤5%Connection, Overload protection, AccessoriesM12 nuts×2, Slotted screwdriver, Operation manual	Ensure distance Sa	≤5.76mm	Ambient temperature	When working:-2570°C(No icing, No condensation)
Standard test objectFe 24*24*1t(Grounded)@Vibration resistant1055Hz,Dual amplitude 1mm(2 hoursSupply voltage1030VDCeach in X, Y, and Z directions)Load current≤200mAImpulse withsand30g/11ms,3 times each for X,Y,Z directionResidual voltage≤2VHigh pressure resistant1000V/AC 50/60Hz 60sConsumption current≤20mAInsulation resistance≥50MΩ(500VDC)Switch point offset [%/Sr]≤±10%Shape specificationM12*1*68mmTemperature drift [%/Sr]≤±20%Protection degreeIP67Hysteresis range [%/Sr]320%Connection type2m PVC CableRepetitive error [R]≤5%Connection, Overload protection,AccessoriesM12 nuts×2, Slotted screwdriver, Operation manual	Adjust the distance	312mm		When storing:-3080°C(No icing, No condensation)
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Load current≤200mAImpulse withsand30g/11ms,3 times each for X,Y,Z directionResidual voltage≤2VHigh pressure resistant1000V/AC 50/60Hz 60sConsumption current≤20mAInsulation resistance≤50MΩ(500VDC)Switch point offset [%/Sr]≤±10%Shape specificationM12*1*68mmTemperature drift [%/Sr]≤±20%Protection degreeIP67Hysteresis range [%/Sr]320%Housing materialNickel copper alloyRepetitive error [R]≤5%Connection type2m PVC CableCircuit protectionShort circuit protection, Overload protection, AccessoriesM12 nuts×2, Slotted screwdriver, Operation manual	Standard test object	Fe 24*24*1t(Grounded)®	Vibration resistant	1055Hz,Dual amplitude 1mm(2 hours
Residual voltage≤2VHigh pressure resistant1000V/AC 50/60Hz 60sConsumption current≤20mAInsulation resistance≥50MΩ(500VDC)Switch point offset [%/Sn]≤±10%Shape specificationM12*1*68mmTemperature drift [%/Sr]≤±20%Protection degreeIP67Hysteresis range [%/Sr]320%Housing materialNickel copper alloyRepetitive error [R]≤5%Connection type2m PVC CableCircuit protectionShort circuit protection, Overload protection,AccessoriesM12 nuts×2, Slotted screwdriver, Operation manual	Supply voltage	1030VDC		each in X, Y, and Z directions)
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Temperature drift [%/Sr] $\leq \pm 20\%$ Protection degreeIP67Hysteresis range [%/Sr]320%Housing materialNickel copper alloyRepetitive error [R] $\leq 5\%$ Connection type2m PVC CableCircuit protectionShort circuit protection, Overload protection,AccessoriesM12 nuts×2, Slotted screwdriver, Operation manual	Consumption current	≤20mA	Insulation resistance	≥50MΩ(500VDC)
Hysteresis range [%/Sr] 320% Housing material Nickel copper alloy Repetitive error [R] ≤5% Connection type 2m PVC Cable Circuit protection Short circuit protection, Overload protection, Accessories M12 nuts×2, Slotted screwdriver, Operation manual	Switch point offset [%/Sn]	≤±10%	Shape specification	M12*1*68mm
Repetitive error [R] ≤5% Connection type 2m PVC Cable Circuit protection Short circuit protection, Overload protection, Accessories M12 nuts×2, Slotted screwdriver, Operation manual	Temperature drift [%/Sr]	≤±20%	Protection degree	IP67
Circuit protection Short circuit protection, Overload protection, Accessories M12 nuts×2, Slotted screwdriver, Operation manua	Hysteresis range [%/Sr]	320%	Housing material	Nickel copper alloy
	Repetitive error [R]	≤5%	Connection type	2m PVC Cable
Reverse polarity protection	Circuit protection	Short circuit protection, Overload protection,	Accessories	M12 nuts×2, Slotted screwdriver, Operation manual
		Reverse polarity protection		

Note: ①the factory default sensing distance is $Sn \pm 10\%$

②unit:mm

Dimensions



Wiring diagram



NPN NO





PNP NO



NPN NC

PNP NC

