


M12 Series

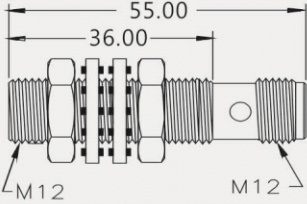
**No-touch operation · high response frequency · wide range application.
 Variety of specification · switching output · dimension and housing material.
 Variable with cable or connector version · customer-specific versions available.**

Reverse polarity and Swapped signal wires protection.

Good environmental resistance up to IP67 and IP68.

All products are CE approved.




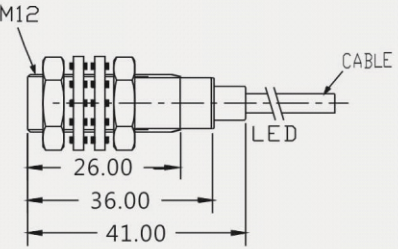


M12 Plug Connector
Nickel-Plated Brass

IEC IP67

Switching Output	Model Number	Operating Voltage	Response Frequency	Sensing Distance
DC 3-Wire NPN NO	TLX-12N02E1-V	DC 10~30V	1000Hz	2mm
DC 3-Wire NPN NC	TLX-12N02E2-V			
DC 3-Wire PNP NO	TLX-12P02E1-V			
DC 3-Wire PNP NC	TLX-12P02E2-V			





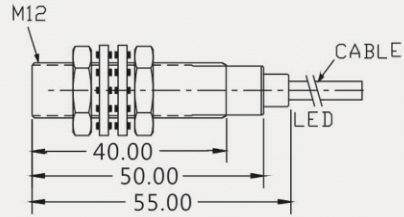
Pre-wired 2M Cable
Nickel-Plated Brass

IEC IP67

Switching Output	Model Number	Operating Voltage	Response Frequency	Sensing Distance
DC 3-Wire NPN NO	TLX-12GN02E1	DC 10~30V	1000Hz	2mm
DC 3-Wire NPN NC	TLX-12GN02E2			
DC 3-Wire PNP NO	TLX-12GP02E1			
DC 3-Wire PNP NC	TLX-12GP02E2			



IEC IP67

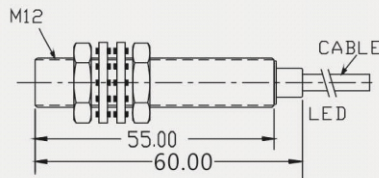


Pre-wired 2M Cable
Nickel-Plated Brass

Switching Output	Model Number	Operating Voltage	Response Frequency	Sensing Distance
DC 3-Wire NPN NO	TLX-12N02E1	DC 10~30V	1000Hz	2mm
DC 3-Wire NPN NC	TLX-12N02E2			
DC 3-Wire PNP NO	TLX-12P02E1			
DC 3-Wire PNP NC	TLX-12P02E2			
DC 2-Wire NPN/PNP NO	XP-12D02E1			
AC 2-Wire SCR NO	XP-12A02E1	AC 24~240V	25Hz	
AC 2-Wire SCR NC	XP-12A02E2			

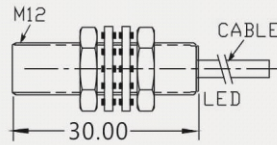


IEC IP67



Pre-wired 2M Cable
Nickel-Plated Brass

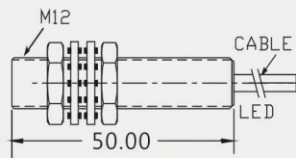
Switching Output	Model Number	Operating Voltage	Response Frequency	Sensing Distance
DC 3-Wire NPN NO	TLX-12LN02E1	DC 10~30V	1000Hz	2mm
DC 3-Wire NPN NC	TLX-12LN02E2			
DC 3-Wire PNP NO	TLX-12LP02E1			
DC 3-Wire PNP NC	TLX-12LP02E2			
DC 2-Wire NPN/PNP NO	XP-12LD02E1			
AC 2-Wire SCR NO	XP-12LA02E1	AC 24~240V	25Hz	
AC 2-Wire SCR NC	XP-12LA02E2			



IEC IP67

Pre-wired 2M Cable
Stainless Steel

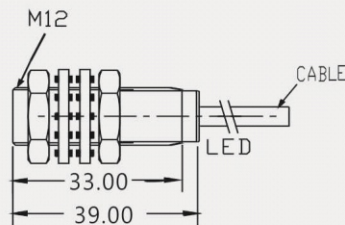
Switching Output	Model Number	Operating Voltage	Response Frequency	Sensing Distance
DC 3-Wire NPN NO	XN-F12GN02E1	DC 10~30V	1000Hz	2mm
DC 3-Wire NPN NC	XN-F12GN02E2			
DC 3-Wire PNP NO	XN-F12GP02E1			



IEC IP67

Pre-wired 2M Cable
Nickel-Plated Brass

Switching Output	Model Number	Operating Voltage	Response Frequency	Sensing Distance
DC 4-Wire NPN NO&NC	XL-F12N02E3	DC 10~30V	1000Hz	2mm
DC 4-Wire PNP NO&NC	XL-F12P02E3			



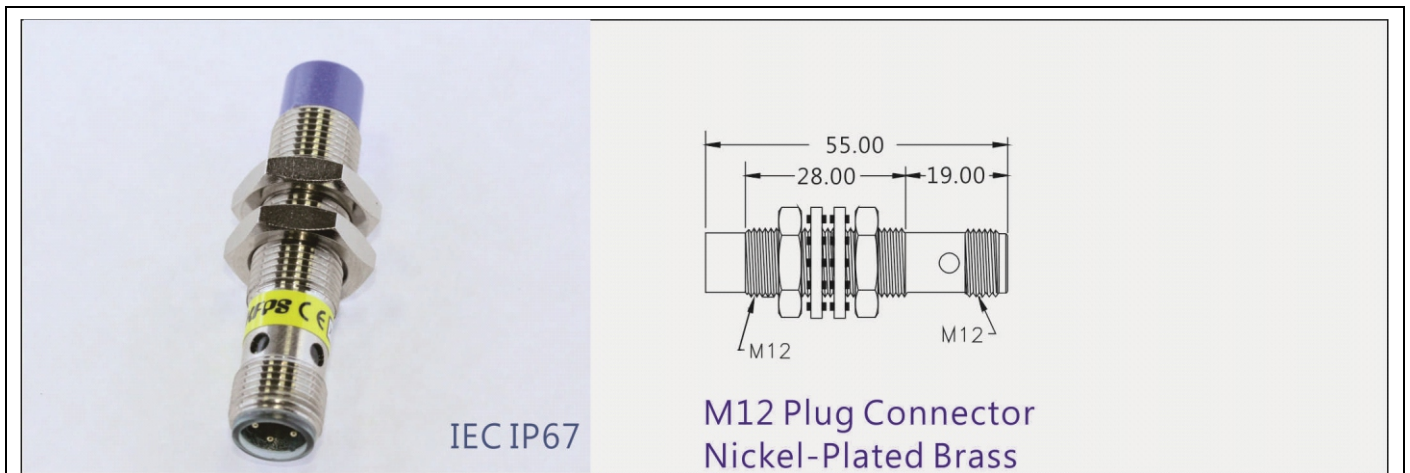
IEC IP68

Pre-wired 2M Cable
Nylon

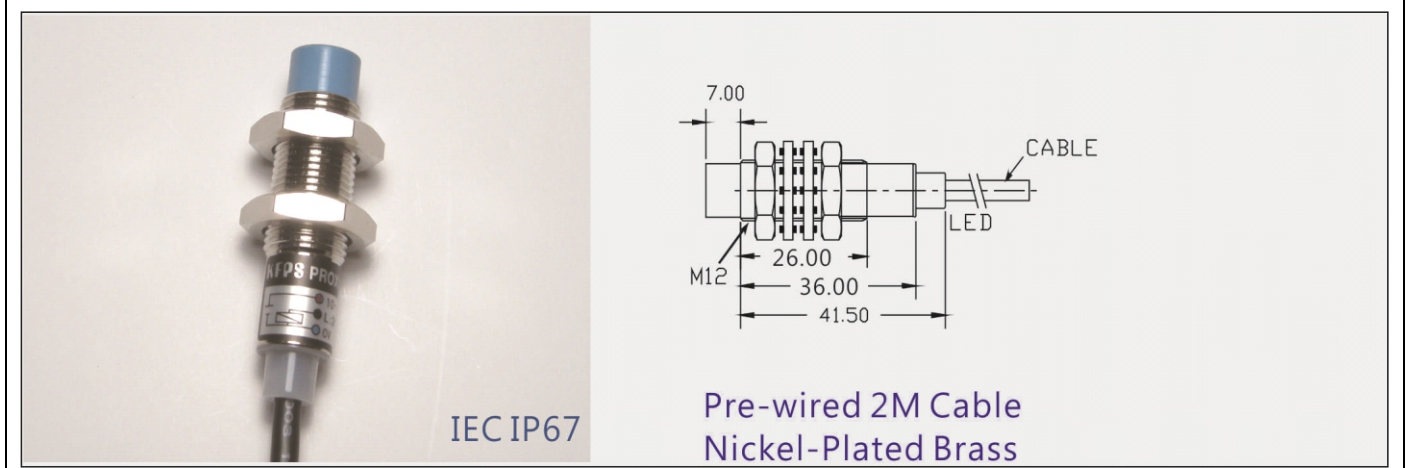
Switching Output	Model Number	Operating Voltage	Response Frequency	Sensing Distance

DC 3-Wire NPN NO	ABS-12N02E1	DC 10~30V	1000Hz	2mm
DC 3-Wire NPN NC	ABS-12N02E2			
DC 3-Wire PNP NO	ABS-12P02E1			
DC 3-Wire PNP NC	ABS-12P02E2			

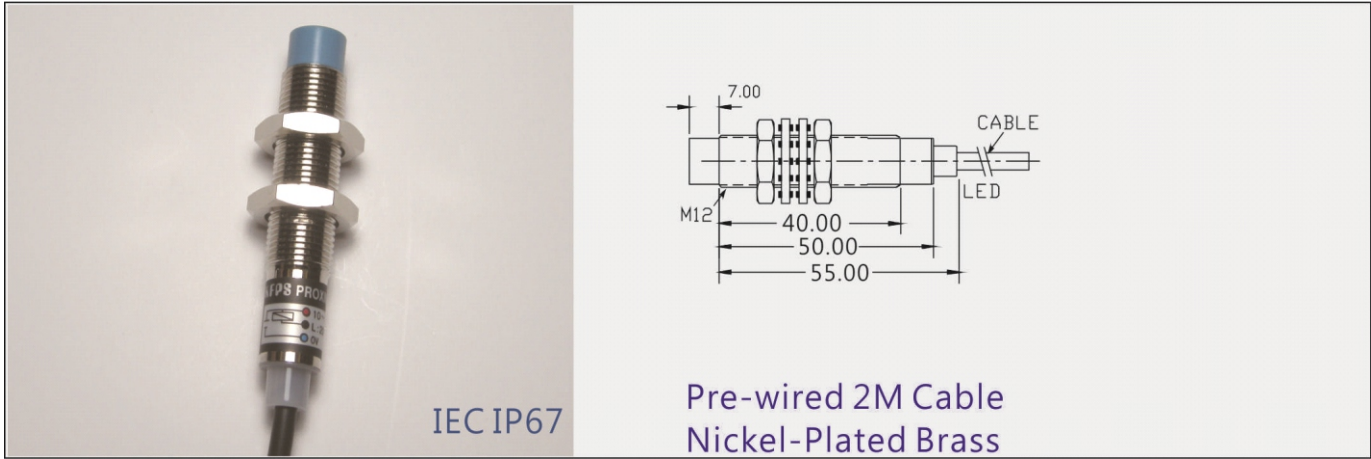
Item	Specifications
Standard sensing object	Iron, 12×12×1 mm
Installation	Shielded
Load current	DC 3&4 Wire ≤ 200mA · DC 2 Wire ≤ 100mA · AC 2 Wire ≤ 300mA
Operation indicator	Red LED
Circuits protection	Reversed polarity & Short circuit protection
Ambient temperature & humidity range	Operating : -20 ~ 70°C / RH 35 ~85% (with no icing or condensation)
Insulation resistance	50MΩ minimum. (at 500VDC) between current carry parts and case
Voltage with stand ability	1000VAC 50/60Hz for 1 minute between current carry parts and case



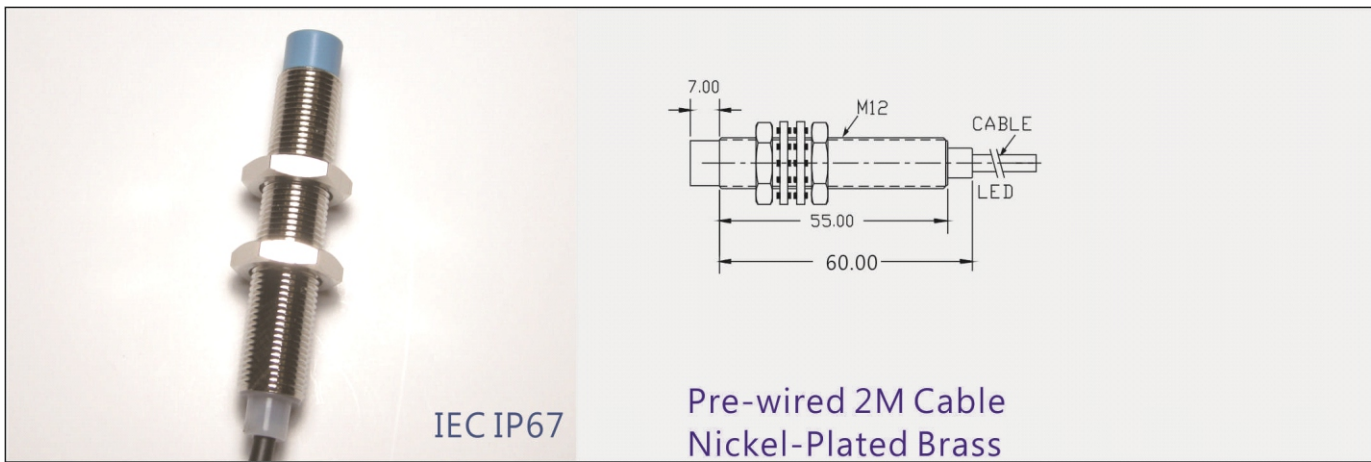
Switching Output	Model Number	Operating Voltage	Response Frequency	Sensing Distance
DC 3-Wire NPN NO	TLX-12N04E1-V	DC 10~30V	600Hz	4mm
DC 3-Wire NPN NC	TLX-12N04E2-V			
DC 3-Wire PNP NO	TLX-12P04E1-V			
DC 3-Wire PNP NO	TLX-12P04E2-V			



Switching Output	Model Number	Operating Voltage	Response Frequency	Sensing Distance
DC 3-Wire NPN NO	TLX-12GN04E1	DC 10~30V	600Hz	4mm
DC 3-Wire NPN NC	TLX-12GN04E2			
DC 3-Wire PNP NO	TLX-12GP04E1			
DC 3-Wire PNP NC	TLX-12GP04E2			

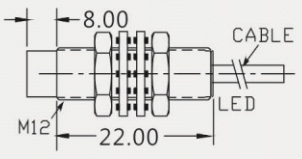


Switching Output	Model Number	Operating Voltage	Response Frequency	Sensing Distance
DC 3-Wire NPN NO	TLX-12N04E1	DC 10~30V	600Hz	4mm
DC 3-Wire NPN NC	TLX-12N04E2			
DC 3-Wire PNP NO	TLX-12P04E1			
DC 3-Wire PNP NC	TLX-12P04E2			
DC 2-Wire NPN/PNP NO	XP-12D04E1			
AC 2-Wire SCR NO	XP-12A04E1	AC 24~240V	25Hz	
AC 2-Wire SCR NC	XP-12A04E2			



Switching Output	Model Number	Operating Voltage	Response Frequency	Sensing Distance
DC 3-Wire NPN NO	TLX-12LN04E1	DC 10~30V	600Hz	4mm
DC 3-Wire NPN NC	TLX-12LN04E2			
DC 3-Wire PNP NO	TLX-12LP04E1			
DC 3-Wire PNP NC	TLX-12LP04E2			
DC 2-Wire NPN/PNP NO	XP-12LD04E1			

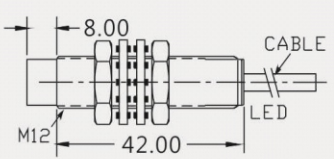
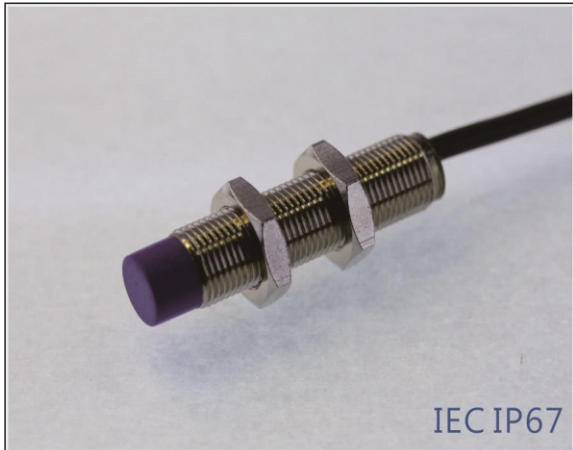
AC 2-Wire SCR NO	XP-12LA04E1	AC 24~240V	25Hz	4mm
AC 2-Wire SCR NC	XP-12LA04E2			



IEC IP67

Pre-wired 2M Cable
Stainless Steel

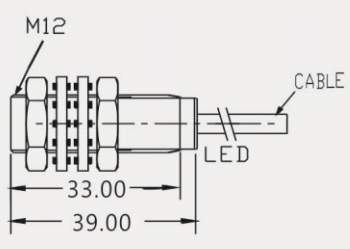
Switching Output	Model Number	Operating Voltage	Response Frequency	Sensing Distance
DC 3-Wire NPN NO	XN-N12GN04E1	DC 10~30V	500Hz	4mm
DC 3-Wire NPN NC	XN-N12GN04E2			
DC 3-Wire PNP NO	XN-N12GP04E1			



IEC IP67

Pre-wired 2M Cable
Nickel-Plated Brass

Switching Output	Model Number	Operating Voltage	Response Frequency	Sensing Distance
DC 4-Wire NPN NO&NC	XL-N12N04E3	DC 10~30V	500Hz	4mm
DC 4-Wire PNP NO&NC	XL-N12P04E3			



IEC IP68

Pre-wired 2M Cable
Nylon

Switching Output	Model Number	Operating Voltage	Response Frequency	Sensing Distance
DC 3-Wire NPN NO	ABS-12N04E1	DC 10~30V	500Hz	4mm
DC 3-Wire NPN NC	ABS-12N04E2			
DC 3-Wire PNP NO	ABS-12P04E1			
DC 3-Wire PNP NC	ABS-12P04E2			

Item	Specifications
Standard sensing object	Iron, 12×12×1 mm
Installation	Unshielded
Load current	DC 3&4 Wire ≤ 200mA · DC 2 Wire ≤ 100mA · AC 2 Wire ≤ 300mA
Operation indicator	Red LED
Circuits protection	Reversed polarity & Short circuit protection
Ambient temperature & humidity range	Operating : -20 ~ 70°C / RH 35 ~85% (with no icing or condensation)
Insulation resistance	50MΩ minimum. (at 500VDC) between current carry parts and case
Voltage with stand ability	1000VAC 50/60Hz for 1 minute between current carry parts and case

Wiring Diagram :

