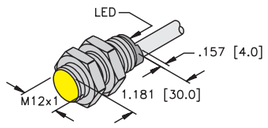
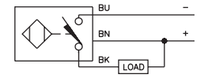
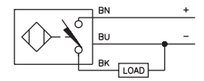
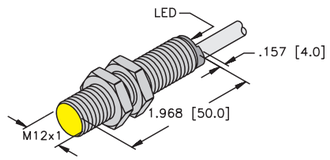
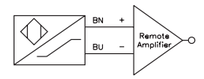
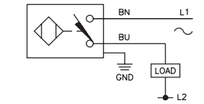
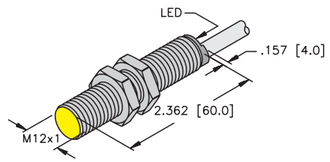
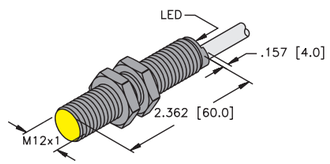
TURCK mold-on connectors available on all cable sensors. See page A5.

Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output	Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
12 mm - Embeddable, Potted-In Cable 	Bi 2-EG12HK-AN6X/S1589	T4605192	***Weldguard***	2	**3-Wire DC NPN**	**10-30 VDC**	2000	≤200	-25 to +70	IP 67	WG	WG	EPTR	N/A	YE	2M/PVC	1	**Diagram 1** 
	Bi 2-G12K-AN6X	T4671200	***Short Barrel***	2			2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	
	Bi 4-G12K-AN6X	T4670251	***Short Barrel***	4			2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	
	Bi 2-G12K-AP6X	T4670200	***Short Barrel***	2	**3-Wire DC PNP**	**10-30 VDC**	2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
	Bi 4-G12K-AP6X	T4670250	***Short Barrel***	4			2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
	Bi 2-EG12-YOX	T4012000		2	**2-Wire DC NAMUR**	**5-30 VDC**	5000	Remote	-25 to +70	IP 67	SS	PA 12	EPTR	N/A	YE	2M/PVC	3	**Diagram 2** 
	Bi 2-G12-YO	T1005400		2			5000	Remote	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	N/A	2M/PVC	3	
	Bi 2-G12-YOX	T4010000		2			5000	Remote	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	3	
12 mm - Embeddable, Potted-In Cable 	Bi 2-EG12-AN6X	T4605101		2	**3-Wire DC NPN**	**10-30 VDC**	2000	≤200	-25 to +70	IP 67	SS	PA 12	EPTR	N/A	YE	2M/PVC	1	**Diagram 3** 
	Bi 2-G12-AN6X	T4635500		2			2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	
	Bi 2-G12-AN7X	T4730500	***TTL Compatible***	2			2000	≤150	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	
	Bi 4-G12-AN6X	T1690706	***Extended Range***	4			2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	1	
	Bi 2-EG12-AP6X	T4605001		2	**3-Wire DC PNP**	**10-30 VDC**	2000	≤200	-25 to +70	IP 67	SS	PA 12	EPTR	N/A	YE	2M/PVC	2	**Diagram 4** 
	Bi 2-G12-AP6X	T4635400		2			2000	≤200	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	2	
12 mm - Embeddable, Potted-In Cable 	Bi 2-G12-ADZ32X	T4205000		2	**2-Wire AC/DC Short-circuit Protected**	**20-250 VAC 10-300 VDC**	20	≤100	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	4	
	Bi 4-G12-ADZ32X	T4205030	***Extended Range***	4			20	≤100	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	4	
	Bi 2-G12-AZ33X	T1304002		2	**2-Wire AC/DC**	**35-250 VAC 10-300 VDC**	20	≤100	-25 to +70	IP 67	CPB	PA 12	EPTR	N/A	YE	2M/PVC	4	
12 mm - Embeddable, Potted-In Cable, Teflon Coated 	Bi 2-GT12-ADZ32X/S34	T4205210	***WFI***	2	**2-Wire AC/DC Short-circuit Protected**	**20-250 VAC 10-300 VDC**	20	≤100	-25 to +70	IP 67	TC	TC	EPTR	N/A	YE	2M/PVC	4	
	Bi 2-GT12-AZ33X/S34	T1304052	***WFI***	2	**2-Wire AC/DC**	**35-250 VAC 10-300 VDC**	20	≤100	-25 to +70	IP 67	TC	TC	EPTR	N/A	YE	2M/PVC	4	

For detailed sensor specifications see Section A.
Normally Closed versions available upon request, consult factory.

For material descriptions see page A34.

TURCK Inc. 3000 Campus Drive Minneapolis, MN 55441 Application Support: 1-800-544-PROX Fax: (763) 553-0708 www.turck.com

2-Wire DC NAMUR

Differential Travel (Hysteresis)	1-10% (5% typical)
Nominal Voltage	8.2 VDC (EN60947-5-6)
Resistance Change from Nonactivated to Activated Condition	typical <1.0 to >8.0 kΩ
Resulting Current Change	≥2.2 mA to ≤1.0 mA
Recommended Switching Point for Remote Amplifier	>1.2 to <2.1 mA, typ. 1.55 mA ON/1.75 mA OFF
Power-On Effect	Realized in Amplifier
Reverse Polarity Protection	Incorporated
Wire-Break Protection	Realized in Amplifier
Transient Protection	Realized in Amplifier
Shock	30 g, 11 ms
Vibration	55 Hz, 1 mm Amplitude in all 3 Planes
Repeatability	≤2% of Rated Operating Distance

2-Wire DC

Ripple	≤10%
Differential Travel (Hysteresis)	3-15% (5% typical)
Voltage Drop Across Conducting Sensor	Non-polarized (AD) <5.0 V Polarized (AG) <4.0 V
Trigger Current for Overload Protection	≥120 mA
Minimum Load Current	≥3.0 mA
Off-State (Leakage) Current	≤0.8 mA
Power-On Effect	Per IEC 947-5-2
Transient Protection	Per EN 60947-5-2
Shock	30 g, 11 ms
Vibration	55 Hz, 1 mm Amplitude in all 3 Planes
Repeatability	≤2% of Rated Operating Distance

REED (AC) and (DC)

Ripple	≤10%
Differential Travel (Hysteresis)	≤1 mm (Depends on magnet)
Maximum Switching Capacity	10 W
No-Load Current	0 mA
Maximum Approach Velocity	≤10 m/s
Power-On Effect	Per IEC 947-5-2
Transient Protection	Per EN 60947-5-2
Shock	30 g, 11 ms
Vibration	55 Hz,1 mm Amplitude in all 3 Planes
Repeatability	≥ ±0.1 mm (constant temperature & voltage)
Temperature Drift	≤0.1 mm
Voltage Drop	≤0.5 Volts

3-Wire DC

Ripple	≤10%
Differential Travel (Hysteresis)	3-15% (5% typical)
Voltage Drop Across Conducting Sensor	≤1.8 V
	- Si...K08/K10(AP71, AN7) ≤0.7 V
	- Bi/Ni../S34 ≤1.8 V
	- Bi 2-Q8SE-AP/AN.. ≤2.5 V
Trigger Current for Overload Protection	≥220 mA on 200 mA Load Current
	≥170 mA on 150 mA Load Current
	≥120 mA on 100 mA Load Current
Off-State (Leakage) Current	<100 µA
No-Load Current	<10 mA (Uprox ≤15 mA)
Time Delay Before Availability	≤8 ms
Power-On Effect	Per IEC 947-5-2
Reverse Polarity Protection	Incorporated
Wire-Break Protection	Incorporated
Transient Protection	Per EN 60947-5-2
Shock	30 g, 11 ms
Vibration	55 Hz, 1 mm Amplitude in all 3 Planes
Repeatability	≤2% of Rated Operating Distance
	Bi 2-Q8SE-AP/AN.. ≤5% of Rated Operating Distance

4-Wire DC

Ripple	≤10%
Differential Travel (Hysteresis)	3-15% (5% typical)
Voltage Drop Across Conducting Sensor	≤1.8 V at 200 mA
Trigger Current for Overload Protection	≥220 mA on 200 mA Load Current
	≥170 mA on 150 mA Load Current
	≥120 mA on 100 mA Load Current
Off-State (Leakage) Current	<100 µA
No-Load Current	<10 mA (Uprox ≤15 mA)
Power-On Effect	Per IEC 947-5-2
Reverse Polarity Protection	Incorporated
Wire-Break Protection	Incorporated
Transient Protection	Per EN 60947-5-2
Shock	30 g, 11 ms
Vibration	55 Hz, 1 mm Amplitude in all 3 Planes
Repeatability	≤2% of Rated Operating Distance

2-Wire AC w/o Short-Circuit Protection

Line Frequency	40-60 Hz
Differential Travel (Hysteresis)	3-15% (5% typical)
Voltage Drop Across Conducting Sensor	≤6.0 V at 400 mA
	8 & 12 mm ≤6.0 V at 100 mA
Continuous Load Current	≤400 mA
	8 & 12 mm ≤100 mA
Off-State (Leakage) Current	≤1.7 mA
Minimum Load Current	≥5.0 mA
Inrush Current	≤8.0 A (≤10 ms, 5% Duty Cycle)
Power-On Effect	Per IEC 947-5-2
Transient Protection	Per EN 60947-5-2
Shock	30 g, 11 ms
Vibration	55 Hz, 1 mm Amplitude in all 3 Planes
Repeatability	≤2% of Rated Operating Distance

2-Wire AC/DC w/Short-Circuit Protection

Line Frequency	40-60 Hz
Differential Travel (Hysteresis)	3-15% (5% typical)
Voltage Drop Across Conducting Sensor	≤6.0 V at 400 mA
	8 & 12 mm ≤6.0 V at 100 mA
Trigger Current for Overload Protection	AC: ≥440 mA; DC: ≥330 mA
	8 & 12 mm AC: ≥120 mA; DC: ≥120 mA
Continuous Load Current	AC: ≤400 mA; DC: ≤300 mA
	8 & 12 mm AC: ≥100 mA; DC: ≥100 mA
Off-State (Leakage) Current	≤1.7 mA (AC)
	≤1.5 mA (DC)
Minimum Load Current	≥3.0 mA
Inrush Current	4.0 A (≤20 ms, 10% Duty Cycle)
Power-On Effect	Per IEC 947-5-2
Transient Protection	Per EN 60947-5-2
Shock	30 g, 11 ms
Vibration	55 Hz, 1 mm Amplitude in all 3 Planes
Repeatability	≤2% of Rated Operating Distance