

# Inductive Sensors



Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
<b>12 mm - Embeddable, picofast® Connection</b> 	Bi 4U-M12-AP6X-V1131	M1634780	<i>Uprox+</i>	4	3-Wire DC PNP
<b>12 mm - Embeddable, eurofast® Connection</b> 	Bi 4U-EM12-AN6X-H1141	M1634827	<i>Uprox+</i> , Stainless Steel	4	3-Wire DC NPN
	Bi 4U-EM12WD-AN6X-H1141	M1634841	<i>Uprox+</i> , Washdown	4	
	Bi 4U-M12-AN6X-H1141	M1634824	<i>Uprox+</i>	4	
	Bi 4U-MT12-AN6X-H1141	M1634829	<i>Uprox+</i> , Teflon	4	
	3-Wire DC PNP	Bi 4U-EM12-AP6X-H1141	M1634807	<i>Uprox+</i> , Stainless Steel	4
		Bi 4U-EM12WD-AP6X-H1141	M1634812	<i>Uprox+</i> , Washdown	4
		Bi 4U-M12-AP6X-H1141	M1634804	<i>Uprox+</i>	4
		Bi 4U-MT12-AP6X-H1141	M1634809	<i>Uprox+</i> , Teflon	4
		Bi 4U-MT12E-AP6X2-H1141*	M1644742	<i>Uprox+</i> , Dual LED's	4
		<b>12 mm - Nonembeddable, eurofast Connection</b> 	Ni 10U-EM12-AN6X-H1141	M1634828	<i>Uprox+</i> , Stainless Steel
Ni 10U-EM12WD-AN6X-H1141	M1634837		<i>Uprox+</i> , Washdown	10	
Ni 10U-M12-AN6X-H1141	M1634826		<i>Uprox+</i>	10	
Ni 10U-MT12-AN6X-H1141	M1634830		<i>Uprox+</i> , Teflon	10	
3-Wire DC PNP	Ni 10U-EM12-AP6X-H1141		M1634808	<i>Uprox+</i> , Stainless Steel	10
	Ni 10U-EM12WD-AP6X-H1141		M1634814	<i>Uprox+</i> , Washdown	10
	Ni 10U-M12-AP6X-H1141		M1634806	<i>Uprox+</i>	10
	Ni 10U-MT12-AP6X-H1141		M1634810	<i>Uprox+</i> , Teflon	10
	Ni 10U-MT12E-AP6X2-H1141*		M1634844	<i>Uprox+</i> , Dual LED's	10
	<b>12 mm - Embeddable, Potted-in Cable</b> 		Bi 4U-EM12WD-AN6X	M1634842	<i>Uprox+</i> , Washdown
Bi 4U-M12-AN6X		M1634823	<i>Uprox+</i>	4	
3-Wire DC PNP		Bi 4U-EM12WD-AP6X	M1634811	<i>Uprox+</i> , Washdown	4
		Bi 4U-M12-AP6X	M1634803	<i>Uprox+</i>	4
<b>12 mm - Nonembeddable, Potted-in Cable</b> 	Ni 10U-EM12WD-AN6X	M1634838	<i>Uprox+</i> , Washdown	10	3-Wire DC NPN
	Ni 10U-M12-AN6X	M1634825	<i>Uprox+</i>	10	
	3-Wire DC PNP	Ni 10U-EM12WD-AP6X	M1634813	<i>Uprox+</i> , Washdown	10
		Ni 10U-M12-AP6X	M1634805	<i>Uprox+</i>	10

\* MT12E = extended barrel length 62mm.



Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	Power LED	Output LED	Mating Cordset	Wiring Diagram #	Wiring Diagrams
10-30 VDC	2000	≤200	-30 to +85	IP 68	CPB	LCP	N/A	YE	PKG 3Z-*	5	<p><b>Diagram 1</b></p>
10-30 VDC	2000	≤200	-30 to +85	IP 68	SS	LCP	N/A	YE	RK 4T-*	1	<p><b>Diagram 2</b></p>
	2000	≤200	-30 to +85	IP 68, 69K	SS	LCP	N/A	YE	RK 4T-*	1	
	2000	≤200	-30 to +85	IP 68	CPB	LCP	N/A	YE	RK 4T-*	1	
	2000	≤200	-30 to +85	IP 68	TC	LCP	N/A	YE	RK 4T-*	1	
10-30 VDC	2000	≤200	-30 to +85	IP 68	SS	LCP	N/A	YE	RK 4T-*	2	<p><b>Diagram 3</b></p>
	2000	≤200	-30 to +85	IP 68, 69K	SS	LCP	N/A	YE	RK 4T-*	2	
	2000	≤200	-30 to +85	IP 68	CPB	LCP	N/A	YE	RK 4T-*	2	
	2000	≤200	-30 to +85	IP 68	TC	LCP	N/A	YE	RK 4T-*	2	
	2000	≤200	-30 to +85	IP 68	TC	LCP	GN	YE	RK 4.4T-*	2	
10-30 VDC	1000	≤200	-30 to +85	IP 68	SS	LCP	N/A	YE	RK 4T-*	1	<p><b>Diagram 4</b></p>
	1000	≤200	-30 to +85	IP 68, 69K	SS	LCP	N/A	YE	RK 4T-*	1	
	1000	≤200	-30 to +85	IP 68	CPB	LCP	N/A	YE	RK 4T-*	1	
	1000	≤200	-30 to +85	IP 68	TC	LCP	N/A	YE	RK 4T-*	1	
10-30 VDC	1000	≤200	-30 to +85	IP 68	SS	LCP	N/A	YE	RK 4T-*	2	<p><b>Diagram 5</b></p>
	1000	≤200	-30 to +85	IP 68, 69K	SS	LCP	N/A	YE	RK 4T-*	2	
	1000	≤200	-30 to +85	IP 68	CPB	LCP	N/A	YE	RK 4T-*	2	
	1000	≤200	-30 to +85	IP 68	TC	LCP	N/A	YE	RK 4T-*	2	
	1000	≤200	-30 to +85	IP 68	TC	LCP	GN	YE	RK 4T-*	2	
10-30 VDC	2000	≤200	-30 to +85	IP 68, 69K	SS	LCP	N/A	YE	2M/PUR	3	<p><b>Diagram 5</b></p>
	2000	≤200	-30 to +85	IP 68	CPB	LCP	N/A	YE	2M/PVC	3	
10-30 VDC	2000	≤200	-30 to +85	IP 68, 69K	SS	LCP	N/A	YE	2M/PUR	4	<p><b>Diagram 5</b></p>
	2000	≤200	-30 to +85	IP 68	CPB	LCP	N/A	YE	2M/PVC	4	
10-30 VDC	1000	≤200	-30 to +85	IP 68, 69K	SS	LCP	N/A	YE	2M/PUR	3	<p><b>Diagram 5</b></p>
	1000	≤200	-30 to +85	IP 68	CPB	LCP	N/A	YE	2M/PVC	3	
10-30 VDC	1000	≤200	-30 to +85	IP 68, 69K	SS	LCP	N/A	YE	2M/PUR	4	<p><b>Diagram 5</b></p>
	1000	≤200	-30 to +85	IP 68	CPB	LCP	N/A	YE	2M/PVC	4	

Uprox+

\* Length in meters.

**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 ( <b>Uprox</b> ≤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