

DC INDUCTIVE PROXIMITY SWITCHES

DEVICE INFORMATION

Inductive proximity sensors are used to detect metals without contacting them.

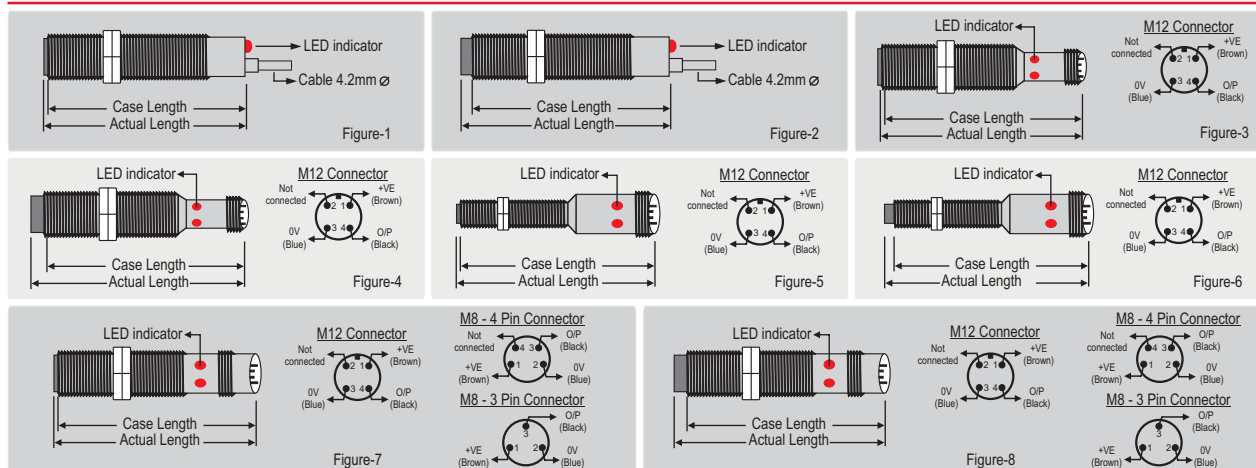
FEATURES

- Threaded barrel brass with nickel plated case
- Protected against short circuit and false polarity of the three connection leads
- Available both M12 connector and cable version
- LED indication
- Provided with oil proof PVC cable
- One year guarantee

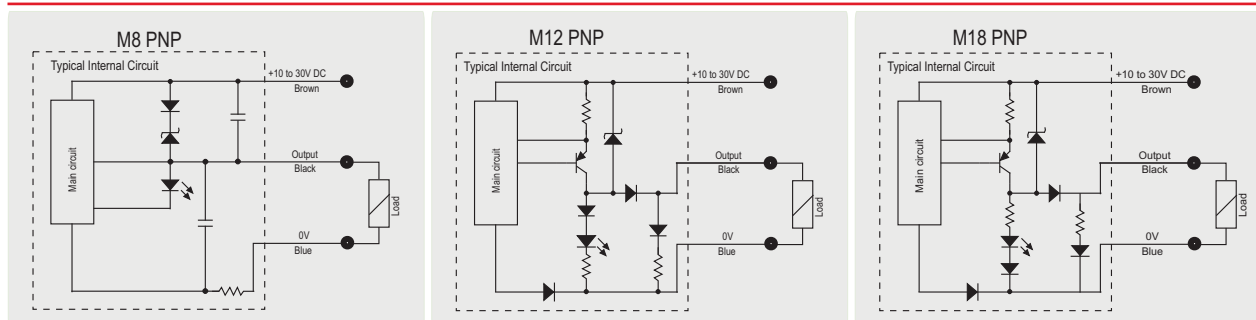
TECHNICAL SPECIFICATION

Type	DC PNP/NPN
Operating voltage	10 - 30 V DC
Current consumption	= 15mA DC
Output Voltage drop at maximum load	= 2 V DC
Maximum load current	200mA
Sensing distance (Sn)	Refer Ordering table
Real sensing distance (Sr)	$S_n \pm 10\%$
Effective sensing distance (Su)	$0.81 S_n = S_u = 1.21 S_n$
Hysteresis	5 to 15% of S_n
Protection class	IP 67
Operating temperature	0 - 70 °C
Standard target	M8 - 8 x 8 x 1 mm made of mild steel M12 - 12 x 12 x 1 mm made of mild steel M18 - 18 x 18 x 1 mm made of mild steel
Correction factors approximately	SS-0.7, Al/Brass-0.4, Copper-0.3

REFERENCE FIGURES

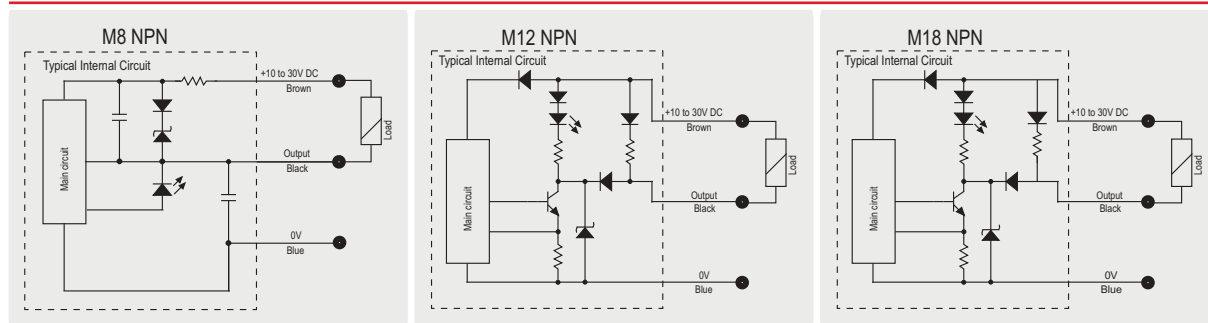


TYPICAL CIRCUIT DIAGRAMS



NOTE: Specification subject to change without notice

TYPICAL CIRCUIT DIAGRAMS



SPECIFICATIONS AND ORDERING TABLE:

Part No.	Construction	Output Type	Assembly	DC Voltage	Sn in mm	Su in mm	Case Length in mm	Total Length in mm	Switching Frequency	Connection type	Ref. Figure
IF080110C45-1	M8x1	PNP NO	Flush	10-30V	1.5	1.2	45	50	1.5KHz	Cable	1
IN080110C45-1	M8x1	PNP NO	Nonflush	10-30V	2	1.6	45	54	1.5KHz	Cable	2
IF080210C45-1	M8x1	PNP NC	Flush	10-30V	1.5	1.2	45	50	1.5KHz	Cable	1
IN080210C45-1	M8x1	PNP NC	Nonflush	10-30V	2	1.6	45	54	1.5KHz	Cable	2
IF081110C45-1	M8x1	NPN NO	Flush	10-30V	1.5	1.2	45	50	1.5KHz	Cable	1
IN081110C45-1	M8x1	NPN NO	Nonflush	10-30V	2	1.6	45	54	1.5KHz	Cable	2
IF081210C45-1	M8x1	NPN NC	Flush	10-30V	1.5	1.2	45	50	1.5KHz	Cable	1
IN081210C45-1	M8x1	NPN NC	Nonflush	10-30V	2	1.6	45	54	1.5KHz	Cable	2
IF080113048-1	M8x1	PNP NO	Flush	10-30V	1.5	1.2	48	48	1.5KHz	M8 conn	7
IN080113048-1	M8x1	PNP NO	Nonflush	10-30V	2	1.6	48	52	1.5KHz	M8 conn	8
IF080213048-1	M8x1	PNP NC	Flush	10-30V	1.5	1.2	48	48	1.5KHz	M8 conn	7
IN080213048-1	M8x1	PNP NC	Nonflush	10-30V	2	1.6	48	52	1.5KHz	M8 conn	8
IF081113048-1	M8x1	NPN NO	Flush	10-30V	1.5	1.2	48	48	1.5KHz	M8 conn	7
IN081113048-1	M8x1	NPN NO	Nonflush	10-30V	2	1.6	48	52	1.5KHz	M8 conn	8
IF081213048-1	M8x1	NPN NC	Flush	10-30V	1.5	1.2	48	48	1.5KHz	M8 conn	7
IN081213048-1	M8x1	NPN NC	Nonflush	10-30V	2	1.6	48	52	1.5KHz	M8 conn	8
IF080111065-1	M8x1	PNP NO	Flush	10-30V	1.5	1.2	65	66.3	1.5KHz	M12 conn	5
IN080111065-1	M8x1	PNP NO	Nonflush	10-30V	2	1.6	65	70.3	1.5KHz	M12 conn	6
IF080211065-1	M8x1	PNP NC	Flush	10-30V	1.5	1.2	65	66.3	1.5KHz	M12 conn	5
IN080211065-1	M8x1	PNP NC	Nonflush	10-30V	2	1.6	65	70.3	1.5KHz	M12 conn	6
IF081111065-1	M8x1	NPN NO	Flush	10-30V	1.5	1.2	65	66.3	1.5KHz	M12 conn	5
IN081111065-1	M8x1	NPN NO	Nonflush	10-30V	2	1.6	65	70.3	1.5KHz	M12 conn	6
IF081211065-1	M8x1	NPN NC	Flush	10-30V	1.5	1.2	65	66.3	1.5KHz	M12 conn	5
IN081211065-1	M8x1	NPN NC	Nonflush	10-30V	2	1.6	65	70.3	1.5KHz	M12 conn	6
IF120110C55-1	M12x1	PNP NO	Flush	10-30V	2	1.6	55	57	1KHz	Cable	1
IN120110C55-1	M12x1	PNP NO	Nonflush	10-30V	4	3.2	55	60.5	1KHz	Cable	2
IF120210C55-1	M12x1	PNP NC	Flush	10-30V	2	1.6	55	57	1KHz	Cable	1
IN120210C55-1	M12x1	PNP NC	Nonflush	10-30V	4	3.2	55	60.5	1KHz	Cable	2
IF121110C55-1	M12x1	NPN NO	Flush	10-30V	2	1.6	55	57	1KHz	Cable	1
IN121110C55-1	M12x1	NPN NO	Nonflush	10-30V	4	3.2	55	60.5	1KHz	Cable	2
IF121210C55-1	M12x1	NPN NC	Flush	10-30V	2	1.6	55	57	1KHz	Cable	1
IN121210C55-1	M12x1	NPN NC	Nonflush	10-30V	4	3.2	55	60.5	1KHz	Cable	2
IF120111060-1	M12x1	PNP NO	Flush	10-30V	2	1.6	60	61.3	1KHz	M12 conn	7
IN120111060-1	M12x1	PNP NO	Nonflush	10-30V	4	3.2	60	64.8	1KHz	M12 conn	8
IF120211060-1	M12x1	PNP NC	Flush	10-30V	2	1.6	60	61.3	1KHz	M12 conn	7
IN120211060-1	M12x1	PNP NC	Nonflush	10-30V	4	3.2	60	64.8	1KHz	M12 conn	8
IF121111060-1	M12x1	NPN NO	Flush	10-30V	2	1.6	60	61.3	1KHz	M12 conn	7
IN121111060-1	M12x1	NPN NO	Nonflush	10-30V	4	3.2	60	64.8	1KHz	M12 conn	8
IF121211060-1	M12x1	NPN NC	Flush	10-30V	2	1.6	60	61.3	1KHz	M12 conn	7
IN121211060-1	M12x1	NPN NC	Nonflush	10-30V	4	3.2	60	64.8	1KHz	M12 conn	8
IF180110C60-1	M18x1	PNP NO	Flush	10-30V	5	4.0	60	63	500Hz	Cable	1
IN180110C60-1	M18x1	PNP NO	Nonflush	10-30V	8	6.4	60	70	500Hz	Cable	2
IF180210C60-1	M18x1	PNP NC	Flush	10-30V	5	4.0	60	63	500Hz	Cable	1
IN180210C60-1	M18x1	PNP NC	Nonflush	10-30V	8	6.4	60	70	500Hz	Cable	2
IF181110C60-1	M18x1	NPN NO	Flush	10-30V	5	4.0	60	63	500Hz	Cable	1
IN181110C60-1	M18x1	NPN NO	Nonflush	10-30V	8	6.4	60	70	500Hz	Cable	2
IF181210C60-1	M18x1	NPN NC	Flush	10-30V	5	4.0	60	63	500Hz	Cable	1
IN181210C60-1	M18x1	NPN NC	Nonflush	10-30V	8	6.4	60	70	500Hz	Cable	2
IF180111064-1	M18x1	PNP NO	Flush	10-30V	5	4.0	64	65.3	500Hz	M12 conn	3
IN180111064-1	M18x1	PNP NO	Nonflush	10-30V	8	6.4	64	72.8	500Hz	M12 conn	4
IF180211080-1	M18x1	PNP NC	Flush	10-30V	5	4.0	80	81.3	500Hz	M12 conn	3
IN180211080-1	M18x1	PNP NC	Nonflush	10-30V	8	6.4	80	88.8	500Hz	M12 conn	4
IF181111064-1	M18x1	NPN NO	Flush	10-30V	5	4.0	64	65.3	500Hz	M12 conn	3
IN181111064-1	M18x1	NPN NO	Nonflush	10-30V	8	6.4	64	72.8	500Hz	M12 conn	4

NOTE: Specification subject to change without notice

SPECIFICATIONS AND ORDERING TABLE:

Part No.	Construction	Output Type	Assembly	DC Voltage	Sn in mm	Su in mm	Case Length in mm	Total Length in mm	Switching Frequency	Connection type	Ref Figure
IF181211080-1	M18x1	NPN NC	Flush	10-30V	5	4.0	80	81.3	500Hz	M12 conn	3
IN181211080-1	M18x1	NPN NC	Nonflush	10-30V	8	6.4	80	88.8	500Hz	M12 conn	4
IF300110C60-1	M30x1.5	PNP NO	Flush	10-30V	10	8.0	60	62.5	300Hz	Cable	1
IN300110C60-1	M30x1.5	PNP NO	Nonflush	10-30V	15	12	60	73	300Hz	Cable	2
IF300210C60-1	M30x1.5	PNP NC	Flush	10-30V	10	8.0	60	62.5	300Hz	Cable	1
IN300210C60-1	M30x1.5	PNP NC	Nonflush	10-30V	15	12	60	73	300Hz	Cable	2
IF301110C60-1	M30x1.5	NPN NO	Flush	10-30V	10	8.0	60	62.5	300Hz	Cable	1
IN301110C60-1	M30x1.5	NPN NO	Nonflush	10-30V	15	12	60	73	300Hz	Cable	2
IF301210C60-1	M30x1.5	NPN NC	Flush	10-30V	10	8.0	60	62.5	300Hz	Cable	1
IN301210C60-1	M30x1.5	NPN NC	Nonflush	10-30V	15	12	60	73	300Hz	Cable	2
IF300111083-1	M30x1.5	PNP NO	Flush	10-30V	10	8.0	83	84.3	300Hz	M12 conn	3
IN300111083-1	M30x1.5	PNP NO	Nonflush	10-30V	15	12	83	95.3	300Hz	M12 conn	4
IF300211083-1	M30x1.5	PNP NC	Flush	10-30V	10	8	83	84.3	300Hz	M12 conn	3
IN300211083-1	M30x1.5	PNP NC	Nonflush	10-30V	15	12	83	95.3	300Hz	M12 conn	4
IF301111083-1	M30x1.5	NPN NO	Flush	10-30V	10	8	83	84.3	300Hz	M12 conn	3
IN301111083-1	M30x1.5	NPN NO	Nonflush	10-30V	15	12	83	95.3	300Hz	M12 conn	4
IF301211083-1	M30x1.5	NPN NC	Flush	10-30V	10	8	83	84.3	300Hz	M12 conn	3
IN301211083-1	M30x1.5	NPN NC	Nonflush	10-30V	15	12	83	95.3	300Hz	M12 conn	4

NOTE: Specification subject to change without notice