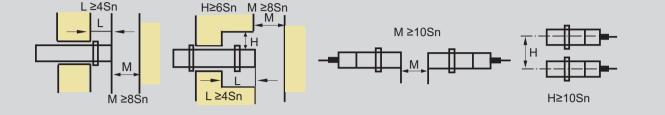
The Comus International group of companies consists of:

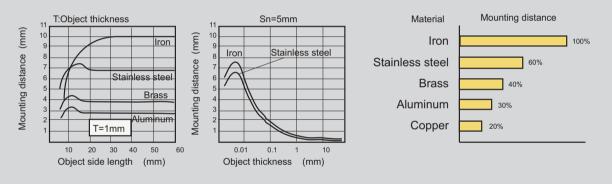
4.INSTALLATION

If used in an area surrounded by metal, Install the proximity Sensor as follows . (Sn = Sensing distance)

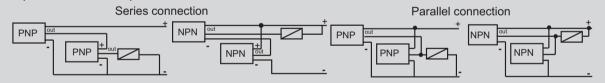


5. INDUCTIVE PROXIMITY APPLICATION DIRECTION

- a. Set mounting distance roughly equal to 80% of Sn.
- b. Set mounting distance roughly equal to 50% of Sn when sensor is used in high frequency or high speed circumstances. c. Mounting distance will change depending on material (iron, stainless steel ,brass, copper and aluminum).



d.lps series connection and parallel connection





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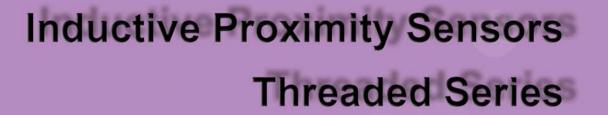
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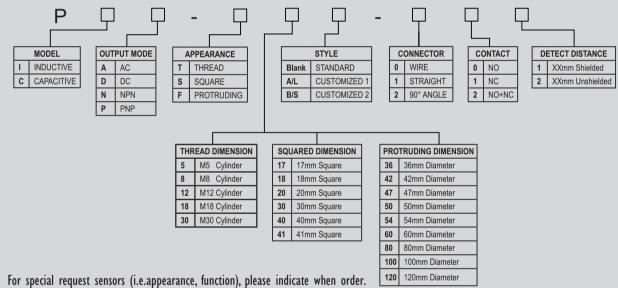
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Thankyou for choosing Comus International sensors. Before installing and operating the sensor(s), please take a moment to read this instruction leaflet carefully. For any questions, please contact our sales team.

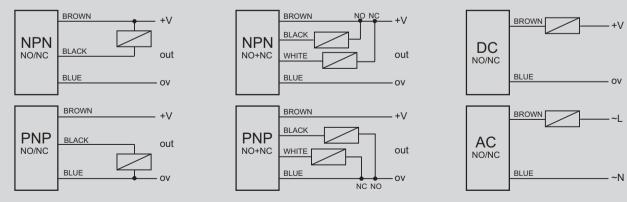
1.FEATURES

- Inductive and Capacitive proximity sensors.
- Style: cylinder (threaded) is available for M5, M8, M12, M18, and M30.
- * Let us know if you need intructions for another proximity sensor type.
- Shielded or unshielded types
- DC 2-wire (10-30V DC), DC 3-wire(10-30V DC), DC 4-wire(10-30V DC), AC 2-wire (90-250 AC) type
- Connection mode: 2/3/4 wire or 2/3/4 pin connector
- Mounting distance (shielded/unshielded):
- M5(1mm), M8(1/2mm), M12(2/4mm), M18(5/8mm), M30(10/15mm)
- LED operation indicator, easily identifiable.
- Overload, short circuity protection; against polarity reversal
- Protection rate: IP67 (IP8 ratings can be specially ordered)
- Housing: Brass, chrome plated, resistant to oil, water acid, and alkalines etc. Brass nickle plated or ABS for M12, M18 and M30
- Standard sensing object: Inductive sensor: ferrous metals; Capacitive sensor: metal or non-metalic objects.
- Widely applied in measuring, Counting, Rpm measuring in mechanisms, chemical, paper manufacture, light industry, etc

2.ORDERING CODE



3.CONNECTION



All dimensions are nominal, in millimetres unless otherwise stated. If further information is required, individual datasheets are available on our websites, and on CD.

As part of the group's policy of continued product improvement, specifications may change without notice. Our sales office will be pleased to help you with the latest information on our products.

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PROXIMITY INDUCTIVE SENSORS THREADED SERIES	Unit: mm _M5×0, 5	Unit: mm M8×1	Unit: mm	Unit: mm Short body	Unit: mm Short body	Unit: mm	Unit: mm	Unit mm Short body	Unit:mm Short body	Unit: mm	Unit: mm	Unit: mm Short body	Unit: mm Short body	PROXIMITY INDUCTIVE SENSORS THREADED SERIES	Unit: mm	Unit: mm	Unit: mm Short body	Unit: mm Short body	Unit: mm	Unit: mm	Unit: mm Short body	Unit: mm Short body	Unit: mm	Unit: mm	Unit: mm Short body	Unit: mm Short body
PNP DC 3 wires NO	PIP-TS5-001	PIP-T8L-001	PIP-T8L-002	PIP-T8S-001	PIP-T85-002	PIP-T8L-1(2)01	PIP-T8L-1(2)02	PIP-T8S-1(2)01	PIP-T8S-1(2)02	PIP-TI2L-001	PIP-T12L-002	PIP-T12S-001	PIP-T12S-002	PNP DC 3 wires NO	PIP-T12L-1(2)01	PIP-T12L-1(2)02	PIP-T12S-1(2)01	PIP-T12S-1(2)02	PIP-T18L-001	PIP-T18L-002	PIP-T18S-001	PIP-T18S-002	PIP-T18L-1(2)01	PIP-T18L-1(2)02	PIP-T185-1(2)01	PIP-T18S-1(2)02
NC	PIP-T5S-011	PIP-T8L-011	PIP-T8L-012	PIP-T8S-011	PIP-T8S-012	PIP-T8L-1(2)11	PIP-T8L-1(2)12	PIP-T8S-1(2)11	PIP-T8S-1(2)12	PIP-T12L-011	PIP-T12L-012	PIP-T12S-011	PIP-T12S-012	NC NC	PIP-T12L-1(2)11	PIP-T12L-1(2)12	PIP-T12S-1(2)11	PIP-T12S-1(2)12	PIP-T18L-011	PIP-T18L-012	PIP-T18S-011	PIP-T18S-012	PIP-T18L-1(2)11	PIP-T18L-1(2)12	PIP-T18S-1(2)11	PIP-T18S-1(2)12
DC 4 wires NO+NC										PIP-T12L-021	PIP-T12L-022	PIP-T12S-021	PIP-T12S-022	DC 4 wires NO+NC	PIP-T12L-1(2)21	PIP-T12L-1(2)22	PIP-T12S-1(2)21	PIP-T12S-1(2)22	PIP-T18L-021	PIP-T18L-022	PIP-T18S-021	PIP-T18S-022	PIP-T18L-1(2)21	PIP-T18L-1(2)22	PIP-T18S-1(2)21	PIP-T18S-1(2)22
NPN DC 3 wires NO	PIN-TS5-001	PIN-T8L-001	PIN-T8L-002	PIN-T8S-001	PIN-T8S-002	PIN-T8L-1(2)01	PIN-T8L-1(2)02	PIN-T8S-1(2)01	PIN-T8S-1(2)02	PIN-TI2L-001	PIN-TI2L-002	PIN-TI2S-001	PIN-TI2S-002	NPN DC 3 wires NO	PIN-T12L-1(2)01	PIN-TI2L-I(2)02	PIN-T12S-1(2)01	PIN-T12S-1(2)02	PIN-TI8L-001	PIN-TI8L-002	PIN-TI8S-001	PIN-T18S-002	PIN-T18L-1(2)01	PIN-T18L-1(2)02	PIN-T185-1(2)01	PIN-T18S-1(2)02
NC	PIN-TS5-011	PIN-T8L-011	PIN-T8L-012	PIN-T8S-011	PIN-T8S-012	PIN-T8L-1(2)11	PIN-T8L-1(2)12	PIN-T8S-1(2)11	PIN-T8S-1(2)12	PIN-TI2L-011	PIN-TI2L-012	PIN-TI2S-011	PIN-TI2S-012	NC	PIN-T12L-1(2)11	PIN-T12L-1(2)12	PIN-T12S-1(2)11	PIN-T12S-1(2)12	PIN-TI8L-011	PIN-TI8L-012	PIN-TI8S-011	PIN-TI8S-012	PIN-T18L-1(2)11	PIN-T18L-1(2)12	PIN-T18S-1(2)11	PIN-T18S-1(2)12
DC 4 wires NO+NC										PIN-TI2L-021	PIN-TI2L-022	PIN-TI 2S-02 I	PIN-TI2S-022	DC 4 wires NO+NC	PIN-T12L-1(2)21	PIN-T12L-1(2)22	PIN-T12S-1(2)21	PIN-T12S-1(2)22	PIN-TI8L-021	PIN-TI8L-022	PIN-T185-021	PIN-T185-022	PIN-T18L-1(2)21	PIN-T18L-1(2)22	PIN-T185-1(2)21	PIN-T18S-1(2)22
DC 2 wires NO		PID-T8L-001	PID-T8L-002			PID-T8L-1(2)01	PID-T8L-1(2)02			PID-TI2L-001	PID-T12L-002			DC 2 wires NO	PID-T12L-1(2)01	PID-T12L-1(2)02			PID-T18L-001	PID-T18L-002			PID-T18L-1(2)01	PID-T18L-1(2)02		
NC		PID-T8L-011	PID-T8L-012			PID-T8L-1(2)11	PID-T8L-1(2)12			PID-T12L-011	PID-T12L-012			NC	PID-T12L-1(2)11	PID-T12L-1(2)12			PID-T18L-011	PID-T18L-012			PID-T18L-1(2)11	PID-T18L-1(2)12		
AC 2 wires NO										PIA-T12L-001	PIA-T12L-002			AC 2 wires NO	PIA-T12L-1(2)01	PIA-T12L-1(2)02			PIA-T18L-001	PIA-T18L-002			PIA-T18L-1(2)01	PIA-T18L-1(2)02		
NC										PIA-T12L-011	PIA-T12L-012			NC	PIA-T12L-1(2)11	PIA-T12L-1(2)12			PIA-T18L-011	PIA-T18L-012			PIA-T18L-1(2)11	PIA-T18L-1(2)12		
Dimension	M5 - Short housing	M8 - Long housing	M8 - Long housing	M8 - Short housing	M8 - Short housing	M8 - Long housing	M8 - Long housing	M8 - Short housing	M8 - Short housing	M12 - Long housing	M12 - Long housing	M12 - Short housing	M12 - Short housing		M12 - Long housing	M12 - Long housing	M12 - Short housing	8	M18 - Long housing	M18 - Long housing	M18 - Short housing	M18 - Short housing	M18 - Long housing	M18 - Long housing	Ŭ	M18 - Short housing
Installation	shielded	shielded	unshielded	shielded	unshielded	shielded	unshielded	shielded	unshielded	shielded	unshielded	shielded	unshielded	Installation	shielded	unshielded	shielded	unshielded	shielded	unshielded	shielded	unshielded	shielded	unshielded	shielded	unshielded
Connection	wire	wire	wire	wire	wire	connector	connector	connector	connector	wire	wire	wire	wire	Connection	connector	connector	connector	connector	wire	wire	wire	wire	connector	connector	connector	connector
Mounting Distance Sn	I.0mm	I.0mm	2.0mm	I.0mm	2.0mm	I.0mm	2.0mm	I.0mm	2.0mm	2.0mm	4.0mm	2.0mm	4.0mm	Mounting Distance Sn	2.0mm	4.0mm	2.0mm	4.0mm	5.0mm	8.0mm	5.0mm	8.0mm	5.0mm	8.0mm	5.0mm	8.0mm
Detect Distance Sa	00.8mm	00.9mm	01.8mm	00.9mm	01.8mm	00.9mm	01.8mm	00.9mm	01.8mm	01.8mm	03.6mm	01.8mm	03.6mm	Detect Distance Sa	01.8mm	03.6mm	01.8mm	03.6mm	04.5mm	06.4mm	04.5mm	06.4mm	04.0mm	06.4mm	04.0mm	06.4mm
Rated operational voltage(DC/AC)	24VDC	24VDC	24VDC	24VDC	24VDC	24VDC	24VDC	24VDC	24VDC	24VDC/220VAC	24VDC/220VAC	24VDC	24VDC	Rated operational voltage(DC/AC)	24VDC/220VAC	24VDC/220VAC	24VDC	24VDC	24VDC/220VAC	24VDC/220VAC	24VDC	24VDC	24VDC/220VAC	24VDC/220VAC	24VDC	24VDC
Supply voltage(DC/AC)	1030VDC	1030VDC	1030VDC	1030VDC	1030VDC	1030VDC	1030VDC	1030VDC	1030VDC	10-30VDC/90-250VAC	10-30VDC/90-250VAC	10-30VDC	10-30VDC	Supply voltage(DC/AC)	10-30VDC/90-250VAC	10-30VDC/90-250VAC	10-30VDC	10-30VDC	10-30VDC/90-250VAC	10-30VDC/90-250VAC	10-30VDC	10-30VDC	10-30VDC/90-250VAC	10-30VDC/90-250VAC	10-30VDC	10-30VDC
Voltage drop	≤2V	≤2V	≤2V	≤2٧	≤2٧	≤2٧	≤2٧	≤2٧	≤2V	≤2V	≤2V	≤2V	≤2V	Voltage drop	≤2V	≤2V	≤2V	≤2V	≤2V	≤2V	≤2V	≤2٧	≤2V	≤2V	≤2V	≤2V
Rated insulation voltage	≥20MΩ	\geq 20M Ω	≥20MΩ	≥20MΩ	≥20MΩ	≥20MΩ	≥20MΩ	≥20MΩ	\geq 20M Ω	≥20MΩ	≥20MΩ	\geq 20M Ω	\geq 20M Ω	Rated insulation voltage	$\geq 20M\Omega$	≥20MΩ	≥20MΩ	≥20MΩ	≥20MΩ	\geq 20M Ω	\geq 20M Ω	\geq 20M Ω	\geq 20M Ω	\geq 20M Ω	\geq 20M Ω	\geq 20M Ω
Load current capacity(DC/AC)	I 00mA	200mA	200mA	I 00mA	I 00mA	200mA	200mA	I 00mA	I 00mA	200mA/300mA	200mA/300mA	I OOmA	I 00mA	Load current capacity(DC/AC)	200mA/300mA	200mA/300mA	I 00mA	I 00mA	200mA/300mA	200mA/300mA	200mA	200mA	200mA/300mA	200mA/300mA	200mA	200mA
Off-State current(NPN/PNP)	≤I5mA	≤IImA	≤IImA	≤llmA	≤I0mA	≤I0mA	≤I0mA	≤I5mA	≤I5mA	≤IImA	≤llmA	≤IImA	≤IOmA	Off-State current(NPN/PNP)	≤IOmA	≤IOmA	≤I5mA	≤I5mA	≤llmA	≤IImA	≤llmA	≤IOmA	≤IOmA	≤IOmA	≤I5mA	≤I5mA
Leak current	≤20 µ A	≤20 µ A	≤20 µ A	≤20 µ A	≤20 µ A	≤20µA	≤20 µ A	≤20 µ A	Leak current	≤20 µ A	≤20 µ A	≤20 µ A	≤20µA	≤20µA	≤20µA	≤20 µ A	≤20 µ A	≤20µA	≤20 µ A	≤20 µ A	≤20 µ A					
Against polarity reversal	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	Against polarity reversal	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Short circuit protected	NO	YES	YES	YES	YES	YES	YES	YES	YES	3wires:YES/2wires:NO	3wires:YES/2wires:NO	YES	YES	Short circuit protected	3wires:YES/2wires:NO	3wires:YES/2wires:NO	YES	YES	3wires:YES/2wires:NO	3wires:YES/2wires:NO	YES	YES	3wires:YES/2wires:NO	3wires:YES/2wires:NO	YES	YES
Load capacity	≤lµF	≤0.5 µ F	≤0.5 µ F	≤0.5 µ F	≤0.5 µ F	≤lµF	≤lµF	≤lµF	≤lµF	≤0.5 µ F	≤0.5 µ F	≤0.5µF	≤0.5 µ F	Load capacity	≤lµF	≤lµF	≤lµF	≤lµF	≤0.5 µ F	≤0.5 µ F	≤0.5 µ F	≤0.5 µ F	≤lµF	≤IµF	≤lµF	≤IµF
Repeated accuracy	≤5%	≤5%	≤5%	≤5%	≤5%	≤5%	≤5%	≤5%	≤5%	≤5%	≤5%	≤5%	≤5%	Repeated accuracy	≤5%	≤5%	≤5%	≤5%	≤5%	≤5%	≤5%	≤5%	≤5%	≤5%	≤5%	≤5%
Ambient temperature range	-25+70°C	-25+70°C	-25+70°C	-25+70°C	-25+70°C	-25+70°C	-25+70°C	-25+70°C	-25+70°C	-25+70°C	-25+70°C	-25+70°C	-25+70°C	Ambient temperature range	-25+70°C	-25+70°C	-25+70°C	-25+70°C	-25+70°C	-25+70°C	-25+70°C	-25+70°C	-25+70°C	-25+70°C	-25+70°C	-25+70°C
Frequency(DC 3/2wires/ AC 2wires)	2000Hz	1.5K~2K Hz	1.5K~2K Hz	1.5K~2K Hz	1.5K~2K Hz	800/400/25Hz	800/400/25Hz	800/400Hz	800/400Hz	Frequency(DC 3/2wires/ AC 2wires)	800/400/25Hz	800/400/25Hz	800/400Hz	800/400Hz	700/400/25Hz	700/400/25Hz	700/400Hz	700/400Hz	700/400/25Hz	700/400/25Hz	700/400Hz	700/400Hz				
Function indication	Red LED Indicator	Red LED Indicator	Red LED Indicator	Red LED Indicator	Red LED Indicator	Red LED Indicator	Red LED Indicator	Red LED Indicator	Function indication	Red LED Indicator	Red LED Indicator	Red LED Indicator	Red LED Indicator	Red LED Indicator	Red LED Indicator	Red LED Indicator	Red LED Indicator	Red LED Indicator	Red LED Indicator	Red LED Indicator	Red LED Indicator					
IP ratings	IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP ratings	IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP67	IP67
Housing material	Nickle plated brass	Nickle plated brass	Nickle plated brass	Nickle plated brass	Nickle plated brass	Nickle plated brass	Nickle plated brass	Nickle plated brass	Housing material	Nickle plated brass	Nickle plated brass	Nickle plated brass	Nickle plated brass	Nickle plated brass	Nickle plated brass	Nickle plated brass	Nickle plated brass	Nickle plated brass	Nickle plated brass	Nickle plated brass	Nickle plated brass					
Material of sensing face	ABS	ABS	ABS	ABS	ABS	ABS	ABS	ABS	ABS	ABS	ABS	ABS	ABS	Material of sensing face	ABS	ABS	ABS	ABS	ABS	ABS	ABS	ABS	ABS	ABS	ABS	ABS
No. of wires x gauge / Connector	9x0.12mm	9x0.12mm	9x0.12mm	9x0.12mm	9x0.12mm	Straight/90° connector	Straight/90° connector	Straight/90° connector	Straight/90° connector	2x0. 2mm	12x0.12mm	12x0.12mm	12x0.12mm	No. of wires x gauge / Connector	Straight/90° connector	Straight/90° connector	Straight/90° connector	Straight/90° connector	12x0.16mm	12x0.16mm	12x0.16mm	12x0.16mm	Straight/90° connector	Straight/90° connector	Straight/90° connector	Straight/90° connector
Standard length of cable	2m	2m	2m	2m	2m	2m	2m	2m	2m	2m	2m	2m	2m	Standard length of cable	2m	2m	2m	2m	2m	2m	2m	2m	2m	2m	2m	2m
Approvals	CE	CE	CE	CE	CE	CE	CE	CE	CE	CE	CE	CE	CE	Approvals	CE	CE	CE	CE	CE	CE	CE	CE	CE	CE	CE	CE
<u></u>			•	<u>.</u>		•				<u>.</u>	I		•	, ··			•				<u> </u>	•	I	I		

Cylinder Threaded M30 also available DC 2 wire (5V DC) also available



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