

Hanwell IceSpy

Sensor Options

The **Hanwell IceSpy** Sensor options technical data sheet details all the sensors available to use with the Hanwell IceSpy Series products.

Please select your product first from the relevant Hanwell IceSpy product datasheets, then add your required sensor appropriately as below. *Please note that sensor temperature ranges may be restricted by the instrument it is used with. Please check the relevant instrument data sheet.*

Note - This datasheet covers our standard and readily available cable lengths. Other lengths may be available than those listed. Please contact Hanwell Solutions with your requirements.



Temperature



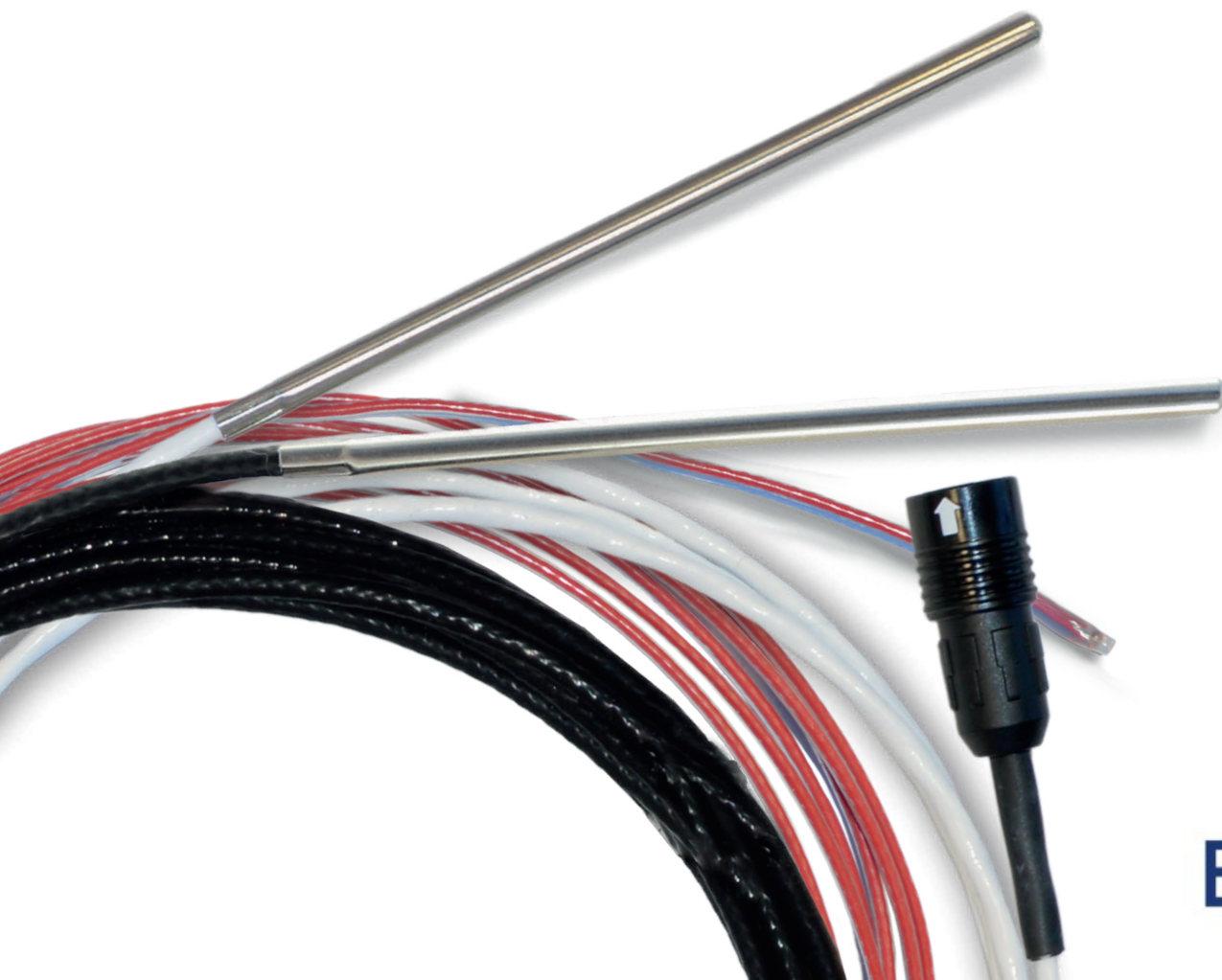
Humidity



Carbon
Dioxide



Airflow



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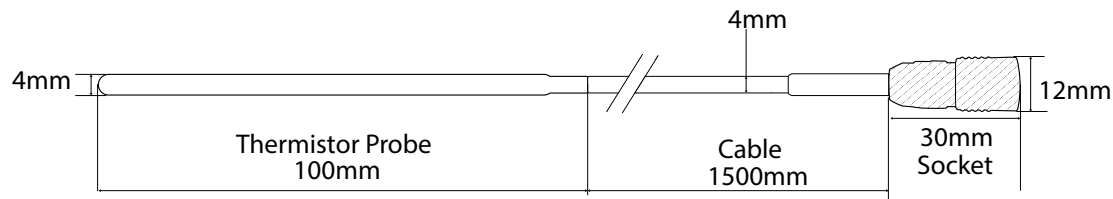
Sensor Options

		Probe Family								
Product family	Unit Type	Thermistor	Thermocouple		PT100	Door	Analogue	Airflow	CO ₂	RH/T
		IN-THxxx	IN-THCxxx	IN-TTxxx	IN-PTxxx	IN-Dxxx	IN-LSCxxx	IN-AFxxx	IN-CO2xxx	IN-HUM
IN-TH	External thermistor	✓								
IN-THD	External thermistor + door	✓				✓				
IN-TT	Thermocouple		✓	✓						
IN-TTD	Thermocouple + door		✓	✓		✓				
IN-PT	PT100				✓					
IN-PTD	PT100 + door				✓	✓				
IN-RH	RH/T									✓
IN-VT001	0-1V						✓			
IN-VT002	0-5V						✓	✓	✓	
IN-VT003	0-10V						✓			
IN-MA001	4-20mA						✓			
Hanwell Lite:										
IN-WT	External thermistor (+ door *)	✓				✓				

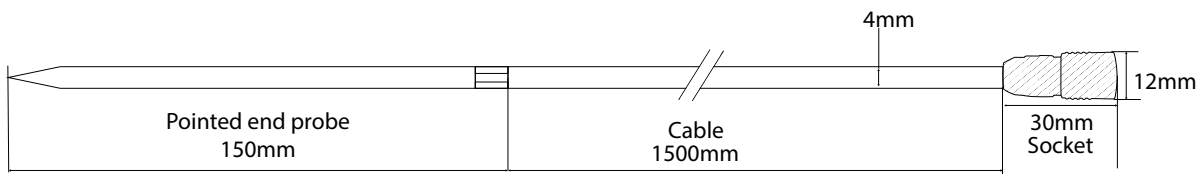
* If door variant

Thermistor Probes

IN-TH150/300	Part codes	Specifications
Non-waterproof		Probe diameter 4mm
1.5 metre cable	IN-TH150	Probe operating range -40°C to +100°C
3 metre cable	IN-TH300	Accuracy +/- 0.5°C
Waterproof		Long term drift < 0.1°C per year
1.5 metre cable	IN-TH150-WP	IP rating IP68 (Waterproof version only)
3 metre cable	IN-TH300-WP	

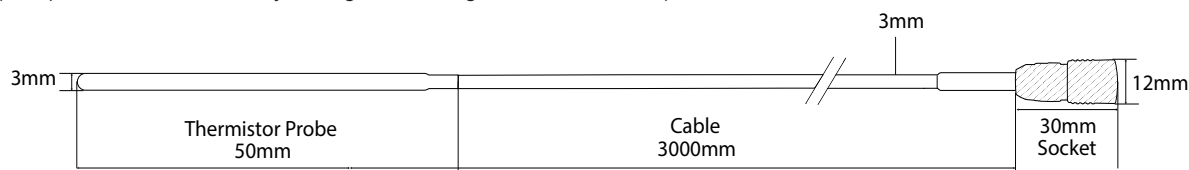


IN-TH150-P	Part codes	Specifications
Non-waterproof		Probe diameter 4mm (pointed end)
1.5 metre cable	IN-TH150-P	Probe operating range -40°C to +100°C
Waterproof		Accuracy +/- 0.5°C
1.5 metre cable	IN-TH150-P-WP	Long term drift < 0.1°C per year
		IP rating IP68 (Waterproof version only)



IN-TH300-3	Part codes	Specifications
Non-waterproof		Probe diameter 3mm
3 metre cable	IN-TH300-3	Probe operating range -40°C to +100°C
Waterproof		Accuracy +/- 0.5°C
3 metre cable	IN-TH300-3-WP	Long term drift < 0.1°C per year
		IP rating IP68 (Waterproof version only)

(Thin probe and cable for easy routing around fridge/freezer door seals)



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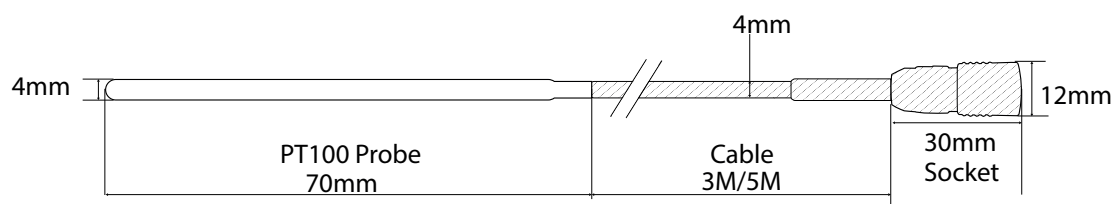
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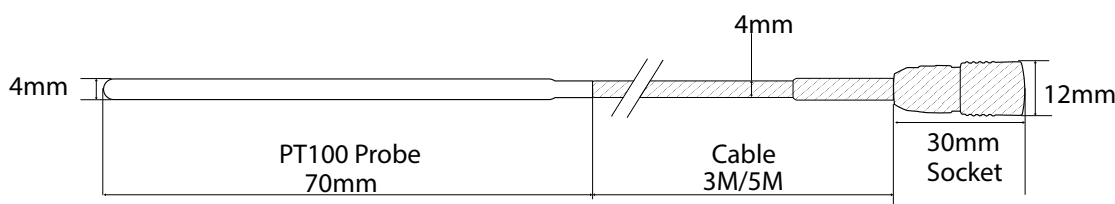
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PT100 Probes

IN-PT143/145	Part codes	Specifications
Non-waterproof		Type Flat film
3 metre cable	IN-PT143	Probe diameter 4mm
5 metre cable	IN-PT145	Probe operating range -90°C to +250°C
Waterproof		Accuracy -50°C to +250°C Class A = $\pm(0.15+0.002* t)^{\circ}\text{C}$ Accuracy Below -50°C Class B = $\pm(0.3+0.005* t)^{\circ}\text{C}$
3 metre cable	IN-PT143-WP	Long term drift < 0.1°C per year *dependent on conditions of use
5 metre cable	IN-PT145-WP	IP Rating IP68 (Waterproof version only)



IN-PT143/145-CAL	Part codes	Specifications
Non-waterproof		Type Wire wound
3 metre cable	IN-PT143-CAL	Probe diameter 4mm
5 metre cable	IN-PT145-CAL	Probe operating range -200°C to +250°C
Waterproof		Accuracy -100°C to +250°C Class A = $\pm(0.15+0.002* t)^{\circ}\text{C}$ Accuracy Below -100°C Class B = $\pm(0.3+0.005* t)^{\circ}\text{C}$
3 metre cable	IN-PT143-CAL-WP	Long term drift < 0.05°C per year *dependent on conditions of use
5 metre cable	IN-PT145-CAL-WP	IP Rating IP68 (Waterproof version only)



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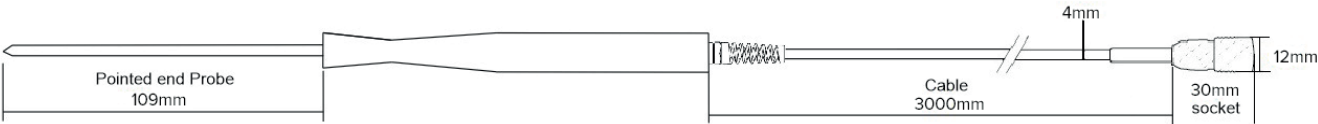
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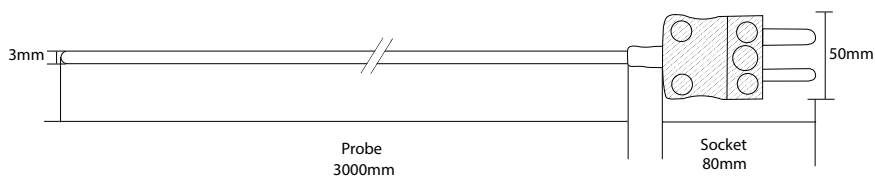
PT100 Probes cont'd

IN-PT100-WP		Part codes	Specifications
Stabbing probe		IN-PT100-WP	
			Type
			Flat film
			Probe diameter
			4mm
			Probe operating range
			-90°C to +250°C
			Accuracy -50°C to +250°C
			Class A = +/- (0.15+0.002* t)°C
			Accuracy Below -50°C
			Class B = +/- (0.3+0.005* t)°C
			Long term drift
			< 0.1°C per year
			*dependent on conditions of use
			IP Rating
			IP68 (Waterproof version only)

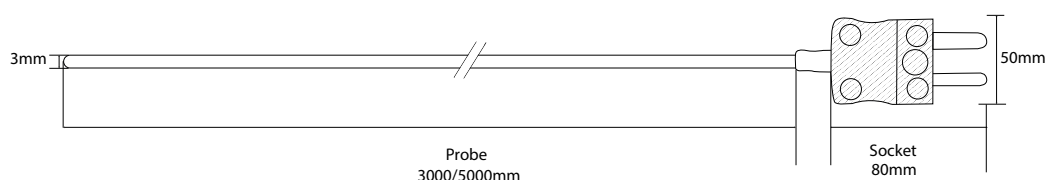


Thermocouple Probes

IN-THC03	Part codes	Specifications
3 metre cable	IN-THC03	Type Probe diameter Probe operating range Accuracy Long term drift
		Ultra precision Teflon coated Type T (Thermocouple junction is isolated) 3mm -200°C to +200°C BS EN 60584 - 1:2013 Class 1 +/- 0.5°C or +/-0.4%, (whichever is greater) above -40°C Below -40°C +/-1 or 1.5% of reading < 0.1°C per year



IN-TT001/2	Part codes	Specifications
3 metre cable	IN-TT001	Type Probe diameter Probe operating range Accuracy Long term drift
5 metre cable	IN-TT002	Mineral insulated Type T (Thermocouple junction is isolated) 3mm -200°C to +350°C BS EN 60584 - 1:2013 Class 1 +/- 0.5°C or +/-0.4%, (whichever is greater) above -40°C Below -40°C +/-1 or 1.5% of reading < 0.1°C per year



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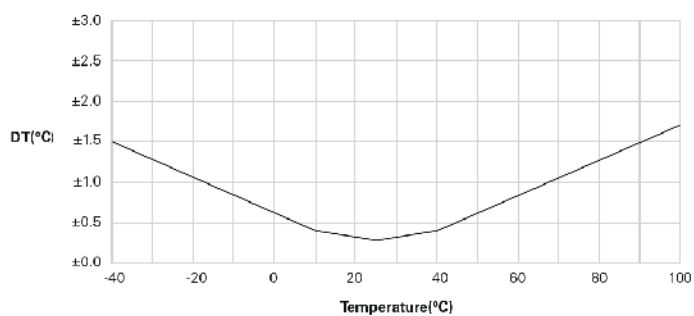
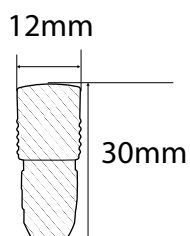
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RH/T Probe

IN-HUM	Part codes	Specifications
	IN-HUM	Humidity Probe details
		Recommended range 0-100% RH non condensing
		Accuracy +/- 3% RH
		Temperature Sensor details (Band gap internal with RH)
		Temperature operating range -30°C to +50°C
		Accuracy See chart



Extension cables	Part codes	Specifications
1.5 metre cable	IN-EXT150	Temperature Operating range -25°C to +85°C

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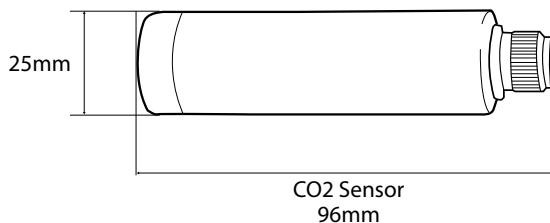
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External CO₂ Sensor

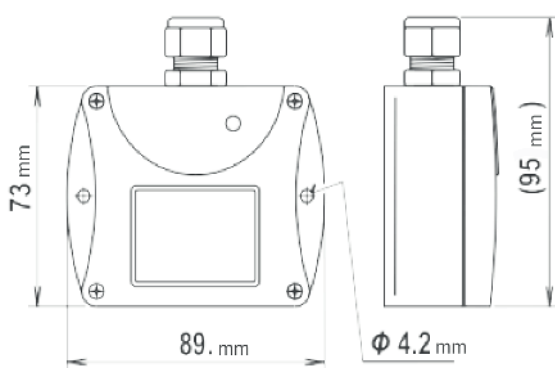
IN-CO2	Part codes	Specifications
(0-5% CO ₂)	IN-CO2-5	Operating Temperature of CO ₂ Measurement -40°C to +60°C
(0-10% CO ₂)	IN-CO2-10	Accuracy @ 25°C and 1013 PA ±0.1% CO ₂
		Temperature Dependence with Compensation, 0 to 20%CO ₂ between -40°C and +60°C ±0.045% of reading/°C
		Long term drift +/- 0.3% CO ₂ per year
		Housing PET plastic
		Cable 1.5 metre



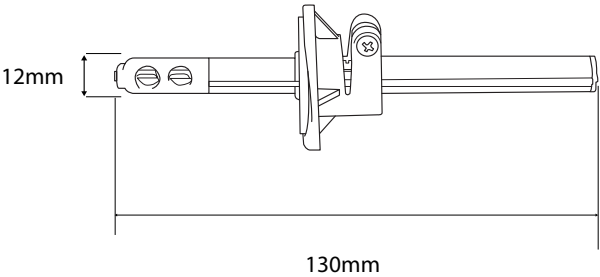
Recommended Installation: The probe can be installed in an environment with an operating temperature range -40 °C to +60 °C. Make sure the probe is in a location that represents the measurement environment properly.

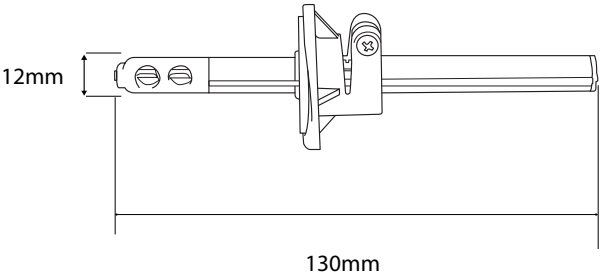
CO₂ Concentration Sensor

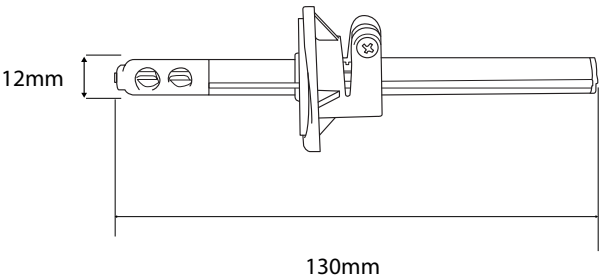
IN-CO2-2000	Part codes	Specifications
	IN-CO2-2000	Operating Temperature of CO ₂ Measurement -30°C to +60°C
		Measuring range 0 to 2000ppm
		Accuracy ±50ppm +2% of measured value
		Temperature Dependence -20°C to +45°C typ. 2ppm CO ₂ / °C
		Analog output 4-20mA
		IP Rating of housing IP30
		Cable 3 metre



Airflow Sensors

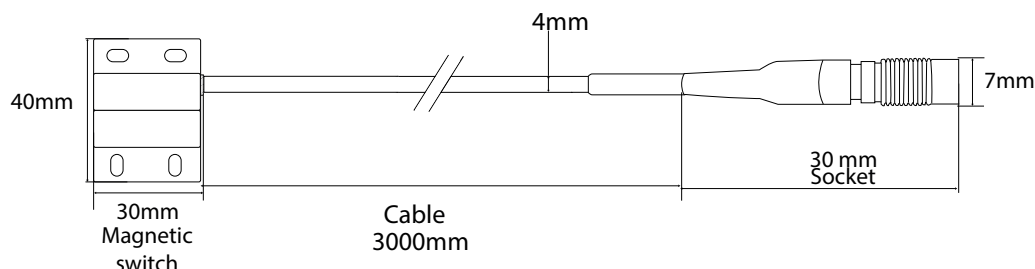
0-5M/S	Part codes	Specifications
	IN-AF05MS	
		Probe operating range
		0-5m/s (0... 1000ft/min)
		Analogue Output
		0-5V
		Working range temperature
		0°C to +60°C
		Storage temperature
		-30°C to +60°C
		Working range
		0-5m/s (0... 1000ft/min)
		Accuracy
		±(0.2m/s / 40ft/ min +3% of measuring value)
		Cable length
		3 metres
		Power supply
		12V via external universal power supply

0-10M/S	Part codes	Specifications
	IN-AF10MS	
		Probe operating range
		0-10m/s (0...2000ft/min)
		Analogue Output
		0-5V
		Working range temperature
		0°C to +60°C
		Storage temperature
		-30°C to +60°C
		Working range
		0-10m/s (0...2000ft/min)
		Accuracy
		±(0.3m/s / 60ft/ min +4% of measuring value)
		Cable length
		3 metres
		Power Supply
		12V via external universal power supply

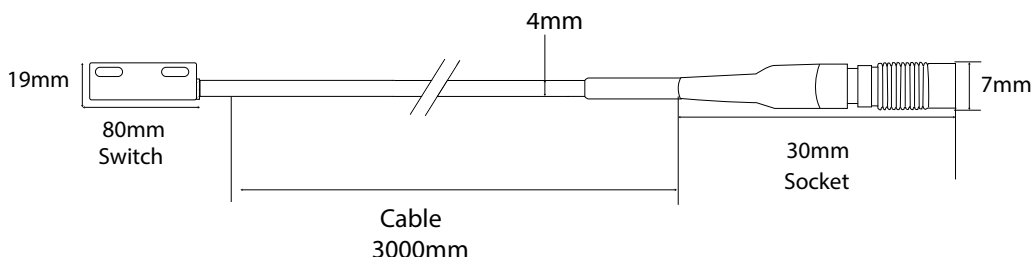
0-20M/S	Part codes	Specifications
	IN-AF20MS	
		Probe operating range
		0-20m/s (0...4000ft/min)
		Analogue Output
		0-5V
		Working range temperature
		0°C to +60°C
		Storage temperature
		-30°C to +60°C
		Working range
		0-20m/s (0...4000ft/min)
		Accuracy
		±(0.4m/s / 80ft/min +6% of measuring value)
		Cable length
		3 metres
		Power supply
		12V via external universal power supply

Door Sensor

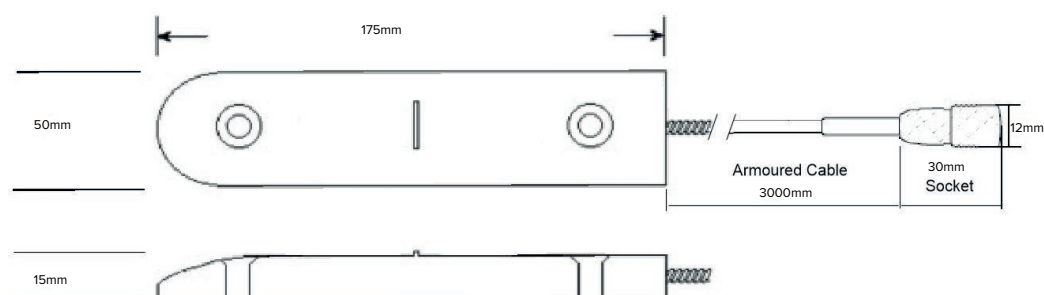
IN-DC001 (Light weight Door switch)	Part codes	Specifications
	IN-DC001	Cable length 3 metre cable



IN-DC002 (Medium duty Door switch with Hirose)	Part codes	Specifications
	IN-DC002	Cable length 3 metre cable



IN-DC003 (Industrial Door events sensor)	Part codes	Specifications
	IN-DC003	Cable length 3 metre cable



Extension cables	Part codes	Specifications
3 metre cable	IN-DSC-3.0	Temperature Operating range -20°C to +70°C

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