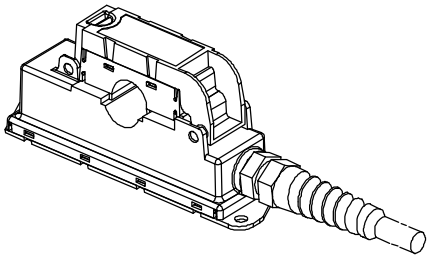
PointSenz PCM 5-PR/SP2

I_{PN} = 5 A

PointSenz PCM 5-PR/SP2 is optimised for the electronic measurement of AC currents, with a galvanic isolation between the primary (high power) circuit and the secondary (electronic) circuit.



Electrical data

I_{PN}	Primary nominal AC rms	5	A
I_{PM}	Primary current, measuring range (peak)	0 .. ± 25	A
I_{OUT}	Analogue output current @ I = 0	4	mA
I_{OUT}	Analogue output current @ I_{PN}	12	mA
I_{OUT}	Analogue output current @ 2 x I_{PN}	20	mA
R_M	Measuring resistance	100 .. 500	Ω
V_C	Supply voltage [1] (± 10 %)	+ 24	V
$I_{C\ maxi}$	Maximum Current consumption [2]	50	mA

Accuracy - Dynamic performance data

X	Accuracy [3, 4] (5% I_P .. 2 x I_{PN}) @ T_A = +25°C, V_C = +24 V		
	f = 50 Hz	± 2	% of I_{PN}
	Position sensitivity relative to centre reading (maxi)	± 1.5	% of I
ε_L	Linearity error [4] (5 % .. 2 x I_P)	± 1.0	% of I_P
$I_{O\ maxi}$	Maximum offset current @ I_P = 0, T_A = 25°C	+4 ± 0.3	mA
I_{OT}	Temperature variation of I_{OE} T_A = + 5 .. + 50°C	± 0.03	mA/°K
TCG	Temperature coefficient of **G** T_A = + 5 .. + 50°C	± 0.10	%/°K
t_r	Response time @ 90 % of I_P	100	m s
BW	Frequency bandwidth (- 3 dB)	0.040 .. 1	kHz

General data

T_A	Ambient operating temperature	- 25 .. + 55	°C
T_S	Ambient storage temperature	- 25 .. + 85	°C
	Relative humidity T_A = 40°C	95	%
m	Mass	150	g
	Standards	EN 50155	
		EN 50121-4	

Features

- Closed loop sensor using Hall Effect
- Panel mounting
- Split core design for easy installation
- Insulated plastic case to UL 94-V0
- Reverse polarity protected
- True rms output
- Water resistant design rated to IP67.

Advantages

- Very good linearity
- Excellent accuracy
- No insertion losses.
- Non - contact measurement (does not need a safety case)

Applications

- Points condition monitoring
- Signal light indication
- Battery supplied applications
- Uninterruptable Power Supplies (UPS).

Application domain

- Track Side.

Notes : [1] Reverse polarity protection
[2] Including I_{OUT}
[3] Excludes electrical offset
[4] Includes linearity with the conductor in the centre of the aperture.

Current Transducer PCM 5-PR/SP2

Isolation characteristics

V_b	Rated isolation voltage rms [5]	50	V
		Mini	
dCp	Creepage distance	12	mm
dCl	Clearance distance	10	mm
CTI	Comparative Tracking Index (Group IIIa)	175	

Note : [5] Overvoltage category III, Pollution degree 2.

Safety

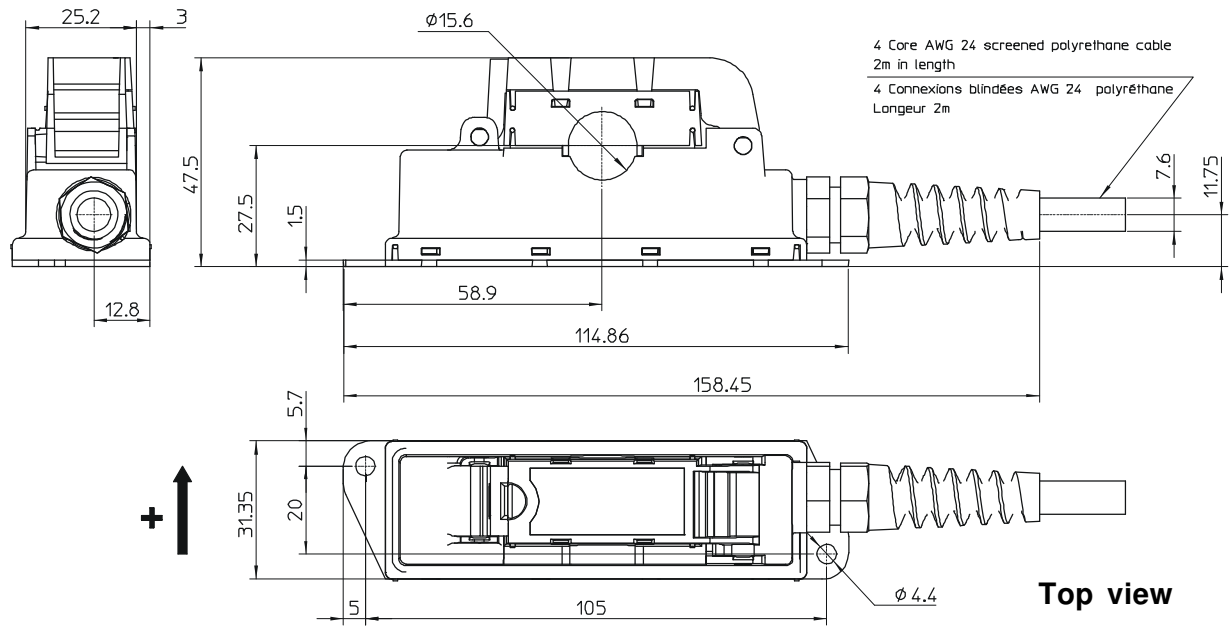
This transducer must be used in electric/electronic equipment with respect to applicable standards and safety requirements in accordance with the manufacturer's operating instructions.

Caution, risk of electrical shock

When operating the transducer, certain parts of the module can carry hazardous voltage (eg. primary busbar, power supply).
Ignoring this warning can lead to injury and/or cause serious damage.
This transducer is a built-in device, whose conducting parts must be inaccessible after installation.
A protective housing or additional shield could be used.
Main supply must be able to be disconnected.

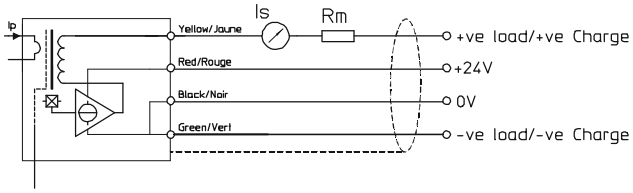
Dimensions PCM 5-PR/SP2 (in mm. 1 mm = 0.0394 inch)

Right view



Top view

Connection :



Mechanical characteristics

• General tolerance	± 0.5 mm
• Primary through-hole	Ø 15 mm
• Connection of secondary	4 core AWG 24 screened polyrethane cable 2 m in length
• Enclosure	UL 94-V0 rated plastic

Remarks

- I_{OUT} is positive when I_P flows in the direction of the arrow.
- Temperature of the primary conductor should not exceed 90 °C.
- This unit is intended for direct mounting in trackside applications. It should only be installed or removed from insulated hazardous live conductors or uninsulated hazardous live conductors which are switched off.
- Connections between the transducer and the customers power supply and output monitoring equipment should be made with screened cable.