

ASPT11 i(R)

Pressure Transmitter for Railway Applications

The ASPT11 i(R) Series Pressure Transmitter is engineered for demanding railway environments, offering 0.5% FS accuracy and designed in compliance with EN 50155 and EN 61373 standards. Featuring a fully welded, oil-filled stainless steel measuring cell, this transducer ensures exceptional stability and long-term reliability under harsh operating conditions.

Its wide operating temperature range from -40°C to +125°C, combined with excellent overpressure protection, makes the ASPT11 i(R) the perfect solution for railway systems exposed to vibration, shock, and extreme temperatures.

The pressure of the measured medium acts directly on the SS316L diaphragm, causing a micro displacement proportional to the applied pressure. This displacement alters the resistance within a Wheatstone bridge circuit, which is then converted into a precise, linear output signal corresponding to the measured pressure.



Major features

- Designed to comply EN 50155 and EN 61373 railway standards
- Enhanced EMC immunity beyond EN 50121-3-2 requirements
- Operating temperature range: -40°C to +125°C
- Default integral snubber for pressure ranges ≥ 25 bar
- SS316L diaphragm and fully welded oil-filled structure for high durability
- Ideal for pantograph pressure control, coolant recirculation pumps, and pneumatic/hydraulic brake systems

Applications

- Railways

Technical Parameters

Pressure range : upto 1000 Bar

Performance

Accuracy* : $\leq \pm 0.5\%$ FS
 $(\leq \pm 0.25\% \text{BFSL})$

Stability (1 year) : $\leq \pm 0.25\%$ of FS

Insulation Resistance : $> 100 \text{ M}\Omega/500\text{VDC}$
 $(200 \text{ M}\Omega/250\text{VDC})$

Over Range Protection : 300% F.S. ($\leq 70 \text{ kPa}$)
 200% F.S. ($\leq 10\text{MPa}$)
 150% F.S. ($\leq 100\text{MPa}$)

Temperature Drift : $\leq \pm 1.5\%$ FS (-20 to 85 °C)

Response Time : $\leq 1 \text{ ms}$ (upto 90% F.S.)

Reverse Polarity Protection : Yes

*Accuracy includes non-linearity, hysteresis & non-repeatability

Thermal

Temperature

Ambient Temp. : -20 ~ 80°C

Medium Temp. : -40 ~ 125°C

Storage Temp. : -40 ~ 120°C

Thermal Limits

Compensated Range : 0 ~ 70°C

TC Zero : $\leq \pm 1.5\%$ FS

TC Span : $\leq \pm 1.5\%$ FS

Environmental

EMC : EN50121-3-2:2006, with power supply unit acc. EN 61000-6-2:2005,
 EN61000-6-2, EN61000-6-3, EN61326-2-3
 Railway applications : EN50155:2007

IP Rating* : IP65 minimum

Random : 7.5g (5Hz~1kHz); IEC 60068-2--64

Vibration : Sine Curve: 20g (25Hz~2000 Hz); IEC 60068-2-6

Shock and vibration tests : EN61373:1999,2010

Free Falling Body : 1 m; IEC 60068-2-32

Surge : IEC 61000-4-5-3 level

Static Electricity : IEC 61000-4-2 4 level

Net Weight : 150 -180 gms

Electrical

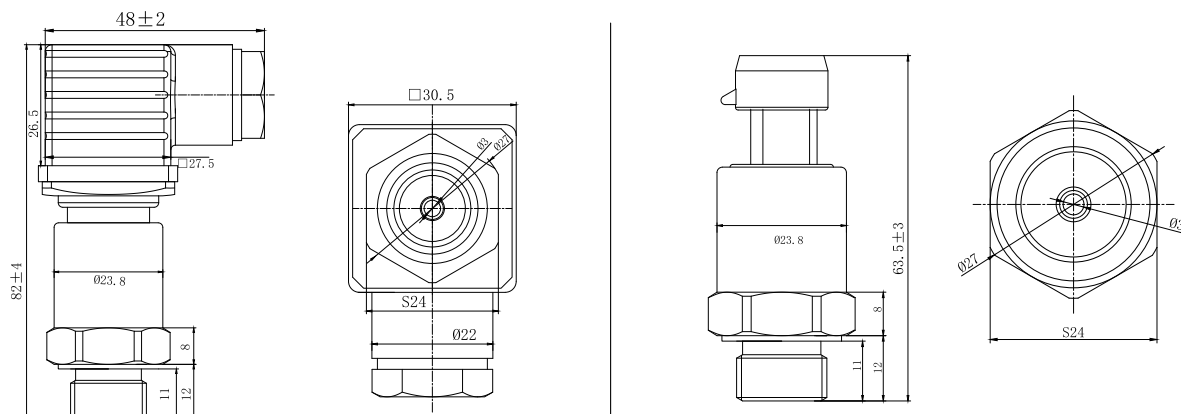
Output	4~20 mA	0~5V	1~5V	0~10V	1~10V	0.5 ~ 4.5V R/M
Supply	12..30VDC	12...30VDC	12...30VDC	12...30VDC	12...30VDC	5VDC

Wiring Guide

DIN 43650, FORM A

Output	Pin 1	Pin 2	Pin 3	Pin 4
4...20 mA (2-wire)	V+	V-	NC	NC
Voltage (3-wire)	V+	Ground	Signal	NC
Voltage (4-wire)	+Signal	Ground	+V	-Signal

Dimension



Ordering Guide

ASPT11 i(R) -25-B-G-1-2-1-L- S

Model Family

ASPT 11i (R) = Pressure Transmitter for Railways and Rolling Stocks

Pressure Range

- Insert Pressure Code

Pressure Unit

- P= Psi
- B= Bar
- K= Kg/Cm2
- M= Millibar
- W= Inches of H2O

Pressure Reference

- A= Absolute
- C= Compound
- G= Gauge
- S= Sealed Gauge

Output

- 1 = 4-20 mA
- 2 = 1-5 V
- 3 = 0-5V
- 4 = 0.5-4.5V
- 5 = 0-10V
- 6 = 1-10V
- Others

Special Options

- S = Snubber
- X = Other Options

Wetted Parts

- L= 316L SS

Process connection

- 1 = G1/4" Male
- 2 = G1/2" Male
- 3 = M20X1.5-6G
- 4 = M14X1.5
- 5 = 1/4" NPT Male
- 6 = 1/2" NPT Male
- 7 = G 3/8
- 8 = 7/16-20 UNF

Electrical connection

- 2= Big DIN
- 4= 1m cable
- 6= Packard
- 8= M12,1
- 9= Others

Due to continuous development of our products technical information's are subject to change.

Please ensure the compatibility between the measured medium and the contacting part of the product when placing an order.

ACT Sensors reserves the right to make any change in this datasheet without notice. The information provided is believed to be accurate and reliable as of this product sheet.

Contact factory for custom configurations not shown



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Your Engineering Partner...

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