



Electronic Temperature Transmitter ETS 4100

Description:

The ETS 4100 is a robust electronic temperature transmitter which is particularly suited to measuring temperature in hydraulic applications in industry.

The temperature sensor, based on a PT 1000 and corresponding evaluation electronics, is capable of measuring temperatures in the range -13 °F to +212 °F.

The sensor has analog output signals of 4 .. 20 mA and 0 .. 10 V available as standard for integration into modern control systems. The pressure resistance up to 8700 psi and excellent EMC characteristics make the ETS 4100 ideal for use in harsh conditions.

Special features:

- Accuracy $\leq \pm 0.8$ % FS
- Ideal for industrial applications
- Robust design
- Excellent EMC characteristics
- Excellent long term stability
- Standard protection class IP 65 / IP 67

Technical data:

Input data	
Measuring principle	PT 1000
Measuring range	-13..+212 °F (-25..+100 °C)
Probe length	6; 50; 100; 250; 350 mm
Probe diameter	4.5; 8; 8; 8; 8 mm
Pressure resistance	8700 psi (probe length 6 mm) 1812.5 psi (probe length 50 mm) 1812.5 psi (probe length 100 mm) 1812.5 psi (probe length 250 mm) 1812.5 psi (probe length 350 mm)
Mechanical connection	G1/4 A DIN 3852
Torque value	15lb-ft(20Nm)
Parts in contact with medium ¹⁾	Mech. conn.: Stainless steel Seal: FPM
Output data	
Output signal, permitted load resistance	4 .. 20 mA, 2 conductor $R_{Lmax} = (U_B - 8 V) / 20 \text{ mA}$ [kΩ] 0 .. 10 V, 3 conductor $R_{Lmin} = 2 \text{ k}\Omega$
Accuracy (at room temperature)	$\leq \pm 0.4$ % FS typ. $\leq \pm 0.8$ % FS max.
Temperature drift (environment)	$\leq \pm 0.006$ FS / °F
Rise time to DIN EN 60751	t_{50} : ~ 4 s t_{80} : ~ 8 s
Environmental conditions	
Operating temperature range ²⁾	-40..185 °F / -13..+185 °F
Storage temperature range	-40..212 °F
Fluid temperature range ²⁾	-40..+257 °F / -13..+257 °F
CE mark	EN 61000-6-1 / 2 / 3 / 4
Vibration resistance to DIN EN 60068-2-6 at 10 .. 500 Hz	≤ 25 g
Protection class to IEC 60529	IP 65 (for male EN175301-803 (DIN 43650) and Binder 714 M18) IP 67 (for male M12x1, when an IP 67 connector is used)
Other data	
Electrical connection	M12x1, 4 pole, Binder Series 714 M18, 4 pole, EN 175301-803 (DIN 43650)
Supply voltage	8 .. 32 V DC 2 conductor 12 .. 32 V DC 3 conductor
Residual ripple of supply voltage	≤ 5 %
Current consumption 3 conductor	~ 25 mA
Weight	~ 200 g (probe length 6 mm) ~ 215 g (probe length 50 mm) ~ 235 g (probe length 100 mm) ~ 280 g (probe length 250 mm) ~ 315 g (probe length 350 mm)

Note: Reverse polarity protection of the supply voltage, excess voltage, override and short circuit protection are provided.

FS (Full Scale) = relative to complete measuring range

¹⁾ Other seal materials on request

²⁾ -13 °F with FPM seal, -40 °F on request

