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PRODUCT DATASHEET

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Rosemount TMU 53

Temperature Measuring Unit



The Rosemount TMU 53 Temperature Measuring Unit is an integrated part of the Rosemount CMS system from Emerson.

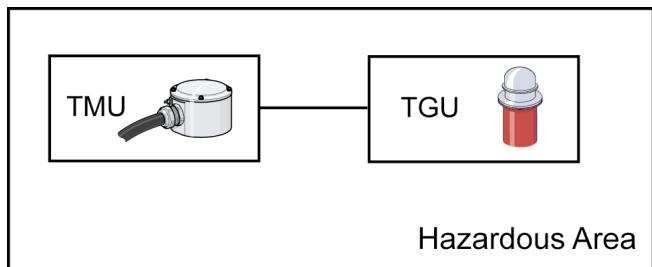
- Robust stainless steel design for installation on cargo pumps
- Intrinsically safe temperature transmitter, with communication to Tank Radar Gauges
- Enables temperature measurements of the cargo and vapor inside the tanks
- Suited for up to three spot temperature sensors

Description

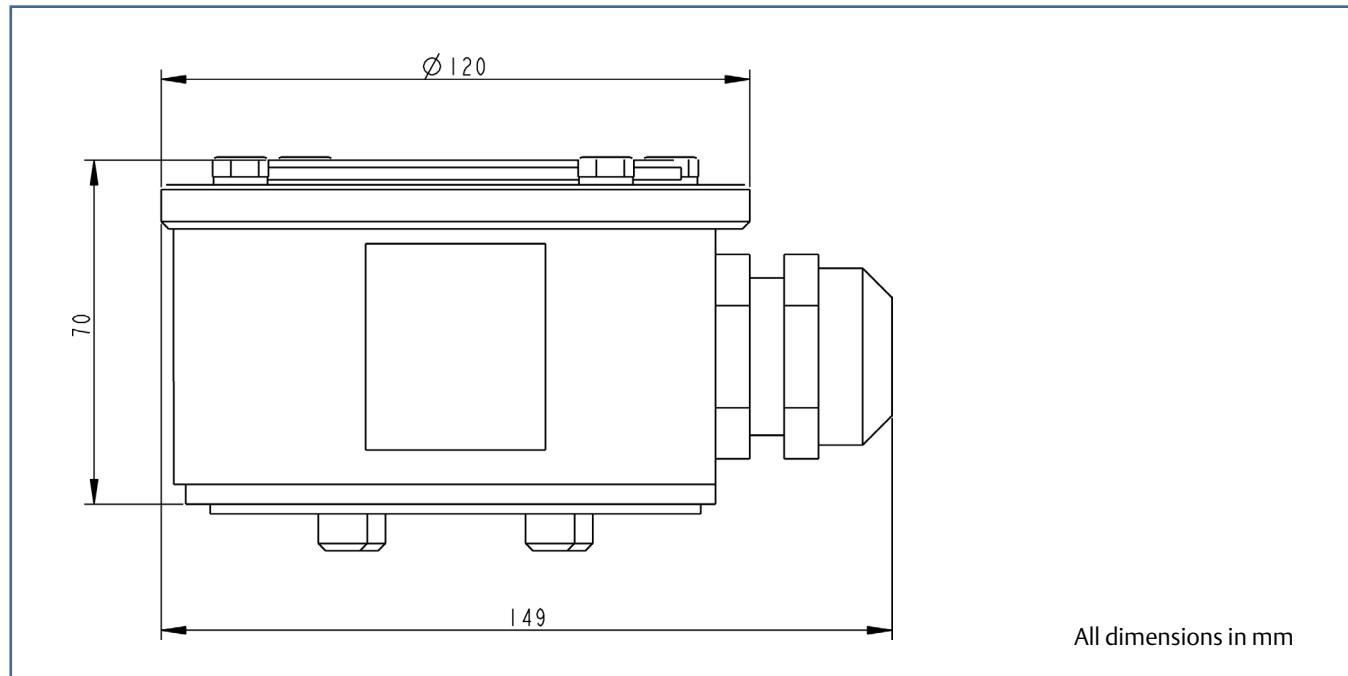
The TMU 53 Temperature Measuring Unit enables temperature measurements of the cargo and vapor inside the tanks. The mechanical outline makes it a suitable choice for installations on pumps.

Up to three temperature sensors, distributed over the tank height, can be connected to the unit. The sensor is based on a Pt100 element with a three wire connection.

The unit communicates with the Rosemount TGU Tank Radar Gauge through a sensor bus, which in turn transmits the processed data to the Rosemount SCU Supply and Communication Unit.



Dimensional Drawings



Technical Specification

TMU 53		
General Specification		
Accuracy, excluding sensor	$\pm 0.15 \text{ }^{\circ}\text{C}$	
Accuracy, Pt100 sensor	$\pm 0.3 \text{ }^{\circ}\text{C} + 0.005 \Delta T$ for Pt100 Class B sensor (ex. ± 0.3 at $0 \text{ }^{\circ}\text{C}$ and ± 0.55 at $50 \text{ }^{\circ}\text{C}$)	
Measuring range with PT100	$-170 \text{ }^{\circ}\text{C}$ to $250 \text{ }^{\circ}\text{C}$	
Number of sensors	1 - 3	
Signal interface	RS-485 for communication with TGU	
Electrical Specification		
Cable to Tank Radar Gauge	Cable type	Multicore; two twisted pair with at least a common shield (Supplied by yard)
	Lead area	0.5 to 1.5 mm^2
	Outer diameter	6 to 21 mm
	Cable length	Maximum 50 m
Mechanical Specification		
Housing material	Stainless steel 316L	
Weight	3.0 kg	
Flange	Suitable for mounting on deepwell cargo pump (from major suppliers)	
Environment Specification		
Ingress protection	IP 66	
Ambient temperature	-40 to $+70 \text{ }^{\circ}\text{C}$	
Approvals		
Marine approvals	ABS, BV, CCS, DNV-GL, KR, LR, NK, RINA	
Explosion protection	Intrinsically safe	ATEX:  II 1 G Ex ia IIC T4 Ga IECEx: Ex ia IIC T4 Ga INMETRO: Ex ia IIC T4 Ga



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