

# Rosemount TMU 51

## Temperature Measuring Unit



**The Rosemount TMU 51 Temperature Measuring Unit is an integrated part of the Rosemount CMS system from Emerson.**

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

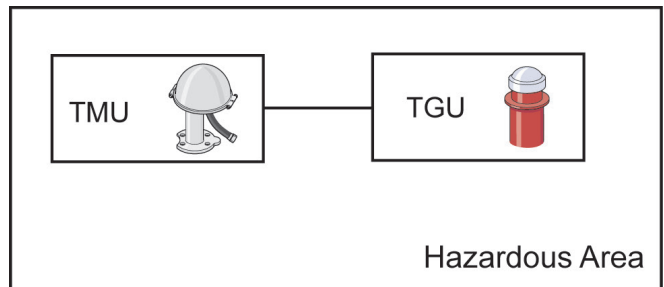
## Description

The TMU 51 Temperature Measuring Unit enables temperature measurements of the cargo and vapor inside the tanks. The mechanical outline makes it a suitable choice for deck installations.

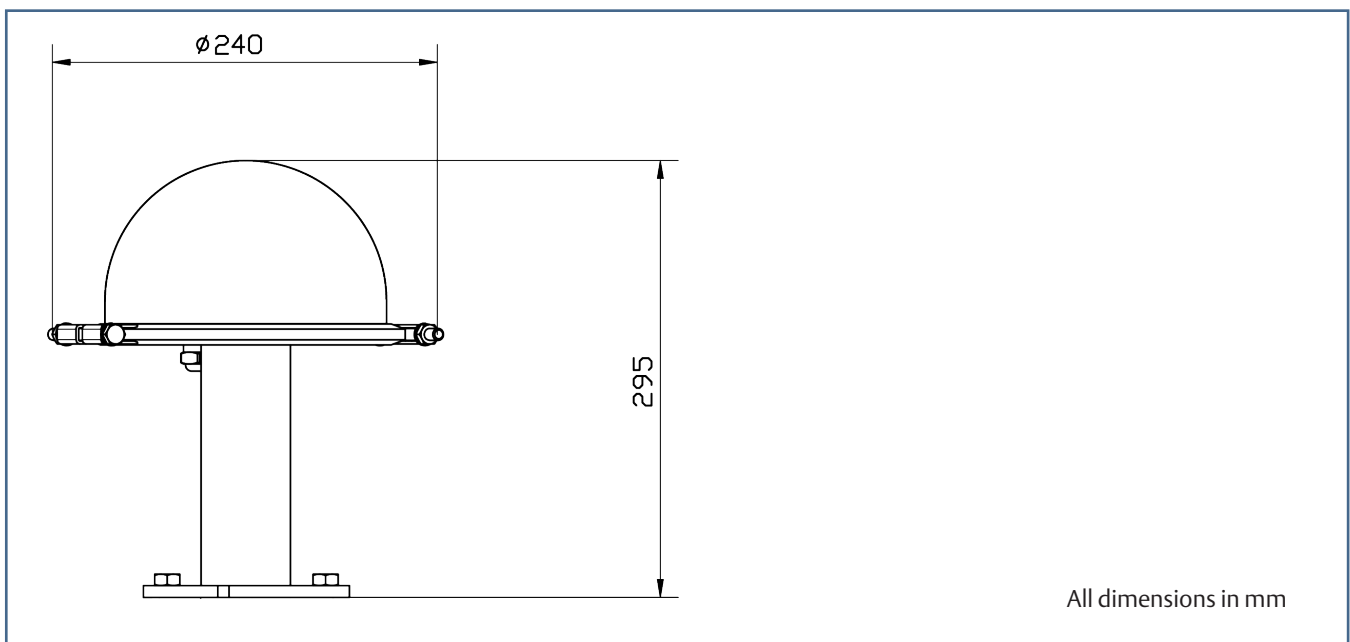
Up to five temperature sensors, distributed over the tank height, can be connected to the unit.

The sensor is based on a Pt100 element with a three wire connection, or alternatively a four 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 51		
<b>General Specification</b>		
Accuracy, excluding sensor	±0.15 °C	
Accuracy, Pt100 sensor	±0.3 °C + 0.005 ΔT for Pt100 Class B sensor (ex. ±0.3 at 0 °C and ±0.55 at 50 °C)	
Measuring range with PT100	-170 ° to 250 °C	
Number of sensors	Standard: 1 - 3 Option: 4 - 6	
Signal interface	RS-485 for communication with TGU	
<b>Electrical Specification</b>		
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 <sup>2</sup>
	Outer diameter	6 to 21 mm
	Cable length	Maximum 50 m
<b>Mechanical Specification</b>		
Housing material	Stainless steel 316L	
Weight	5.4 kg	
Flange	Fits DN 50 PN6 and JIS 5K-50A	
<b>Environment Specification</b>		
Ingress protection	IP 66	
Ambient temperature	-40 to + 70 °C	
<b>Approvals</b>		
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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Emerson is a world-leading provider of marine solutions with engineering excellence, decades of industry experience and global presence supporting any ship anywhere. All marine systems and solutions are designed especially for the harsh marine environments, engineered and manufactured in-house by our skilled teams of marine engineers. Emerson is well-known in the industry and has more than 50 years' experience with a large installed base and covers well-known marine brands such as Rosemount, Micro Motion and Damcos. Supporting marine customers from a global network of sales and service hubs along the maritime highway.

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