Temperature Products

Temperature

Temperature is one of the most widely measured variables in industrial applications; Product quality is highly dependent on accurate temperature measurement and control. Emerson Process Management can provide a complete solution for your temperature measurement application.

Complete Temperature Assemblies

Emerson provides complete Rosemount temperature assemblies to reduce procurement and installation costs. The transmitter, sensor, extension hardware, and thermowell arrive installation-ready, enabling immediate installation into the process.

Single Point and High Density Solutions

Temperature measurement points in industrial applications are typically either low density, single point measurements or high density where several measurement points are clustered together. Single point measurements are either geographically separated from other measurement points, are used in critical control and safety loops, or are essential to controlling product quality. High density measurement applications require the same level of reliability, but can take advantage of new technologies to minimize installed cost. These high density applications include distillation columns, heat exchangers, boilers, bearing temperatures and reactor profiles. Emerson leads the process control industry in providing solutions for both single point and high density applications.

Table 1. Transmitter Selection Chart

Models		Appli	plication Functionality					Housing				Available Outputs								
648 1 X X - - - X - - - X - - - X - - - X - - - X - - - X -	Models	Single Point	High Density	Sensor Inputs	RTD Inputs	Thermocouple Inputs	LCD Display	Hot Backup [®]	Sensor Drift Alert	Safety Certified	Transmitter Sensor Matching		Dual-Compartment	Head Mount	Rail Mount	Other	HART	FOUNDATION fieldbus	Wireless	PC-Programmable
644 1 X X X - - X X - - - X X -	3144P			2	Х	Х	Х	Х	Х	Х	Χ	Х	Х	_	_	_	Χ	Х	_	_
248 1 X X - - - - - X X - - - 148 1 X X - - - - - X - - - - - 848T 8 X X - - - - X - - <	648			1	Х	Х	Х	_	_	_	Х		Х	_	_	_	Х	_	Х	_
148 1 X X - - - - - X - - X 848T 8 X X - - - X - - X - - X - X 848T 4 X X - - - - - - X - X - X	644			1	Х	Х	Х	_	-	_	Х	Χ	_	Χ	Х	_	Χ	Х	_	_
848T 8 X X - - - X - - X -	248			1	Х	Χ	_	-	_	_	-	_	_	Χ	Х	_	Χ	_	_	_
848T 4 X X X X - X - X -	148			1	Х	Х	_	_	_	_	-	_	_	Χ	_	_	_	_	_	Х
	848T			8	Х	Х	_	_	_	_	ı	Χ	_	ı	Х	_	_	Χ	_	Χ
WIICIGSS	848T Wireless			4	Х	Х	_	_	_	-	-	_	_	_	-	Х	Х	-	Х	_

Comprehensive Product Catalog

00805-0100-1025, Rev GA Catalog 2008 - 2009

Table 2. Sensor Selection Chart

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St	yle	Te	echn	ology				
U.S.	European DIN / Metric		RTD	Thermocouple		Temperat		
Χ	_		Χ	_		-50 to 400		
Χ	_		Χ	_		-200 to 60		
Χ	_		Χ	_		-50 to 200		
Χ	_		-	Χ		-180 to 1		
NA	NA		Χ	Χ		-40 to 800		
_	Χ		Χ	_		-196 to 60		
_	Χ		Χ	_		-50 to 250		
_	Х		Χ	_		-50 to 250		
_	Х		_	Χ		-40 to 100		
_	Χ		-	Χ		0 to 1700		
	St S:D X X X	Style	Style	Style Techn	Style	Style Technology		

Specifications								
Temperature Range °C (°F)	Use with Transmitter- Sensor Matching	Measurement Points	Comments					
-50 to 400 (-58 to 752)	Х	1	Thin-film RTD					
-200 to 600 (-328 to 1112)	X	1 or 2	Wire-wound RTD					
-50 to 200 (-58 to 392)	X	1 or 2	Sanitary RTD					
-180 to 1150 (-292 to 2102)	_	1 or 2	U.S. Style Thermocouple					
-40 to 800 (-40 to 1472)	X	2 to 60	Multipoint sensor for temperature profiling					
-196 to 600 (-321 to 1112)	Χ	1 or 2	DIN style RTD					
-50 to 250 (-58 to 482)	Х	1 or 2	Sanitary RTD					
-50 to 250 (-58 to 482)	Х	1 or 2	Sanitary RTD					
-40 to 1000 (-40 to 1832)	_	1 or 2	DIN style thermocouple					
0 to 1700 (32 to 3092)	_	1	High Temperature Thermocouple					

X = Available — = Not Available NA Not Applicable

Table of Contents

Rosemount 3144P Temperature Transmitter

Rosemount 648 Wireless Temperature Transmitter

Rosemount 644 Temperature Transmitter

Rosemount 848T Multi-Input Temperature Transmitter Family

Rosemount 248 Temperature Transmitter and Monitoring Assembly

Rosemount 148 Temperature Transmitter

Temperature Sensors and Accessories (English)

Temperature Sensors and Accessories (Metric)

Resistance Temperature Sensors for Hygienic and Sanitary Applications

Rosemount 1080 and 1082 Multipoint Thermocouple and RTD Profiling Sensors

Rosemount Series 1075 and 1099 High-Temperature Thermocouples