

Programmable 10" Circular Chart Recorder

User configurable one or two pens



49011-87

These recorders are designed with the latest innovation in recording technology, enclosures, and functionality. Finding a place to install this recorder is easy, with its compact 2.5" panel depth and short 1.3" protrusion from the front of the panel. It can be panel- or surface-mounted. The cutout size is the commonly utilized 12.7" square cutout.

- 1 or 2 trend pen versions
- 4-digit red LED display
- High/low limit capability available
- Universal inputs
- Up to 2 alarms per pen
- Universal power supply
- Communications

What's included: Pack of 100 charts, pen(s), and power adapter.

Catalog No.	Model No.	Description
TS-49011-86	51000011	1-channel recorder NEMA 3 case with alarms/relays
TS-49011-87	51100011	2-channel recorder NEMA 3 case with alarms/relays
TS-49011-84	54020011	1-channel recorder NEMA 3 case with alarms and 2 relay outputs
TS-49011-85	54422011	2-channel recorder NEMA 3 case with alarms and 2 relay outputs per channel
Accessories		
TS-49014-98	60500402	Red pens. 5/pk
TS-49014-99	60500401	Green pens. 5/pk
TS-17110-00	—	NIST-traceable calibration with data

Charts—Box of 100

Range	12 hour		24 hour		7 day	
	Catalog No.	Model No.	Catalog No.	Model No.	Catalog No.	Model No.
0 to 14 pH	—	—	TS-49012-88	00214417	TS-49012-75	00214416
0 to 100	TS-49012-72	00213824	TS-49012-83	00213825	TS-49012-84	00213826
0 to 200	TS-49012-70	00213819	TS-49012-76	00213801	TS-49012-78	00213806
0 to 300	—	—	TS-49012-86	00213883	TS-49012-87	00213884
0 to 400	TS-49012-74	00214410	TS-49012-77	00213802	TS-49012-79	00213807
0 to 600	—	—	TS-49012-81	00213817	TS-49012-69	00213818
0 to 1000	—	—	TS-49012-82	00213820	TS-49012-71	00213821
0 to 2000	—	—	TS-49012-80	00213810	TS-49012-67	00213813
30 to 230°F	TS-49012-73	00213831	TS-49012-85	00213832	TS-49012-68	00213814

SPECIFICATIONS

Recording		
Pen type	Disposable fiber tip	
Pen color	Pen 1: red; pen 2: green	
Chart size	10 inch	
Chart drive	Stepper motor	
Chart rotation	User configurable; 8 hour, 12 hour, 24 hour or 7 day	
Chart span	Bottom and top of span, -9999 to 9999 units	
Input Types/Range	Type	Range
Thermocouple	J	32 to 1400°F (0 to 760°C)
	K	32 to 2500°F (0 to 1360°C)
	T	-330 to 750°F (-200 to 400°C)
	R	400 to 3000°F (200 to 1650°C)
	S	400 to 3000°F (200 to 1650°C)
RTD	100 Ω Platinum	-220 to 750°F (-140 to 400°C)
	0.00385 Ω/Ω/°C	
Current DC	0 to 20 mA, 4 to 20 mA; internal 4.7 Ω shunt resistor	
Voltage DC	0 to 25 mV, 0 to 50 mV, 10 to 50 mV, 0 to 5 V, 1 to 5 V	
Input performance		
Performance under reference condition		
Measurement error	Type J, K, T, R, S and RTD: ±0.25% of span ±1 degree mA, mV and VDC; ±0.25% of scaled span plus 1 least significant digit	
Cold junction compensation error	±0.2°C @ 25°C	
Cold junction comp. rejection	0.04/°C deviation from 25°C	
Linearization error	TCs: ±0.25°C typical, ±0.5°C worst case with expectations RTDs: ±0.1°C typical, ±0.3°C worst case	
Ambient temp. error	±0.01% of span per °C deviation from 25°C	
Relay outputs		
Relays	SPDT, contacts rated 5 amps resistive at 115 VAC, 2.5 A resistive, 1/8 HP at 230 VAC (single phase), 250 VA at 115/230	
Alarms		
Number	Up to two process alarms for each of two inputs	
Type	Process high or low	
Limit device	Optional high/low limits for each input with latching output Normally open output latches open Red reset button included to the right of the display	
Hysteresis	Fully adjustable, 0 to 200 units, single sided	
Security	Alarm setpoint changes can be prohibited	
Sensor fault action	Alarms work normally in "Hi" and "Lo" conditions	
Construction		
Enclosure	Injection molded Noryl® case and cover with acrylic window	
NEMA rating	NEMA 3 standard	
Mounting	Panel or wall	
Overall dimensions	14" W x 14" H x 3 7/8" D (356 x 356 x 97 mm)	
Panel cutout	12 1/16" W x 12 1/16" H (323 x 323 mm)	
Panel depth	2 1/2" (64 mm)	
Panel protrusion	1 5/16" (33 mm)	
Power	90 to 264 VAC, 50/60 Hz	