

INDICATOR & ALARM UNITS

7SI 1/16 DIN Compact Digital Indicator

Features:

- Four Digit Display
- T/C, RTD, mV, mA or V Input
- NEMA 4X, IP65
- Up to 2 Independent Alarms
- Logic Input for Alarm Reset
- Alarm Standby on Start-up
- Optional Digital Communications
- Optional 24 Vac/Vdc Supply



The 7SI is a compact 1/16 DIN digital indicator/ alarm unit with a 4-digit process variable display designed for equipment manufacturers who need these functions in a small package. Inputs are factory calibrated and selectable from the front panel. Fifteen thermocouple types, 3-wire Platinum RTD's and several ranges of linear mV, mA and voltage inputs are available. The 7SI has one standard alarm relay output and an optional second alarm relay output. Relays can be programmed to energize or deenergize in an alarm condition. Both alarms can be configured as process high or low at independent thresholds within the readout range

and with an adjustable hysteresis of 0.1 to 10% of span. Alarms can be acknowledged automatically or manually via a front panel key, optional logic input or RS-485 communications link. LED beacons for each alarm flash to annunciate new alarms. The alarm LED's stay steady ON for alarms that are present but acknowledged, and are OFF when no alarm is present. Optional RS-485 digital communications with Modbus® or JBUS is available for computer supervision. The 7SI is NEMA 4X rated for operation in severe environments.

Specifications:

Supply Voltage:	100-240 Vac (+10%, -15%), 50/60 Hz or 24 Vac/Vdc (±10%)
Operating Ambient:	0-50°C, 20-85% RH non-condensing
Inputs:	T/C Types B, C, D, E, G, L, J, K, N, Platinel II, R, S, T and U (°C, °F); Pt 100 3W RTD (°C, °F) Ranges: See Table A, page 2-10; mAdc, mVdc, Vdc
Logic Input:	for Alarm Acknowledgement, requires contact rated at 0.5 mA, 5 Vdc minimum

Output Ratings:
Output 1: Relay, 3A/250V, SPDT, Resistive Direct or Reverse operation
Output 2: (Optional) Relay, 2A/250V, SPST, NO, Resistive Direct or Reverse operation

Serial Communications: EIA RS-485 Modbus®, JBUS

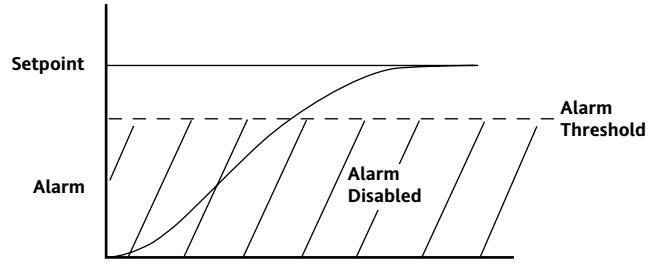
Mounting: Panel Mount

Alarm Standby Function

The 7SI can be programmed with an alarm masking function (Alarm standby), which puts the alarm in a standby condition during instrument powerup, when process low alarms are subject to false activation. Once the low alarm threshold is traversed for the first time the instrument reverts to standard operation.

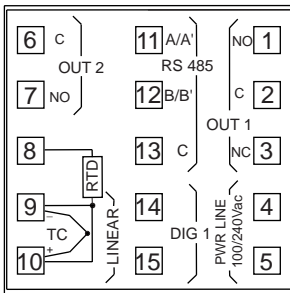
Data Memory Function

The 7SI also has a "data memory" function which is enabled at powerup. It is able to store in memory the minimum and maximum measured value, which, by pushbutton or serial link, can be displayed on the front panel. This function can also be reset by pushbutton or link, deleting the old values and starting a new memorization period.

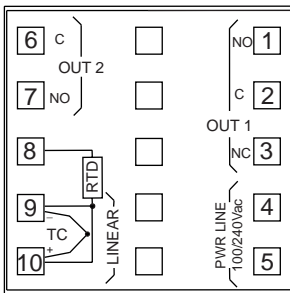


Alarm Standby

Terminal Connections and Mounting:



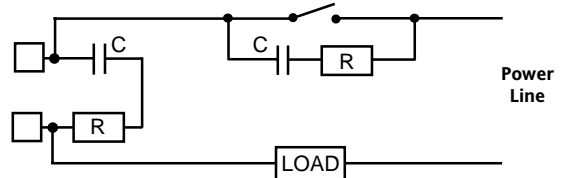
7SI with RS-485



7SI without RS-485

Wiring

Do not run input wires with power cabling. Ground shields at one point only. Use compensating cable for thermocouple wiring. Relays are internally protected by a varistor. When inductive loads (such as mercury contactors) are used, or external switches are connected in series with internal contacts, high voltage transients may affect performance of the instrument. In this case it is recommended to install an additional RC snubber network across the contacts as shown. Contact Barber-Colman.



External Switch in Series with the Internal Contact
Snubber Part Number: CZ140398

Mounting

Dimensions: 48W x 48H x 105D mm (without RS-485)
48W x 48H x 122D mm (with RS-485)
Cutout: 45W x 45H mm (-0, +0.6 mm)
60 mm min. center-to-center vertical spacing
75 mm min. center-to-center horizontal spacing
Weight: 250 gm

Ordering Codes:

Model	Input	Output 1	Output 2	Options	Power Supply	Reserved
7SI	9	1				0000

Input	Output 1	Output 2	Options	Power Supply
9 T/C Type B, C, D, E, G, L, J, K, N, Platinel II, R, S, T, & U (°C, °F) Pt100 3W RTD (°C, °F) 0 to 20 mAdc & 4 to 20 mAdc 0 to 60 mVdc & 12 to 60 mVdc 0 to 5 Vdc & 1 to 5 Vdc 0 to 10 Vdc & 2 to 10 Vdc	1 Relay	0 None 1 Relay	0 None 1 RS-485 Communications and Logic Input	3 100 to 240 Vac 5 24 Vac/Vdc

* Ranges - See Table A, page 2-10