

# INDICATOR & ALARM UNITS

## 7HI & 7HK 1/8 DIN 4-Digit Horizontal Digital Indicators

### Features:

- Four Digit LED Display
- Universal Input (T/C, RTD, mV, mA or V)
- NEMA 4X, IP65
- Up to 3 Independent Alarms (7HI)
- Configurable Automatic or Manual Reset
- High & Low Peak Reading Memory
- Measurement Offset Function
- Optional 24 Vac/Vdc Supply
- Analog Retransmission (7HK)



The 7HI/7HK 1/8 DIN horizontal indicators offer outstanding performance in a cost effective package. Designed specifically for equipment manufacturers who need process monitoring and alarm, the 7HI/7HK are easy to configure and use. Factory calibrated, they accept thermocouples, 3-wire Platinum RTD, and mV, mA and Vdc inputs, selectable from the front panel and programmable with filtering and sensor break indication. High or low process alarm setpoints can be programmed and password protected. Alarms can be acknowledged automatically, or manually from the keypad. A bright 4-digit LED display and 6 panel beacons provide process variable, alarm status and other important process information to the operator. Both models are NEMA 4X rated. Both have a peak high/peak low feature

that remembers the highest and lowest detected process variable readings. This sequence can be reset and restarted from the front panel.

**7HI** - The 7HI has up to 3 independent latchable alarm relays (2 SPDT and 1 SPST) programmed for high or low process alarms. The 7HI is also available with an optional 24 Vac/Vdc supply.

**7HK** - The 7HK is available with 2 SPDT alarm relays for high or low process alarms. In addition, as a third output, the 7HK has a linear analog retransmission output of the process variable. This output is programmable for 0 to 20 mA or 4 to 20 mA and can have a programmable filter applied.

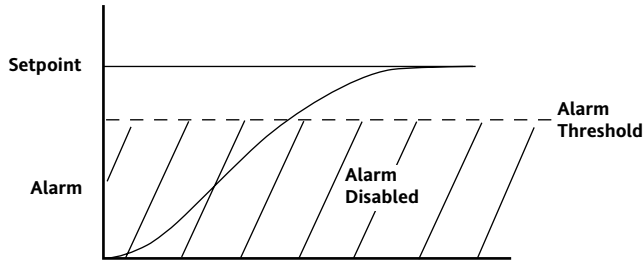
### Specifications:

<b>Supply Voltage:</b>	100-240 Vac (+10%, -15%), 50/60 Hz or 24 Vac/Vdc ( $\pm 10\%$ )
<b>Operating Ambient:</b>	0-50°C, 20-85% RH non-condensing
<b>Inputs:</b>	T/C Types J, K, L, R, S, T and N (°C, °F); Pt 100 3W RTD (°C, °F) Ranges: See Table C, page 2-10; mA <sub>dc</sub> , mV <sub>dc</sub> , V <sub>dc</sub>
<b>Mounting:</b>	Panel Mount

<b>Output Ratings:</b>	
Output 1:	Relay, 3A/250 Vac, 3A/30 Vdc, SPDT, Resistive Alarm 1, Direct or Reverse Acting
Output 2:	Relay, 3A/250 Vac, 3A/30 Vdc, SPDT, Resistive Alarm 2, Direct or Reverse Acting
Output 3:	Relay, 2A/250 Vac, 2A/30 Vdc, SPST, NO, Resistive (7HI) Optional Alarm 3, Direct or Reverse Acting
Output 3:	Isolated 0 to 20 mA or 4 to 20 mA, (500 $\Omega$ max.) (7HK) Isolated 0 to 10 Vdc (by solder jumper - recalibration required), (5k $\Omega$ min.) Optional Retransmission of PV

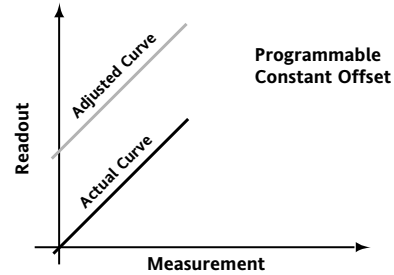
### Alarm Standby Function

The 7HI/7HK have an Alarm Standby function to allow masking of the process low alarm condition if the process variable has not traversed the low alarm threshold for the first time.



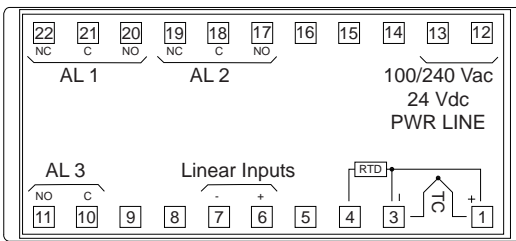
### Measurement Offset

A programmable sensor offset is provided for instances when it is not possible to locate the sensor in the ideal location. This offset can be applied to all inputs and is programmable for °C or °F.

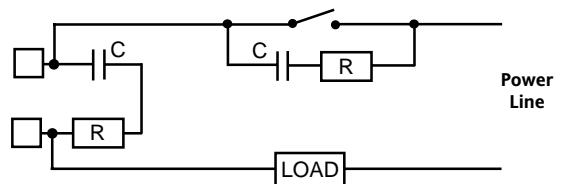
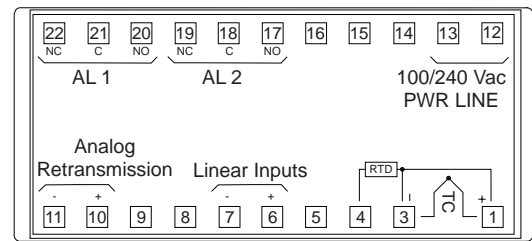


## Terminal Connections and Mounting:

7HI



7HK



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

### 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.

### Mounting

Dimensions: 96W x 48H x 89D mm  
Cutout: 92W (-0, +0.8 mm) x 45H mm (-0, +0.6 mm)  
60 mm min. center-to-center vertical spacing  
125 mm min. center-to-center horizontal spacing  
Weight: 250 gm

## Ordering Codes:

Model	Input	Reserved	Outputs	Power Supply	Reserved
		000			000

Model	Input	Outputs	Power Supply
7HI 7HK	4 8	0 1 2 3	3 5
Digital Panel Indicator Digital Panel Indicator with Analog Retransmission	T/C Type J, K, L, N, R, S, & T (°C, °F) Pt100 3W RTD (°C, °F)* T/C Type J, K, L, N, R, S, & T (°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	None Two Alarm Relays Two Alarm Relays plus 0 - 20 or 4 - 20 mAdc Analog Retransmission (7HK only) Three Alarm Relays (7HI only)	100 to 240 Vac 24 Vac/Vdc (7HI only)

\* Ranges - See Table C, page 2-10