

4 ½ DIGIT PROCESS INDICATOR WITH ALARMS

ABOUT TEC401

TEC401 is a 4 ½ digit process indicator with upto 4 alarms. It has a universal input including thermocouple types, RTD and linear inputs. It has a retransmission output corresponding to the Process Value. It has an RS485/MODBUS RTU communication port, and a multi-function digital input.



FEATURES

- Universal input
- 0 / 1 / 2 / 3 / 4 setpoints
- Isolated 0/4~20 mA or 0~10 V DC retransmission output
- 24 V DC transmitter supply
- RS485 / MODBUS RTU
- ONOFF control
- Digital input
- 85~265 V AC SMPS / 18~35 V DC power supply

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SPECIFICATIONS

All specifications at ambient of 25 °C, unless specified otherwise

INPUTS Input group 1 Thermocouple RTD Voltage Current Input group 2 Thermocouple RTD Current Voltage Sampling time Transmitter supply Range limits Accuracy Cold junction compensation Sensor break protection Digital input closure for alarm acknowledge / mode/peak-valley reset	B, E, J, K, N, R, S, T Pt100, 3-wire 0~50 mV, 0~10 V 4~20 mA B, C, D, E, G, J, K, N, R, S, T, L, U, PLII Pt100, 3-wire, Cu53, JPT100 0~20 mA, 4~20 mA, Square root 0~50 mV, 0~1 V, 0~5 V, 0~10V, -10~20mV, 0~100 mV, 0~200 mV 50 ms / 200 ms programmable 22 V nominal, 30 mA max See Table 1 See Table 1 Automatic User programmable Isolated potential free contact standby	ISOLATION Mutual isolation between input, supply, relays, analog output, digital input, RS485	1500 VAC RMS, 50hz / 1 minute
INDICATION Process variable 0.56" (14.2 mm) red LED display Status indication	4 ½ digit, 7 segment LEDs for Relay1, Relay2 LEDs for Rx, Tx (RS485)	PROGRAMMABLE PARAMETERS Setpoint Unit Resolution linear input High scale Low scale Digital filter Hysteresis Bias (for process variable) Relay logic SP4 only) Alarm delay Alarm types Alarm acknowledge reset relay in alarm condition Setpoint lock Level lock Relay action	Full range (See Table 1) °C, °F, EU User selectable 0.0001, 0.001, 0.01, 0.1 or 1 for 0.1 or 1 for temperature Full range (See Table 1) Full range (See Table 1) Low, High 0.1~99.9 -99.9 to 99.9 a. Full scale high alarm b. Full scale low alarm c. Deviation high alarm d. Deviation low alarm e. Inband alarm f. Outband alarm (c. to f. available for SP2, SP3, 0~999 second/minute Self reset or latched and can be disabled at power on Front panel function used to ON, OFF Password protected Reverse / direct
VIEW MODE Peak / Valley value after power on / reset	Maximum/Minimum process	Alarm acknowledge reset relay in alarm condition Setpoint lock Level lock Relay action	Through 4 tactile keys 48(H) x 96(W) x 112(D) Panel mount 44 x 92 mm a) 85~265 V AC, 50/60 Hz b) 18~35 V DC c) 12~55 V DC 4 watts maximum 0~50 °C Below 90%, non condensing
OUTPUTS No. of relays Relay contact type Relay contact rating SSR drive signal No. of analog outputs Accuracy (analog output) Current output 20~0 mA isolated from input Maximum load for current output Voltage output Load for voltage output	0 / 1 / 2 / 3 / 4 NO-C-NC (Relay 1, Relay 2) NO-C (Relay 3, Relay 4) 7A / 230V AC, resistive 12 V DC for external SSR 0 / 1 (current or voltage) ±0.1% of span wrt measured input 4~20 mA / 0~20 mA / 20~4 mA / 500 ohms 0~10 V / user specified >10 Kohms	OTHER Programming Dimensions (in mm) (Fig 1) Mounting Panel cutout Supply voltage (default) Power consumption Operating ambient temperature Relative humidity	
COMMUNICATION Port Protocol Slave ID	RS485 Modbus RTU User programmable (1~247)		

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TABLE 1

SENSOR / INPUT	RANGE LIMITS (°C / EU)		RANGE IN WHICH ACCURACY IS SPECIFIED		TYPICAL ACCURACY AT 30 °C (°C / EU)	WORST CASE ACCURACY (°C / EU)
	LOW SCALE	HIGH SCALE	LOW SCALE	HIGH SCALE		
Pt - 6% Rh / Pt - 30% Rh (B)	400	1800	400	1800	± 3	± 5
Chromel / Constantan (E)	-200	850	0	850	± 1	± 3
Iron / Constantan (J)	-200	760	0	760	± 1	± 3
Chromel / Alumel (K)	-200	1370	-50	1200	± 1	± 3
Nicrosil / Nilil (N)	-200	1300	-50	1200	± 1	± 3
Pt / Pt - 13% Rh (R)	0	1700	400	1700	± 2	± 5
Pt / Pt - 10% Rh (S)	0	1700	400	1700	± 2	± 5
Copper / Constantan (T)	-200	400	-200	400	± 1	± 3
Pt100, 3-wire	-200	850	-200	600	± 0.3	± 1.0
JPT100	-200	510	-200	500	± 0.3	± 1.0
Linear (0~50 mV, 0~20 mA, 4~20 mA)	-19999	19999	-19999	19999	± 0.1% of span	± 0.2% of span
Tungsten - 5% Rh / Tungsten - 26% Rh (C)	0	2300	0	2200	± 3	± 5
Tungsten - 3% Rh / Tungsten - 25% Rh (D)	0	2000	0	2000	± 3	± 5
Tungsten / Tungsten - 26% Rh (G)	0	2310	100	2310	± 3	± 5
Iron / Constantan (L)	-200	900	-200	800	± 1	± 3
Copper / Constantan (U)	-200	600	-200	500	± 1	± 3
PLATINEL II (PLII)	0	1390	0	1300	± 3	± 3
Cu53	0	150	0	150	± 0.3	± 0.5
Linear (-10~20 mV, 0~100mV, 0~200 mV, 0~1 V, 0~5 V, 0~10 V)	-19999	19999	-19999	19999	± 0.1% of span	± 0.2% of span
Linear (4~20 mA) with square root	0	19999	0	19999	± 0.1% of span	± 0.2% of span

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DIMENSIONS mm

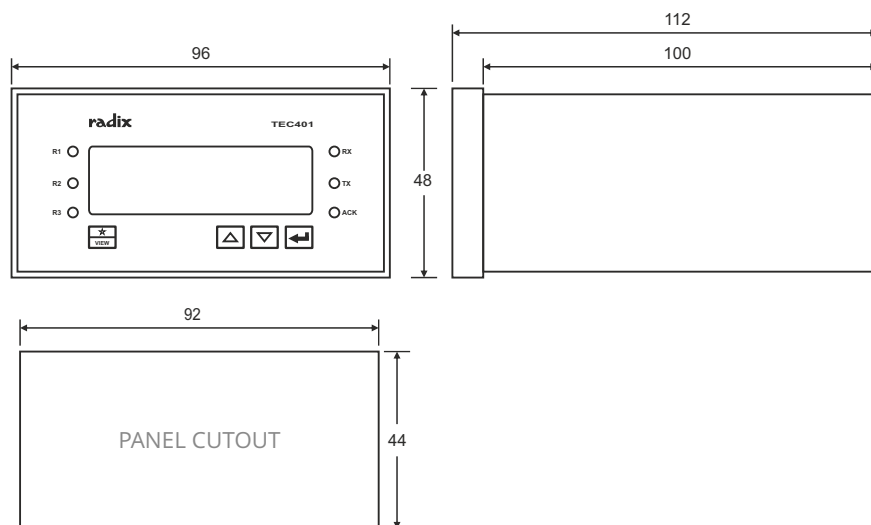
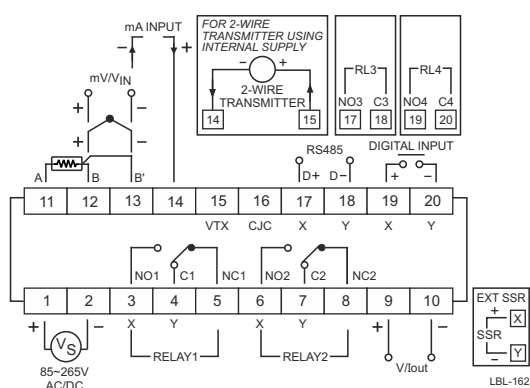


FIG 1

ORDERING INFORMATION

CONNECTIONS



2485 - ☐ ☐
A B

Product code	A	Configuration			B	Supply
		Relay	RS485	4~20 mA output		
2485	00	0	0	0	0	18~35 V DC
	01	0	0	1	1	85~265 V AC
	02	0	1	0		
	03	2	0	0		
	04	2	0	1		
	05	2	1	0		
	06	2	1	1		
	07	4	0	0		
	08	4	0	1		

The standard product is supplied with input group 1.

Ordering Options

The following ordering options are available on request. Minimum order quantity and/or minimum order value may apply.

	Option	Details
1.	Input	Group 2
2.	Analog output	0~10 V DC
3.	Supply voltage	12~55 V DC
4.	Output type	SSR drive signal
5.	Input type	Resistance between 1K & 10K

CAT#485R4/A

ENQUIRIES

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Sensors: sensors@radix.co.in
Gauges: gauges@radix.co.in
Automation: automation@radix.co.in
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