



- Universal input
- Upto 5 setpoints, 4~20 mA + 4 relays
- Isolated 0/4~20 mA or 0-10 V DC for control / retransmission output
- RS485 / MODBUS RTU
- 85~265 V AC SMPS
- Autotuning : From cold start
At setpoint
- Auto / Manual selection
- PID, Proportional and ONOFF control
- PID versions
 - Standard - relay or analog control output
 - VMD open + close relay outputs

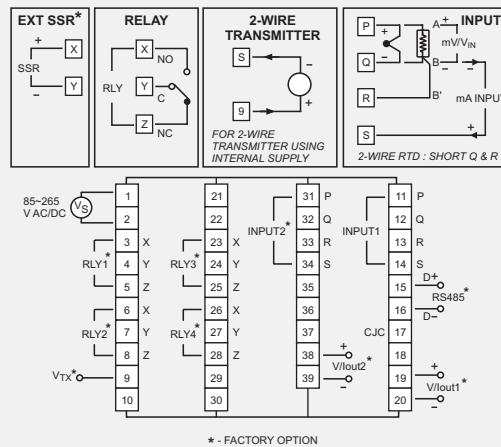
SPECIFICATIONS All specifications at ambient of 25 °C, unless specified otherwise

<p>INPUT</p> <p>Input group 1</p> <p>Thermocouple RTD Voltage Current</p> <p>Input group 2</p> <p>Thermocouple RTD Current Voltage</p> <p>Transmitter supply (V_{TX}) Range limits Accuracy Cold junction compensation Sensor break protection</p> <p>INDICATION</p> <p>Process variable</p> <p>Setpoint</p> <p>Status indication</p> <p>OUTPUTS</p> <p>No. of setpoints</p> <p>No. of relays Relay contact type Relay contact rating SSR drive</p> <p>No. of analog outputs Current output</p> <p>Maximum load for current output</p> <p>Voltage output Load for voltage output</p> <p>AUTO/MANUAL OPERATION</p> <p>Function</p> <p>Auto / Manual transfer</p>	<p>B, E, J, K, N, R, S, T Pt100, 3-wire 0~50 mV 0~20 mA, 4~20 mA</p> <p>B, C, D, E, G, J, K, N, R, S, T Pt100, 3-wire, Cu53 0~20 mA, 4~20 mA, Square root 0~50 mV Through DIP selection following voltage inputs are available : 0~1 V, 0~5 V, 0~10 V, 0~10 mV, 0~100 mV, 0~200 mV 22 V nominal, 30 mA max See Table 1 See Table 1 Automatic User programmable</p> <p>Upper : 4 digit, 7 segment 0.56" (14.2 mm) red LED display Lower : 4 digit, 7 segment 0.56" (14.2 mm) green LED display LEDs for relay status LEDs for setpoint indication LED for auto/manual status LEDs for communication</p> <p>5 if Analog output is used for control 4 if Relay1 is used for control 1 / 2 / 3 / 4 NO-C-NC 5A / 230V AC, resistive 12 V DC drive signal for external SSR 0 / 1 4~20 mA / 0~20 mA / 20~4 mA / 20~0 mA isolated from input 500 ohms</p> <p>0-10 V / user specified >10 Kohms</p> <p>Output power is increased / decreased by UP/DOWN keys in manual mode Bumpless</p>	<p>COMMUNICATION</p> <p>Port Protocol Slave ID</p> <p>PROGRAMMABLE PARAMETERS</p> <p>Setpoint Unit Resolution</p> <p>High scale Low scale Digital filter Hysteresis (ONOFF control) Offset Band (P) Integral time (I) Derivative time (D) Cycle time for SP1/SP2 Upper limit for output power Lower limit for output power Relay logic</p> <p>Alarm types</p> <p>Alarm acknowledge</p> <p>Setpoint lock Level lock Relay action</p> <p>OTHER</p> <p>Programming Dimensions (in mm) Mounting Panel cutout Supply voltage</p> <p>Power consumption Operating ambient temperature Relative humidity</p>	<p>RS485 Modbus RTU User programmable (1~256)</p> <p>Full range (See Table 1) °C, °F, EU User selectable 0.01, 0.1 or 1 for linear input, 0.1 or 1 for temperature Full range (See Table 1) Full range (See Table 1) A (minimum) ~ F (maximum) 0~25% span -50 to 50% of range limit 0.1~999.9% Off, 1~9999 seconds Off, 1~9999 seconds 1~640 second 0~100% 0~100% a. Heat b. Cool c. Fullscale high alarm d. Full scale low alarm e. Deviation high alarm f. Deviation low alarm g. Inband alarm h. Outband alarm (e. to h. available for SP2, SP3, SP4 only) Self reset or latched and can be disabled at power on Front panel function used to reset relay in alarm condition ON, OFF ON, OFF Reverse / direct</p> <p>Through 3 tactile keys 96(H) x 96(W) x 100(D) Panel mount 92 x 92 mm a) 85~265 V AC, 50/60 Hz b) 20~35 V DC (optional) 4 watts maximum</p> <p>0~50 °C Below 90%, non condensing</p>
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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		
Input Group 1						
Pt - 6% Rh / Pt - 30% Rh (B)	400	1820	400	1820	± 3	± 5
Chromel / Constantan (E)	-270	850	0	850	± 1	± 3
Iron / Constantan (J)	-210	760	0	760	± 1	± 3
Chromel / Alumel (K)	-270	1372	-50	1200	± 1	± 3
Nicrosil / Nisil (N)	-270	1300	-50	1200	± 1	± 3
Pt / Pt - 13% Rh (R)	0	1760	400	1760	± 2	± 5
Pt / Pt - 10% Rh (S)	0	1760	400	1760	± 2	± 5
Copper / Constantan (T)	-270	400	-200	400	± 1	± 3
Pt100, 3-wire	-200	850	-200	600	± 0.3	± 1.0
Linear (0~50 mV, 0~20 mA, 4~20 mA)	-1999	9999	-1999	9999	± 5 EU	± 20 EU
Input Group 2						
The following inputs are available in Input Group 2 in addition to inputs of Input Group 1.						
Tungsten - 5% Rh / Tungsten - 26% Rh (C)	0	2320	0	2320	± 3	± 5
Tungsten - 3% Rh / Tungsten - 25% Rh (D)	0	2310	0	2310	± 3	± 5
Tungsten / Tungsten - 26% Rh (G)	0	2310	0 </td <td>2310</td> <td>± 3</td> <td>± 5</td>	2310	± 3	± 5
Cu53	0	180	0	180	± 0.3	± 0.5
Linear (0~10 mV, 0~100 mV, 0~200 mV, 0~1 V, 0~5 V, 0~10 V)	-1999	9999	-1999	9999	± 5 EU	± 20 EU
Linear (4~20 mA) with square root	0	9999	0	9999	± 10 EU	± 40 EU

CONNECTION DIAGRAM



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