



- Two universal inputs
- Upto 5 setpoints, 4~20 mA + 4 relays
- Isolated 2 x 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
- Scaleable remote setpoint

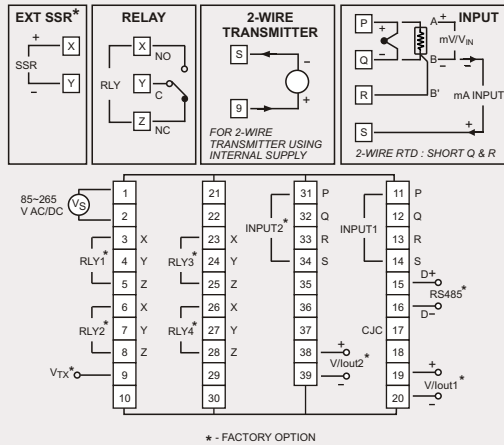
**SPECIFICATIONS** All specifications at ambient of 25 °C, unless specified otherwise

|   |  |   |  |
|---|--|---|--|
| <p><b>INPUTS</b></p> <p><b>No. of inputs</b><br/>Input group 1<br/>(common for both inputs)</p> <p>Thermocouple<br/>RTD<br/>Voltage<br/>Current</p> <p><b>Input group 2</b><br/>(common for both inputs)</p> <p>Thermocouple<br/>RTD<br/>Current</p> <p>Voltage</p> <p><b>Transmitter supply (V<sub>TX</sub>)</b><br/>Range limits<br/>Accuracy<br/>Cold junction compensation<br/>Sensor break protection</p> <p><b>REMOTE SET POINT</b><br/>Function</p> <p><b>Input signal</b><br/>Range<br/>Display</p> <p><b>INDICATION</b><br/>Process variable</p> <p><b>Setpoint</b></p> <p><b>% output power</b></p> <p><b>Status indication</b></p> <p><b>OUTPUTS</b><br/>No. of relays<br/>Relay contact type<br/>Relay contact rating<br/>SSR drive</p> <p><b>No. of analog outputs</b><br/>Current output</p> <p><b>Maximum load for current output</b></p> <p><b>Voltage output</b><br/>Load for voltage output</p> | <p>2 (input 1, input 2)</p> <p>B, E, J, K, N, R, S, T<br/>Pt100, 3-wire<br/>0~50 mV<br/>0~20 mA, 4~20 mA</p> <p>B, C, D, E, G, J, K, N, R, S, T<br/>Pt100, 3-wire, Cu53<br/>0~20 mA, 4~20 mA,<br/>Square root (for input 1)<br/>0~50 mV<br/>Through DIP selection following<br/>voltage inputs are available :<br/>0~1 V, 0~5 V, 0~10 V, 0~10 mV,<br/>0~100 mV, 0~200 mV<br/>22 V nominal, 30 mA max<br/>See Table 1<br/>See Table 1<br/>Automatic<br/>User programmable</p> <p>When configured, input2 functions<br/>as a remote setpoint input<br/>4~20 mA (other types on request)<br/>User programmable<br/>Middle display</p> <p>Upper : 4 digit, 7 segment<br/>0.56" (14.2 mm) red LED display<br/>Middle : 4 digit, 7 segment<br/>0.56" (14.2 mm) green LED display<br/>Lower : 3 digit, 7 segment<br/>0.39" (9.9 mm) red LED display<br/>LEDs for relay status<br/>LEDs for setpoint indication<br/>LED for auto/manual power status<br/>LEDs for communication</p> <p>1 / 2 / 3 / 4<br/>NO-C-NC<br/>5A / 230V AC, resistive<br/>12 V DC drive signal for<br/>external SSR<br/>0 / 1 / 2 (current or voltage)<br/>4~20 mA / 0~20 mA / 20~4 mA /<br/>20~0 mA isolated from input<br/>500 ohms</p> <p>0-10 V / user specified<br/>&gt;10 Kohms</p> | <p><b>AUTO/MANUAL OPERATION</b><br/>Function</p> <p><b>Auto / Manual transfer</b></p> <p><b>COMMUNICATION</b><br/>Port<br/>Protocol<br/>Slave ID</p> <p><b>PROGRAMMABLE PARAMETERS</b><br/>Setpoint<br/>Unit<br/>Resolution</p> <p><b>High scale</b><br/><b>Low scale</b><br/><b>Digital filter</b><br/><b>Hysteresis (ONOFF control)</b><br/><b>Offset</b><br/><b>Band (P)</b><br/><b>Integral time (I)</b><br/><b>Derivative time (D)</b><br/><b>Cycle time for SP1/SP2</b><br/><b>Upper limit for output power</b><br/><b>Lower limit for output power</b><br/><b>Relay logic</b></p> <p><b>Alarm types</b></p> <p><b>Alarm acknowledge</b></p> <p><b>Setpoint lock</b><br/><b>Level lock</b><br/><b>Relay action</b></p> <p><b>OTHER</b><br/><b>Programming</b><br/><b>Dimensions (in mm)</b><br/><b>Mounting</b><br/><b>Panel cutout</b><br/><b>Supply voltage</b></p> <p><b>Power consumption</b><br/><b>Operating ambient temperature</b><br/><b>Relative humidity</b></p> | <p>Output power is increased/<br/>decreased by UP/DOWN keys in<br/>manual mode<br/>Bumpless</p> <p>RS485<br/>Modbus RTU<br/>User programmable (1~256)</p> <p>Full range (See Table 1)<br/>°C, °F, EU<br/>User selectable<br/>0.01, 0.1 or 1 for linear input,<br/>0.1 or 1 for temperature<br/>Full range (See Table 1)<br/>Full range (See Table 1)<br/>A (minimum) ~ F (maximum)<br/>0~25% span<br/>-50 to 50% of range limit<br/>0.1~999.9%<br/>Off, 1~9999 seconds<br/>Off, 1~9999 seconds<br/>1~640 second<br/>0~100%<br/>0~100%<br/>a. Heat b. Cool<br/>c. Fullscale high alarm<br/>d. Full scale low alarm<br/>e. Deviation high alarm<br/>f. Deviation low alarm<br/>g. Inband alarm h. Outband alarm<br/>(e. to h. available for SP2, SP3,<br/>SP4 only)<br/>Self reset or latched and can be<br/>disabled at power on<br/>Front panel function used to<br/>reset relay in alarm condition<br/>ON, OFF<br/>ON, OFF<br/>Reverse / direct</p> <p>Through 3 tactile keys<br/>96(H) x 96(W) x 100(D)<br/>Panel mount<br/>92 x 92 mm<br/>a) 85~265 V AC, 50/60 Hz<br/>b) 20~35 V DC (optional)<br/>4 watts maximum<br/>0~50 °C<br/>Below 90%, non condensing</p> |
|---|--|---|--|

**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 |                                     |                               |
| <b>Input Group 1</b>  |                        |            |                                      |            |                                     |                               |
| 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                       |
| <b>Input Group 2</b>  |                        |            |                                      |            |                                     |                               |
| 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                                    | 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



STK-710

### ORDERING INFORMATION

| 2014                      | A               | B                | C           | D        | E | F | G | H | I | J | K |
|---------------------------|-----------------|------------------|-------------|----------|---|---|---|---|---|---|---|
| <b>A Number of inputs</b> | 1 One           | 2 Two            |             |          |   |   |   |   |   |   |   |
| <b>B Input Group</b>      | 1 Group1        | 2 Group2         |             |          |   |   |   |   |   |   |   |
| <b>C Relay1</b>           | 0 None          | 1 Relay, NO-C-NC | 2 SSR drive |          |   |   |   |   |   |   |   |
| <b>D Relay2</b>           | 0 None          | 1 Relay, NO-C-NC | 2 SSR drive |          |   |   |   |   |   |   |   |
| <b>E Relay3</b>           | 0 None          | 1 Relay, NO-C-NC | 2 SSR drive |          |   |   |   |   |   |   |   |
| <b>F Relay4</b>           | 0 None          | 1 Relay, NO-C-NC | 2 SSR drive |          |   |   |   |   |   |   |   |
| <b>G Analog output1</b>   | 0 None          | 1 0/4~20 mA      | 2 0~10 V DC | 3 Other* |   |   |   |   |   |   |   |
| <b>H Analog output2</b>   | 0 None          | 1 0/4~20 mA      | 2 0~10 V DC | 3 Other* |   |   |   |   |   |   |   |
| <b>I Communication</b>    | 0 Not provided  | 1 RS485          |             |          |   |   |   |   |   |   |   |
| <b>J Software type</b>    | 0 PID, Standard | 1 PID, VMD       |             |          |   |   |   |   |   |   |   |
| <b>K Supply voltage</b>   | 0 85~265 V AC   | 1 20~35 V DC     |             |          |   |   |   |   |   |   |   |

\* Please specify

### SALES INQUIRIES

AN ISO 9001:2000 COMPANY

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