8208

4/8 Channel Scanner/ DAQ Module

Compact. Advanced. Fast

RoHS

8208 Scanner offers multi-channel monitoring with advanced functions and simple programming features in very compact 1/4 DIN size for monitoring process values and protection application.

8208 has flexible configuration option for 4/8 channels accepting universal input and 4 relays to serve various applications. The unit has separate numeric displays for ch. no., group and process value. All configuration and calibration can be done from front panel keypad.

8208 has 4 relays with full mapping and logic flexibility. User has facility to program alarm, trip set-points and logic individually or group wise. Channels can be configured up to 4 groups with one relay per group: 2 groups with 2 relays per group or 1 group with 4 relays per group. Two discrete LEDs are provided per channel and one LED per relay for indication.

8208 has built-in Isolated RS-485 serial communication port with modbus RTU protocol and provides optional analog retransmission output with Max./Min. to further interface with PLC/DAS/DCS/ SCADA

Features

- Universal input for each analog input
- Compact 1/4 DIN mounting
- Front panel programming
- Fast sampling rate with instantaneous relay action
- Four relays for alarm/trip
- RS-485 serial communication port for remote monitoring
- Comprehensive alarm/trip logic programming
- Multiple levels of configuration and password protection
- Retransmission output (Optional)

Applications

- Generator monitoring and protection
- Monitoring of air compressor, pump, transformers, fans and blowers DG temperature monitoring
- Motor protection: Winding & bearing temperature
- Water and waste-water remote monitoring
- Electrical sub-station monitoring
- Drying ovens
- Fermentation processes
- Flow monitoring
- Retorts and cooking processes
- Heat treatment: to achieve desired result of hardening or softening material
- Power monitoring
- As a SCADA RTU
- Metal and mining applications
- Machine condition monitoring
- As a distributed I/O module for interface with PLC/DCS/DAS etc.

TECHNICAL SPECIFICATIONS

Input

No of Input	4 or 8
Input Type	Thermocouple (E, J, K, T, B, R, S, N), RTD (Pt-100, 3W), current, voltage
Display Range	Refer Table-1
Accuracy	±0.1% of FS ± 1 Count
ADC Resolution	17 bits
Display Resolution	0.1 / 1.0°C
Sampling Rate	TC and linear input: 100m sec./channel RTD input: 200m sec./channel
CJC Error	±2.0°C
Sensor Open	All inputs except 0-5VDC / 10VDC
T/C Burnout Current	0.25µA
RTD Excitation Current	1 mA (Approx.)
NMRR	> 40dB
CMRR	> 120dB
Temp-co	< 100ppm/°C
Input Impedance	> 1MΩ
Max Voltage	20VDC

Display & Keys

Process Value	4-Digit, 0.56", red seven segment LED
Channel No.	2-Digit, 0.56", green seven segment LED
Group No.	1-Digit, 0.56", red seven segment LED
Status	4 Red LEDs for relay status, 1 red LED auto/manual mode status, 2 green LEDs for communication, 1 red LED for fault, 16 red LEDs for alarms
Keys	Menu/enter, escape, A/M, increment, shift key/decrement

Output

Relay

No of Relays	4
Type	Single change over (C, NO, NC)
Rating	2A@230VAC / 30VDC
Time Delay	1 to 99 secs.

Retransmission Output (Optional)

Current	0/4-20mA @ 500Ω max.
Voltage	0/1-5V, 0-10V @3KΩ min.
Accuracy	0.25% of FS
Selection	Max. or min. reading of channels

Communication Output (Optional)

Interface	RS-485
Protocol	Modbus RTU
Baud Rate	9600, 19200

Power Supply

Standard	85-265VAC / 110-300VDC
Optional	18-36VDC
Power Consumption	<15VA

Isolation (Withstanding voltage)

Between primary terminals* and secondary terminals** **At least 1500 V AC for 1 minute**
Between primary terminals* and grounding terminal: **At least 1500 V AC for 1 minute**
Between grounding terminal and secondary terminals**: **At least 1500 V AC for 1 minute**
Between secondary terminals**: **At least 500 V AC for 1 minute**
* Primary terminals indicate power terminals and relay output terminals.
** Secondary terminals indicate analog I/O signal and communication O/P.
Insulation resistance: 20MΩ or more at 500V DC between power terminals and grounding terminal.

Physical

Dimension (in mm)	96(H) x 96(W) x 110(D)
Front Bezel (in mm)	96(H) x 96(W)
Panel Cutout (in mm)	92.5(H) x 92.5(W)
Depth Behind Panel	110 mm
Enclosure	Molded ABS
Weight	500 grams approx.
Protection	IP20
Terminal Cable Size	2.5 mm^2
Accessories	2 numbers mounting clamps

Environmental

Operating Temperature	0-55° C
Storage Temperature	0-80° C
Humidity	30-95% RH non-condensing

Table 1: Display Range

	Input Type	Range
Thermocouple	E	-200 °C to 1000 °C
	J	-200 °C to 1200 °C
	K	-200 °C to 1370 °C
	T	-200 °C to 400 °C
	B	450 °C to 1800 °C
	R	0 to 1750 °C
	S	0 to 1750 °C
	N	-200 °C to 1300 °C
RTD	Pt-100	-199.9 to 850.0 °C
Linear	-10 - 20mV	-1999 to 9999
	0 - 75mV	
	0 - 100mV	
	0.4 - 2V DC	
	4-20 mA (Ext.100Ω)	
	0 - 2 VDC	
	0 - 20mA (Ext 100Ω)	
	0 - 5V	
	1 - 5V	
	0 - 10V	

Ordering Code

Model	No. of Input		Input Type		Auxilliary Power Supply		Retransmission Output Type		Communication Output Type	
8208	4	4 Channels	1	E	U1	85-265 VAC / 110-300VDC	N	None	N	None
	8	8 Channels	2	J	U2	18-36 VDC	1	4-20mA	Y	1XRS-485
			3	K			2	0-20mA		
			4	T			3	1-5 V		
			5	B			4	0-5 V		
			6	R			5	0-10 V		
			7	S						
			8	N						
			9	Pt-100						
			A	-10 to 20mV						
			B	0-75 mV						
			C	0-100 mV						
			D	0-2 V						
			E	0.4-2 V						
			F	0-5 V						
			G	1-5 V						
			H	0-10 V						