



8208

8 Channel Scanner/ DAQ Module

Compact. Advanced. Fast



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 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 optional Isolated RS-485 serial communication port with Modbus RTU protocol and provides optional analog retransmission output with max./min./Avg. to further interface with PLC/DAS/DCS/SCADA.

The 8208 supports both physical analog inputs (from sensors like thermocouples, RTDs, current, or voltage) and serial inputs via Modbus RTU over RS-485. Its analog outputs can be controlled by internal logic (Physical AI Values, Modbus AI Values) or Modbus commands over RS485. The relay outputs can be activated based on process values (Physical AI Values, Modbus AI Values) or direct commands from Modbus over RS485. This makes the 8208 ideal for tasks like alarm control, process switching, and automation. With the ability to handle both physical and serial I/O at the same time, it easily fits into SCADA systems, PLCs, and other control setups.

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
- Multi-mode Analog Input: Physical Sensor Input and Serial Input via Modbus RS485
- Modbus compatible DO & AO control Operation

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		Power Supply	
No of Input	8	Standard	85-265VAC / 110-300VDC
Input Type	Thermocouple (E, J, K, T, B, R, S, N), RTD (Pt-100, 3W), current, voltage, Serial Input	Optional	18-36VDC
Display Range	Refer table-1	Power Consumption	<15VA
Accuracy	±0.1% of FS ± 1 count	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.	
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		
Temperature-Co	< 100ppm/°C		
Input Impedance	> 1MΩ		
Max. Voltage	20VDC		
Display & Keys		Physical	
Process Value	4-Digit, 0.56", red seven segment LED	Dimension (in mm)	96(H) x 96(W) x 110(D)
Channel No.	2-Digit, 0.56", green seven segment LED	Front Bezel (in mm)	96(H) x 96(W)
Group No.	1-Digit, 0.56", red seven segment LED	Panel Cutout (in mm)	92.5(H) x 92.5(W)
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	Depth Behind Panel	110 mm
		Enclosure	Molded ABS
		Weight	500 Grams approx.
Keys	Menu/enter, escape, A/M, increment, shift key/decrement	Protection	IP20
Output		Terminal Cable Size	2.5 mm ²
		Accessories	2 Numbers mounting clamps
		Environmental	
Relay		Operating Temperature	-12 to 55° C
		Storage Temperature	-40 to 80° C
		Humidity	30-95% RH non-condensing
Type test			
		Shock Test	IEC 60068-2-27
		Cold Test	IEC 60068-2-1: 2007
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	
	-10 - 20mV		
Linear	0 - 75mV		
	0 - 100mV		
	0.4 - 2V DC		
	4-20 mA (Ext.100Ω)	-1999 to 9999	
	0 - 2 VDC		
	0 - 20mA (Ext 100Ω)		
	0 - 5V		
	1 - 5V		
	0 - 10V		
	Serial (RS485)	PV write Facility	-1999 to 9999

Ordering Code							
Model	Input Type	Auxilliary Power Supply		Retransmission Output Type		Communication Output Type	
8208	1 E	U1	85-265 VAC / 110-300VDC	N	None	Y	1 x RS-485
	2 J	U2	18-36 VDC	1	4-20mA		
	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						
	S Serial RS485						

Prefab Cables Ordering Code		Busbar Temperature Sensor (Extra Cost)	
Part Code	Description	BSSRTD1-Busbar-LX	Busbar Temperature Sensor (PT100)
8208-AIC-2.5	8 Channel Analog Input cable, 25 Core 2.5 mtrs long with one end Fork/U Type lugs and other end pig tails		