



## 8208-IP

### Weather Proof Scanner

4 / 8 - Channel

The 8208-IP Scanner offers 4 / 8 channel monitoring with advanced functions and full programming features with touch sense keys in IP65 Weather proof protection for monitoring process values and protection application.

8208-IP has 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 keypad.

8208-IP 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-IP has built-in Isolated RS485 serial communication port with Modbus RTU protocol and provides optional analog retransmission output with Max/ Min to further interface with PLC/DAS/DCS/ SCADA.

The Unit is wall mounting with up to 12 nos PG11 glands for 8 channels Scanner & 6 nos PG11 glands for 4 channels Scanner for multi-core cable wiring.

#### Features

- Universal input for each Analog Input
- IP65 for Weather proof protection
- Easy Programming by front Touch sense keypad
- Fast Sampling rate with instantaneous relay action
- Four relays for alarm/trip
- RS485 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
- Pharma application
- Chemical industries
- 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 channels	4 or 8
Input Type	Thermocouple (E, J, K, T, B, R, S, N), RTD (Pt-100), Current, Voltage
Display Range	Refer Table-1
Accuracy	0.1% of FS + 1 Digit
ADC Resolution	17 bits
Display Resolution	0.1 / 1.0°C
Sampling Rate	TC and Linear Input : 100mSec/channel RTD Input: 200mSec/channel
CJC Error	±2.0° C
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, Escape / A/M, Increment, Shift / Down / ACK

Output	
<b>Relay</b>	
No of Relays	4
Type	Single Change over (C, NO, NC)
Rating	2A@250VAC / 30VDC
Time Delay	1 to 99 secs

Retransmission Output (Optional)	
Current	0/4-20mA @ 500Ω Max
Voltage	0/1-5VDC, 0-10VDC @3KΩ Min
Accuracy (DAC)	0.25% of FS
Selection	Max or Min Reading of Channels

Communication Output	
Interface	RS485
Protocol	Modbus RTU
Baud Rate	9600,19200

Power Supply	
Standard	85-265VAC @ 50Hz / 60 Hz / 110-290VDC
Optional	18-36VDC
Consumption	15VA Max

### 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)	200(H) x 200(W) x 120(D)
Weight	4 Kgs.
Enclosure	Steel sheet, 1.25 mm
Type of Protection	NEMA 4, IP65
Cable Entry Size / No.	4 channel Scanner: 6 nos. PG11 glands* 8 channel Scanner: 12 nos. PG11 glands*
Mounting	Wall Mount
Accessories	4 numbers mounting clamps

Environmental	
Operating Temperature	0-70° 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	
8208-IP	4	4 channels	1 E	U1 85-265 VAC / 110-290VDC	N None
			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		

\* 6 nos. PG11 glands are supplied in 4 channel Scanner & 12 nos. PG11 glands are supplied in 8 channel Scanner.  
 Any change in type and no. of glands please consult factory before order placement