



8204

4-Channel Scanner/ DAQ Module

The most compact Multichannel Indicator with Alarms

8204 Scanner offers multi-channel monitoring with advanced functions and simple programming features in very compact 1/8 DIN size for monitoring process values and protection application.

8204 has flexible configuration option for 4 channels accepting universal input and 4 relays to serve various applications. The unit has separate Numeric displays for CH. No. and Process Value. All Configuration and Calibration can be done from front panel keypad.

8204 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. One discrete LED is provided per relay for indication.

8204 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.

Features

- Universal input for each Analog Input
- Compact 1/8 DIN mounting
- Front Panel Programming
- 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
- 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	4	Standard	85-265VAC / 110-300VDC
Input Type	Thermocouple (E, J, K, T, B, R, S, N), RTD (Pt-100, 3W), Current, Voltage	Optional	18-36VDC
Display Range	Refer Table-1	Power Consumption	<10VA
Accuracy	±0.1% of FS ± 1 Count	Isolation (Withstanding voltage)	
ADC Resolution	17 bits	<ul style="list-style-type: none"> 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 	
Display Resolution	0.1 / 1.0°C	* Primary terminals indicate power terminals and relay output terminals.	
Sampling Rate	TC and Linear Input :100mSec/channel RTD Input: 200mSec/channel	** Secondary terminals indicate Analog I/O signal and Communication O/P.	
CJC Error	±2.0°C	Insulation resistance: 20MΩ @ 500V DC between power terminals and grounding terminal.	
Sensor Open	All inputs except 0-5VDC / 10VDC	Physical	
Sensor Burnout current	1.2µA	Dimension (in mm)	48(H) x 96(W) x 120(D)
RTD Excitation current	1 mA (Approx.)	Front Bezel (in mm)	48(H) x 96(W)
NMRR	> 40dB	Panel Cutout (in mm)	45(H) x 92(W)
CMRR	> 120dB	Depth behind Panel	112 mm
Temp-co	< 100ppm/°C	Enclosure	ABS Molded
Input Impedance	> 1MΩ	Weight	300 grams approx.
Max Voltage	20VDC	Protection	IP20
Display & Keys		Terminal Cable size	2.5 mm ²
Process Value	4-digit, 0.56", Red seven segment LED	Accessories	2 numbers mounting clamps
Channel No	1-digit, 0.56", Green seven segment LED	Environmental	
Status	4 Red LEDs for Relay status, 1 Red LED for Communication	Operating Temperature	0-55° C
Keys	Menu/Enter, Escape, Increment, Shift Key/Decrement	Storage Temperature	0-80° C
		Humidity	30-95% RH non-condensing
Output		Table 1: Display Range	
Relay		Input Type	Ranges
No of Relays	4	E	-200 °C to 1000 °C
Type	Single Change over (C, NO or C, NC)	J	-200 °C to 1200 °C
Rating	2A@230VAC/ 30VDC	K	-200 °C to 1370 °C
Time Delay	1 to 99 secs	T	-200 °C to 400 °C
Retransmission Output (Optional)		B	450 °C to 1800 °C
Current	0/4-20mA @ 500Ω Max	R	0 to 1750 °C
Voltage	0/1-5V, 0-10V @3KΩ Min	S	0 to 1750 °C
Accuracy	0.25% FS	N	-200 °C to 1300 °C
Selection	Max or Min Reading of Channels	RTD	Pt-100
Communication Output			-10 - 20mV
Interface	RS485		0 - 75mV
Protocol	Modbus RTU		0 - 100mV
Baud Rate	9600, 19200		0.4 - 2V DC
		Linear	4-20 mA (Ext.100Ω)
			0 - 2 VDC
			0 - 20mA (Ext 100Ω)
			0 - 5V
			1 - 5V
			0 - 10V
			-1999 to 9999

ORDERING CODE

Model	Input Types	Auxiliary Power Supply	Retransmission Output Type
8204	1 E	U1 85-265 VAC / 110-300VDC	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			