



8204

4-Channel Scanner/DAQ Module

The Most Compact Multichannel Indicator with Alarms

The 8204 is succeeding the most popular range of 85XX scanners. It offers multi-channel process monitoring with advanced functions and simple programming features in very compact 1/8 DIN size.

8204 has flexible configuration options for 4 channels accepting universal input and 4 relays to serve diverse applications. User has facility to program individual alarm, trip set-points and logic, individual or group wise. Channels can be configured up to 4 groups with two relay outputs per group. Two discrete LEDs are provided per channel and one LED per relay for indication.

It has built-in RS485 serial communication port. It also has optional retransmission output with high accuracy for communication with PLC/DAS/SCADA.

Features

- Universal input
- Communications for remote monitoring
- Compact 1/8 DIN mounting
- Front Panel Programming
- Faster sampling rate
 - 10 times/sec for TC, linear
 - 5 times/sec for RTD
- Auto/ Manual Scan switch button
- Four relays for alarm/trip
- Comprehensive Alarm/Trip logic programming
- One-shot/ digital calibration
- Analog Retransmission (Optional)

Applications

Monitoring and Data logging for:

- Machines protection by speed monitoring
- Non-contact rotor speed measurement
- Industrial Pumps
- Motors
- Gear boxes
- Blowers
- Air compressors
- Online Vibration measurement

Technical Specifications:

Input

Input Type	Thermocouple (E, J, K, T, B, R, S, N), RTD (Pt100), 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	<ul style="list-style-type: none"> 100mSec for TC and Linear Input 200mSec for RTD Input
CJC Error	±2.0 °C
Sensor open	All inputs except 0-5V
Sensor Burnout current	1.2uA
RTD excitation current	1 mA (Approx.)
NMRR	> 40dB
CMRR	> 120dB
Tempco	< 100ppm/°C
Input Impedance	> 1MΩ
Max Voltage	20VDC

Display & Keys

Process Value	0.56", Red 4-digit
Channel No.	0.56", Green 1-digit
Alarm & Communication	Discrete LEDs
Keys	Four keys for configuration, calibration and operation

Output

Alarm Output (Field programmable)

Relays	4 Nos.
Type	Single Change over (C, NO)
Rating	2A @ 230VAC / 30VDC
Control Mode	Heat or Cool with time delay

Retransmission Output (Optional)

Current	0/4-20mA @500Ω Max.
Voltage	0/1-5V, 0-10V @2KΩ Min.
Accuracy	0.25% of FS

Communication Output

Interface	RS485
Protocol	Modbus-RTU
Baud Rate	9600, 19200

Power Supply

Standard	85-265VAC / 125-300VDC
Optional	18-36VDC
Consumption	<10VA

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 500 V DC between power terminals and grounding terminal.

Physical

Size	96(W) x 48(H) x 120(D) mm
Front Bezel	96 x 48 mm
Panel Cutout	92mm x 45mm
Depth behind panel	112 mm

Enclosure	Molded ABS
Weight	300 grams approx.
Protection	IP20
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
E	-200 to 1000°C
J	-200 to 1200°C
K	-200 to 1370°C
T	-200 to 400°C
B	450 to 1800°C
R	0 to 1750°C
S	0 to 1750°C
N	-200 to 1300°C
RTD	-199.9 to 850.0°C
0 to 75mV	-1999 to 9999
0 to 100mv	
0.4 to 2V	
0 to 2V	
0-20 mA*	
4-20 mA*	
0 to 5V	
1 to 5V	
0 to 10V	
-10 to 20mV	

* Ext. 100Ω/0.1%

Ordering Code

Model	Input		Auxiliary Power Supply		Retransmission Output	
			U1	80-265VAC/ 125-300VDC	N	None
8204	U	Universal	U1	80-265VAC/ 125-300VDC	N	None
	1	E	U2	18-36VDC	1	4-20mA
	2	J			2	0-20mA
	3	K			3	1-5V
	4	T			4	0-5V
	5	B			5	0-10V
	6	R				
	7	S				
	8	N				
	9	Pt100				
	A	-10 to 20mV				
	B	0-75mV				
	C	0-100mV				
	D	0-2V				
E	0.4-2V					
F	0-20mA					
G	4-20mA					
H	0-5V					
I	1-5V					
J	0-10V					

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