



## SERIES: D43



- UNIVERSAL INPUT - PROGRAMMABLE
- ANALOGUE OUTPUT: 0/4...20 mA OR 0...10 V
- AUXILIARY POWER SUPPLY FOR TRANSMITTERS
- 21-POINT LINEARIZATION OF THE MEASURED VALUE
- STORAGE OF MINIMUM & MAXIMUM VALUES OF THE INPUT
- AVERAGING WITH TIME - PROGRAMMABLE FOR UP TO 1 HOUR
- UP TO 4 ALARM OUTPUTS WITH INDICATION, OPERATING IN 6 MODES
- PROGRAMMABLE DISPLAY IN 3 INTERVALS WITH DIFFERENT COLOURS
- SIGNALING OF THE RANGE OVERFLOW - npn TYPE OPEN COLLECTOR OUTPUT
- GALVANIC ISOLATION BETWEEN SUPPLIES, ALARMS, INPUT, OUTPUT & RS-485
- RS-485 COMMUNICATION INTERFACE (OPTION)

### INTRODUCTION

Indumart D43 Series Programmable Digital Panel Meters can accept a large variety of signals and provide stable reading with very good accuracy. They can supply an analogue output and may be equipped with RS-485 interface with serial link; suitable for communication in computer systems and other devices, fulfilling the master function. A 24V isolated power for the transducer is a standard feature of these meters.

As standard, these indicators are equipped with two ON/OFF relays and optionally may be ordered with two extra contacts. The alarm status of each relay is indicated with a bright LED diode.

The input value is indicated on a 14 mm high, 5-digit display and as a process safety feature, the overflow threshold can be programmed to trigger an open collector npn type contact. In addition to the standard signals, the input may be the Real Time Clock (RTC) as the D43 Series is equipped with an adjustable internal clock. Thus, the meter enables indication of the current time and the alarms may be programmed to trigger with the clock. Moreover, averaging the input value with time is possible and is programmable for up to one hour interval.

The input type, display range, decimal point position along with the contacts' parameters such as set points, direction of the alarms (6 modes) and their time delay

can be programmed by the user. Other programmable parameters are:

- Individual characteristics of the input (up to 21 point),
- Selection of the analogue output,
- Display colour, individually in three intervals,
- Thresholds of displayed overflows,
- Password, Time setup, Unit highlight (ON or OFF)
- Measurement averaging time,
- Parameters of the RS485 communication interface

The 21-point individual characteristic option allows linearization of the input and also enables the meter to recalculate the measured quantity into any value.

Galvanic isolation between the alarms, power supply, input signal, analogue output, RS-485 interface and the auxiliary power supply of the D43 Series is a standard feature of these heavy-duty meters.

Other features are **1)** storage of both the minimum and maximum values of the input, which is resettable; **2)** programming the display into three intervals and each interval with a distinct colour of red, green or orange. This feature is helpful to operators by enabling them to observe qualitative changes in the value of the measured parameter.

The D43 Series with IP65 (washable) front-face-rating may be mounted on panels or be used as a free standing meter.

## SPECIFICATIONS

<b>Input</b>	See the Input table
<b>Indication</b>	5 digit, 7-segment, 14 mm high LED display, -19999...99999 3 colour display (red, green, orange) - colour changes according to the display value (intervals are adjustable by the user) Up to 4 alarm diodes for alarms
<b>Decimal Position</b>	User programmable
<b>Power Supply</b>	85...253 VAC or VDC (option 1) 20...40 VAC or VDC (option 2) When AC power: 40...400 Hz
<b>Accuracy Class</b>	0.1
<b>Time Accuracy</b>	0.5 s/day
<b>C.J. Compensat'n Error</b>	0.1% of the measuring range
<b>Wire Resistance Error</b>	0.1% of the 400Ω range
<b>Output Relays (std.)</b>	2 voltageless NOC contacts 0.5A @ 250VAC
<b>Output Relays (optional)</b>	2 voltageless switched-over 0.5A @ 250VAC
<b>Analogue Output</b>	0.2% of set range + 0.005% /°C Galvanically insulated
<b>Current</b>	0...20 mA or 4...20 mA with 500 Ω max. load resistance
<b>Voltage</b>	0...10 V; minimum 500Ω load
<b>OC Output</b>	Voltageless; OC type NPN transistor 30 mA @ 30VDC Galvanically insulated
<b>Auxiliary Loop Supply</b>	24 VDC, 30 mA max.
<b>Isolation Between Circuits</b>	Basic
<b>Phase to earth operation</b>	300 V max. for the supply circuit 50 V max. for other circuits
<b>Digital Output</b>	RS-485 MODBUS protocol
<b>Mode</b>	8N2, 8E1, 8O1, 8N1
<b>Baud Rate(kb/s)</b>	4, 8, 9.6, 19.2, 38.4, 57.6, 115.2
<b>Ambient Temp.</b>	-25...+55°C
<b>Storage Temperature</b>	-30...+70°C
<b>Relative Humidity</b>	25...95%
<b>Safety Standard</b>	EN61010-1 (IEC1010-1)
<b>EMC Immunity</b>	EN6100-6-2
<b>EMC Emission</b>	EN6100-6-4
<b>Case Material</b>	ABS
<b>Environ. Protection</b>	Panel: IP65; Terminal: IP10
<b>Dimensions (mm)</b>	96 x 48 x 93 (W x H x D)
<b>Weight</b>	0.2 kg (0.5 lb)

## ORDER CODES

Model **D43-**

### SUPPLIED POWER

85...253 VAC or VDC

20...40 VAC or VDC

### OUTPUT

2 Alarm Contacts (std.)

OC+Analog+RS485

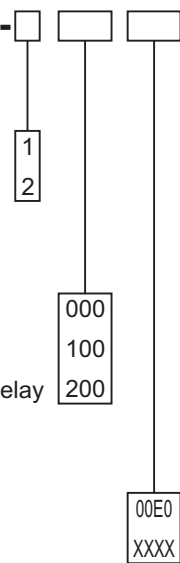
OC+Analog+RS485 +2 Switched-over Relay

### EXECUTION

Standard Execution

Custom made

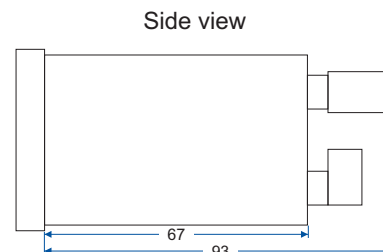
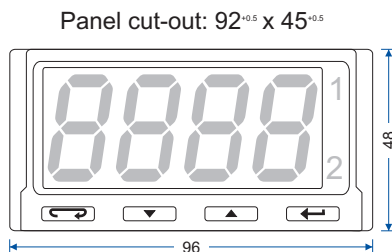
*Example: D43-110000E0*



## Input signals of D43 Series

Input Type	Range
Thermocouple J	-220...+1210°C
Thermocouple K	-280...+1382°C
Thermocouple N	-250...+1310°C
Thermocouple E	-280...+1010°C
Thermocouple R	-50...+1775°C
Thermocouple S	-50...+1775°C
Pt100	-200...+850°C
Pt500	-200...+850°C
Pt1000	-200...+850°C
Resistor	0...400Ω
Resistor	0...4000Ω
mA	-24...+24 mA
mV	-10...+63 mV
Voltage	-13...+13 V
Current Time	00.00...23.59

## DIMENSIONS (mm)



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