



SERIES: DB15 & DB16

**Indicator + Data Logger +
Transmitter + ON/OFF Controller**
and many more features all in one unit

- UNIVERSAL INPUT
- SELECTABLE BARGRAPH COLOUR & RESOLUTION
- COLOURED MARKERS OF ALARM THRESHOLDS
- SIGNALLING OF ALARM STATE THROUGH BARGRAPH COLOUR CHANGE
- TREND LINE TO INDICATE GROWTH, FALLING OR STABLE STATE OF THE INPUT SIGNAL
- RECORDING OF 750 DATA SAMPLES
- 4-DIGIT LED INDICATION
- mA OR VOLTAGE OUTPUT (OPTION)
- 4 ON/OFF RELAY OUTPUTS (OPTION)
- 8 OPEN COLLECTOR OUTPUTS (OPTION)
- MODBUS RS-485 INTERFACE (OPTION)
- MINIMUM & MAXIMUM VALUES STORAGE
- WORKING RANGE CONTRACTION (MAGNIFIER)
- GALVANIC ISOLATION OF ALL INPUTS & OUTPUTS

multicolour



INTRODUCTION

Indumart Multicolour Bargraph Indicators models *DB15* and *DB16* use the new gallium nitride diode technology to bring a high accuracy, multicolour, bargraph indicator with high luminescence brightness to show the value(s) of the input(s) both in bar and digital fashions. High intensity of the bargraph light allows good visibility even in a sunlit room.

These universal input bargraph indicators can indicate, record and control various processes and produce a current or voltage output. They may convert input signals into mA or voltage output, and also have RS-485 digital interface and four relay or eight open collector type outputs. They are intended for both simple and industrial applications and for applications destined to work in computer systems, with the recording of the input signals and producing ON/OFF control action.

Up to seven choices for bargraph colour, and up to three multicolour sections on the bargraph may be specified. Indicating the alarm states, the trend changing of the process, and the value of input(s) digitally on 4-digit LED indicator(s) are other standard features of DB series bargraph indicators.

Features such as storage of minimal and maximal values, root extraction or raising to a power of the input(s), addition, subtraction, multiplication and division of the channels, galvanic isolations of all inputs and outputs, working range contraction (magnifier), password protection of the specification parameters, and many more capabilities make the DB series the most versatile bargraph indicators in the market.

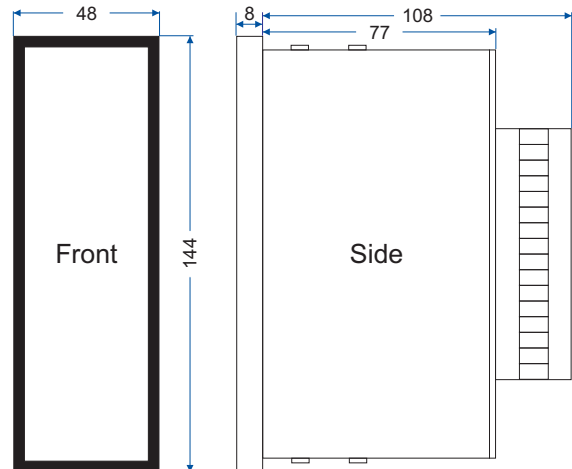
The indicators can easily be programmed via their keyboard or through the RS-485 interface.

SPECIFICATIONS

Input	See the Input tables
Bargraph Height	100 mm for model DB15; 80 mm for model DB16
Bargraph Segments	55 segments in 3-colour execution or 29 segments in 7-colour execution (DB15); 2x48 segments in 3-colour execution or 2x27 segments in 7-colour execution (DB16)
Bargraph Accuracy	±0.5 segment
Bargraph Resolution	Programmable
Digital Display	4-digit LED; 7 mm high
Indication Range	-1999...+9999
Accuracy @ 20°C	0.1% ± 1 digit
Analogue Output	0.025% of range resolution; Galvanically insulated
Current	0/4...20 mA ; max. 500Ω load
Voltage	0...10 V; minimum 500Ω load
Output Error @ 20°C	0.2% of the range
Relay Outputs	4 relays; 3 types of alarms
Voltage	250 VAC, 150 VDC
Current	5 A @ 30 VDC or 250 VAC
Resistance	1250 VA, 150 W
Relay Signal Display	Signalling of alarm operation on the bargraph
Open Collector Outputs	Voltageless, 8 npn transistors
Added Voltage	5...30 VDC
Max. Load	25 mA
Digital Output	RS-485 MODBUS protocol ASCII or RTU
Recording Capacity	749 sample data with at least 1 second interval
Math Function	Root extraction, raising to a power, addition, subtraction, multiplication and division of channels
Supply Voltage	20...40 VDC or VAC 90...253 VAC or VDC 40...440 Hz
Power Consumption	< 10 VA
Auxiliary Power Supply	24 VDC, 30 mA maximum
Ambient Temp. Error	0.05% FS / 10 K (indication) 0.1% FS / 10 K (output)
Ambient Temp.	-25...+55°C
Storage Temperature	-20...+85°C
Front Panel Seal	IP50
Case Material	Thermoplastics
Safety Standard	EN61010-1; 600 VAC
EMC Immunity	EN50081-2
EMC Emission	EN50082-2
Cut-Out Dimensions	44 ^{+0.5} x 137.5 ^{+0.5} mm
Weight	0.35 kg (DB15); 0.4 kg (DB16)

Input Type	Range	Input Type	Min. Subrange
Pt100	-200...+850°C	0...10 kΩ	140 Ω
Pt500	-200...+850°C	±300 mV	18 mV
Pt1000	-200...+850°C	±600 V	5 V
Thermocouple J	-100...+1200°C	±300 mA	5 mA
Thermocouple K	-100...+1370°C	±5 A	1 A
Thermocouple N	-100...+1300°C		
Thermocouple E	-100...+900°C		
Thermocouple R	0...+1760°C		
Thermocouple S	0...+1760°C		
Thermocouple T	-100...+400°C		

DIMENSIONS (mm)



ORDER CODES

Model DB

NUMBER OF INPUTS
One 15
Two 16

BARGRAPH COLOUR
3 Colours (R+G+RG) T
7 Colours (R+G+B+RG+RB+GB+RGB) M

COLOUR OF DIGITAL DISPLAY(S)
Without Display (must order RS-485)
Red (for one-input model only) 00
Green (for one-input model only) R
Blue (for one-input model only) G
Red (1) - Red (2) B
Red (1) - Green (2) RR
Red (1) - Blue (2) RG
Green (1) - Red (2) RB
Green (1) - Green (2) GR
Green (1) - Blue (2) GG
Blue (1) - Red (2) GB
Blue (1) - Green (2) BR
Blue (1) - Blue (2) BG
 BB

INPUT SIGNAL
Universal (included in the tables) U

ANALOGUE OUTPUT SIGNAL
Without Analogue Output 0
Current 0/4...20 mA 1
Voltage 0...10 V 2

DIGITAL OUTPUT SIGNAL
Without Digital Output 0
RS-485 1

ADDITIONAL OUTPUTS
None 0
4 Relays 4
8 OC Outputs 8

POWER SUPPLY
95...253 VAC/VDC 1
20...40 VAC/VDC 2

TYPE OF TERMINALS
Socket - Screw Plug 0
Special Order (code supplied by manufacturer) X

EXECUTION
Standard 008



INDUMART INC.

1-15 W. Pearce St., Richmond Hill, Ont. L4B 1H6, Canada
Phone: (905) 707-9998 Fax: (905) 707-8484 E-mail: Sales@Indumart.com