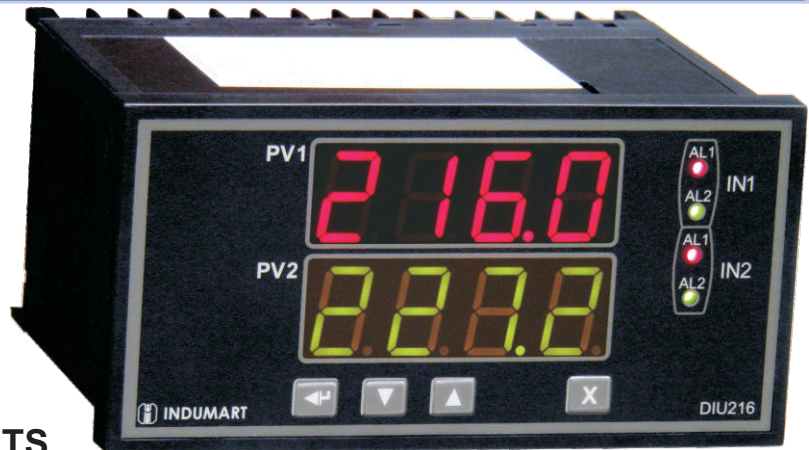




## SERIES: DIU216

Can also be used as:  
Temperature Transmitter  
or Flow Transmitter



- FOUR ON/OFF OUTPUTS
- RTD, T/C, mV, V or mA INPUTS
- FULLY PROGRAMMABLE PARAMETERS
- RS485 SERIAL COMMUNICATION (option)
- TWO 4-DIGIT, 20 mm BRIGHT LED INDICATORS
- AUXILIARY POWER SUPPLIES FOR LOOP POWERED INSTRUMENTS
- SQUARE ROOT OF INPUTS FOR FLOW TRANSMISSION APPLICATIONS
- SCALABLE mA OR VOLTAGE RETRANSMISSION OUTPUTS WITH OFFSET
- 2 INDEPENDENT INPUTS OR INDICATING 2 PARAMETERS OF ONE INPUT WITH 4 RELAY OUTPUTS

### INTRODUCTION

Indumart DIU216 2-channel Universal Input Indicator / Controller / Transmitter is a stable, microprocessor-based device with very good accuracy. It accepts two independent inputs, which can be RTDs, thermocouples, current, mV and voltage inputs. The meter provides power for loop powered instruments, and has four programmable relays/SCR/SSR providing ON/OFF control/alarm with adjustable hysteresis; two contacts for each input channel.

The indicator can be ordered with mA or voltage outputs, which is scalable and can be programmed with an offset and direct or reverse mode by the user. This is an important feature which provides retransmission signal or proportional control output signal.

Configuration of DIU216 can be performed via its front panel keys. The input type, range, offset value, NO/NC alarm parameters, hysteresis, outside range display flashing values, cut-off value for sq-root input and retransmission values are programmed by the user. It also allows adjusting of its output relays' delay time and output direction in case of temperature sensor break. Self-testing which displays the error, automatic cold junction temperature compensation of thermocouple inputs and capability of becoming

recalibrated are other important features of DIU216 indicators.

Configuration parameters are protected by entering the correct password; resulting in increased operation reliability in case of tampering.

Values of the inputs to DIU216 are indicated on 20 mm, 4-digit bright LED displays with two different colours (red and green) and the status of outputs is shown by four LEDs; first alarms of each input are red and second alarms are green for differentiation.

The DIU216 may be ordered with RS485 serial communication interface.

Due to accepting two inputs and producing two scalable analogue outputs, the DIU216 has many sophisticated applications in the industry. For example, It can have a level transmitter output connected to both inputs and indicating level of the tank on one of the indicators and volume of the liquid inside the cylindrical tank on the other indicator with four level alarm points and two analogue outputs (proportional) for control valve and recording. A simple application is when using the meter for only one input and allocating all four alarms to that input.

Input	Range	Resolution	Input Impedance
Pt100 (3-wire)	-200...650°C	1°C	>10 kΩ
Pt100 (3-wire)	-199.9~320.0°C	0.1°C	
Cu50 (3-wire)	-50.0~150.0°C	0.1°C	
T/C"J"	0...1200°C	1°C	>1 MΩ
T/C"K"	0...1300°C	1°C	
T/C"B"	400...1800°C	1°C	
T/C"S"	0...1600°C	1°C	
T/C"E"	0...1000°C	1°C	
T/C"T"	0.0~320.0°C	0.1°C	
T/C "Wre3-25"	0...2300°C	1°C	
Linear Current	0/4...20 mA	1.6 or 1.3 μA	<250 Ω
Linear Current	0...10 mA	0.8 μA	
Linear mV	0...20 mV	1.6 μV	>4.7 MΩ
Linear Voltage	0/1...5 Volt	0.4 or 0.3 mV	

Temperature unit of °F can be set using the display offset and scale.

## SPECIFICATIONS

### General

<b>Accuracy</b>	Better than 0.5% F.S. ±1
<b>Display</b>	2 x 4 digit, 20 mm LED 1st input (PV1) display is red 2nd input (PV2) display is green -1999...9999 adjust. decimal
<b>Alarm Indications</b>	4 LEDs; red and green
<b>Cold Junction Comp.</b>	Automatic; from 0...+50°C

<b>Power Supply</b>	90...260 VAC/DC 20...24...30 VAC/DC
<b>Aux. Power Supply Load Resistance</b>	24 VDC nominal @ 30 mA 0...10 mA (<1.5 kΩ), 4...20 mA (<750 Ω), 0~1~5 V (>250 kΩ)
<b>Operating Condition</b>	0...+50°C; 0 to 85% RH
<b>Front Panel Sealing</b>	IP43
<b>Case Material</b>	ABS
<b>Dimensions</b>	160 x 80 x 116 mm (W x H x D)
<b>Mounting (panel)</b>	Cutout 152 x 76 mm

### Outputs

<b>Contact Outputs</b>	Two NO/NC contacts with adjustable hysteresis for each input (total of 4 outputs)
<b>Relay</b>	3A @ 220 VAC or 24 VDC;
<b>Solid State Relay (SSR)</b>	30 mA @ 9 VDC output
<b>SCR Trigger</b>	100A @ 600V
<b>SCR Bidirec. Thyristor</b>	5A @ 600 V
<b>Analogue Outputs</b>	2 independent outputs; one for each channel 4...20, 0...20, 0...10 mA 0...5 or 1...5 V Outputs can be scaled or have an offset value
<b>Serial Interface</b>	RS485
<b>Baud Rate (selectable)</b>	1200, 2400, 4800, 9600 bps

Indumart reserves the right to change the specifications without prior notice.

## ORDER CODE

Model: **DIU216** —

### Power Supply

90...260 VAC/DC  
20...24...30 VAC/DC

A  
D

### Outputs of 1st Input

Relay  
SCR  
SSR

R  
C  
S

### Outputs of 2nd Input

Relay  
SCR  
SSR

R  
C  
S

### RS485 Serial Communication Interface

Not Required  
Required

0  
1

### Retransmission Output of 1st Input

4...20 mA or 0...20 mA or 0...10 mA  
0...5 V or 1...5 V

0  
1

### Retransmission Output of 2nd Input

4...20 mA or 0...20 mA or 0...10 mA  
0...5 V or 1...5 V

0  
1