



Digital Process Indicators IDA Series

Function: The IDA series panel mounting digital process indicators are low cost microprocessor based with a bright 4 digit red LED display. There are 3 basic models designed for use in instrumentation systems with Current or Voltage, Temperature (RTD or Thermocouple) and Load Cell/Strain Gauge inputs. The display can be factory set, or adjusted by the user, to display engineering units. The indicators come as standard with an LED alarm annunciator, a transmitter excitation supply and are 115 or 230 Volt AC, or low Volt AC/DC powered. The displays are housed in a 1/8 DIN sized enclosure and can be scaled from -1999 to 9999 full scale. Options on the IDA Series include: a relay output; AC and DC current and voltage input extension modules.

- IDA-21 mA, mV or Voltage inputs.** Reliable, accurate, low cost, factory set, user scalable, versatile meter for a pre-defined application. The meter includes a transducer/transmitter supply and is set to accept an input from a range of mA, mV or Voltage inputs.
- IDA-22 RTD or Thermocouple inputs.** Reliable, accurate, low cost meter for displaying temperature in °C or °F from a range of RTD's and Thermocouples with a 1 or 0.1 degree resolution.
- IDA-23 Load Cell or Strain Gauge inputs.** Accurate, highly sensitive, user scaleable, low cost meter with built-in isolated and stabilised transducer excitation voltage designed to accept input signals up to 25mV from load cells and strain gauges.

All three models in the series have the following features:

- 4 digit bright red LED display
- LED Alarm annunciator
- Display range of - 1999 to 9999
- Accuracy of 0.1%
- Re-scaling via front panel pushbuttons
- Internal references for re-calibration without the need to remove the meter from the panel
- Supplied with an "Engineering Units" label pack.
- IP65 rated fascia panel
- 1/8 DIN sized robust enclosure
- Behind panel depth of only 80mm
- Electrical connections via high quality plug-in screw connectors split to separate power and signal wires

Features/Options on the IDA series of instruments are as follows:

Display Configuration

The display is configured by simply writing in the required values together with the corresponding values of the input signal. Alternatively, for increased accuracy the indicator can be instructed to read the actual values of the input signal where this is practical.

Transmitter/Transducer Power Supply

The IDA-21 and IDA-23 come as standard fitted with a predefined transmitter/transducer power supply. The supply is factory set and the options are as follows: Isolated and stabilised 5 Volt or 10 Volt DC transducer excitation supply and the IDA-21 has a third option of a transmitter supply at a nominal 24 Volt DC.

Tare/Hold/Peak Memory Function

The IDA-21 (with the exception of the 0 to 10V model) and the IDA-23 come fitted as standard with remote tare or hold or peak memory function. These can be operated by a switch connected to the rear terminals.

Alarm Relay Output Option

All IDA series displays can be fitted with a 2A changeover contact relay alarm output. The LED, which comes as standard on the front of the instrument, gives a clear indication of the alarm condition. Each alarm can be set as High or Low via the front panel pushbuttons. These pushbuttons can then be disabled to prevent unauthorised tampering.

Input Extension Modules Option

The IDA-21 comes as standard with either inputs in the range 0 to $\pm 100\text{mV}$ and 0 to $\pm 20\text{mA}$, the chosen range being link selectable, or a dedicated 0 to 10 Volt input. Input extension cards are available as an optional extra to take the input ranges to 2.5 Amp or 1000 Volt DC or AC (true RMS).

SPECIFICATIONS

INPUTS:

IDA-21

mA or mV link selectable

DC Current

0 to ± 20 mA into < 5 ohms

DC Voltage

0 to ± 100 mV into > 1 Mohm

or

0 to 10 Volt into > 100 K

Optional Extension

Link selectable

Current Ranges:

DC or AC (true RMS)

± 100 mA, ± 500 mA, ± 2.5 A

Voltage Ranges:

DC or AC (true RMS)

± 500 mV, ± 2.5 V, ± 10 V, ± 50 V,

± 250 V, ± 1000 V

IDA-22

Resistance Thermometers

3 wire PT100 or PT130

Excitation: 0.25mA

Displayed in either $^{\circ}$ C or $^{\circ}$ F

Thermocouple

Type D, J, K, N, R, S or T

Selectable internal/external

reference junction

Display reads O/C on sensor

break

IDA-23

DC Voltage

0 to ± 25 mV

DISPLAYS:

Display

4 digit high brightness red

LED's

Digit Size

14.2mm

Full Scale Range

-1999 to 9999

IDA-21 and IDA-23

user scalable to required

engineering units

IDA-22 factory set to

required display range

$^{\circ}$ C or $^{\circ}$ F link selectable

Decimal Point

Programmable to any

location in the range

-1.999 to 9999

Display Update

2 updates per second

Watchdogs

Software and Hardware

watchdogs reset the CPU

on any programme error or

power disruption

Input Resolution (min)

for noise free display

IDA-21 4 μ V or 1 μ A/digit

IDA-23 1 μ V/digit

SUPPLY:

Power Supply Voltage

115 Volt AC 50/60 Hz or

230 Volt AC 50/60 Hz or

Universal low voltage:

11-30 Volt DC/9-24 Volt AC

Power Required

6VA Maximum

IDA-21 and IDA-23

Transducer/Transmitter

Excitation Voltage:

Transducer Supply

Stabilised 5V or 10V dc at

35mA max

Transmitter Supply

Un-regulated 24 Volt DC at

35mA max

Isolation: 500 Volt dc or ac

peak

OUTPUT:

Optional

Alarm Relay Output

Link selectable High or Low,

Fail Safe or Non-Fail Safe

Changeover relay rated at

2 Amps at 240 Volt AC

Set point - front panel

pushbutton adjusted

GENERAL:

Accuracy

$\pm 0.1\%$ ± 1 digit

Linearity

IDA-22 better than 0.3%

Cold Junction

Compensation

IDA-22 better than 0.1 $^{\circ}$ / $^{\circ}$ C

Temperature Co-efficient

0.01% / $^{\circ}$ C

Common/Series Mode

Rejection

> 120 dB/ > 60 dB at 50/60 Hz

Operating/Storage

Temperature/RH

0 to $+ 50^{\circ}$ C/ -10 to $+ 70^{\circ}$ C

0 to 90% RH non-condensing

Mounting

Panel mounting

Terminals

Plug in terminals -

Screw clamp for 0.5 to

1.5mm² cables

Protection Level

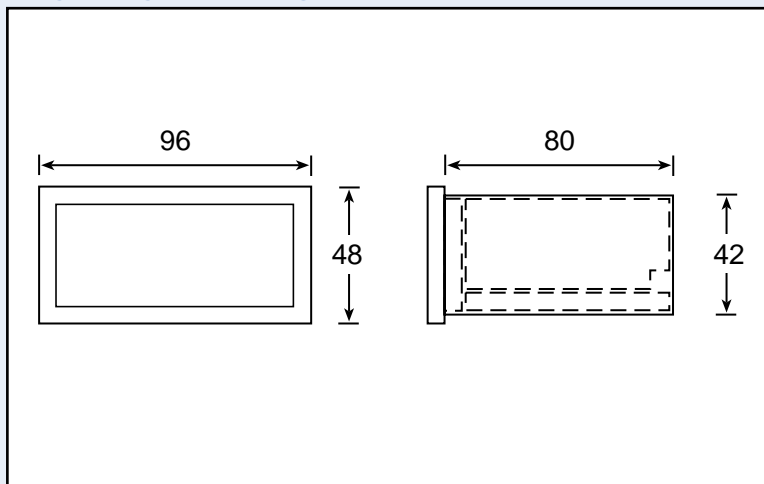
Fascia panel to IP65

Weight

Mains or Low Voltage

powered 450 gms

MECHANICAL DETAILS



Dimensions (mm):

48(H) x 96(W) x 87(D)

Panel Cut-out (mm):

44(H) x 92(W)

ORDERING DETAILS

- Give identification code, i.e. IDA-21
- Give details of power supply, i.e. 240 Volt AC 50Hz
- Give details of input type and range, i.e. 4 to 20mA
- Give details of calibration, i.e. 0 to 150 psi
- Give details of transmitter/transducer supply required, i.e. 24VDC
- If required, specify which of the Tare, Hold or Peak memory functions are required
- Give details of any options required, i.e. alarm relay



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