Level pro

Level Process Display

ITC 450

ITC 450

## ITC 450 / ITC 470 - SIMPLE PLUG & PLAY DESIGN
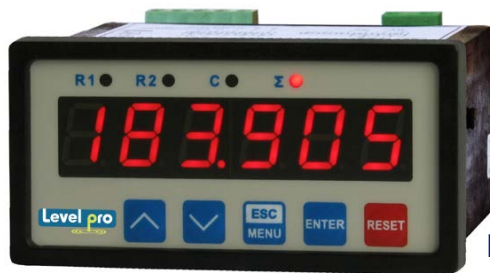
▶ **Process Meter with a Large LED Display**
▶ **Extended Displayed Values Range Untill**
▶ **6 digits : -99999 ÷ 999999**
▶ **Inputs : 0/4-20 mA, 0/1-5V, 0/2-10V, 0-60/75/100/150 mV**
▶ **0, 2 or 4 REL / OC Outputs**
▶ **Analogue output : Active or Passive, Power Supply Output : 24V DC**
▶ **RS-485 / Modbus RTU**
▶ **Signal Peak Value Detection**
▶ **Free configuration software S-Config**

The **ITC 450 / ITC 470 Series** Process Meter Features an Easy, Functional Programming Menu "That is Easy to Operate" and a Clear 4-Digit, 20 mm High "Bright" LED Display. The Tight Enclosure with High Protection "NEMA 4X " Class (IP 65) Makes it an Ideal Choice for Heavy- Duty Applications. The Optional Infrared Controller can be Used to to Change the Settings without Opening the Enclosure.
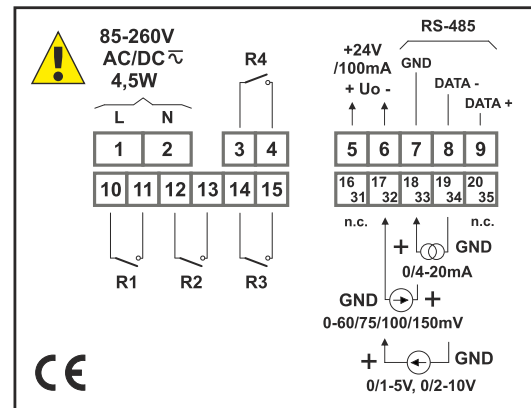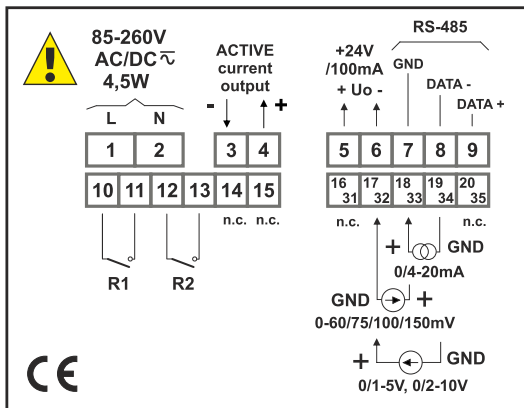
TECHNICAL DATA

Power supply / Power consumption	19V ÷ 50V DC; 16V ÷ 35V AC or 85 ÷ 260V AC/DC, all separated for 85 ÷ 260V AC/DC and 16V ÷ 35V AC power supply: max. 4,5 VA; for 19V ÷ 50V DC power supply: max. 4,5 W
Display	LED, 4 x 20 mm or 6 x 13 mm high, red (green - on request), brightness adjustable in 8 steps
Displayed values	-999 ÷ 9999 or -99999 ÷ 999999 + decimal point
Input	**Current** : 4-20 mA, programmable, input resistance < 65Ω (typ. 55Ω),overload-protected, input current limited to 40 mA; **Voltage** : 0-5V, 1-5V, 0-10V or 2-10V, programmable, input resistance > 50 kΩ **Milivoltage** : 0-60 mV, 0-75 mV, 0-100 mV, 0-150 mV; programmable; input resistance > 100 kΩ accepted prolonged input overload: 20%
Accuracy	0.1% @25°C ± one digit (for 0-20 mA range)
Stability	50 ppm/°C
Binary outputs	0, 2 or 4 x REL Imax=1A, Umax=30VDC/250VAC (cosø=1) or OC Imax=30mA, Umax=30VDC, Pmax=100mW
Analogue output (available with 2 x REL or OC, see ordering)	**Active Current** : operating range 0/4-20 mA (max. 0-24 mA), load resistance 700Ω max., resolution 13 bit **Passive Current** : isolated, operating range 4-20 mA (max. 2,8-24 mA), load resistance 600Ω @24VDC, resolution 13 bit **Active Voltage** : operating range 0/1-5V, 0/2-10V (max. 0-11V), load resistance min. 2000Ω, resolution 13 bit
Power supply output	24V DC +5%, -10% / max. 100 mA, Stabilized
Communication Interface	RS-485, 8N1 and 8N2, 1200 bit/s ÷ 115200 bit/s, Modbus RTU (not galvanically isolated)
Operating temp	-20°C ÷ +50°C (option)
Storage temp	-20°C ÷ +70°C (Depending on Option)
Protectiomclass	IP 65 (front side when an optional seal is installed); IP 40 (front side); IP 20 (case and connection clips)
Case	Panel mounting; material: NORYL - GFN2S E1
Dimensions (WxNxD)	**Case (WxHxD)** : 96 x 48 x 100 mm **Panel cut-out dimensions** : 90,5 x 43 mm **Installation depth** : min. 102 mm **Board Thickness** : Standard 7 mm or other depending on used board thickness brackets (see Accessories)
Weight	230 g max.

CE

DIMENSIONS

Side view

Case dimensions

Panel cut-out dimensions
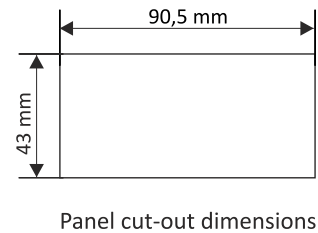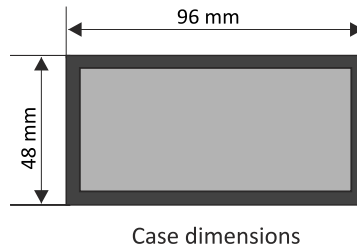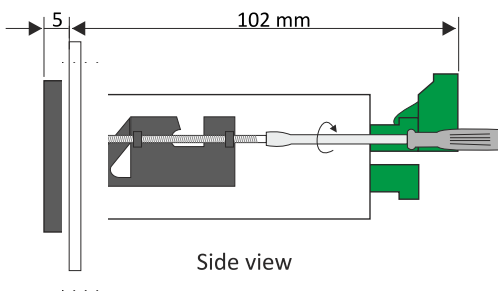
EXAMPLARY PIN ASSIGNMENTE

Version with 2 x REL and 1 x AO 0/4-20 mA, active

Version with 4 x REL

ORDERING

ITC -X-1XXX-1-X-XX1

Display:
450 : 4 -digits
470 : 6-digits

Type of input:
8 : 4-20 mA, 0/1-5V, 0/2-10V
C : 0-60/75/100/150 mV

Number of outputs:
0
2
3
4

Type of outputs:
0 : no output
1 : REL (for 2 and 4 outputs)
2 : OC (for 2 and 4 outputs)
3 : 2 x REL + 1 x AO (0/4-20 mA, active, non-isolated)
4 : 2 x OC + 1 x AO (0/4-20 mA, active, non-isolated)
9 : 2 x REL + 1 x AO (4-20 mA, passive, isolated)
A : 2 x OC + 1 x AO (4-20 mA, passive, isolated)
B : 2 x REL + 1 x AO (0/1-5V, 0/2-10V, active, non-isolated)
C : 2 x OC + 1 x AO (0/1-5V, 0/2-10V, active, non-isolated)

Options:
00 : no options
01 : IP 65 frame
03 : green colour LED display
04 : IP 65 frame + green colour LED display
08 : operating temp. -20°C ÷ +50°C
0P : IP 65 frame + operating temp. -20°C ÷ +50°C
0L : green colour LED display + operating temp. -20°C ÷ +50°C
0T : IP 65 frame + green colour LED display
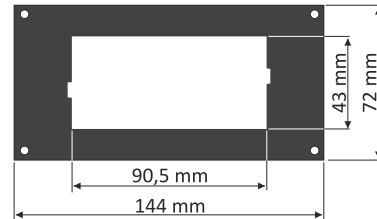   + operating temp. -20°C ÷ +50°C

Power supply:
3 : 24V AC/DC
4 : 85V - 260V AC/DC

MOUNTING PLATES
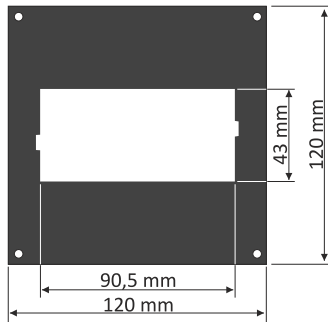
ITC-450/470
to mount 96 x 48 mm
size unit in place
of 96 x 96 mm cut-out

43 mm
120 mm
90,5 mm
120 mm

ITC-450/470
to mount 96 x 48 mm
size unit in place
of 144 x 72 mm cut-out

43 mm
72 mm
90,5 mm
144 mm

BOARD THICKNESS BRACKETS / ADAPTORS

HPS-07
1 ÷ 7 mm board thickness
brackets (2 pcs)
standard included with device

HPS-45
1 ÷ 45 mm board thickness
brackets (2 pcs)

HPS-05
1 ÷ 5 mm board thickness
brackets (2 pcs)

HPS-94
brackets for mounting devices
on DIN 35/7.5 or 15 rail (2 pcs)

SOFTWARE

Config- S- 2 is used for the simultaneous detection of devices in multiple Modbus RTU networks and allows user to change the configuration of most of them. For each detected device a list of its registers, which the user can modify, is displayed and also additional informations about device parameters (type, address in the network, etc.). **S-Config** software can be downloaded from Levelpro website at www. levelprosales.com
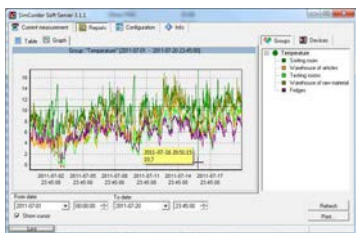
Softcom is a visualisation application created to facilitate work with advanced networks of the Levelpro devices, for acquisition, visualisation, reporting, archiving, exporting and printing of measurement data from all network devices. You can download measurements from the devices automatically or on demand. There is a possibility of immediate notification about emergency states via SMS or e-mail, which will often allow to quickly resolve an arising problem while avoiding long and expensive stoppages. You can view the measurement data, emergency states and configuration via the internet at every time.

CONVERTERS

TheRSS-4U module is designed to connect a USB host to slave devices equipped with RS- 485 interface. The PC with special software can be used as a host. The RSS-4U unit guarantees full galvanic isolation between USB and RS-485 circuits. The converter can work with any devices equipped with RS-485 interface and contains integrated circuit which supports USB 1.1 and USB 2.0 standards. The main purpose is connection of PC ho st computer with industrial data acquisition and visualisation systems based on RS-485 interface. The RSS-4U can be also manufactured with DIN mounting adaptor.

CE

Typical Application

LP-100
Junction Box

2" Fitting

2" Bulkhead

Levelpro
Sensor

ENC-100 NEMA 4X
Enclosure + ITC 450
Display (Optional)

Relief
Valve

Level Pro
Controller

4 - 20 mA

R1   R2

800 series
level sensor

Outlet
Valve

Level Pro
Controller

R1   R2

Alarm

RS 485

PC

RS 485

Level Control

Removable Cover

**All Plastic Corrosion
Resistant NEMA 4X
Junction Box Enclosure**

**Recommended to Mount On
Tip of Tank or Sump**

Wire Grip

**4-20mA
Output**

2" Thread

Cable Gripper

Part # LP-100