



Read this document carefully before using this device. The guarantee will be expired by damaging of the device if you don't attend to the directions in the user manual. Also we don't accept any compensations for personal injury, material damage or capital disadvantages.

# ENDA EI741A PROGRAMMABLE INDICATOR

Thank you for choosing ENDA EI741A INDICATOR.

- \* 72x72mm sized.
- \* 4 digits display.
- \* Easy to use by front panel keypad.
- \* Display scale can be adjusted between -1999 and 4000.
- \* Decimal point can be adjusted between 1. and 3. digits.
- \* Measurement unit can be displayed.
- \* Selectable four different standard input types (0-20mA, 4-20mA, 0-1V, 0-10V)
- \* User can calibrate the device according to specified input type.
- \* Sampling time can be adjusted in four steps.
- \* Stores maximum and minimum measurement values.
- \* The maximum or the minimum values can be hold on the display.
- \* Current and voltage calibration can be performed.
- \* Parameter access protection on 3 levels.
- \* Easy connection by removable screw terminal.
- \* CE marked according to European Norms.



Order Code : EI741A- 

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|---|---|
| <b>1 - Supply Voltage</b><br>230VAC...230V AC<br>24VAC.....24V AC<br>SM.....9-30V DC / 7-24V AC | <b>2 - Auxiliary Supply OUT</b><br>AS.....12V DC 50mA (unregulated)<br>AS08.....8V DC 50mA (regulated)<br>AS05.....5V DC 50mA (regulated)<br>None.....No auxiliary supply out |
|---|---|



**RoHS  
Compliant**

## TECHNICAL SPECIFICATIONS

ENVIRONMENTAL CONDITIONS	
Ambient/storage temperature	0 ... +50°C/-25 ... +70°C (with no icing)
Max. relative humidity	80% Relative humidity for temperatures up to 31°C, decreasing linearly to 50% at 40°C.
Rated pollution degree	According to EN 60529      Front panel : IP65 Rear panel : IP20
Height	Max. 2000m

Do not use the device in locations subject to corrosive and flammable gases.

ELECTRICAL CHARACTERISTICS	
Supply	230V AC ±10% -20%, 50/60Hz or 24V AC ±10%, 50/60Hz or optional 9-30V DC / 7-24V AC ±10% SMPS
Power consumption	Max. 7VA
Wiring	2.5mm <sup>2</sup> screw-terminal connections
Date retention	EEPROM (Min. 10 years)
EMC	EN 61326-1: 2006
Safety requirements	EN 61010-1: 2010 (pollution degree 2, overvoltage category II, measurement category I) EI741A cannot be used if measurement category II, III or IV is required.

Input type	Measurement range		Measurement accuracy	Input empedance
	Min.	Max.		
0-1V DC voltage	0V	1.1V	±0,5% (of full scale)	Approx. 11kΩ (terminal voltage limits: min. = -2V, max. = 30V)
0-10V DC voltage	0V	14V	±0,5% (of full scale)	Approx. 11kΩ (terminal voltage limits: min. = -2V, max. = 30V)
0-20mA DC current	0mA	25mA	±0,5% (of full scale)	Approx. 5Ω (applicable terminal voltage is max. 50mA.)
4-20mA DC current	0mA	25mA	±0,5% (of full scale)	Approx. 5Ω (applicable terminal voltage is max. 50mA.)



While the current measuring mode, input impedance becomes 5Ω . Therefore, in current mode, the device must not be connected any voltage input. Otherwise, the device is broken. While the device is running in the voltage measurement mode and if required to change to current measurement mode, then firstly the voltage inputs must be removed and after that, input type must be changed to one of the current measurement modes.

OUTPUTS	
Auxiliary power supply	12V DC, max. 50mA (unregulated) or 8V DC, max. 50mA (regulated) or 5V DC max. 50mA (regulated)

HOUSING	
Housing type	Suitable for flush-panel mounting according to DIN 43 700.
Dimensions	W72xH72xD97mm
Weight	Approx. 350g (after packing)
Enclosure material	Self extinguishing plastics



While cleaning the device, solvents (thinner, benzine, acid etc.) or corrosive materials must not be used.

# TERMS

1) Measurement value, measurement unit, the minimum or the maximum measured values are displayed in the run mode. Parameter name, parameter value or a user defined unit is displayed in the programming mode.

2) Increment or parameter selection key in the programming mode. Used for displaying measurement unit or the max. measured value in the run mode.

3) Decrement or parameter selection key in the programming mode. Used for making the minimum and the maximum measured values equal in the run mode.

4) Menu selection key in the programming mode. Used for displaying the minimum measured value in the run mode.

5) Used for selecting run and programming modes, adjusting parameters, displaying measurement unit or making the minimum and the maximum measured values equal.

( 1 ) Digital display	4 digits 7 segment red LED display
Character height	14.2mm
( 2 ),( 3 ),( 4 ),( 5 ) Keypads	Micro switch

# DIMENSIONS

**Depth**: 97mm

**Panel cut-out**: 75mm (width), 68mm (height)

**Flush mounting clamp**: 78mm (total height), 72mm (display height)

**Connection cables**

**For removing mounting clamps:**

- Push the flush-mounting clamp in direction 1 as shown in the figure left.
- Then, pull out the clamp in direction 2.

**Note:**

- 1) While panel mounting, additional distance required for connection cables should be considered.
- 2) Panel thickness should be maximum 10mm.
- 3) There must be at least 90mm free space behind the device, otherwise it would be difficult to remove it from the panel.

# CONNECTION DIAGRAM

**Warning:** ENDA EI741A is intended for installation in control panels. Make sure that the device is used only for intended purpose. The shielding must be grounded on the instrument side. During an installation, all of the cables that are connected to the device must be free of electrical power. The device must be protected against inadmissible humidity, vibrations, severe soiling. Make sure that the operation temperature is not exceeded. All input and output lines that are not connected to the supply network must be laid out as shielded and twisted cables. These cables should not be close to the power cables or components. The installation and electrical connections must be carried on by a qualified staff and must be according to the relevant locally applicable regulations.

<p>5 + AUXILIARY SUPPLY OUT 12V 50mA</p> <p>6 GND</p> <p>7 + INPUT</p> <p>8 GND</p> <p>9 230V AC +10% -20% 50/60Hz 7VA</p> <p>10</p> <p>ENDA INDUSTRIAL ELECTRONICS EI741A-230VAC-AS12 INDICATOR SN: XXXXXXXXXX</p>	<p>5 + AUXILIARY SUPPLY OUT 5V 50mA</p> <p>6 GND</p> <p>7 + INPUT</p> <p>8 GND</p> <p>9 230V AC +10% -20% 50/60Hz 7VA</p> <p>10</p> <p>ENDA INDUSTRIAL ELECTRONICS EI741A-230VAC-AS08 INDICATOR SN: XXXXXXXXXX</p>	<p>5 + AUXILIARY SUPPLY OUT 5V 50mA</p> <p>6 GND</p> <p>7 + INPUT</p> <p>8 GND</p> <p>9 230V AC +10% -20% 50/60Hz 7VA</p> <p>10</p> <p>ENDA INDUSTRIAL ELECTRONICS EI741A-230VAC-AS05 INDICATOR SN: XXXXXXXXXX</p>	<p>5</p> <p>6</p> <p>7 + INPUT</p> <p>8 GND</p> <p>9 230V AC +10% -20% 50/60Hz 7VA</p> <p>10</p> <p>ENDA INDUSTRIAL ELECTRONICS EI741A-230VAC INDICATOR SN: XXXXXXXXXX</p>	<p>5 + AUXILIARY SUPPLY OUT 12V 50mA</p> <p>6 GND</p> <p>7 + INPUT</p> <p>8 GND</p> <p>9 110V AC ±10% 50/60Hz 7VA</p> <p>10</p> <p>ENDA INDUSTRIAL ELECTRONICS EI741A-110VAC-AS12 INDICATOR SN: XXXXXXXXXX</p>
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# NOTE :

**SUPPLY:**

184-253V AC 50/60Hz 7VA

Fuse F 100 mA 250V AC

Switch

230V AC Supply

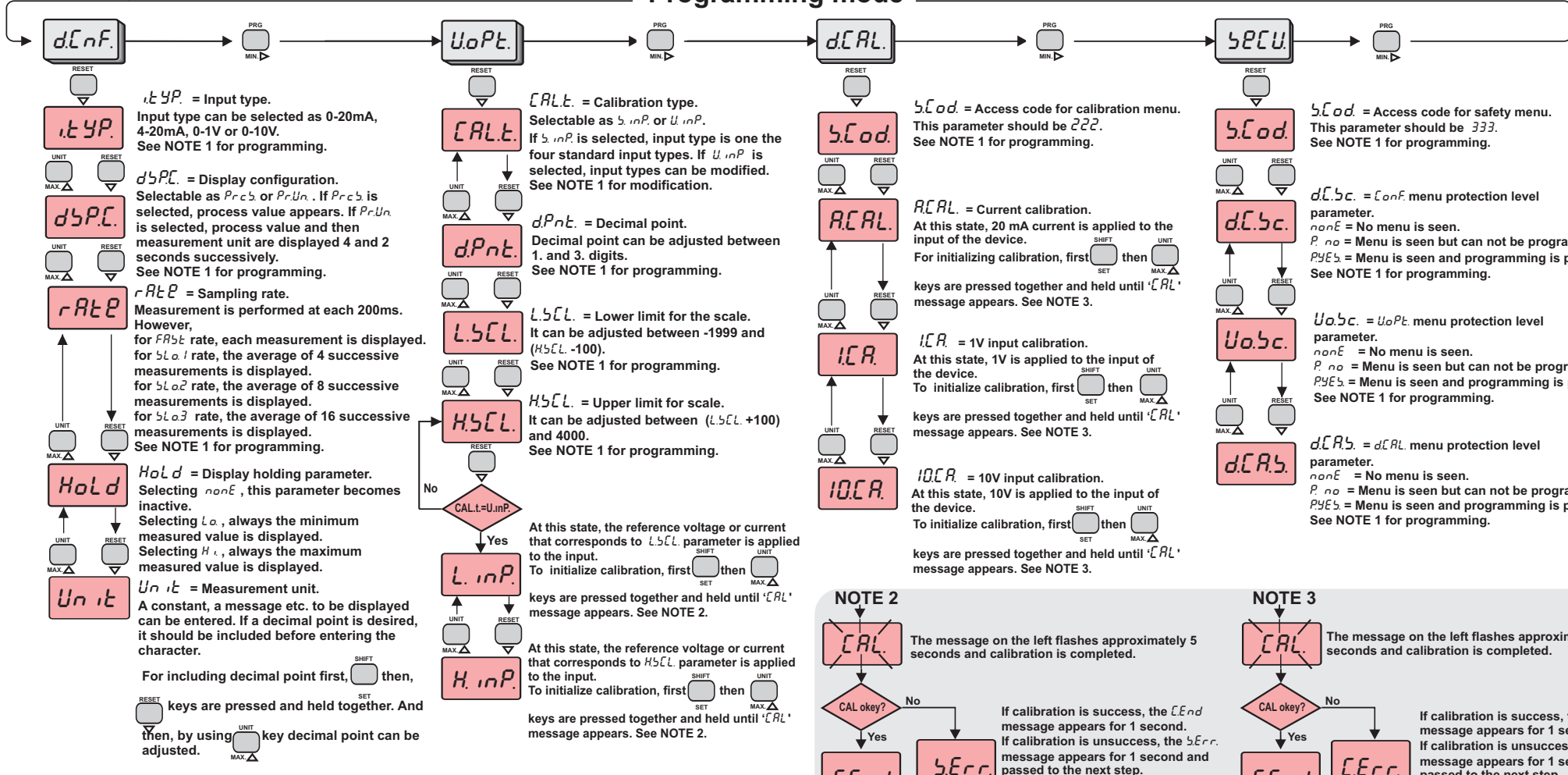
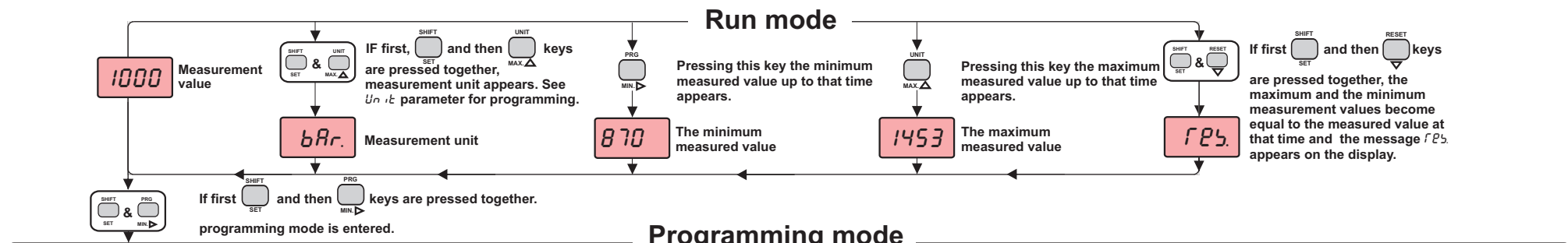
Holding screw 0.4-0.5Nm

Equipment is protected throughout by DOUBLE INSULATION.

**Warning:** Fuse should be connected Cable size: 1,5mm<sup>2</sup>

**Note :**

- 1) Mains supply cords shall meet the requirements of IEC 60227 or IEC 60245.
- 2) In accordance with the safety regulations, the power supply switch shall bring the identification of the relevant instrument and it should be easily accessible by the operator.



#### Parameter adjustment method

**NOTE 1**

For adjusting a selected parameter first press and hold **SHIFT** key. Then, by using **UNIT** **RESET** keys adjustment can be made.

If increment key **UNIT** is pressed and held 0.6 seconds, the value of the selected parameter changes rapidly. If waited enough, the value increases 100 at each step. After 1 second following the release of the key, initial condition is returned. The same procedure is valid for the decrement key.

