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 EDP 141 DIGITAL POTENTIOMETER

Thank you for choosing ENDA EDP 141 potentiometer.

CE

* 34x77mm sized.
* 4 digits display.
* Easy to use by front panel keypad.
* Display scale can be adjusted between -1999 and 8000.
* Decimal point can be adjusted between 1. and 3. digits.
* 0-10V output with adjustable minimum and maximum values.
* 'Soft on' and 'soft off' properties can be selected.
* Parameter access protection on 3 levels.
* Having CE mark according to European Norms.

Supply Voltage	Order Code
230V AC +%10 -%20	EDP141
24V AC ± %10	EDP141-24AC
9-30V DC SMPS module	EDP141-24DC

TECHNICAL SPECIFICATIONS

ENVIRONMENTAL CONDITIONS	
Ambient/storage temperature	0 ... +50°C/-25 ... +70°C (with no icing)
Max. relative humidity	80% up to 31°C decreasing linearly 50% at 40°C.
Rated pollution degree	According to EN 60529 Front panel : IP60 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 9-30V DC SMPS module
Power consumption	Max. 7VA
Wiring	2.5mm² screw-terminal connections
Date retention	EEPROM (Min. 10 years)
EMC	EN 61326-1: 1997, A1: 1998, A2: 2001 (Performance criterion B for the EMC standard)
Safety requirements	EN 61010-1: 2001 (pollution degree 2, overvoltage category II, measurement category I)

OUTPUT	
0-10V output	Maximum 10mA, digitally adjusted potentiometer output. Resolution : 1/10000 V Fluctuation : Maximum 30mV Rise time from 0 to 10V is maximum 300ms

HOUSING	
Housing type	Suitable for flush-panel mounting according to DIN 43 700.
Dimensions	W77xH34xD70mm
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.

SİSEL MÜHENDİSLİK ELEKTRONİK SAN. VE TİC. A.Ş.
Yukarı Dudullu Barbaros Cad. Kutup Sok. No:20 34775 - ÜMRANİYE/İSTANBUL-TÜRKİYE
Tel : +90 216 499 46 64 Pbx. Fax : +90 216 365 74 01
url : www.enda.com.tr

TERMS

1) Adjusted potentiometer value is seen in run mode
Parameter name, value or its unit in programming mode.

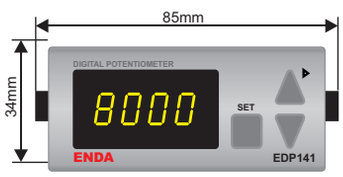
2) Increment key during run mode.
Increment or parameter selection key during programming mode.

3) Decrement key during run mode.
Decrement or parameter selection key during programming mode.

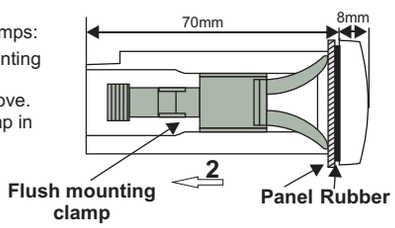
4) Used for selecting run or programming modes and for adjusting parameters.

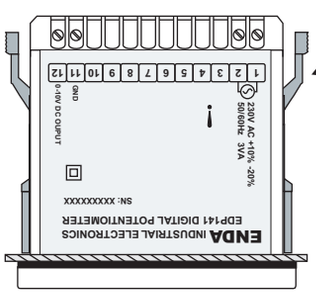
(1) Digital display	**4 digits 7 segment yellow LED display**
Character height	**9.1mm**
(2),(3),(4) Keypad	**Micro switch**

DIMENSIONS



For removing mounting clamps:
- Push up the flush-mounting clamp in direction **1** as shown in the figure above.
- Then, pull out the clamp in direction **2.**

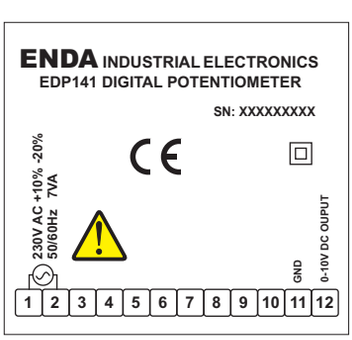


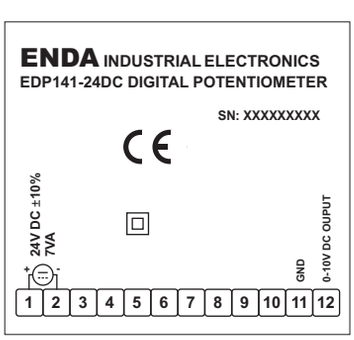


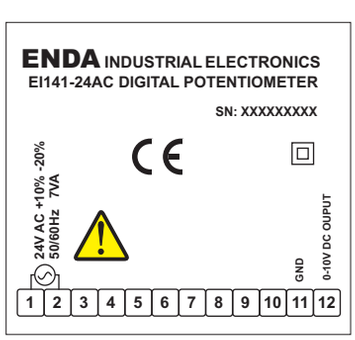
Note 1) Panel thickness should be maximum 7mm
2) If there is no 60mm free space at back side of the device, it would be difficult to remove it from the panel.

CONNECTION DIAGRAM

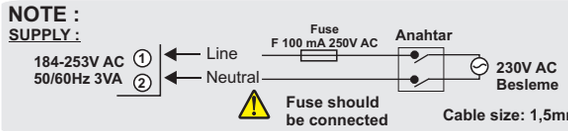
ENDA EDP 141 is intended for installation in control panels. Make sure that the device is used only for intended purpose. The shielding must be grounded on the instrument side. During an installation, all of the cables that are connected to the device must be free of energy. The device must be protected against inadmissible humidity, vibrations, severe soiling and 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.







NOTE :
SUPPLY :



Holding screw
0.4-0.5Nm

Equipment is protected throughout by DOUBLE INSULATION.

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.

Run mode

1000 — Preset value → SET → 1000 → ▲ → 1001 → ▲ → 1002 → ▼ → 1001

If no key is pressed for 3 seconds

First press SET key. Then, by using ▲ ▼ keys, preset value can be adjusted. If no key is pressed for 3 seconds Run mode is returned.

If o.E.t.Y and o.d.t.Y parameters is adjusted to any value except dSAb parameter, output can be controlled with ▲ and ▼ buttons.

If SET key is pressed and held for 5 seconds programming mode is entered

Entering from programming mode to run mode:

If no key is pressed within 20 seconds during programming mode data is stored automatically and the run mode is entered. Alternatively the same function occurs by pressing SET key and holding for 5 seconds

Programming mode

U.oPt. → ▲ → d.oPt. → ▲ → d.CAL. → ▲ → SECU. → ▲

U.oPt.

d.Pnt. = Decimal point.
Decimal point can be adjusted between 1. and 3. digits.
See NOTE 1 for programming.

L.SCL. = Lower value of the scale.
It can be adjusted between -1999 and (H.SCL. -10) Output becomes 0V at the adjusted value.
See NOTE 1 for programming.

H.SCL. = Upper value of the scale
It can be adjusted between (L.SCL. +10) and 8000.Output becomes 10V at the adjusted value.
See NOTE 1 for programming.

Lo.L ı. = Lower limit for preset value.It can be adjusted between L.SCL. and H ı.L ı.
See NOTE 1 for programming.

H ı.L ı. = Upper limit for preset value.It can be adjusted between Lo.L ı. and H.SCL.
See NOTE 1 for programming.

d.oPt.

P.on.C. = Control parameter when first energized.
oFF= When first energized, output is the voltage that lower limit value is indicated.
Attention: If this parameter is selected, the set value that was adjusted before is seen when set button is pressed at first. In addition,if increasing or decreasing that value is wanted the set value is equalized to lower limit value and then adjustment can be done.
On= When first energized, output is the voltage that the set value is indicated.
S.Str.= When first energized, output is increased slowly from the voltage that lower limit value is indicated to the voltage that set value is indicated during r.t ı.
See NOTE 1 for programming.

o.E.t.Y. = Adjusted type of the output to preset value with ▲ button.
dSAb. = Output cannot be adjusted to preset value with ▲ button.
Enb. = Output can be adjusted to preset value with ▲ button.
S.on. = Output is increased to voltage that set value is displayed with ▲ button during r.t ı. .
See NOTE 1 for programming.

o.d.t.Y. = Adjusted type of the output to lower limit value with ▼ button.
dSAb. = Output cannot be adjusted to lower limit value with ▼ button.
Enb. = Output can be adjuested to lower limit value with ▼ button.
S.oFF. = Output is increased to voltage that lower limit value is displayed with ▼ button during d.t ı. .
See NOTE 1 for programming.

r.t ı. = increasing time for output.
It is adjusted between 1 and 250 seconds.
Output is incerased slowly to the set value during adjusted time.
See NOTE 1 for programming.

d.t ı. = decreasing time for output.
It is adjusted between 1 and 250 seconds.
Output is decreased slowly to the lower limit value during adjusted time.
See NOTE 1 for programming.

P. ı.d.t. = increasing and decreasing speed of preset value.
It is adjusted between 1 and 3. P. ı.d.t. = 1, set value changes one by one. P. ı.d.t. = 2, set value changes 10 at each step. P. ı.d.t. = 3, set value changes 100 at each step.
See NOTE 1 for programming.

d.CAL.

S.Cod. = Access code for safety menu.
This parameter should be 222.
See NOTE 1 for programming.

10.CA. = calibration for 0-10V output.
The device should be calibrated until 10.000V is obtained at the output.
Calibration procedure is as explained below.

When SET key is pressed, previous calibration value is seen. While holding SET key, calibration value should be adjusted until 10.000V is seen at the output by using ▲ ▼ keys .

If SET key is released, calibration is exited. In the mean time, the new calibration value is saved in an EEPROM.

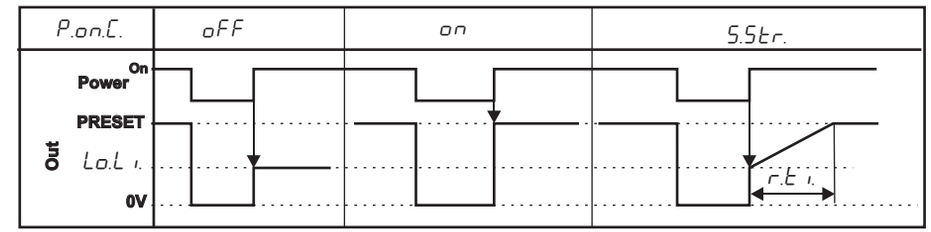
SECU.

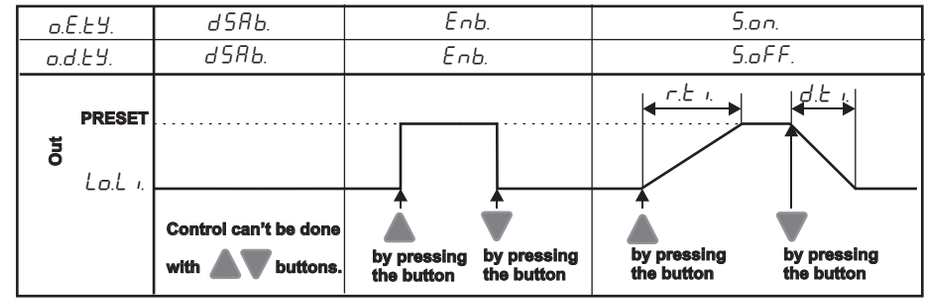
S.Cod. = Access code for safety menu.
This parameter should be 333.
See NOTE 1 for programming.

Uo.Sc. = U.oPt. menu protection level parameter.
nonE = No menu is seen.
P. no = Menu is seen but can not be programmed.
P.YES. = Menu is seen and programming is possible.
See NOTE 1 for programming.

d.o.Sc. = d.oPt. Menu protection level parameter.
nonE = No menu is seen.
P. no = Menu is seen but can not be programmed.
P.YES. = Menu is seen and programming is possible.
See NOTE 1 for programming.

d.CA.S. = d.CAL. menu protection level parameter.
nonE = No menu is seen.
P. no = Menu is seen but can not be programmed.
P.YES. = Menu is seen and programming is possible.
See NOTE 1 for programming.





Parameter adjustment method

NOTE 1

For adjusting a selected parameter first press and hold SET key. Then, by using ▼ ▲ keys, adjustment can be made.

If increment key ▲ 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.