



## EZM-4435, EZM-4935, EZM-7735, EZM-9935 Programmable Timers



EZM-4435, EZM-4935, EZM-7735, EZM-9935

- 6 digits actual value and 6 digits Set value Display
- Operation with 1 Set Value
- Reset, Pause and Start inputs
- NPN/PNP input type selection
- Programmable Time Bases (Hour, Minute, Second)
- Operation with Automatic and Manual Reset

### SPECIFICATIONS :

#### INPUTS :

**Reset Input:** Switch, Proximity or Capacitive sensor can be connected.

**Pause Input:** Switch, Proximity or Capacitive sensor can be connected.

**Start Input:** Switch, Proximity or Capacitive sensor can be connected.

**Sensor Type Selection:** NPN or PNP can be selected.

**Reset Function:** Automatic or Manual.

**Reset, Pause and Start Inputs Filter :** 2-250 msec (Can be adjusted in parameter.)

#### OUTPUT

**Process Output :** Relay Output( 5A@250V ~at Resistive Load)

#### SUPPLY VOLTAGE

**Supply Voltage :**

230 V ~ 50/60 Hz (-15%;+10%) 2.3VA

115V ~ 50/60 Hz (-15%; +10%) 2.3VA

24V ~ 50/60 Hz (-15%; +15%) 2.3VA

24V = 4W / 24V ~ 50/60 Hz (-15%; +15%) 4VA

(Must be determined in order.)

#### DISPLAY :

**Actual Value Display :**

EZM-4435 : 8 mm Red 6 digit LED Display

EZM-4935 : 13.2 mm Red 6 digit LED Display

EZM-7735 : 10.8 mm Red 6 digit LED Display

EZM-9935 : 13.2 mm Red 6 digit LED Display

**Set Value Display :**

EZM-4435 : 8 mm Green 6 digit LED Display

EZM-4935 : 8 mm Green 6 digit LED Display

EZM-7735 : 8 mm Green 6 digit LED Display

EZM-9935 : 8 mm Green 6 digit LED Display

**LED Displays :** SV (Set value), OP (Output Position).

#### ENVIRONMENTAL RATINGS AND PHYSICAL SPECIFICATIONS

**Operating Temperature:** 0...50°C

**Humidity :** 0-90%RH (none condensing)

**Protection Class:** Ip65 at front, Ip20 at rear

#### Weight:

EZM-4435 : 210 gr.

EZM-4935 : 210 gr.

EZM-7735 : 250 gr.

EZM-9935 : 340 gr.

#### Dimensions:

EZM-4435: (48 x 48mm, Depth: 95 mm)

EZM-4935: (96 x 48mm, Depth: 96 mm)

EZM-7735: (72 x 72mm, Depth: 95.5 mm)

EZM-9935: (96 x 96mm, Depth: 96 mm)

#### Panel Cut-Out:

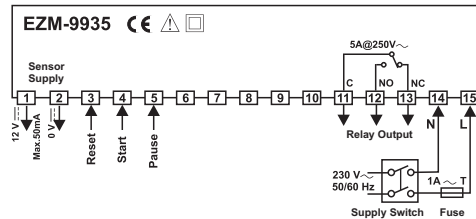
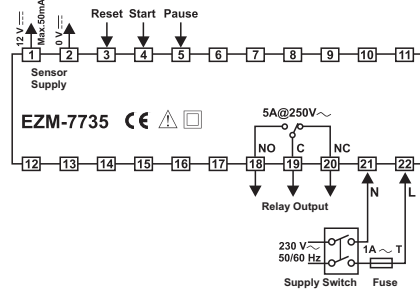
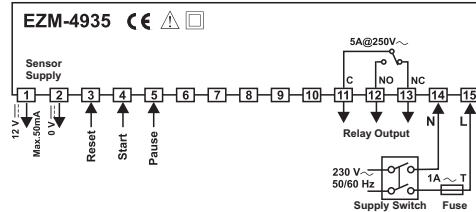
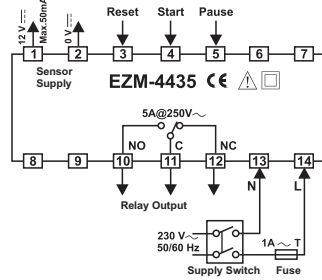
EZM-4435: (46 x 46mm)

EZM-4935: (92 x 46mm)

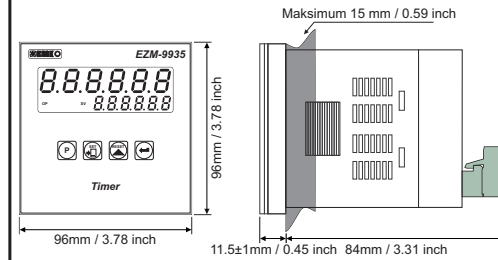
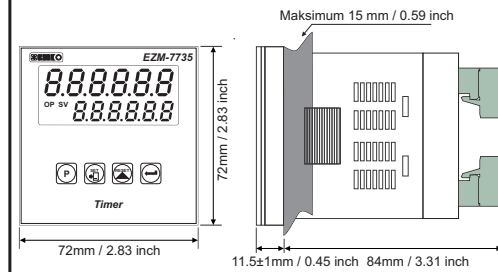
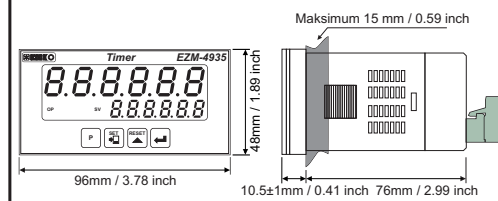
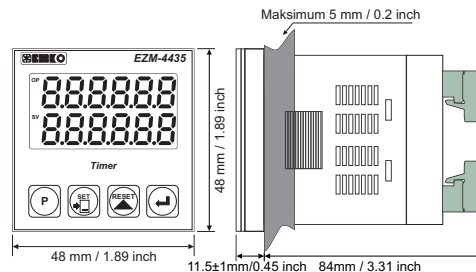
EZM-7735: (69 x 69mm)

EZM-9935: (92 x 92mm)

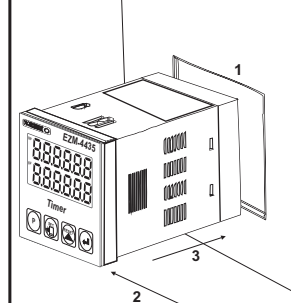
### Electrical Wirings



### DIMENSIONS



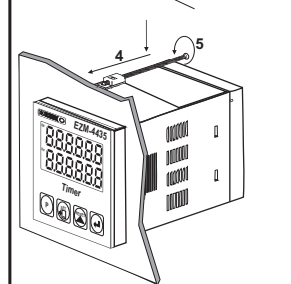
### PANEL MOUNTING



1-Before mounting the device in your panel, make sure that the panel cut-out is suitable.

2- Check front panel gasket Position.

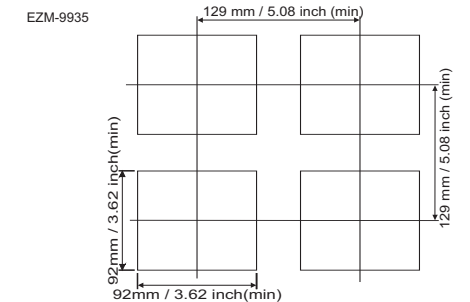
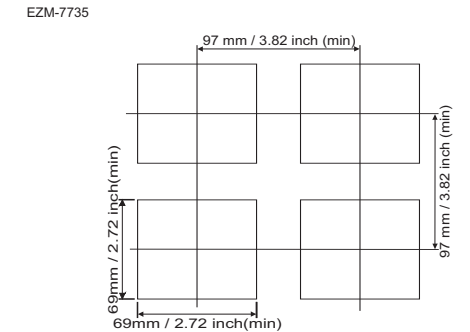
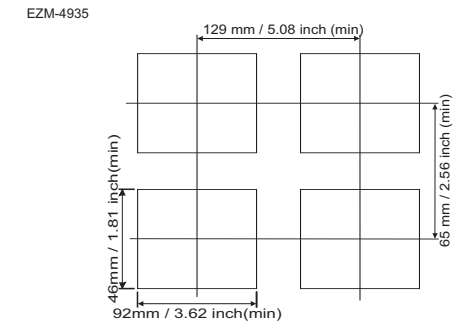
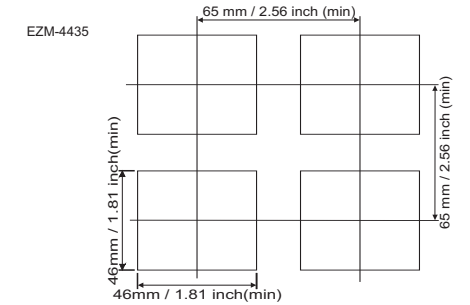
3- Insert the device through the cut-out. If the mounting clamp are on the unit, put out them before inserting the unit to the panel.



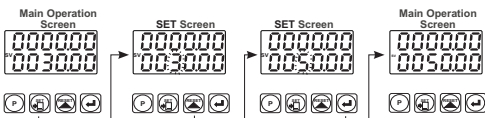
4-Insert the unit in the panel cut-out from the front side.

5-Insert the mounting clamps to the holes that located top and bottom sides of device and screw up the fixing screws until the unit completely immobile within the panel.

### Panel Cut-out



## Accessing and Changing the Set Values

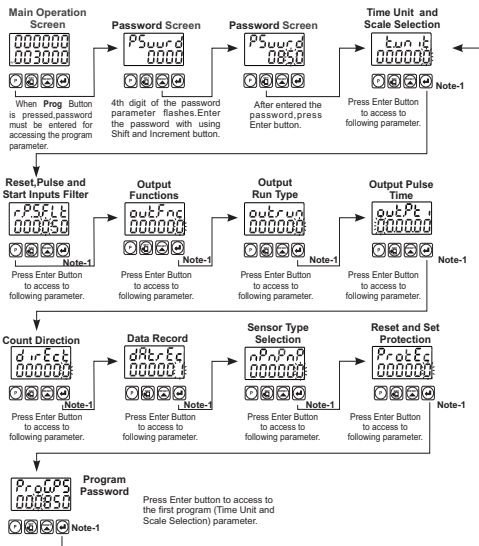


When Shift button is Pressed, 4th digit of Set value starts to flash.

Increase the flashing digit with pressing the Increment button.

Save the SET value With pressing the Enter Button.

## Accessing to the Program Parameters



**Note 1 -** Parameter value can be changed with Increment button. When the Enter button is pressed, parameter value will be saved and following parameter is accessed.

**Note 2 -** Press "P" button is exit without saving the parameter value. Thus Main Operation Screen is appeared.

## Parameter Definitions

### **Time Unit and Scale Selection (Default =0)**

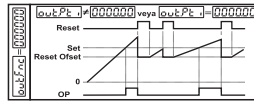
- 000000** Hour/Minute base counting timer. It can be adjusted from 00.00 to 99.59.
- 000001** Minute/Second base counting timer. It can be adjusted from 0.00 to 99.59.
- 000002** Second/Millisecond base counting timer. It can be adjusted from 00.00 to 99.99.
- 000003** Hour/Minute base counting timer. It can be adjusted from 00.00 to 23.59.
- 000004** Hour base counting timer. It can be adjusted from 000.00 to 999.99.
- 000005** Minute base counting timer. It can be adjusted from 000.00 to 999.99.
- 000006** Second base counting timer. It can be adjusted from 000.00 to 999.99.

### **Reset, Pulse and Start Input Pulse Time. (Default =50)**

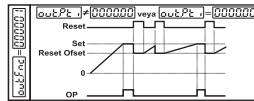
It is used to protect against the electrical contact debounce or the signal that is less than the determined pulse time. It can be adjusted from **000002** to **000250** millisecond.

## Output Functions (Default=0)

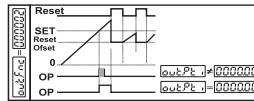
**0:Manual Reset-1:**Process counts,until manual reset happens.When count value reaches the Set value,Output position is changed.



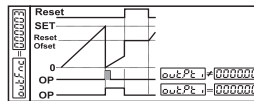
**1:Manual Reset-2:**Process counts,until count value reaches Set value.When count value reaches the Set value,Output position is changed.Counting doesn't change until manual reset happens.



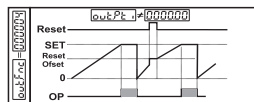
**2:Manual Reset-3:**Process counts,until manual reset happens.When count value reaches the Set value,output position is changed.After the end of the output pulse time, output position changes the old position.



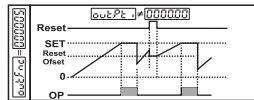
**3:Automatic Reset-1:**When count value reaches the set value,output position is changed.Process value is reset automatically and counting will continue from "0" (upcount) or "Set" (downcount) if the start input is active after the end of the output pulse time,output position changes the old position.



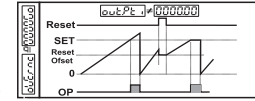
**4:Automatic Reset-2:**When count value reaches the set value,output position is changed.Counting doesn't continue over or the set value.Process value is reset automatically. Counting continue from "0" (upcount) or "Set" (downcount) if the start is active.Output position changes the old position at the end of the output pulse time.



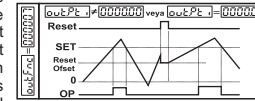
**5:Automatic Reset-3:**When count value reaches the set value,output position is changed.Count value becomes zero (for 0->P) counting restarts on "0" value,if the start input is active,but set value is shown on the process value screen.Output position becomes the old position end the real count value can be seen at the end of output pulse time.



**6:Automatic Reset-4:**When count value reaches the set value,output position is changed.Count value is automatically reset and counting will continue (for 0->P), if the start input is active output position changes the old position at the end of the output pulse time.



**7:Automatic Reset-5:**Process counts,until count value reaches set value.Count value is automatically reset and output position is changed,if the start input is active then counting will continue "0" (upcount) or "Set" (downcount).



### **Output Run Type (Default =0)**

- 000000** Normally De-energised.
- 000001** Normally Energised.

### **Output Pulse Time (Default =00.02.00)**

It determines how long Output will be active.It can be adjusted from 00.00.00 to 99.59.99 (99 minutes; 59.99 seconds). If it is 00.00.00, then it operates indefinitely.

### **Count Direction (Default =0)**

- 000000** Upcount. ( 0 --> Preset )
- 000001** Downcount. ( Preset --> 0 )

### **Data Record (Default =1)**

- 000000** Count value is saved to memory when power is disconnected and restored on power up.
- 000001** Count value is not saved to memory when power is disconnected.

### **Sensor Type Selection (Default =0)**

- 000000** NPN sensor type selected.
- 000001** PNP sensor type selected.

### **Reset and Set Protection (For Front Panel Access) (Default =0)**

- 000000** No Reset and Set protection.
- 000001** Only Reset button protection is active.
- 000002** Only Set button protection is active.
- 000003** Full Protection.Reset and Set button protection is active.

### **Program Password (Default =0)**

It is used for accessing to the program parameters.

It can be adjusted from **000000** to **009999**.

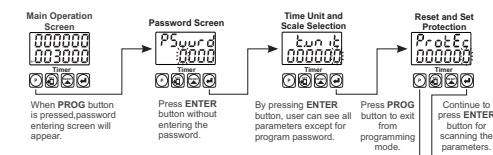
If it is **000000**; there is no password protection while entering to the program parameters.

When programming **Prog** button is pressed, will appear on the display.

**If this parameter is different from "0" and user wants to access to the program parameters;**

- 1- If user does not enter the **Psurd** value correctly; operation screen will appear without entering to operator parameters.
- 2- When **Psurd** in top display and **000000** in bottom display,if user presses ENTER button without entering password (for observing the parameters); User can see all parameters except Program Password but device does not allow to do any change in the program parameters.

## Failure Messages in EZM-XX35 Programmable Timers



When PROG button is pressed,password entering screen will appear.

Press ENTER button without entering the password.

By pressing ENTER button, user can see all parameters except for program password.

Press PROG button to exit from programming mode.

Continue to press ENTER button for scanning the parameters.

- 1- If Actual Value is flashing and counting is stopped; It appears if any of the count value is bigger than the maximum count value. To remove this warning and reset the count value press RESET button.
- 2- If Actual Value is flashing and counting is stopped; It appears if any of the count value is lower than the minimum count value. To remove this warning and reset the count value press RESET button.

## Installation

**Before beginning installation of this product, please read the instruction manual and warnings below carefully.**

- In package ,
- One piece unit
  - Two pieces mounting clamp
  - One piece instruction manual

A visual inspection of this product for possible damage occurred during shipment is recommended before installation. It is your responsibility to ensure that qualified mechanical and electrical technicians install this product.

If there is danger of serious accident resulting from a failure or defect in this unit, power off the system and the electrical connection of the device from the system.

The unit is normally supplied without a power switch or a fuse. Use power switch and fuse as required.

Be sure to use the rated power supply voltage to protect the unit against damage and to prevent failure.

Keep the power off until all of the wiring is completed so that electric shock and trouble with the unit can be prevented.

Never attempt to disassemble, modify or repair this unit. Tampering with the unit may result in malfunction, electric shock or fire.

Do not use the unit in combustible or explosive gaseous atmospheres. During the equipment is putted in hole on the metal panel while mechanical installation some metal burrs can cause injury on hands, you must be careful.

Montage of the product on a system must be done with it's mounting clamp. Do not do the montage of the device with in appropriate mounting clamp. Be sure that device will not fall while doing the montage.

It is your responsibility if this equipment is used in a manner not specified in this instruction manual.

## Warranty

EMKO Elektronik warrants that the equipment delivered is free from defects in material and workmanship. This warranty is provided for a period of two years. The warranty period starts from the delivery date. This warranty is in force if duty and responsibilities which are determined in warranty document and instruction manual performs by the customer completely.

## Maintenance

Repairs should only be performed by trained and specialized personnel. Cut power to the device before accessing internal parts. Do not clean the case with hydrocarbon-based solvents (Petrol, Trichlorethylene etc.). Use of these solvents can reduce the mechanical reliability of the device. Use a cloth dampened in ethyl alcohol or water to clean the external plastic case.

## Other Informations

### Manufacturer Information:

Emko Elektronik Sanayi ve Ticaret A.Ş.  
Demirtaş Organize Sanayi Bölgesi Karanfil Sk. No:6 16369  
BURSA/TURKEY  
Phone : +90 224 261 1900  
Fax : +90 224 261 1912

### Repair and maintenance service information:

Emko Elektronik Sanayi ve Ticaret A.Ş.  
Demirtaş Organize Sanayi Bölgesi Karanfil Sk. No:6 16369  
BURSA/TURKEY  
Phone : +90 224 261 1900  
Fax : +90 224 261 1912

## Order Information

EZM-4435 (48x48 DIN 1/16)	A	B	C	D	E	/	F	G	H	I	/	U	V	W	Z
EZM-4935 (96x48 DIN 1/8)															
EZM-7735 (72x72 DIN )															
EZM-9935 (96x96 DIN 1/4)		00	0	1	/	00	00	/	0	0	0	0	0	0	0

### A Supply Voltage

2	24 V $\overline{\text{---}}$ (-%15;+%15) / 24 V $\sim$ (-%15;+%15) 50/60Hz
3	24 V $\sim$ (-%15;+%15) 50/60Hz
4	115 V $\sim$ (-%15;+%10) 50/60Hz
5	230V $\sim$ (-%15;+%10) 50/60Hz
9	Customer

### E Output-1

1	Relay Output (5A @ 250 V $\sim$ ) at Resistive Load
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All order information of EZM-xx35 series are given on the table at above. User may form appropriate device configuration from information and codes that at the table and convert it to the ordering codes.

Firstly, supply voltage then other specifications must be determined. Please fill the order code blanks according to your needs. Please contact us, if your needs are out of the standards.



Symbol Means Vac  $\sim$   
Symbol Means Vdc  $\overline{\text{---}}$   
Symbol Means Vac and Vdc  $\infty$