

Read this document carefully before using this device. The guarantee will be expired by device demages 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 ETM2432 DIGITAL TIMER

Thank you for choosing ENDA ETM2432 digital timer.

- * 77 x 35mm sized
- * Dual contact output for timing control.
- * External start, reset, and gate inputs.
- * Hours minutes and minutes seconds indications can be selected.
- * Scale 0:01 99:59 minutes 0:01 99:59 hours
- * Time increasing and decrement steps can be adjusted.
- * Counting in downward direction.
- * Start and stop process can be controlled by the front panel.
- * 8 different warning tones.
- * Upper and lower limits can be adjusted to setpoint value.
- * CE marked according to European Norms.



CONNECTION DIAGRAM

ENDA ETM2432 is intended for installation within 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 out by a qualified staff and must be according to the relevant locally applicable regulations.



1 - Supply Voltage 230VAC...230V AC 24......24V AC/DC 12......12V AC/DC SM.......9-30V DC / 7-24V AC

TECHNICAL SPECIFICATIONS

ENVIRONMENTAL CONDITIONS					
Ambient/Storage temperature	0 +50 / °C -25 +70 °C				
Relative Humidity	Max. humidity 80% for temperatures up to 31°C decreasing linearly to 50% relative humidity at 40°C.				
Protection Class	According to EN60529; Front panel: IP65 Rear panel : IP20				
Height	Max. 2000m				
Do not use the devi	ice in locations subject to corrosive and flammable gasses.				

ELECTRICAL CHARACTERISTICS					
Supply	230V AC ±%10, 50/60Hz or 12/24V AC/DC ±%10, 50/60Hz or 9-30V DC/7-24V AC, 50/60Hz				
Power Consumption	Max. 7VA				
Wiring	2.5mm²'lik screw-terminal				
Scale	Selectable 99:59 min. or hour.				
Sensitivity	1 second.				
Time Accuracy	±%1				
Indicator	4 digits, 12.5mm, 7 segment red LED				
EMC	EN 61326-1: 2013 (Performance criterion B is satisfied for EN 61000-4-3)				
Safety Requirements	EN 61010-1: 2010 (Pollution degree 2, overvoltage category II)				
OUTPUT					
Out	2 Relays: 250V AC, 8A (for resistive load), NO and NC control output.				
Life Expectancy for Relay	30.000.000 Switching for no-load operation; 300.000 switching for 8A resistive load at 250VAC.				
START INPUT					
Input Type	Mechanical contact (Minimum = 50ms)				
RESET INPUT					
Input Type	Mechanical contact (Minimum = 50ms)				
GATE INPUT					
Input Type	Mechanical contact (Minimum = 50ms)				
HOUSING					
Housing Type	Suitable for flush-panel mounting according to DIN 43 700.				
Dimensions	W77xH35xD71mm				
Weight	Approx. 198g (After packing)				
Enclosure Materials	Self extinguishing plastics				
While cleaning the device, solvents (thinner, benzine, acid etc.) or corrosive materials must not be used.					

Dimensions



ETM2432-E-01-151012



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 OUT1 LED
 : Specifies the output OUT1.

 OUT2 LED
 : Specifies the output OUT2.

 HOUR LED
 : Selected time unit is HOUR.

 MIN LED
 : Selected time unit is MINUTE.

SET

Timer value can be set in Running Mode , Parameter values can be set in Programming Mode and newly assigned parameter values can be saved . After parameter values are changed , new values are saved to memory and Running Mode is returned either by pressing $\stackrel{\text{ser}}{=}$ button or by waiting 10 seconds.

Timer is started by pressing \blacktriangle button for 1 second, when $5 \ell r.2$ is selected (Except, either parameter or time set value changing). Menu parameters can be accessed in Programming Mode. Parameter set values can be increased. Timer set value can be increased in Time Config

Mode. Timer set value increases gradually accelerated by pressing continuously.

Timer and audible warning are stopped by pressing ∇ button for 1 second. when $5 \ell r c^2$ is selected (Except,either parameter or time set value changing). Menu parameters can be accessed in Programming mode. Parameter set values can be decreased. Timer set value can be decreased in Time Config Mode. Timer set value decreases gradually accelerated by pressing continuously.



In order to change sub-menu parameters value, press 🔨 buttons while holding 🚰 button down. When 🎽 button is released , all changes will be saved to memory and related sub-menu parameter is returned. Programming Menu is returned from sub-menu parameters by pressing 🔪 buttons at same time. In the sub-menu , all changes will be saved to memory and Running Mode is returned from sub-menu if no key is pressed for 10 seconds. In programming menu , all changes can be saved to memory and Running Mode can be returned from programming menu either by pressing 👗 buttons at same time or if no key is pressed for 10 seconds.





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ENDA ETM 2432 DIGITAL TIMER OUTPUT TYPES

NOTE : Selected area indicates the moment of power-up, if the external "START" input is active.



ENDA ETM2432 DIGITAL TIMER PARAMETERS CONFIGURATION PARAMETERS

Parameter Name	Functional Specification	Min.	Max.	Unit	Factory Settings			
E inE	Device time config	00:01	99:59	hr:min min:sec.	n n			
Strit	Device input control parameter	Str. 1	Str.2		Str.1			
Dut.t	Device output control parameter	0ut. 1	out.9		0ut. I			
Sond	Device audible warning control parameter	5d. I	5d.8		5d. I			
TIMER CONFIGURATION PARAMETERS								
t.LoL	Time config lower limit define parameter	00:07	99:59		00:07			
E.uPL	Time config upper limit define parameter	00:02	99:59		99:59			
in.dE	Time config increase/decrease coefficient parameter							
SECURITY PARAMETERS								
5.C o d	Security code parameter	0	9999		0			
RE.S.	Time config security parameter				P.9E 5			
RE.c.	Menu security parameter				P.YE S			

Note 1: If 5tr.t selected 5tr. I, Control is provided with START - RESET - GATE inputs.

- Note 2: If 52 r.Ł selected 52 r.2, Control is provided with device front panel START (▲) STOP (▼) buttons.
- Note 3: GATE input can be used for all 52r.2 and Gu2.2 types.
- Note 4: When 52 r.2 parameter switched from 52 r. 1 to 52 r.2, device continue to work with present But 2 output setting. Timer can be stopped with device front panel STOP(▼) button in case of need.
- Note 5: Cases in Note 4 also valid for 52 r. 2 parameter switched from 52 r. 2 to 52 r. 1, digital RESET input can be used instead of STOP button.
- Note 6: In Running Mode, if the a and ▼ keys are pressed together, revision number appears on display. (In order to show the revision number, 5とっと parameter must be set to 5とっ. 1 in LooF menu).



