⚠ Please read this document carefully before using this product. The guarantee will be invalidated if the device is damaged by not following instructions detailed in the manual. CAL Controls shall not be responsible for any damage or losses however caused, which may be experienced as a result of the installation or use of this product.

CAL ETM1411 DIGITAL TIMER

Thank you for choosing the CAL ETM1411 digital timer.

* 34 x 77mm sized.
* Single contact output for timing control.
* External start input.
* Display can be adjusted to show min. or sec.
* Scale ;
  0:01 .... 99:59 min.
  0:01 .... 99:59 hour
* Decrease and increace step of time can be adjusted.
* Start and stop possibility by front panel.
* 16 different warning tones.
* Upper and lower limits of the setpoint can be adjusted.
* CE marked according to European Norms.

CE

ETM1411
OUT   HOUR MIN
59:59
SET
START
STOP
CAL   DIGITAL TIMER

Output	Supply Voltage	Order Code
Relay	230V AC +%10 -%20	ETM1411-230VAC
	12V AC/DC ±%10	ETM1411-12
	24V AC/DC ±%10	ETM1411-24

Connection Diagram

⚠ CAL ETM1411 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 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 out by qualified staff and must be according to the relevant locally applicable regulations.

www.cal-controls.com
CAL Controls
ETM1411-230VAC
DIGITAL TIMER
SN: XXXXXXXXX
OUT 250V AC 8A RESISTIVE LOAD
230V AC +10% -20% 50/60Hz 3VA
START
1 2 3 4 5 6 7 8 9 10 11 12
CE

www.cal-controls.com
CAL Controls
ETM1411-12
DIGITAL TIMER
SN: XXXXXXXXX
OUT 250V AC 8A RESISTIVE LOAD
12V AC/DC ±10% 50/60Hz 3VA
START
1 2 3 4 5 6 7 8 9 10 11 12
CE
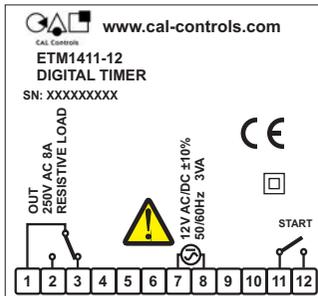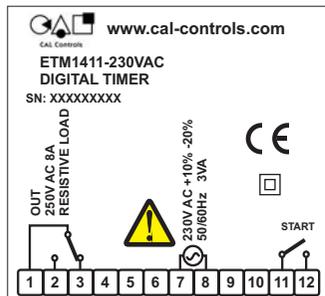
▫ Equipment is protected throughout by DOUBLE INSULATION.

Holding screw 0.4-0.5Nm

NOTE :
SUPPLY:
184-253V AC 50/60Hz 3VA
7 ← Line
8 ← Neutral
Fuse F 100 mA 250V AC
Switch
230V AC Supply
Cable size: 1,5mm²
⚠ Fuse should be connected.
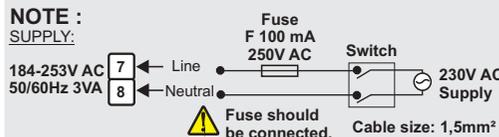
Note:
1) Mains supply cords shall meet the requirements of IEC 60227 or IEC 60245.
2) In accordance with the safety regulations, the power supply switch shall bring the identification of the relevant instrument and it should be easily accessible by the operator.

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/DC ±%10, 50/60Hz or 12V AC/DC ±%10, 50/60Hz.
Power consumption	Max 3VA
Wiring	2.5mm² screw-terminal connections
Scale	Selectable 99:59 min. or hour.
Sensitivity	1 sec.
Time Accuracy	±%1
Indicator	4 digits, 12mm, 7 parts yellow LED
EMC	EN 61326-1: 1997, A1: 1998, A2: 2001 (Performance criterion B is satisfied for EMC tests. The device is designed to operate in controlled electromagnetic environment)
Safety requirements	EN 61010-1: 2001 (pollution degree 2, overvoltage category II)

OUTPUT	
OUT	Relay: 250V AC, 8A (for resistive load), NO+NC
Life expectancy for relay	Mechanical 30.000.000 operation; Electrical 100.000 operation

START INPUT	
Input type	Control with mechanical contact.
On and Off times for input pulses	Min. = 100ms, Max. = ∞

HOUSING	
Housing type	Suitable for panel mounting
Dimensions	W77xH34xD70mm
Weight	Approx. 240g (after packing)
Enclosure material	Self extinguishing plastics

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

Dimensions

85mm
34mm
ETM1411
OUT HOUR MIN
59:59
SET
START
STOP
CAL   DIGITAL TIMER

Depth
70mm
8mm
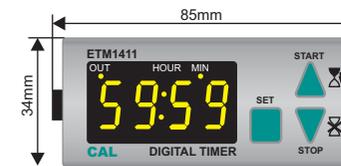
For removing mounting clamps:
Push out the mounting clamp in direction **1** as shown in the figure below. Then, pull out the clamp in direction **2**.
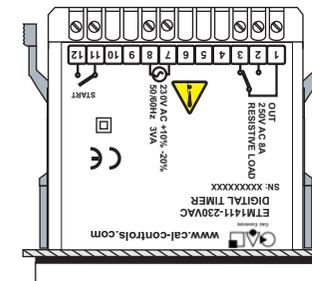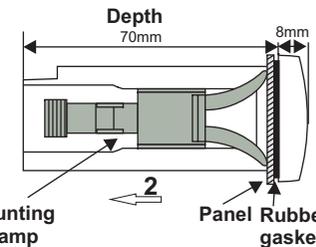
mounting clamp
mounting clamp
Panel   Rubber gasket
2
1

Panel cut-out
71mm
29mm

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

ETM1411-E-03

INDICATOR OF CONTACT OUTPUT
INDICATOR OF SELECTING HOUR
INDICATOR OF SELECTING MINUTE

ETM1411
OUT   HOUR MIN
START
SET
STOP
CAL   DIGITAL TIMER
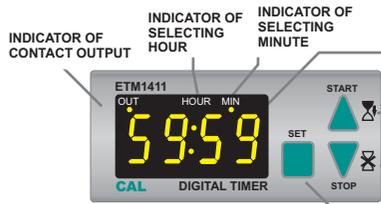
Displayed time value in the run mode, parameter value or name in the programming mode.

When held down for one second in the run mode, timer runs. Used for selecting menu and increasing setpoint value of the parameters in the programming mode and for increasing the setpoint value in the run mode. When held down for a few seconds, the change rate accelerates.

When held down for one second in the run mode, timer and voiced warning are stopped.(When $Str.t. = tYP.1$ mode is selected, timer and voiced warning can be stopped if external start input is off). Used for selecting parameters and decreasing the setpoint value in the programming mode and for decreasing the setpoint value in the run mode. When held down for a few seconds, the change rate accelerates.

Used for adjusting the value of the setpoint in the run mode and for adjusting the selected parameter in the programming mode. For adjusting the selected parameter, while holding [SET] key, the value can be adjusted by using ▲ and ▼ keys.

Run Mode

30:59 **Time value** → [SET] → 60:00 → ▼ → 59:59 → ▲ → 60:00 → [SET] →

When pressed [SET] **key, TIMER set value flashes and by using** ▲ **and** ▼ **keys the value can be adjusted with the step defined by** $in.dE$.

If [SET] key is pressed and held for 3 seconds, programming mode is entered.

If [SET] key is pressed, run mode is entered.

Programming Mode

⌐t.S.⌐ → ▲ → ⌐t.c.⌐ → ▲ → ⌐SE⌐ → ▲ →

▼

t.LoL — The lower limit of the setpoint. Adjustable between 0.01 and $t.uPL$.

▼

t.uPL — The upper limit of the setpoint. Adjustable between $t.LoL$ and 99.59.

▼

in.dE — Increase or decrease step of the setpoint. Adjustable between 1 and 30.

▼

t.bAS — Selection of time unit. If min is selected, time can be adjutable max. 99:59 min. If $Hour$ is selected, time can be adjutable max. 99:59 h.

▼

Str.t. — Selection of start type. By external start input and start/stop keys, timer can be run and stopped. 4 different selection types are defined in the control diagram.

▼

Out.t. — Selection of relay output. If $tYP.0$ is selected, timer runs by start and relay contact shuts. When time is over, relay contact opens. If $tYP.1$ is selected, timer runs by start. When time is over, relay contact shuts.

▼

Sond. — Selection of buzzer voice type. Adjustable 16 different voice types. If this parameter is selected 0, voiced warning is canceled.

▼

S.Cod. — Access code for entering security menu. This parameter should be 411.

▼

A.-t.S. — Access code for timer set menu. $nonE$= Menu is invisible. $P.YES$= Parameters of menu are changeable. $P.no$= Parameters of menu are only visible.

▼

A.-t.c. — Access code for timer configuration menu. $nonE$= Menu is invisible. $P.YES$= Parameters of menu are changeable. $P.no$= Parameters of menu are only visible.

▼

CONTROL DIAGRAM BY EXTERNAL START INPUT

Out.t. / Str.t.	tYP.0	tYP.1
tYP.0	Power / Out / Start input / Stop key / Indicator	Power / Out / Start input / Stop key / Indicator
tYP.1	Power / Out / Start input / Indicator	Power / Out / Start input / Indicator
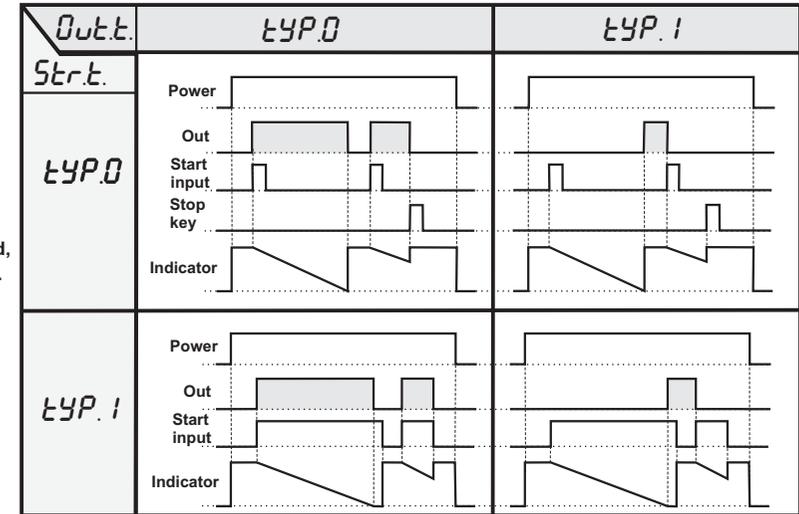
CONTROL DIAGRAM BY START & STOP KEYS

Out.t. / Str.t.	tYP.0	tYP.1
tYP.2	Power / Out / Start key / Stop key / Indicator	Power / Out / Start key / Stop key / Indicator
tYP.3	Power / Out / Start key / Stop key / Indicator	Power / Out / Start key / Stop key / Indicator

ETM1411-E-03