

# E2CT, E1CT, E1NM, E2NM, ECH

## Технические характеристики

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Ижевск (3412)26-03-58	Набережные Челны (8552)20-53-41	Севастополь (8692)22-31-93	Череповец (8202)49-02-64
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Россия (495)268-04-70	Киргизия (996)312-96-26-47	Казахстан (7172)727-132	

# Counters

## Electromechanical Hour Meter

### Types E1HM4



- 7/8 digits hour meter
- Without reset
- High shock resistance
- Long life service
- IP65 front

### Product Description

This very small hour meter can be used as meter for service intervals in many applications such as: UV lamps, small appliances, respiratory ventilators, oxygen machines, dialysis machines.

### Ordering Key

**E1HM4 0 351**

Type \_\_\_\_\_  
Housing type \_\_\_\_\_  
Supply voltage \_\_\_\_\_  
Stock items: E1HM40071  
E1HM40075  
E1HM40084  
E1HM40351

### Approvals



### Housing

0	See fig.1
1	See fig.2
2	See fig.3
4	See fig.4

### Supply Voltages and Consumption<sup>1</sup>

	Supply voltage	AC 50Hz	AC 60Hz	VDC
071	20÷30	0.3VA	-	-
081		-	0.3VA	-
072	42÷48	0.25VA	-	-
082		-	0.25VA	-
074	100÷130	0.6VA	-	-
084		-	0.6VA	-
381	187÷264	-	-	0.75W
075		1.2VA	-	-
085	-	-	1.2VA	-
351	10÷30	-	-	0.5W
353	36÷80	-	-	0.9W

### General Data

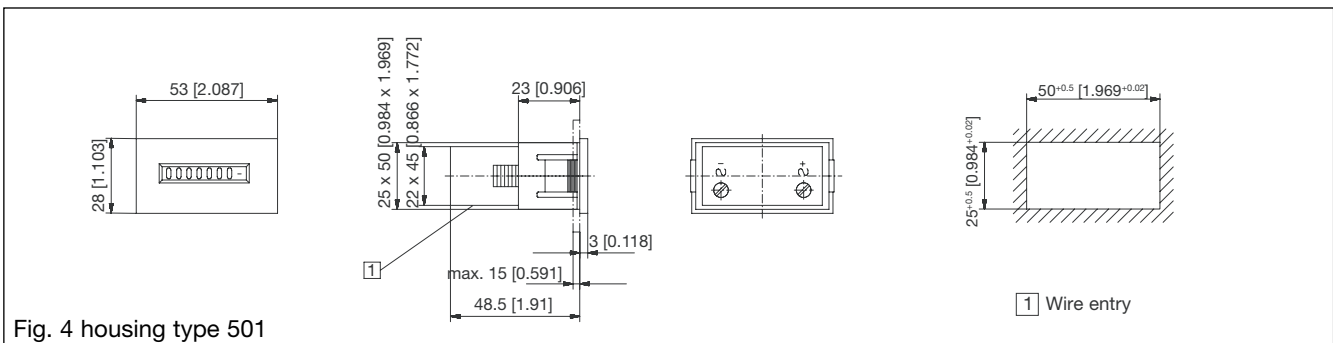
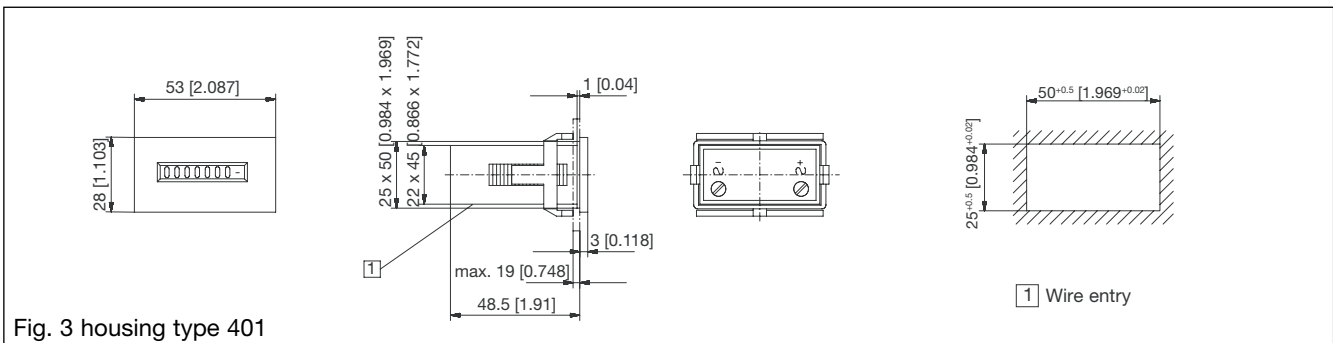
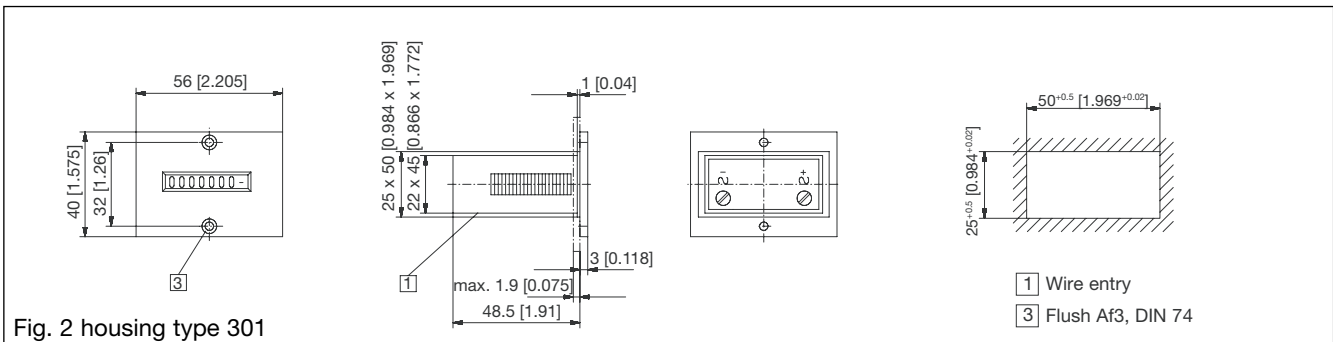
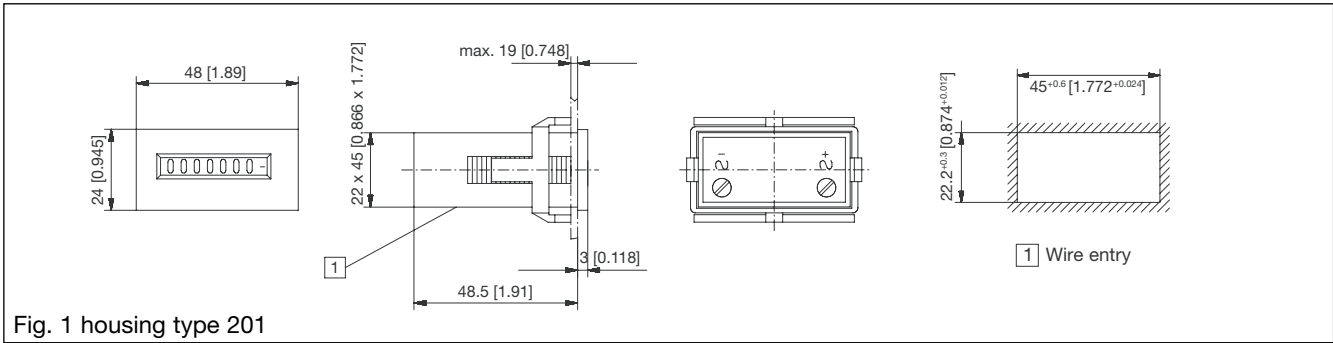
Display	AC DC	7 digits (99999.99) 8 digits (999999.99)
Dimensions of digits		H 4mm/0.158"
Colour of digit figures		White on Black (decimal: red on black)
Operating temperature		-10...+50°C/14...122°F
Mounting position		Any
Connections		Screw terminals max torque 0.8Nm
Housing colour		Black RAL 9005
Housing material		Plastic
Weight		50g/1.764oz
Panel cut-out HxL		22.2x45mm / 0.874"x1.772" 25.0x50mm / 0.984"x1.969"
Degree of protection		IP65 (are sealed)

### Measuring Specifications

Counting mode	adding
On time	100%
Reset	No
Accuracy	
AC	Supply freq. +30ms
DC	<0.003% (24h)

<sup>1</sup> The available voltages are those where the consumption is indicated

## Dimensions mm/inches



## Options

Upon request	Flat pins connection 0.8x6.3mm (0.032x0.248")
Upon request	Screw terminals with terminal cover

# Counters

## DIN rail Electromechanical Hour Meter

### Type E1HM35



- 7 digit micro adding counter
- Large temperature range
- DIN rail mounting
- 2 modules DIN wide
- DC version quartz driven
- IP65 front protection

E1HM35

### Product Description

This is an electromechanical hour meter designed for DIN rail mounting. It is particularly suitable for distribution panel or control cabinet installations. It can be used for general time counting in plants, houses and equipments.

### Ordering Key

**E1HM35 351**

Type \_\_\_\_\_  
 Supply Voltage \_\_\_\_\_  
 Stock items: E1HM35075  
 E1HM35351

### Approvals



### Supply Voltage

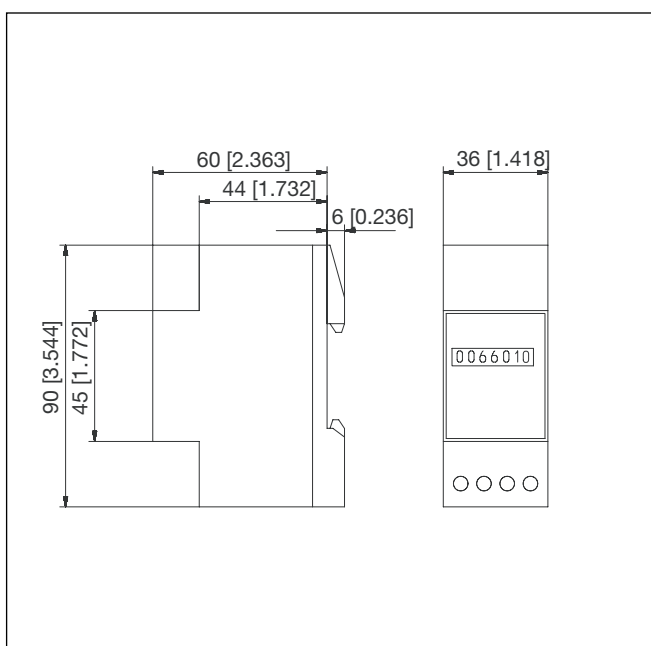
351	from 10 to 27VDC
075	230VAC ±10%, 50Hz

### General Data

Display	7 digits (99999.99h)
Dimension of counting digits	3.5mm/1.14"
Colour of figures	White on Black (decimal black on white)
View angle	Front
Operating temperature	
AC power	-10...+70°C/-14...158°F
DC power	-10...+50°C/-14...122°F

Mounting position	Any
housing colour	Grey RAL 7035
Dimensions H x W x D	90x36 (2 DIN modules) 60mm
Weight	60g/2.116oz
Protection degree	IP65 (screw terminal IP20)
Power consumption	
AC	2.5VA
DC	1.0W

### Dimensions mm/inches



# Counters

## Electromechanical counters

### Types E2CT4



- 5 digit miniature pulse counter
- Long operating life (50Mio pulse)
- 130mW consumption
- With reset button
- All AC and DC voltages
- Types to fit DIN 24x48
- Suitable for battery operation
- IP41

## Product Description

This range of very reliable and durable counters is indicated for applications where small dimensions and low power

consumption is a must: self powered devices, vending machines, automatic message systems.

## Ordering Key

**E2CT4 5 001 012**

Type \_\_\_\_\_  
 Digits \_\_\_\_\_  
 Housing type \_\_\_\_\_  
 Voltages \_\_\_\_\_

Stock items: E2CT45210013  
 E2CT45210051  
 E2CT45210054  
 E2CT45210056  
 E2CT45210210

## Approvals



## Digits

5	5 digits
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## Measuring Specifications

Counting mode	adding
Max pulse speed	10 pulse/s
On time	50ms
Pulse interval	> 50Mio
Reset	Front reset push button

## General Data

Dimensions of digits	1.7x4mm/0.066"x0.158"
Colour of digit figures	White on Black
Figures shaft	Stainless steel
Power consumption	
AC	0.75VA ≤(115V) 1.5VA (230V)
DC	0.5W (130mW on request)
Operating temperature	-10...+50°C/14...122°F
Operating life	>50x10 <sup>6</sup> pulses
Mounting position	Any
Connections	
Panel and surface mount	Flying leads AWG22 150mm length
PCB	Round Ø1.66mm/0.065" pins
Degree of protection	IP41

## Housing

010	Housing without front panel, rear screw mount (fig.1)
011	Base mount with two mounting holes (fig.2)
056	Built in counter with spring, 31x20mm [1.221x0.788"] (fig.3)
210	Panel mount with spring clip 31x20mm [1.221x0.788"] (fig.4)
510	DIN housing 24x48, 22x45mm [0.866x1.772"] (fig.5)
910	Built in counter with spring, 37.5x23.5mm [1.477x0.925"] (fig.6)

## Voltages

Housing Type	12 VDC	24 VDC	24 VAC	115 VAC	230 VAC
010	012	013	051	054	056
011	012	013	051	054	056
056	012	013	051	054	056
210	012	013	051	054	056
510	012	013	051	054	056
910	012	013	051	054	056

**Dimensions** mm/inches

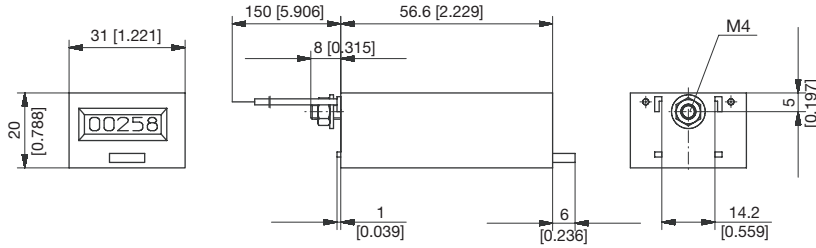


Fig. 1 housing type 010

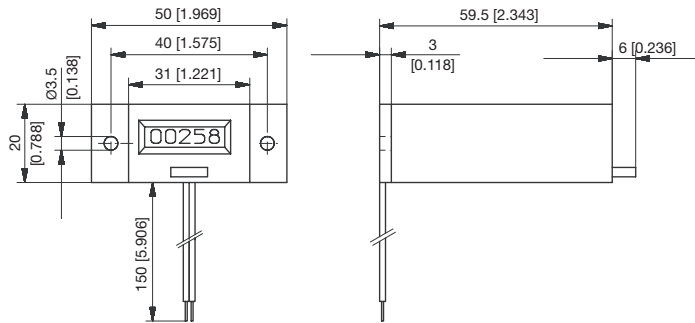


Fig. 2 housing type 011

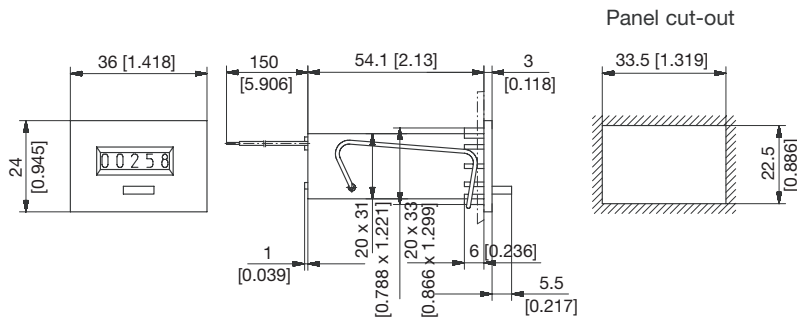


Fig. 3 housing type 056

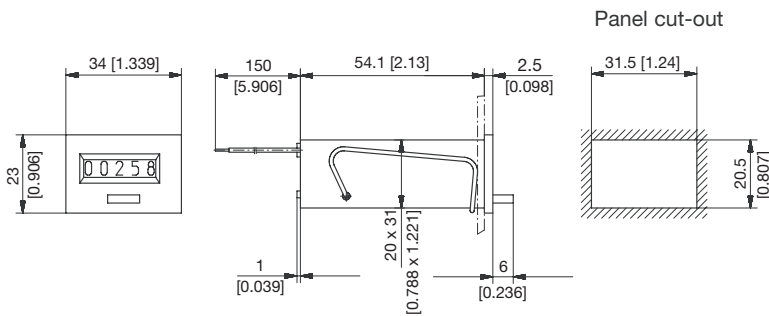


Fig. 4 housing type 210

**Dimensions** mm/inches

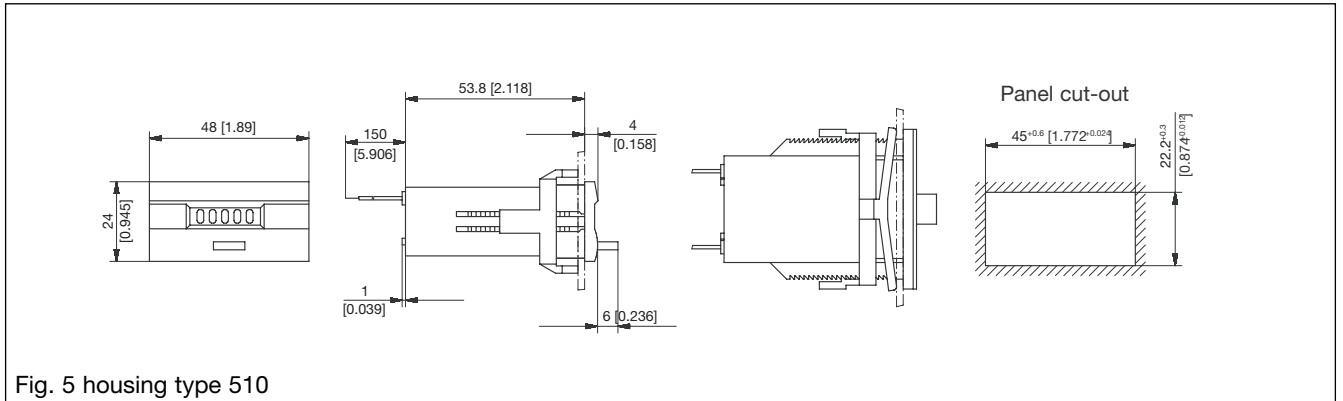


Fig. 5 housing type 510

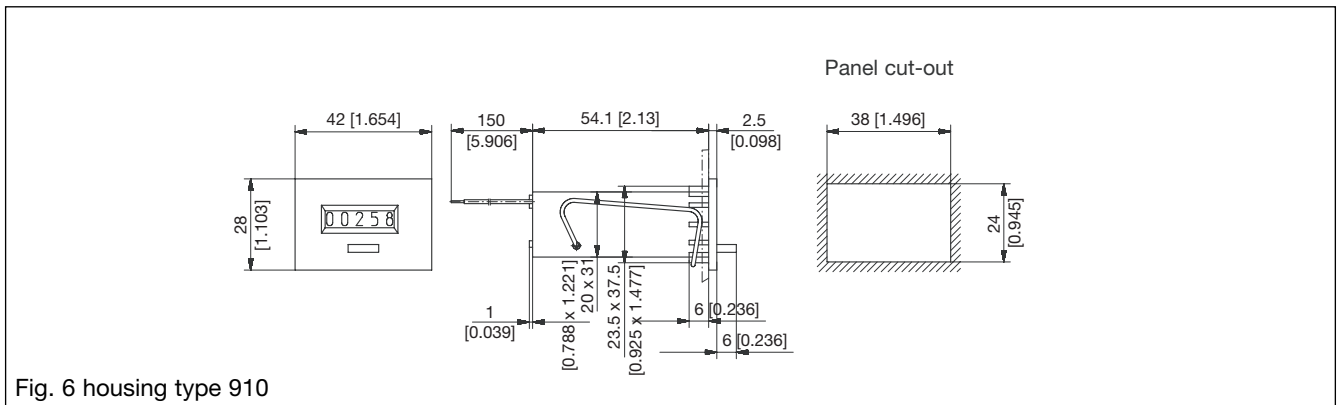


Fig. 6 housing type 910

# Electromechanical Hours Meter Type E2HM4



E2HM4

- 7/8 digits hour meter
- High shock and impact resistance
- Without reset
- Small dimensions
- Large optical digit figures
- 5 years warranty
- Data retention when power is off
- Long service life
- Protection IP 52, suitable for any mounting position

## Product Description

Low cost, stepper-motor driven hour meters for panel mount. General time counting, service intervals for measuring devices (respiratory ventilators,

oxygen machines, dialysis machines), small appliances, UV lamps, display panels in vehicles.

## Ordering Key

**E2HM4 075**

Type \_\_\_\_\_  
Voltage code \_\_\_\_\_

Stock items: E2HM4071  
E2HM4075  
E2HM4084  
E2HM4351

## Approvals



## General data

Display DC	8 digit
AC	7 digit
<b>Dimensions of digits</b>	
Height	4mm/0.158"
Width	1.7mm/0.066"
<b>Viewing angle</b>	Frontal
<b>Colour of digit figures</b>	White and Red on Black
<b>Operating indicator</b>	
AC	Fast rotating wheel of the running time meter with red dashes
DC	1/100h display turns continuously by 1 digit in 36s
<b>Ambient temperature</b>	-15...+50°C/5°F...122°F
<b>Mounting position</b>	Panel mounting
<b>Connections</b>	Screw terminal for cable diameter up to 2.5mm²/ 1612.9square inch
<b>Max. tightening torque</b>	0.8Nm
<b>Housing</b>	Black plastic RAL 9005
<b>Dimensions</b>	48x48 acc. to DIN 43700 STD
<b>Weight</b>	48g/1.673oz
<b>Panel cut-out</b>	46x46mm / 1.89"x1.89"
<b>Protection degree</b>	IP52 (IP65 version with optional seal gasket between counter and bezel or the front side)

## Options

Upon request	IP65
Upon request	Wire entry from behind, screw fixing from rear

## Supply Voltages and Consumption<sup>1</sup>

	Supply voltage	Power Consumption		
		AC 50Hz	AC 60Hz	VDC
071	20÷30	-0.3VA	-	-
081		-	-0.3VA	-
072	42÷48	-0.25VA	-	-
082		-	-0.25VA	-
074	100÷130	-0.6VA	-	-
084		-	-0.6VA	-
381		-	-	750mW
075	187÷264	-1.2VA	-	-
085		-	-1.2VA	-
079	360÷440	-1.65VA	-	-
089		-	-1.65VA	-
351	10÷30	-	-	500mW

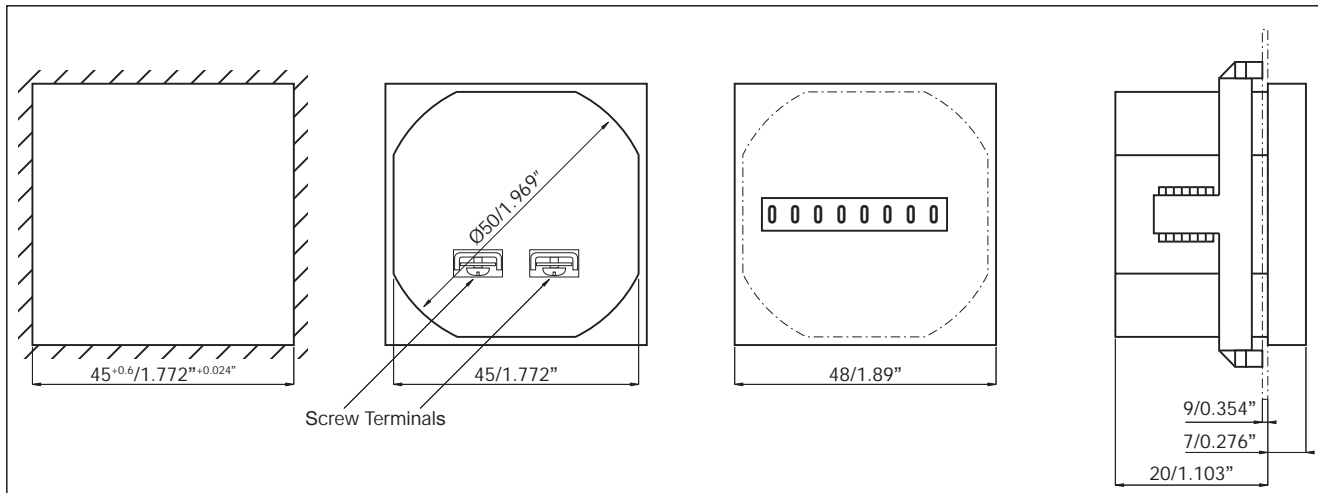
## Measuring Specifications

<b>Time range</b>	
DC	0.01...999 999.99h
AC	0.01...99 999.99h
<b>ON time</b>	100%
<b>Counting system</b>	Adding
<b>Reset</b>	No
<b>Accuracy</b>	
AC:	Supply frequency + 30ms < 0.003% (24h)
DC:	

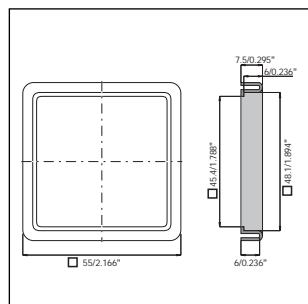
<sup>1</sup> The available voltages are those where the consumption is indicated



## Dimensions mm/inches



## Accessories



Slip-on bezel  $\square$  55

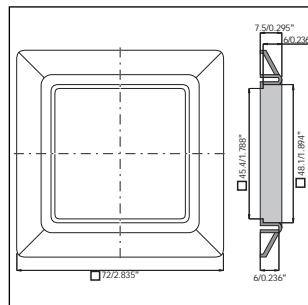
NI-ACC T008171

Bezel adapter

$\square$  55x55mm/2.166"x2.166"  
for adapting cut-out  
50x50mm/1.969"x1.969"  
to 45x45mm/1.772"x1.772"

Colour

Black



Slip-on bezel  $\square$  72

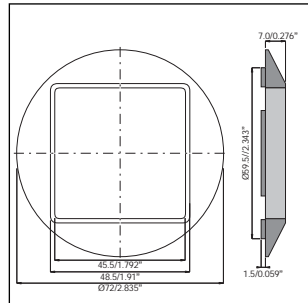
NI-ACC T008177

Bezel adapter

$\square$  72x72mm/2.835"x2.835"  
for adapting cut-out  
50x50mm/1.969"x1.969"  
to 45x45mm/1.772"x1.772"

Colour

Black



Slip-on bezel  $\text{Ø}72$

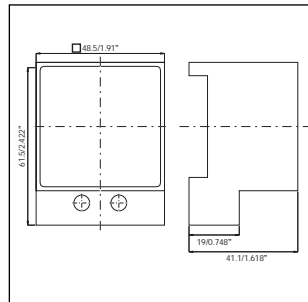
NI-ACC N510226

Bezel adapter

$\text{Ø}72$ mm/2.835"  
for adapting cut-out  
 $\text{Ø}60$ mm/2.362"  
to 45x45mm/1.772"x1.772"

Colour

Black



DIN Rail mounting adapter

NI-ACC G008040

Counter adapter

for wire entry from below;  
mounting of the adapter  
with screw fixing from rear.  
Flat pin 0.8x6.3mm  
/0.032"x0.248"

Colour

Black

# Electromechanical Hours Meter Type E2HM35

CARLO GAVAZZI



- 6 digits hour meter
- High shock resistance
- Low power consumption
- Water proof IP65
- Magnified figures

## Product Description

This hour meter is particularly designed to fit applications on moving devices and harsh environments such as: utility vehicles, construction machines, generators, fork lift trucks, car washes, etc...

## Ordering Key

**E2HM35 2 302**

Type \_\_\_\_\_  
Mounting type \_\_\_\_\_  
Voltages \_\_\_\_\_

Stock items: E2HM352301  
E2HM352302  
E2HM352373

## Approvals



## Voltage Code

373	10÷80VDC
301	115VAC
302	230VAC

## Mounting Type

1	Fig. 1
2	Fig. 2

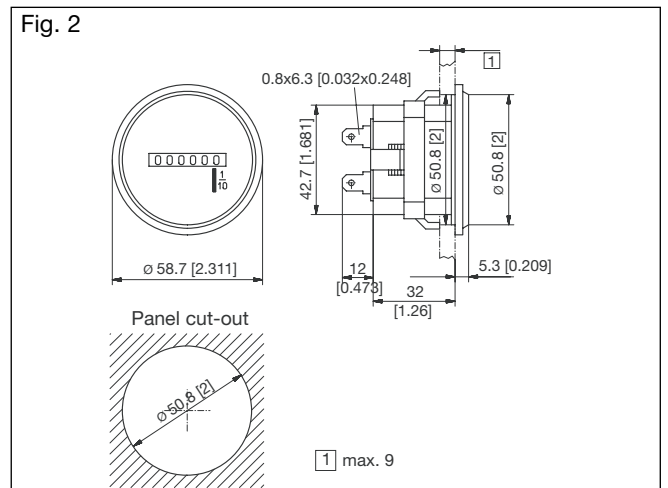
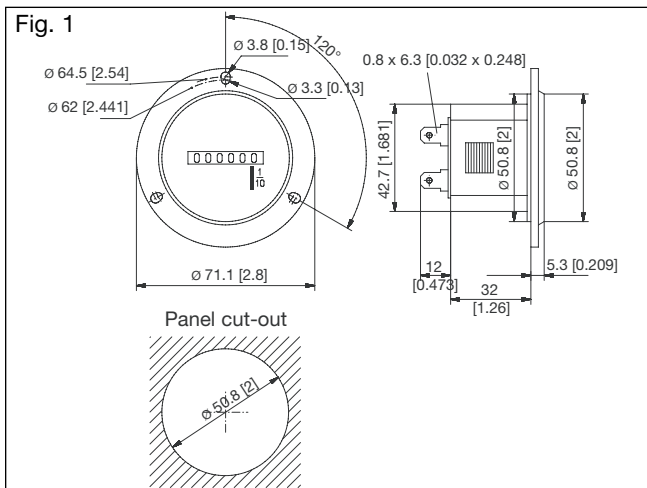
## General data

Dimensions of digits	3.5mm/0.138"
Colour of digit figures	White on Black
Power consumption	
AC	0.4VA max.
DC 12V	0.08W max.
DC 24V	0.7W max.
Rated voltages	115/230VAC ±10% 50/60Hz 10...80VDC
Operating temperature	-30...+65°C/-22°F...149°F
Mounting position	Any
Housing	Plastic
Weight	55g/1.94oz
Degree of protection	IP65

## Measuring Specifications

Time range	999 99.9h
ON time	100%
Counting system	Adding
Reset	No
Accuracy	<0.02% over full range

## Dimensions mm/inches



# Counters

## Electromechanical counter/hour meter

### Types ECH4



ECH4

- 2 instruments combined
- No reset
- High shock resistance
- Magnified figures

## Product Description

This device is a combination of 2 instruments into a single housing. It features an hour meter in combination of pulse counter. It is suitable

to measure service intervals together with counting, respiratory ventilators, UV lamps and small appliances.

## Approvals



## Supply Voltages and Consumption<sup>1</sup>

	Supply voltage	Power Consumption		
		AC 50Hz	AC 60Hz	VDC
071	20÷30	0.53VA	-	-
081		-	0.53VA	-
072	42÷48	0.53VA	-	-
082		-	0.53VA	-
074	100÷130	1.43VA	-	-
084		-	1.43VA	-
381	187÷264	-	-	11.75W
075		3.0VA	-	-
085	-	-	3.0VA	-
351	10÷30	-	-	1W
353	36÷80	-	-	1.65W

## General Data

Dimensions of digits	1.7x4mm/0.066"x0.158"
Colour of digit figures	White on Black
pulse counter	White on Black for Hours
hour meter	Red on Black for decimals
Figures shaft	Stainless steel
Operating temperature	-15...+50°C/5...122°F
Operating life	>50x10 <sup>6</sup> pulses
Mounting position	Any
Connections	Flat pin 0.8x6.3mm with screw terminals tightening max. torque 0.8Nm
Degree of protection	IP65 (front)
Housing colour	Black RAL 9005
Weight	65g/2.29oz

## Ordering Key

**ECH4 0 071**

Type \_\_\_\_\_  
Housing type \_\_\_\_\_  
Supply Voltages \_\_\_\_\_  
Stock items: ECH40075  
ECH40084  
ECH40351

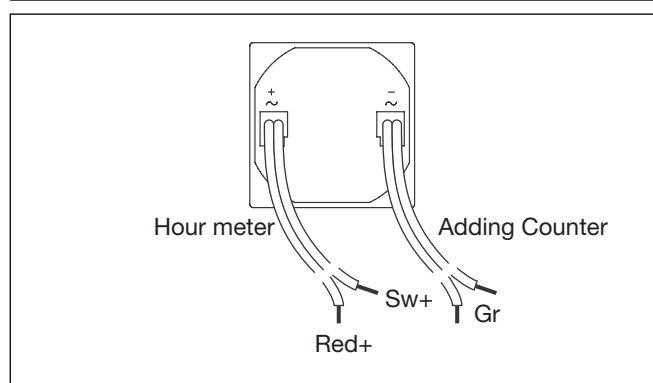
## Housing

0	(fig.1)
1	(fig.2)
2	(fig.3)

## Measuring Specifications

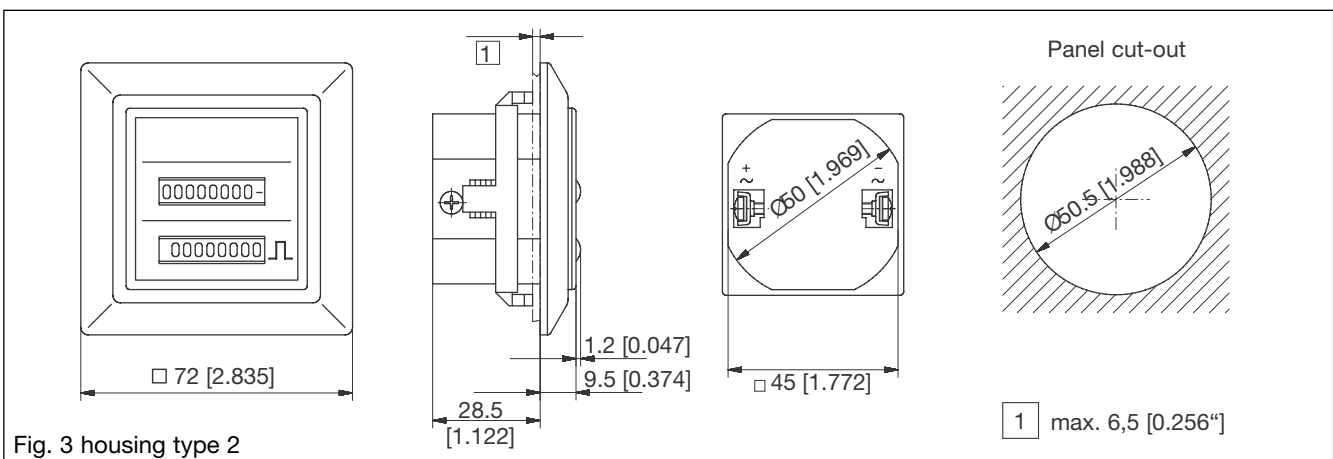
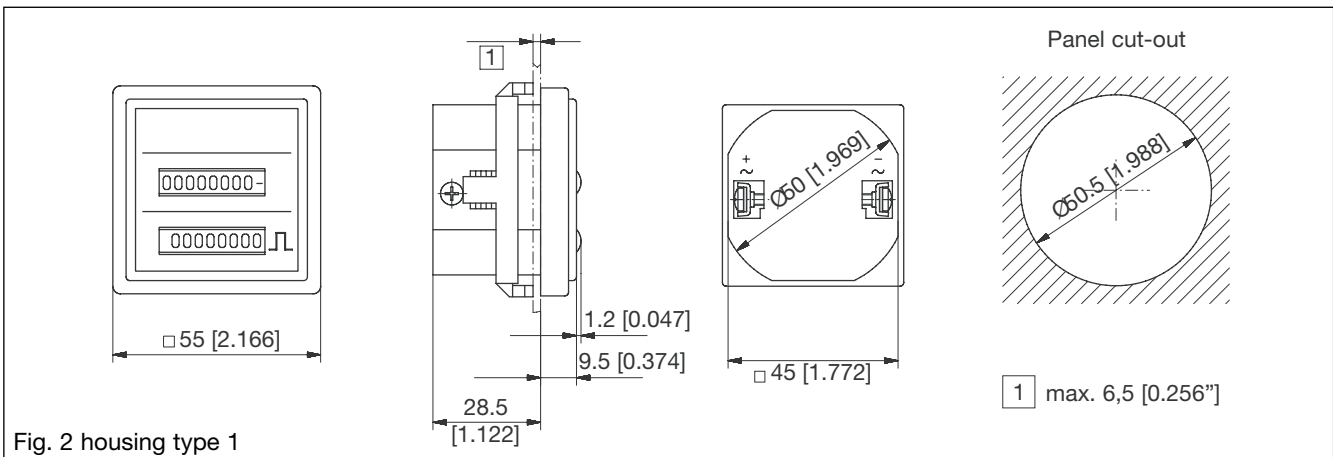
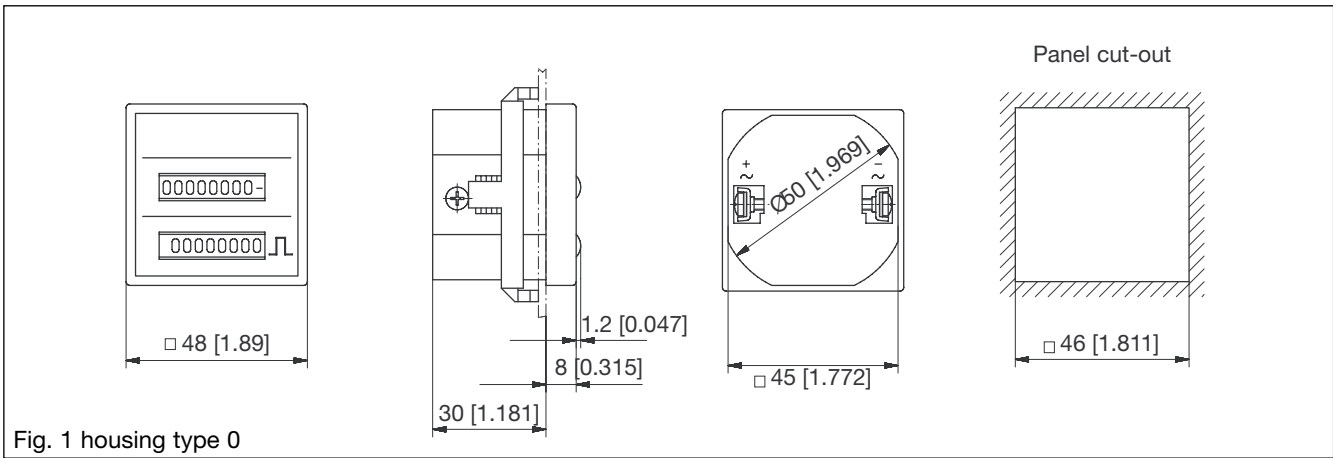
Counting mode	adding
Accuracy	
AC	supply frequency +30ms
DC	<0.003% (24h)
Reset	No
Hour meter	
AC	999999.99h (8 <sup>th</sup> digit rotating dash)
DC	999999.99h (last digit 1 turn every 36s)
On time	100%

## Meter with separate connections (rear view)



<sup>1</sup> The available voltages are those where the consumption is indicated

**Dimensions** mm/inches



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Иваново (4932)77-34-06	Мурманск (8152)59-64-93	Саратов (845)249-38-78	Челябинск (351)202-03-61
Ижевск (3412)26-03-58	Набережные Челны (8552)20-53-41	Севастополь (8692)22-31-93	Череповец (8202)49-02-64
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