

Pulse counters, electromechanical

Standard counters

4 or 6 digits with/without reset, electrical reset (AC+DC)

Mk 14 / Mk 16



The standard totalizers Mk 14 (with manual reset) and Mk 16 (with manual or manual and electrical reset) boast a robust construction.

They are ideal for use in harsh industrial environments.



Characteristics

- 6-digit totalizer without reset.
- 4- or 6-digit totalizer with manual, manual and electrical reset.
- Mk 16 has integrated electrical reset.

Benefits

- Very long service life (200 million pulses).

Applications

Piece counting, event counting, time and charge metering.

Type series

Description	reset	4 digits	6 digits	Order information
Panel mount with front bezel and 2 mounting holes	manual	Mk 14.11	Mk 16.11	· Art. no. · For special voltages, please give type, voltage and series e.g.: Mk 16.21, 48 V AC, type a
Panel mount for clip mounting	without	–	Mk 16.20	
	manual	Mk 14.21	Mk 16.21	
	manual and electrical	–	Mk 16.23	

Technical data

Electrical connection		flat pin 0.8 x 2.8 mm [0.032 x 0.11"] with flat push on connector
Rated voltage	type 0 / 1 / a	12 / 24 / 48 / 60 / 115 / 230 V DC ±10 % 24 / 48 / 60 / 115 / 230 V AC ±10 %
Housing		Makrolon, similar to RAL 7001
Height of figures		4 mm [0.16"]
Color of figures		white on black
Counting mechanism shaft		stainless steel
Mounting position		any
Operating life		approx. 200 x 10 ⁶ pulses
Protection	with reset without reset	IP40 (front side) IP41 (front side)
Weight	reset manual reset electrical	Mk 14 – 85 g [3.00 oz] Mk 16 – 100 g [3.53 oz] Mk 14 – 145 g [5.12 oz] Mk 16 – 140 g [4.94 oz]
Test voltage		2000 V ~ effective
Vibration resistance	3 g 6 g 10 g	up to 10 Hz up to 15 Hz independent of position 20 - 300 Hz
EMC standards		EN 55011 class B EN 61000-6-2, EN 61000-6-3
Device safety	designed to protection class 2 application area	EN 61010 part 1 2 pollution level 2

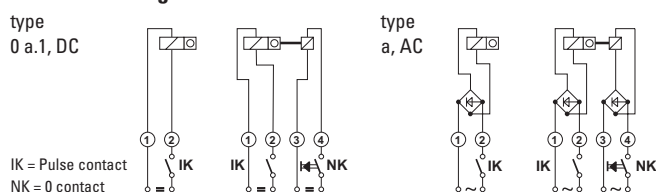
Options

Extended temperature range

Reset magnet

Power consumption	DC	approx. 9 W
	AC	approx. 12 VA
Rated voltage		12 / 24 / 48 / 60 / 115 / 230 V DC ±10 % 24 / 48 / 60 / 115 / 230 V AC ±10 %
Permissible residual ripple		max. 48 %
Minimum pulse time		0.25 sec, during 0.3 sec no count pulse is allowed
Cycle duration factor	Mk 16 Mk 14	15 %, max. 1.0 min 10 %, max. 40 sec

Connection diagram

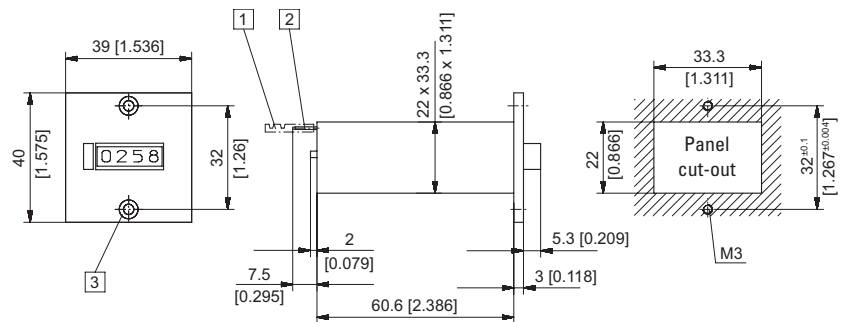


Pulse counters, electromechanical

Standard counters	4 or 6 digits with/without reset, electrical reset (AC+DC)	Mk 14 / Mk 18
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Type / Counting mechanism									
Voltage	Type	Pulse frequency max.	Pulse on time min.	Pulse interval min.	Pulse ratio	On-time	Power consump. approx.	Permi. residual ripple max.	Operating temp. (non-condensing)
V DC	0	10 Hz	64 ms	40 ms	3 : 2	100 %	1 W	48 %	-10°C ... +45°C [+14°F ... +113°F]
V DC	1	25 Hz	24 ms	16 ms	3 : 2	100 %	2 W	48 %	-10°C ... +45°C [+14°F ... +113°F]
V AC	a	18 Hz	22.2 ms	33.3 ms	2 : 3	100 %	2.9 VA	–	-10°C ... +45°C [+14°F ... +113°F]

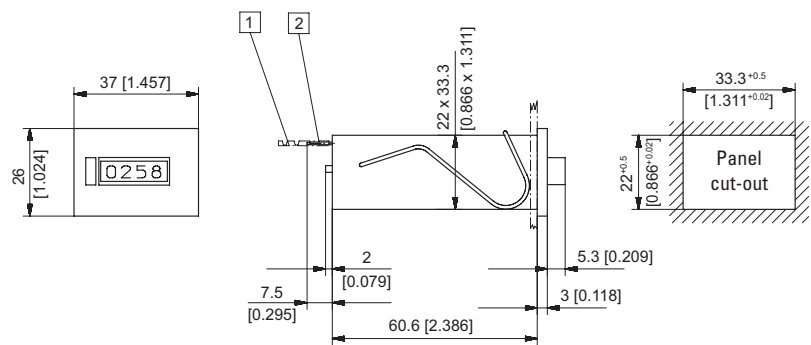
Panel mount, front bezel with 2 mounting holes
4 digits, manual reset
Type Mk 14.11



- 1 Flat push on connector 0.8 x 2.8 [0.032 x 0.11], tinned
- 2 Flat pin 0.8 x 2.8 [0.032 x 0.11], tinned
- 3 Countersinking Af3 DIN 74 Color of housing black, Art. no. 1.310.111.XXX

Type	Voltage	Display	Art. no.			
			12 V	24 V	115 V	230 V
Mk 14.11	DC (10 Hz) / 0	4 digits, manual reset	1.310.110.012	1.310.110.013		
	DC (25 Hz) / 1		1.310.110.032	1.310.110.033		
	AC (18 Hz) / a			1.310.110.061	1.310.110.064	1.310.110.066

Panel mount, for clip mounting
4 digits, manual reset
Type Mk 14.21



- 1 Flat push on connector 0.8 x 2.8 [0.032 x 0.11], tinned
 - 2 Flat pin 0.8 x 2.8 [0.032 x 0.11], tinned
- Color of housing black, Art. no. 1.310.211.XXX

Type	Voltage	Display	Art. no.			
			12 V	24 V	115 V	230 V
Mk 14.21	DC (10 Hz) / 0	4 digits, manual reset	1.310.210.012	1.310.210.013		
	DC (25 Hz) / 1		1.310.210.032	1.310.210.033		
	AC (18 Hz) / a			1.310.210.061	1.310.210.064	1.310.210.066

Pulse counters, electromechanical

Standard counters

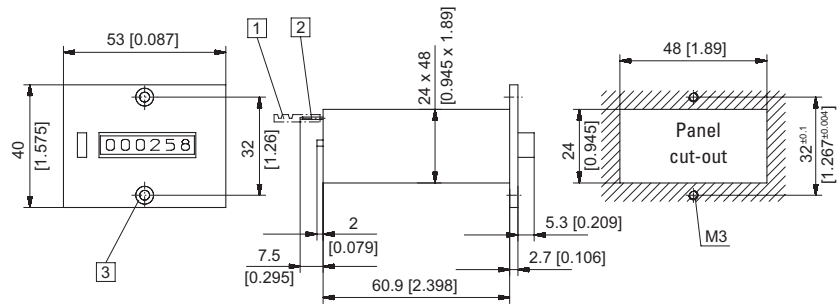
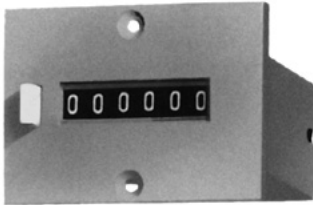
4 or 6 digits with/without reset, electrical reset (AC+DC)

Mk 14 / Mk 16

**Panel mount, front bezel with
2 mounting holes**

6 digits, manual reset

Type Mk 16.11



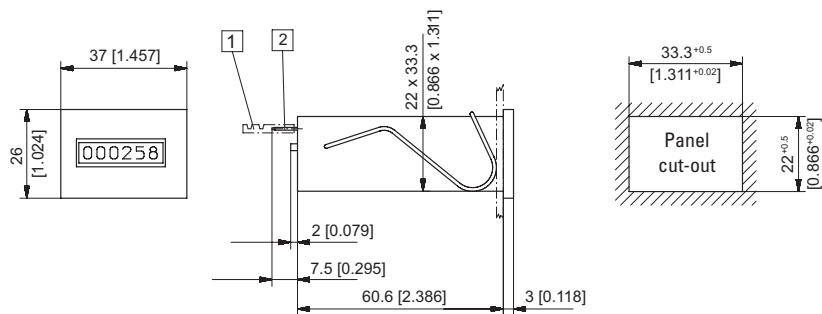
- 1 Flat push on connector 0.8 x 2.8 [0.032 x 0.11], tinned 2 Flat pin 0.8 x 2.8 [0.032 x 0.11], tinned
3 Countersinking Af3 DIN 74 Color of housing black, Art. no. 1.340.111.XXX

Type	Voltage	Display	Art. no.			
			12 V	24 V	115 V	230 V
Mk 16.11	DC (10 Hz) / 0	6 digits,	1.340.110.012	1.340.110.013		
	DC (25 Hz) / 1	manual reset	1.340.110.032	1.340.110.033		
	AC (18 Hz) / a			1.340.110.061	1.340.110.064	1.340.110.066

Panel mount for clip mounting

6 digits, without reset

Type Mk 16.20



- 1 Flat push on connector 0.8 x 2.8 [0.032 x 0.11], tinned 2 Flat pin 0.8 x 2.8 [0.032 x 0.11], tinned
Color of housing black, Art. no. 1.330.201.XXX

Type	Voltage	Display	Art. no.			
			12 V	24 V	115 V	230 V
Mk 16.20	DC (10 Hz) / 0	6 digits,	1.330.200.012	1.330.200.013		
	DC (25 Hz) / 1	without reset	1.330.200.032	1.330.200.033		
	AC (18 Hz) / a			1.330.200.061	1.330.200.064	1.330.200.066

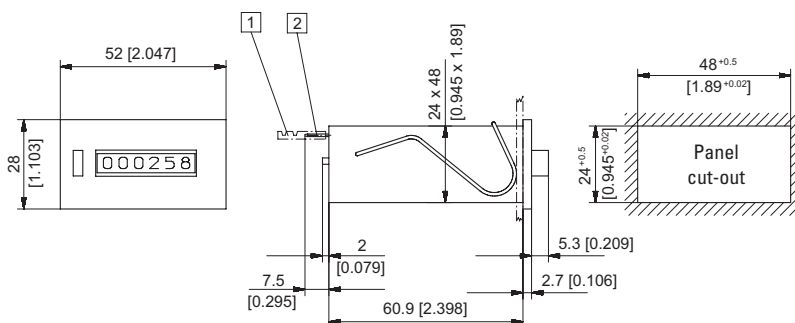
Pulse counters, electromechanical

Standard counters **4 or 6 digits with/without reset, electrical reset (AC+DC)** **Mk 14 / Mk 16**

Panel mount for clip mounting

6 digits, manual reset

Type Mk 16.21



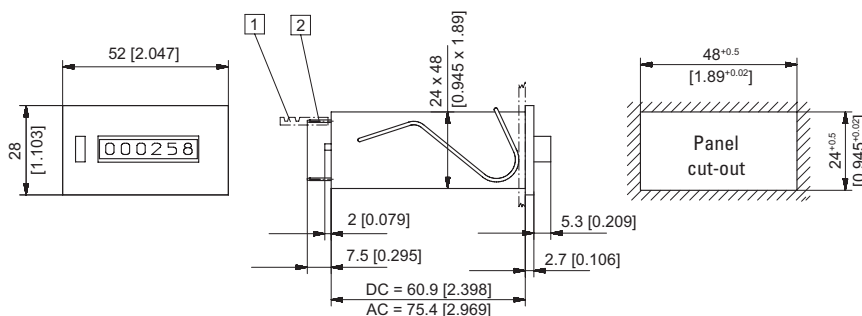
1 Flat push on connector 0.8 x 2.8 [0.032 x 0.11], tinned 2 Flat pin 0.8 x 2.8 [0.032 x 0.11], tinned
Color of housing black, Art. no. 1.340.211.XXX

Type	Voltage	Display	Art. no.			
			12 V	24 V	115 V	230 V
Mk 16.21	DC (10 Hz) / 0	6 digits, manual reset	1.340.210.012	1.340.210.013		
	DC (25 Hz) / 1		1.340.210.032	1.340.210.033		
	AC (18 Hz) / a			1.340.210.061	1.340.210.064	1.340.210.066

Panel mount, for clip mounting

6 digits, manual and electrical reset

Type Mk 16.23



1 Flat push on connector 0.8 x 2.8 [0.032 x 0.11], tinned 2 Flat pin 0.8 x 2.8 [0.032 x 0.11], tinned
Color of housing black, Art. no. 1.340.231.XXX

Type	Voltage	Display	Art. no.			
			12 V	24 V	115 V	230 V
Mk 16.23	DC (10 Hz) / 0	6 digits, manual and electr. reset	1.340.230.012	1.340.230.013		
	DC (25 Hz) / 1		1.340.230.032	1.340.230.033		
	AC (18 Hz) / a			1.340.230.061	1.340.230.064	1.340.230.066