

Pulse counters, electromechanical

Mini counters **6 or 7 digits without reset (AC+DC)** **W16 / W17**



The mini totalizers W16 and W17 are not resettable, and have been designed for various front panel sizes in a wide variety of applications.

They offer an excellent price / performance ratio and are easy to operate.

Characteristics

- 6- or 7-digit miniature pulse counters, adding without reset.
- Low power consumption.
- Available for all common DC and AC voltages.
- Versions available for DIN 48 x 24 mm and many other panel mount dimensions as well as for other types, e.g. PCB mount.

Benefits

- Long service life / Protection IP41 (front side).

Applications

Battery-powered devices, heat and water consumption measurement, establishing tolls and charges, general quantity counting.

Type series

Description / mounting	Panel mount dim.	Housing	Display	6 digits		7 digits	
				W16.20	-	-	W17.50
Panel mount + mounting clip, 34 x 23 mm [1.34 x 0.91"]	31 x 20 mm [0.79 x 0.25"]	plastic	front side	-	-	-	-
Panel mount + mounting clip, 48 x 24 mm [1.89 x 0.94"]	45 x 22.2 mm [1.77 x 0.87"]	plastic	front side	-	-	-	-
PCB mount, lying		sheet steel	on the top	W16.60	-	-	-
Panel mount + mounting clip, 42 x 28 mm [1.65 x 1.10"]	37.5 x 23.5 mm [1.48 x 0.93"]	plastic	front side	-	-	-	W17.90

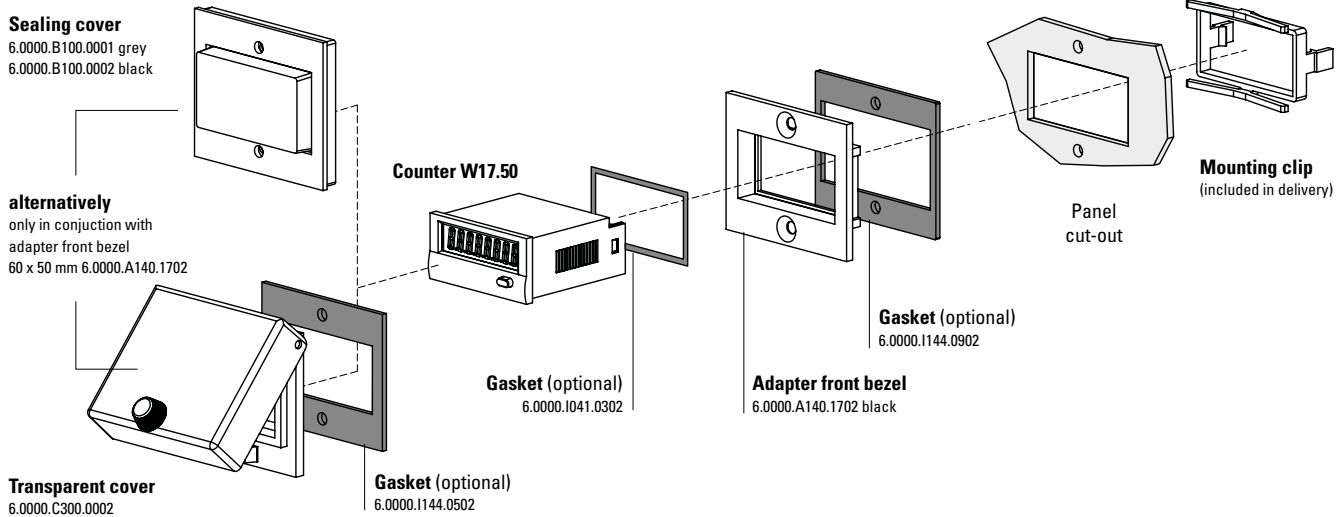
Order information

- Art. no.
- For special voltages, please give type, voltage, kind of voltage and series e.g.: W16.20, 9 V DC, 05, black

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Accessories / Mounting examples (for W17.50 only)



		Type / size	Description		Order no.	suitable gasket
Adapter front bezel		53 x 28 mm [2.09 x 1.10"]	for cut-out 50 x 25 mm [1.97 x 0.98"] to cut-out 45 x 22.2 mm [1.77 x 0.94"]	black anthracite	6.0000.A080.0502 6.0000.A080.0503	6.0000.1082.0502
		56 x 40 mm [2.20 x 1.57"]	for cut-out 50 x 25 mm [1.97 x 0.98"] to cut-out 45 x 22.2 mm [1.77 x 0.94"] screw mounting	black anthracite	6.0000.A110.0502 6.0000.A110.0503	6.0000.1113.0502
		72 x 36 mm [2.83 x 1.42"]	for cut-out 68 x 33 mm [2.68 x 1.30"] to cut-out 45 x 22.2 mm [1.77 x 0.94"]	black and silver anodised as set	6.0000.A210.1802	–
		60 x 50 mm [2.36 x 1.97"]	for cut-out 54 x 29 mm [2.13 x 1.14"] to cut-out 45 x 22.2 mm [1.77 x 0.94"] screw mounting	black	6.0000.A140.1702	6.0000.1144.0902
		48 x 48 mm [1.89 x 1.89"]	for cut-out 45 x 45 mm [1.77 x 1.77"] to cut-out 45 x 22.2 mm [1.77 x 0.94"]	black	6.0000.A040.0402	–
Sealing cover IP65		K1	only in conjunction with adapter front bezel 60 x 50 mm 6.0000.A140.1702	transparent / grey transparent / black	6.0000.B100.0001 6.0000.B100.0002	–
Transparent cover IP65		1 Dv (mounted on bezel)	cover lockable, for cut-out 54 x 29 mm [2.13 x 1.14"], only in conjunction with adapter front bezel 60 x 50 mm 6.0000.A140.1702	transparent / black	6.0000.C300.0002	6.0000.1144.0502
Gasket counter			48 x 24 mm (for installation in adapter front bezel) 49 x 25 mm		6.0000.1041.0302 6.0000.1063.0302	
Mounting frame		cut-out 50 x 25 mm [1.97 x 0.98"]	via adapter 6.0000.A080.0503 for snap-on mounting on 35 mm [1.38"] top-hat DIN rail	chromated	6.0000.F300.0006	–
Enclosure blind		48 x 24 mm [1.89 x 0.94"]	for cut-out 45 x 22.2 mm [1.77 x 0.94"] and cut-out 50 x 25 mm [1.97 x 0.98"]	anthracite	6.0000.H100.0003	–

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Technical data		
Electrical connection	panel mount, base mount	flying leads, AWG 22 approx. 150 mm [5.91"] \varnothing 0.34 mm ² , 6 mm [0.24"] stripped wire ends, tinned
	PCB mount	round pin \varnothing 1.6 mm [0.063"]
Rated voltage	type 05 (8 Hz)	1.5 / 3 / 4.5 / 5 / 6 / 12 V DC (+15 %, -5 %)
	type 0 (10 Hz)	12 / 24 / 48 / 115 / 230 V DC \pm 10 %
	type a0 (10 Hz)	24 / 48 / 115 / 230 V AC, \pm 10 %
Cycle duration factor		100 %
Height of figures		4 x 1.7 mm [0.16 x 0.067"]
Color of figures		white on black
Counting mechanism shaft		stainless steel
Operating temperature		-10 °C ... +50 °C [+14 °F ... +122 °F] (non-condensing)
Relative humidity at +30 °C [+86 °F]		\leq 80 % (non-condensing)
Altitude		up to 2000 m [6562']
Mounting position		any
Operating life		$>$ 50 x 10 ⁶ pulses
Protection		IP41 (front side)
Weight		approx. 50 g [1.76 oz]
Device safety	designed to	EN 61010 part 1
	protection class application area	2 pollution level 2

Options	
Electrical connection	- with flat pin 0.8 x 2.8 mm [0.032 x 0.11"] (Art. no.: 1.XX9.XXX.XXX)
	- with flat pin 0.8 x 6.3 mm [0.032 x 0.25"] and push on connectors (Art. no.: 1.XX5.XXX.XXX)
	- with open screw terminals (Art. no.: 1.XX4.XXX.XXX)
Color of housing (availability see table)	grey Art. no.: X.XXX.XX0.XXX
	black Art. no.: X.XXX.XX1.XXX
Extended temperature range	on request
With lens for digit height 5 or 6.3 mm	on request

Approvals	
CE compliant in accordance with	
EMC Directive	2014/30/EU
RoHS Directive	2011/65/EU
Low Voltage Directive	2014/35/EU

Type / Counting mechanism						
Voltage	Type	Pulse frequency max.	Pulse on time min.	Pulse interval min.	Power consumption approx.	Permi. residual ripple max.
V DC	05	8 Hz	50 ms	75 ms	50 mW	5 %
V DC	0	10 Hz	50 ms	50 ms	0.5 W (\leq 115 V) 1 W (185 V)	48 %
V AC	a0	10 Hz	50 ms	50 ms	0.75 VA (\leq 115 V) 1.5 VA (230 V)	–

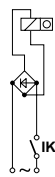
Connection diagram

type
0 a.1, DC



IK = Pulse contact

type
a, AC



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Mini counters

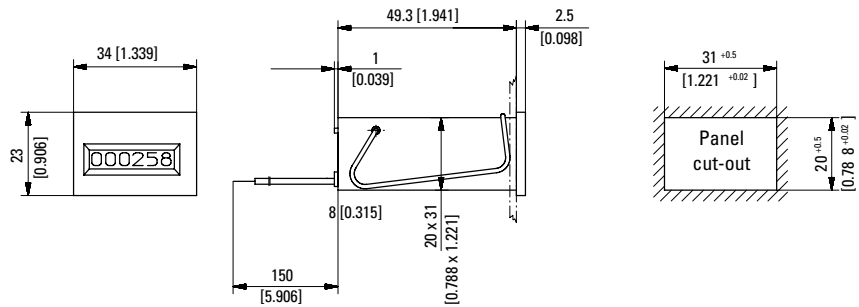
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W16 / W17

Panel mount with mounting clip

Panel mount dimensions 31 x 20 [1.22 x 0.79]

Type W16.20



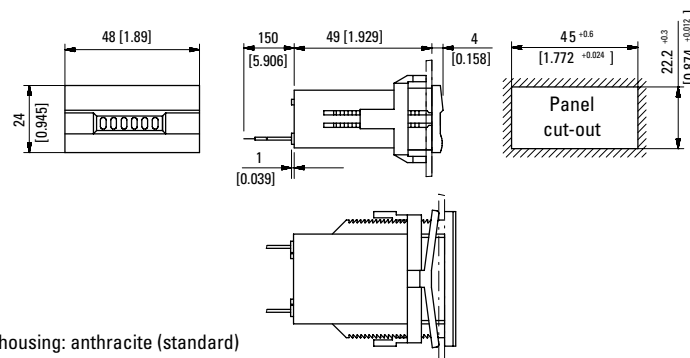
Color of housing black: Art. no. 1.160.201.XXX

Type	Voltage	Display	Art. no.				Further stock types:
			12 V	24 V	115 V	230 V	
W16.20	DC (8 Hz) / 05	6 digits	1.160.200.049	1.160.200.050			1.160.201.013 ¹⁾ 1.160.201.056 ¹⁾ 1.160.200.033 ¹⁾
	DC (10 Hz) / 0		1.160.200.012	1.160.200.013			
	AC (10 Hz) / a0			1.160.200.051	1.160.200.054	1.160.200.056	

Panel mount with mounting clip 48 x 24 [1.89 x 0.94]

Panel mount dimensions 45 x 22.2 [1.77 x 0.87]

Type W17.50



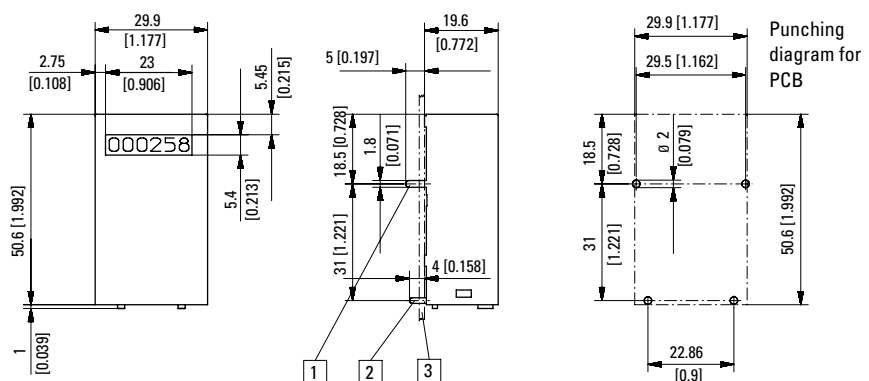
Color of housing: anthracite (standard)

Type	Voltage	Display	Art. no.			
			12 V	24 V	115 V	230 V
W17.50	DC (8 Hz) / 05	7 digits	1.740.500.049.550	1.740.500.050.550		
	DC (10 Hz) / 0		1.740.500.012.550	1.740.500.013.550 ¹⁾		
	AC (10 Hz) / a0			1.740.500.051.550	1.740.500.054.550	1.740.500.056.550 ¹⁾

PCB mount, sheet steel

Display wide side

Type W16.60



1) Mounting pins 1.8 x 0.4 [0.071 x 0.016] 2) Coil connections \varnothing 1,6 [0.063] 3) PCB

Color of housing blue (zinc-plated)

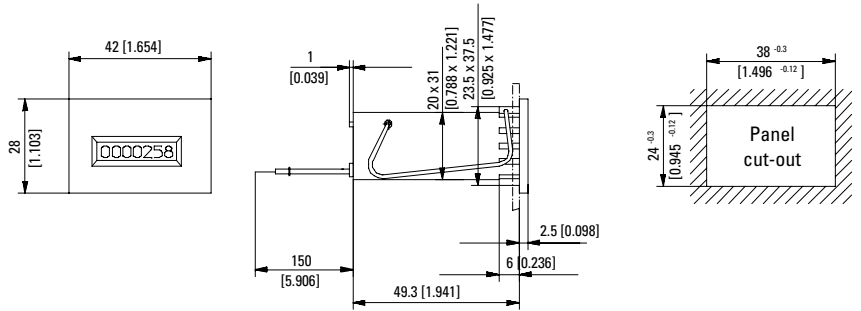
Type	Voltage	Display	Art. no.			
			12 V	24 V	115 V	230 V
W16.60	DC (10 Hz) / 0	6 digits	1.160.601.012	1.160.601.013		

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Panel mount with mounting clip
 Panel mount dimensions 37.5 x 23.5 [1.48 x 0.93]

Type W17.90



Color of housing black: Art. no. 1.XXX.901.XXX

Type	Voltage	Display	Art. no.			
			12 V	24 V	115 V	230 V
W17.90	DC (8 Hz) / 05	7 digits	1.740.900.049	1.740.900.050		
	DC (10 Hz) / 0		1.740.900.012	1.740.900.013		
	AC (10 Hz) / a0				1.740.900.054	1.740.900.056