

Pulse counters, electromechanical

Mini counters	6 or 7 digits without reset (AC+DC)	W 16 / W 17
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The mini totalizers W 16 and W 17 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.

Pulse counters

<h3>Characteristics</h3> <ul style="list-style-type: none"> 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. 	<h3>Benefits</h3> <ul style="list-style-type: none"> Long service life / Protection IP41 (front side).
	<h3>Applications</h3> <p>Battery-powered devices, heat and water consumption measurement, establishing tolls and charges, general quantity counting.</p>

Type series					
Description / mounting	Panel mount dim.	Housing	Display	6 digits	7 digits
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	W 16.20	-
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	-	W 17.50
PCB mount, lying		sheet steel	on the top	W 16.60	-
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	-	W 17.90
Order information					
· Art. no.					
· For special voltages, please give type, voltage, kind of voltage and series e.g.: W 16.20, 9 V DC, 05, black					

Accessories	Dimensions in mm [inch]	Order no.
Adapter front bezel, 53 x 28 [2.09 x 1.10]	for cut-out 50 x 25 [1.97 x 0.98] to cut-out 45 x 22.2 [1.77 x 0.87], with clip mounting for counters 48 x 24 [1.89 x 0.94]	anthracite T008180
Adapter front bezel, 56 x 40 [2.20 x 1.57]	for cut-out 50 x 25 [1.97 x 0.98] to cut-out 45 x 22.2 [1.77 x 0.87], with screw mounting for counters 48 x 24 [1.89 x 0.94]	anthracite T008181
Adapter front bezel, 72 x 36 [2.83 x 1.42]	for cut-out 68 x 33 [2.68 x 1.30] to cut-out 45 x 22.2 [1.77 x 0.87], for counters 48 x 24 [1.89 x 0.94], as set	black and silver anodised 162704 Set
Adapter front bezel, 48 x 48 [1.89 x 1.89]	for cut-out 45 x 45 [1.77 x 1.77] to cut-out 45 x 22.2 [1.77 x 0.87], with clip mounting for counters 48 x 24 [1.89 x 0.94]	black T008883
Adapter front bezel, 60 x 50 [2.36 x 1.97]	for cut-out 54 x 29 [2.13 x 1.14] to cut-out 45 x 22.2 [1.77 x 0.87], with screw mounting and gasket for counters 48 x 24 [1.89 x 0.94]	black N003001
Transparent cover, lockable, IP65	for cut-out 54 x 29 [2.13 x 1.14], for screw mounting to front bezel F1B or adapter front bezel N003001, for counters with cut-out 50 x 25 [1.97 x 0.98] or 45 x 22.2 [1.77 x 0.87]	N003002
Sealing cover type K1, IP65	suitable for front bezel 60 x 50 [2.36 x 1.97], for screw mounting of electromech. counters and via adapter front bezel N003001 for counters 48 x 24 [1.89 x 0.94]	G008301
Mounting frame with cut-out 50 x 25 [2.36 x 1.97] via separate adapter also for 45 x 22.2 [1.77 x 0.87]	for snap-on mounting on 35 [1.38] top-hat DIN rail, for counters 53 x 28 [2.09 x 1.10] and via separate adapter (T008180) for counters 48 x 24 [1.89 x 0.94]	chromated G300004

Suitable gaskets, other accessories and installation examples for optional accessories can be found in chapter accessories or in the accessories section under: www.kuebler.com/accessories.

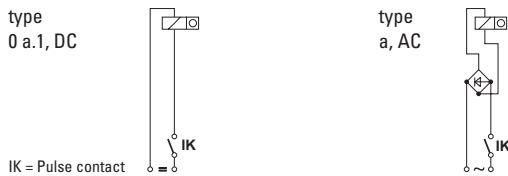
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Technical data		
Electrical connection	panel mount, base mount	flying leads, AWG 22 approx. 150 mm [5.91"] \varnothing 0.34 mm ² , 6 mm [0.24"] stripped wire ends, tinned
	PCB mount	round pin \varnothing 1.6 mm [0.063"]
Rated voltage	type 05 (8 Hz)	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)
Mounting position		any
Operating life		> 50 x 10 ⁶ pulses
Protection		IP41 (front side)
Weight		approx. 50 g [1.76 oz]
EMC standards		EN 55011 class B EN 61000-6-2, EN 61000-6-3
Device safety	designed to	EN 61010 part 1
	protection class application area	2 pollution level 2

Options		
Electrical connection	round pins \varnothing 1.6 mm [0.063"] and push on connectors	(Art. no.: 1.161.XXX.XXX)
	with flat pin 0.8 x 2.8 mm [0.032 x 0.11"]	(Art. no.: 1.169.XXX.XXX)
	with flat pin 0.8 x 6.3 mm [0.032 x 0.25"] and push on connectors	(Art. no.: 1.165.XXX.XXX)
	with open screw terminals	(Art. no.: 1.164.XXX.XXX.023)
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

Connection diagram

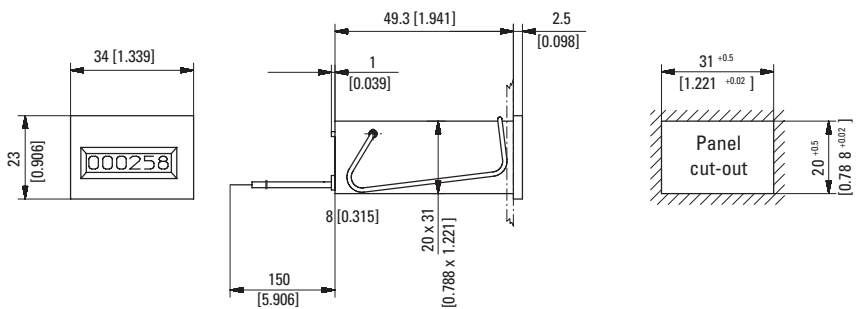


Type / Counting mechanism						
Voltage	Type	Pulse frequency max.	Pulse on time min.	Pulse interval min.	Power consumption approx.	Permi. residual ripple max.
V DC	05	8 Hz	50 ms	75 ms	50 mW	5 %
V DC	0	10 Hz	50 ms	50 ms	0.5 W (\leq 115 V) 1 W (185 V)	48 %
V AC	a0	10 Hz	50 ms	50 ms	0.75 VA (\leq 115 V)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

Panel mount with mounting clip

Panel mount dimensions 31 x 20 [1.22 x 0.79]

Type W 16.20



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

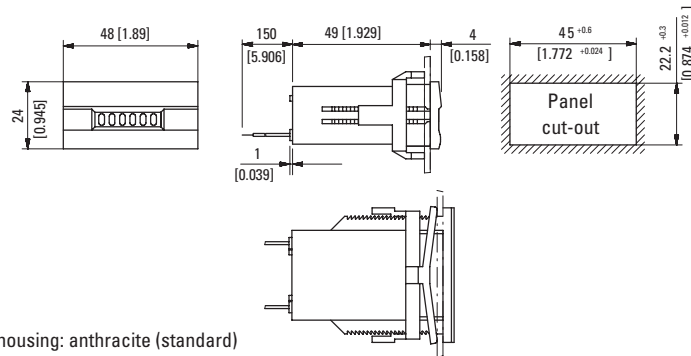
Type	Voltage	Display	Art. no.				Further stock types: 1.160.201.013 24 V DC/0sw 1.160.201.056 230 V AC/a0sw
			12 V	24 V	115 V	230 V	
W 16.20	DC (8 Hz) / 05	6 digits	1.160.200.049	1.160.200.050			
	DC (10 Hz) / 0		1.160.200.012	1.160.200.013 ¹⁾			
	AC (10 Hz) / a0			1.160.200.051	1.160.200.054	1.160.200.056 ¹⁾	

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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 W 17.50



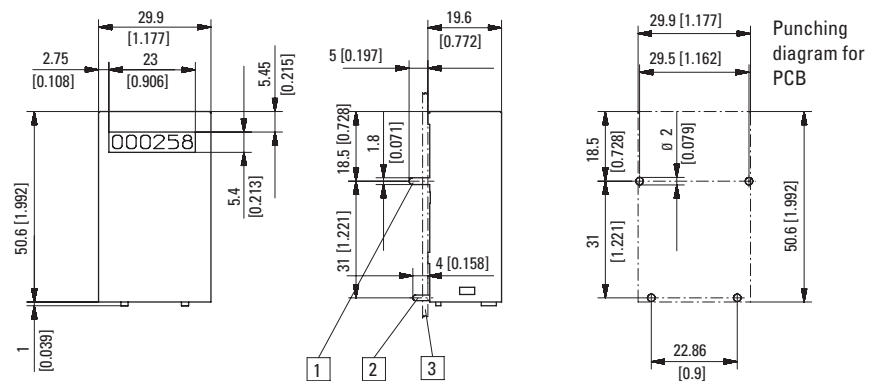
Color of housing: anthracite (standard)

Type	Voltage	Display	Art. no.			
			12 V	24 V	115 V	230 V
W 17.50	DC (8 Hz) / 05	7 digits	1.740.500.049.550	1.740.500.050.550		
	DC (10 Hz) / 0		1.740.500.012.550¹⁾	1.740.500.013.550¹⁾		
	AC (10 Hz) / a0			1.740.500.051.550	1.740.500.054.550	1.740.500.056.550¹⁾

PCB mount, sheet steel

Display wide side

Type W 16.60



1) Mounting pins 1.8 x 0.4 [0.071 x 0.016] 2) Coil connections \varnothing 0.16 [0.006] 3) PCB

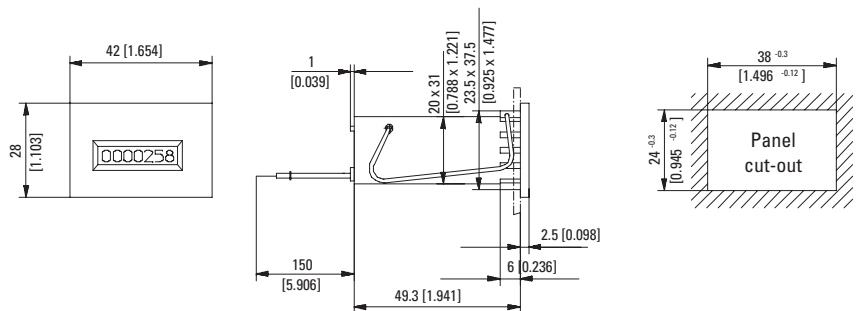
Color of housing blue (zinc-plated)

Type	Voltage	Display	Art. no.			
			12 V	24 V	115 V	230 V
W 16.60	DC (10 Hz) / 0	6 digits	1.160.601.012	1.160.601.013		

Panel mount with mounting clip

Panel mount dimensions 37.5 x 23.5 [1.48 x 0.93]

Type W 17.90



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

Type	Voltage	Display	Art. no.			
			12 V	24 V	115 V	230 V
W 17.90	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

Dimensions in mm [inch]

1) Stock types