

Pulse counters, electromechanical

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

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	Order information
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	-	- Art.-No. - For special voltages, please give type, voltage, kind of voltage and series e.g.: W 16.20, 9 V DC, 05, black
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	

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 as well as further accessories can be found in the accessories section or in the accessories area of our website at: www.kuebler.com/accessories.

1) On request

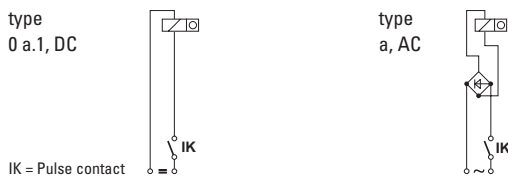
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Technical data	
Electrical connection	
panel mount, base mount	flying leads, AWG 22 approx. 150 mm [5.91"] \varnothing 0.34 mm ² , 6 mm [0.24"] stripped wire ends, tinned
PCB mount	round pin \varnothing 1.6 mm [0.063"]
Rated voltage	
type 05 (8 Hz)	1.5 / 3 / 4.5 / 5 / 6 / 12 V DC (+15%, -5%)
type 0 (10 Hz)	12 / 24 / 48 / 115 / 185 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"]	
Colour 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]	

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)
Colour 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

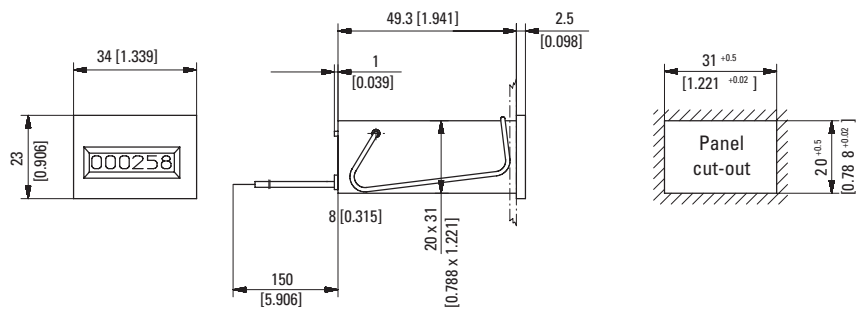


Type / Counting mechanism						
Voltage	Type	Pulse frequency max.	Pulse on time min.	Pulse interval min.	Power consumption approx.	Permi. residual ripple max.
V DC	05	8 Hz	50 ms	75 ms	50 mW	5 %
V DC	0	10 Hz	50 ms	50 ms	0.5 W (\leq 115 V) 1 W (185 V)	48 %
V AC	a0	10 Hz	50 ms	50 ms	0.75 VA (\leq 115 V)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



Colour of housing black: Art.-No. 1.160.201.XXX

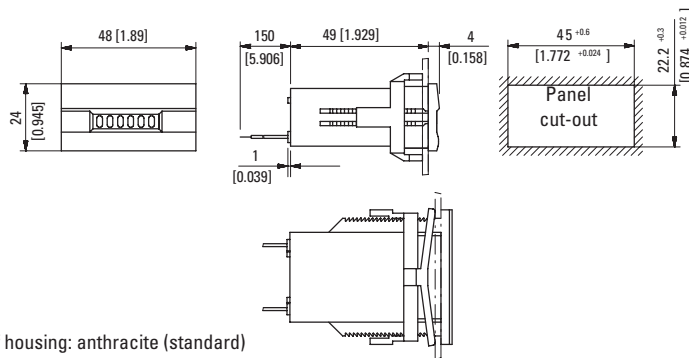
Type	Voltage	Display	Art.-No.				Further stock types:
			12 V	24 V	115 V	230 V	
W 16.20	DC (8 Hz) / 05	6 digits	1.160.200.049	1.160.200.050			1.160.201.013 24 V DC/0sw 1.160.201.056 230 V AC/a0sw
	DC (10 Hz) / 0		1.160.200.012	1.160.200.013 ¹⁾			
	AC (10 Hz) / a0			1.160.200.051	1.160.200.054	1.160.200.056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



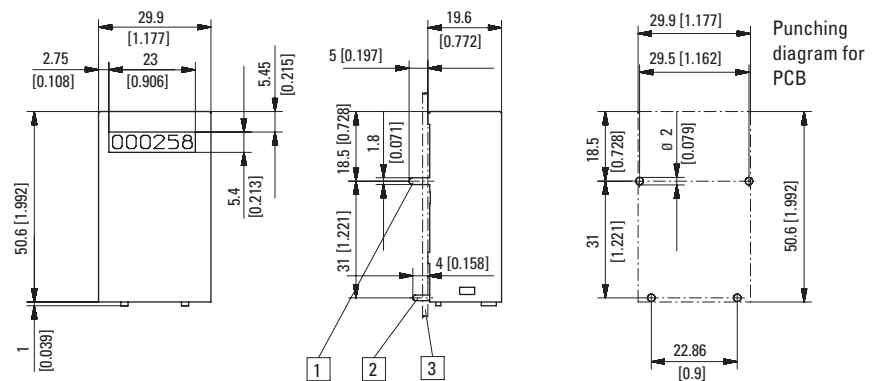
Colour of housing: anthracite (standard)

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

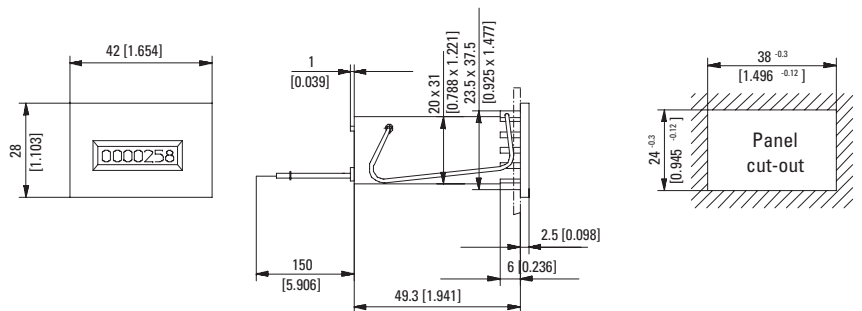
Colour of housing blue (zinc-plated)

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



Colour 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