

Miniature pulse counter W 16/W 17



- 6 or 7 digit miniature pulse counter, without reset
- Power consumption min. 50 mW
- Power consumption at version 05 and 50 ms pulse length 2,5 mWs/Pulse
- Long operating life
- For all DC and AC voltages
- Types to DIN dimension 24 x 48 and many other dimensions e.g. PCB mount
- Protection IP 41

Applications

Self powered device, battery operation
Vending machines, automatic message systems general counting systems

Technical data:

Electrical Connection:	Panel and-surface mount model PCB mounting	Flying leads AWG 22, appr. 150 mm round pin \varnothing 1.6 mm
Rated voltage:	type 05: 1.5/3/4,5/5/6/12 V DC $\pm 15\%$ -5 % type 0: 12/24/48/115/185 V DC $\pm 10\%$ type a0: 24/48/115/230 V AC $\pm 10\%$	
Cycle duration factor:	100 %	
Height of figures	appr. 1.7 x 4 mm	
Colour of figures	white on black	
Shaft:	stainless steel	
Ambient temperature:	-10 ... +50 °C	
Mounting position	any	
Operating life:	> 50 x 10 ⁶ pulses	
Colour of housing:	black	grey
	W16.50, W17.50	W16.00, W16.20
	W16.60, W17.60	W16.20.10, W16.20.31
	W16.70,	W16.90, W16.80
	AW16.00	W17.80
Weight	appr. 50 g	

Options:

- Electrical Connection: counter with pins \varnothing 1.6 mm and push on connectors
Art.-No.: 1.161.XXX.XXX
with Flat pin 0.8 x 2.8 mm and push on connectors
Art.-No.: 1.169.XXX.XXX
...with Flat pin 0.8 x 6.3 and push on connectors
...Art.-No.: 1.165.XXX.XXX
...with screw terminal
... Art.-No.: 1.164.XXX.XXX
- extended temperature range
- with lens or digit height 5 or 6.3 mm on request

Type series

Type	Housing	Display	Description
W 16.00	Plastic	Small side	Counter without front bezel, rear mounting
W 16.20	Plastic	Small side	Flush mount counter with spring clip, dimension 31 x 20 mm
W 16.20.10	Plastic	Small side	Flush mount counter with spring clip, panel cut-out 33 x 24 mm
W 16.20.31	Plastic	Small side	Flush mount counter with spring clip, panel cut-out 32 x 23 mm
W 16.40	Plastic	Small side	2 two holes at front side
W 16.50	Plastic	Small side	DIN housing 24 x 48, Built in dimension 22 x 45 mm
W 16.60	Steel	Large side	PCB counter
W 16.70	Steel	Small side	PCB counter
W 16.80	Plastic	Small side	PCB counter
W 16.90	Plastic	Small side	Flush mount counter with spring, dimension 37.5 x 23.5
AW 16.00	Plastic	Small side	Base mount counter
AW 16.80	Plastic	Small side	Base mount counter
AW 16.81	Plastic	Small side	Base mount counter
W 17.50	Plastic	Small side	DIN housing with spring 24 x 48, Panel cut-out 22 x 45 mm
W 17.80	Plastic	Small side	PCB counter
W 17.90	Plastic	Small side	Panel counter with spring, Panel cut-out 37,5 x 23,5 mm

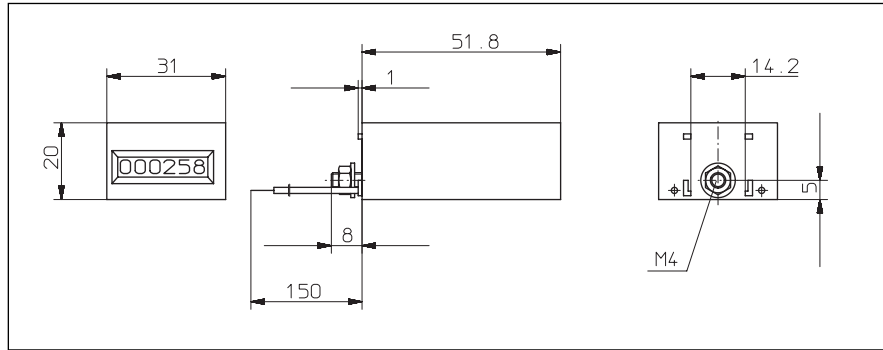
Counting mechanism

Voltage	Model	max. Pulse-speed	Pulse on time	Pulse interval min.	Power consumption app.	Residual ripple voltage max.
DC	05	8	50 ms	75 ms	50 mW	5 %
	0	10	50 ms	50 ms	0,5 W (\leq 115 V) 1 W (185 V)	48 %
AC	a0	10	50 ms	50 ms	0,75 VA (\leq 115 V) 1,5 VA (230 V)	

Ordering information

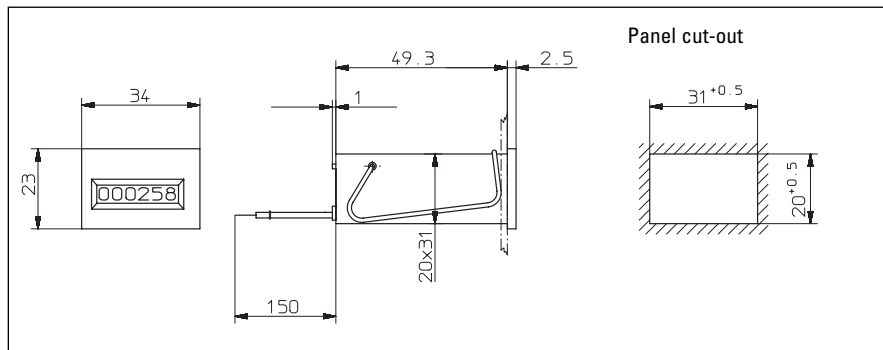
- Article number
- For special voltages, please give type, voltage, kind of voltage and series e.g. W 16.20, 9 V DC, 05, black.

Type W 16.00



W 16.00 (6 digit)	12 V Art.-No.	24 V Art.-No.	115 V Art.-No.	230 V Art.-No.
DC (8 Imp/s)	1.160.000.049	1.160.000.050		
DC (10 Imp/s)	1.160.000.012	1.160.000.013		
AC (10 Imp/s)		1.160.000.051	1.160.000.054	1.160.000.056

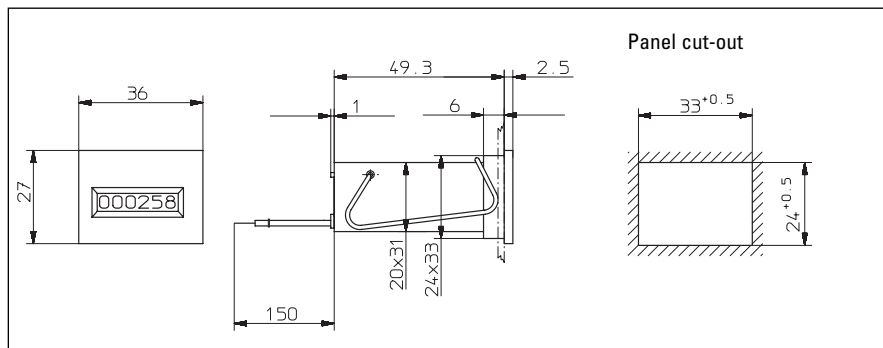
Type W 16.20



W 16.20 (6 digit)	12 V Art.-No.	24 V Art.-No.	115 V Art.-No.	230 V Art.-No.
DC (8 Imp/s)	1.160.200.049	1.160.200.050		
DC (10 Imp/s)	1.160.200.012	1.160.200.013		
AC (10 Imp/s)		1.160.200.051	1.160.200.054	1.160.200.056

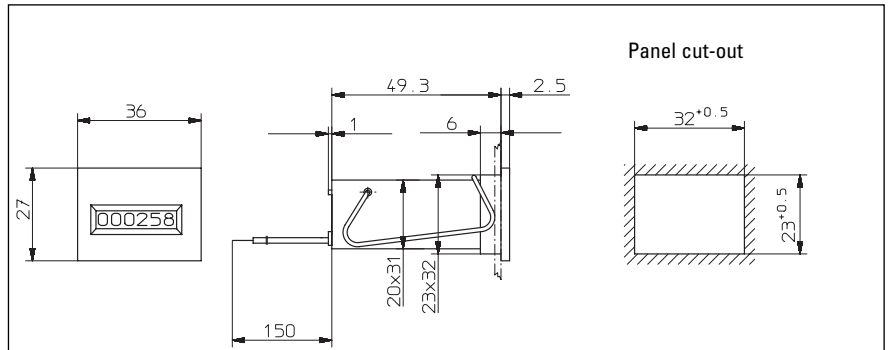
Colour of housing black:
Art.-No. 1.160.201.XXX

Type W 16.20.10



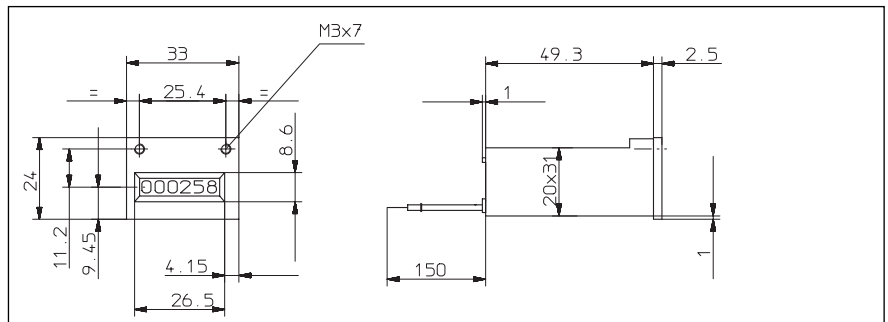
W 16.20.10 (6 digit)	12 V Art.-No.	24 V Art.-No.	115 V Art.-No.	230 V Art.-No.
DC (8 Imp/s)	1.168.250.049	1.168.250.050		
DC (10 Imp/s)	1.168.250.012	1.168.250.013		
AC (10 Imp/s)		1.168.250.051	1.168.250.054	1.168.250.056

Type W 16.20.31



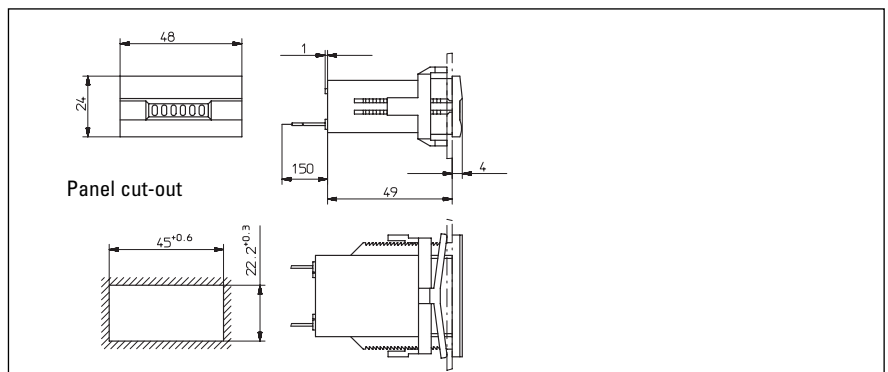
W 16.20.31 (6 digit)	12 V Art.-No.	24 V Art.-No.	115 V Art.-No.	230 V Art.-No.
DC (8 Imp/s)	1.168.260.049	1.168.260.050		
DC (10 Imp/s)	1.168.260.012	1.168.260.013		
AC (10 Imp/s)		1.168.260.051	1.168.260.054	1.168.260.056

Type W 16.40



W 16.40 (6 digit)	12 V Art.-No.	24 V Art.-No.	115 V Art.-No.	230 V Art.-No.
DC (8 Imp/s)	1.160.400.049	1.160.400.050		
DC (10 Imp/s)	1.160.400.012	1.160.400.013		
AC (10 Imp/s)		1.160.400.051	1.160.400.054	1.160.400.056

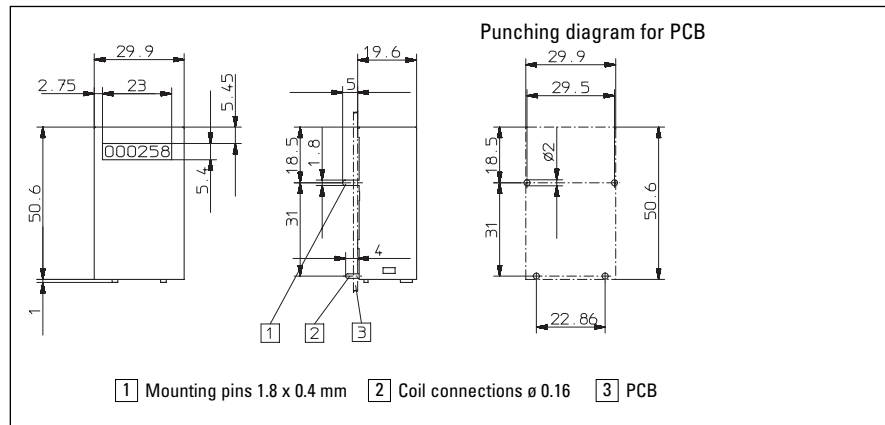
Type W 16.50/W17.50



W 16.50 (6 digit)	12 V Art.-No.	24 V Art.-No.	115 V Art.-No.	230 V Art.-No.
DC (8 Imp/s)	1.160.500.049.550	1.160.500.050.550		
DC (10 Imp/s)	1.160.500.012.550	1.160.500.013.550		
AC (10 Imp/s)		1.160.500.051.550	1.160.500.054.550	1.160.500.056.550

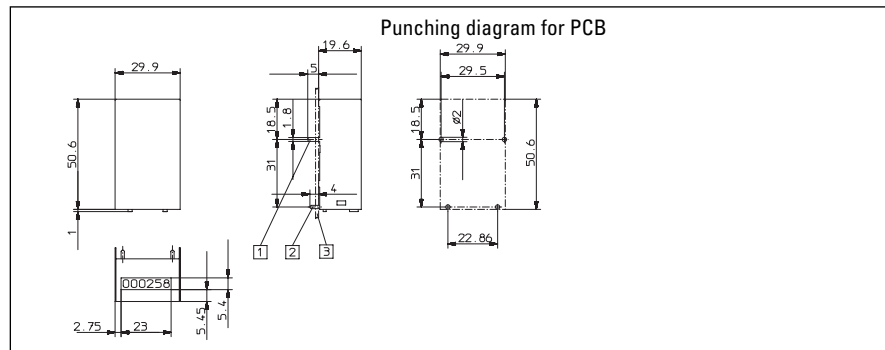
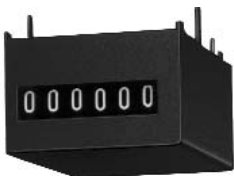
W 17.50 (7 digit)	12 V Art.-No.	24 V Art.-No.	115 V Art.-No.	230 V Art.-No.
DC (8 Imp/s)	1.740.500.049.550	1.740.500.050.550		
DC (10 Imp/s)	1.740.500.012.550	1.740.500.013.550		
AC (10 Imp/s)		1.740.500.051.550	1.740.500.054.550	1.740.500.056.550

Type W 16.60



W 16.60 (6 digit)	12 V Art.-No.	24 V Art.-No.
DC (8 Imp/s)	1.160.601.049	1.160.601.050
DC (10 Imp/s)	1.160.601.012	1.160.601.013

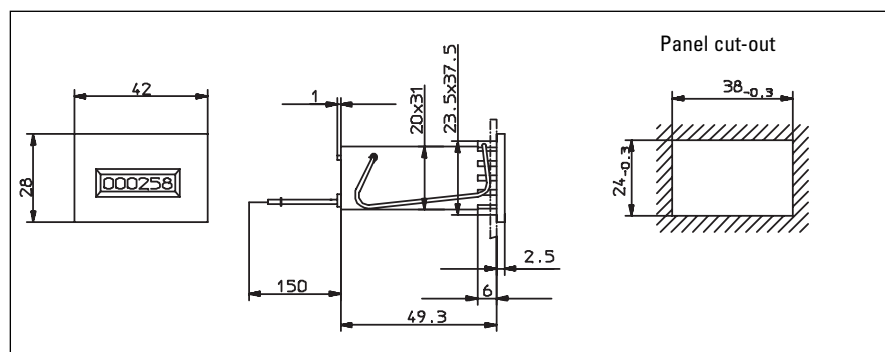
Type W 16.70



W 16.70 (6 digit)	12 V Art.-No.	24 V Art.-No.
DC (8 Imp/s)	1.160.701.049	1.160.701.050
DC (10 Imp/s)	1.160.701.012	1.160.701.013

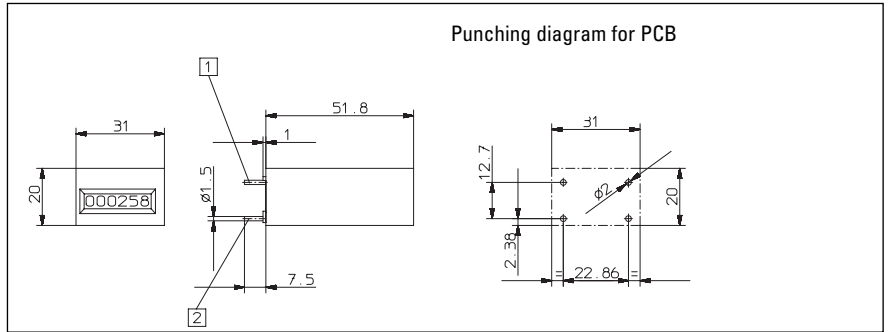
1) Mounting pins 1.8 x 0.4 mm 2) Coil connections Ø 0.15 3) PCB

Type W 16.90/W 17.90



W 16.90 (6 digit)	12 V Art.-No.	24 V Art.-No.	115 V	230 V
DC (8 Imp/s)	1.160.701.049	1.160.701.050	-	-
DC (10 Imp/s)	1.160.701.012	1.160.701.013	-	-
AC (10 IMP/s)	-	-	1.160.900.054	1.160.900.056
W 17.90 (7 digit)	12 V Art.-No.	24 V Art.-No.	115 V	230 V
DC (8 Imp/s)	1.740.701.049	1.740.701.050	-	-
DC (10 Imp/s)	1.740.701.012	1.740.701.013	-	-
AC (10 IMP/s)	-	-	1.740.900.054	1.740.900.056

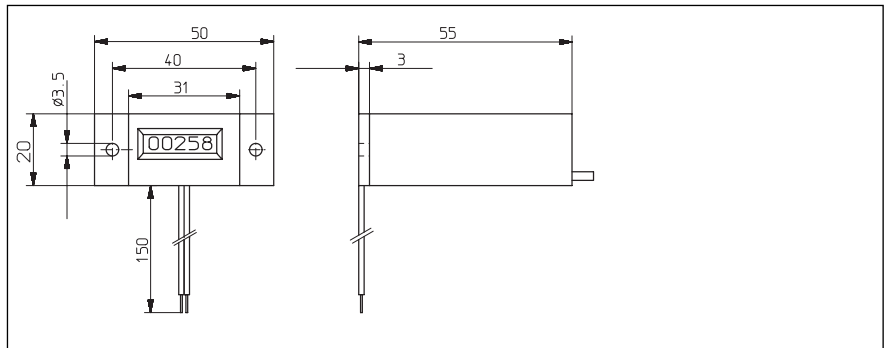
Type W 16.80/W 17.80



1 potential free pins 2 Coil connections

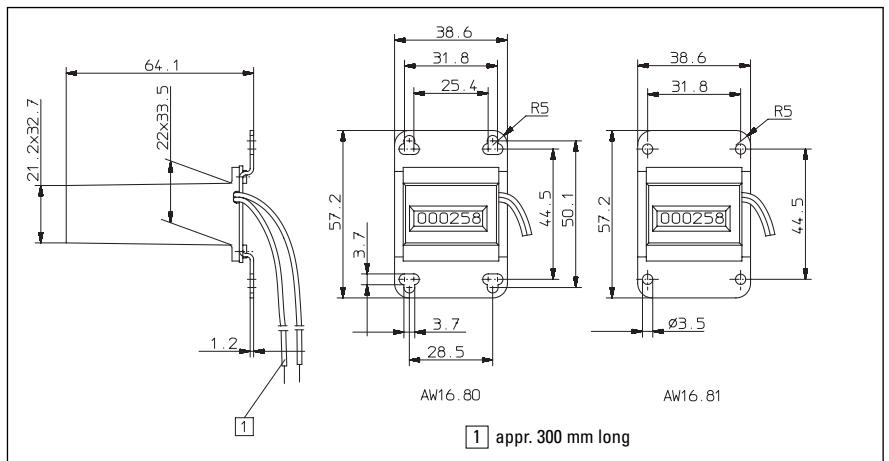
	12 V	24 V	115 V	230 V
W 16.80 (6 digit)	Art.-No.	Art.-No.	Art.-No.	Art.-No.
DC (8 Imp/s)	1.160.800.049	1.160.800.050		
DC (10 Imp/s)	1.160.800.012	1.160.800.013		
AC (10 Imp/s)		1.160.800.051	1.160.800.054	1.160.800.056
W 17.80 (7 digit)	Art.-No.	Art.-No.	Art.-No.	Art.-No.
DC (10 Imp/s)	1.740.800.012	1.740.800.013		
AC (10 Imp/s)		1.740.800.051	1.740.800.054	1.740.800.056

Type AW 16.00



	12 V	24 V	115 V	230 V
AW 16.00 (6 digit)	Art.-No.	Art.-No.	Art.-No.	Art.-No.
DC (8 Imp/s)	1.162.001.049	1.162.001.050		
DC (10 Imp/s)	1.162.001.012	1.162.001.013		
AC (10 Imp/s)		1.162.001.051	1.162.001.054	1.162.001.056

Type AW 16.80 and AW 16.81



Type	Imp/s	12 V DC Art.-No.	24 V DC Art.-No.
AW 16.80	10	1.162.800.012	1.162.800.013
AW 16.81	10	1.162.810.012	1.162.810.013