

Pulse counters, electromechanical

Standard counters	6 or 8 digits with/without reset (AC+DC)	B16 / B18
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The standard totalizers B16 (with manual reset) and B16, B18 (without reset) offer a robust construction.

They are ideal for use in harsh industrial environments as individual counters or as plug-in types in combination with additional B, BVa, HB or HVa counters.

Characteristics

- B16.x1: 6-digit totalizer with manual reset.
- B16.x0 and B18.x0: 6- and 8-digit totalizers without reset.
- Counters without front bezel fit into bezels F1B and F2B and can be combined in RM 50 x 25 mm with socket 945.2.
- Very long service life (200 million pulses).

Benefits

- Can be combined with preset counters BVa and HVa, as well as with timer HB.
- Can be upgraded using various front covers to protect against dust, dirt and humidity – reset can be locked out.

Applications

General quantity counting, piece counting, event counting, timing.

Type series

Description	6 digits without reset	8 digits without reset	6 digits with reset	Order information
Counter without front bezel, rear mounting, plugs into socket box 945.2 and frontbezel F1	–	B18.00	B16.01	- Art. no. - For special voltages, please give type, voltage, kind of voltage and series e.g.: B16.31, 4.5 V DC, 0 or B18.00, 48 V AC, a
Panel mount, front bezel size no. 1 with 2 mounting holes	B16.10	B18.10	B16.11	
Panel mount, for clip mounting	B16.20	B18.20	B16.21	
Panel mount, front bezel size no. 3 with 2 mounting holes	B16.30	B18.30	B16.31	

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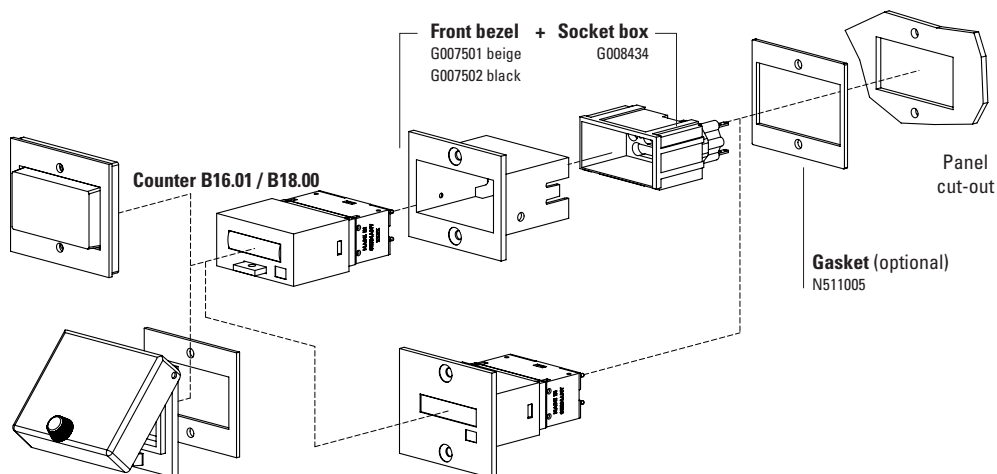
Accessories / Mounting examples

Sealing cover

G008300 grey
G008301 black

alternatively

only in conjunction with
front bezel
54 x 29 mm F1B or
B16.3X / B18.30



Transparent cover

F1B N003002 lockable

Gasket (optional)

N511019

Counter B16.3X / B18.30

		Type / size	Description		Order no.	suitable gasket
Front bezel		F1B	for 1x counter B16.01 or B18.00 for cut-out 54 x 29 mm [2.13 x 1.14"] (only in conjunction with socket box G008434)	beige black	G007501 G007502	N511005
		F2B	for 2x counter B16.01 or B18.00 for cut-out 54 x 54 mm [2.13 x 2.13"] (only in conjunction with 2 x socket box G008434)	beige black	G007503 G007504	N511003
Socket box		945.2	for plug-in connection in front bezel F1B	black	G008434	—
Sealing cover IP65		K1	for counter B1x.3x or B1x.0x in conjunction with front bezel F1B	transp. /grey transp. /black	G008300 G008301	—
		K2	only in conjunction with front bezel F2B (for 2x counter B16.01 / B18.00)	transp. /grey transp. /black	G008302 G008303	
Transparent cover IP65		1 Dv	cover lockable for counter B1x.3x or for counter B1x.0x in conjunction with front bezel F1B	transp. /black	N003002	N511019
		2 Dv	cover lockable only in conjunction with front bezel F2B	transp. /black	G008143	
		2 Dvs	cover key lockable only in conjunction with front bezel F2B	transp. /black	G008153	
Gasket counter			56 x 40 mm [2.20 x 1.57"] 53 x 28 mm [2.09 x 1.10"] 60 x 50 mm [2.36 x 1.97"]	B16.1 / B18.1 B16.2 / B18.2 B16.3 / B18.3	N511045 N511015 N511019	
Mounting frame		cut-out 50 x 25 mm [1.97 x 0.98"]	via adapter T008180 for snap-on mounting on 35 mm [1.38"] top-hat DIN rail	chromated	G300004	—
Enclosure blind		48 x 24 mm [1.89 x 0.94"]	for cut-out 50 x 25 mm [1.97 x 0.98"], for counter 53 x 28 mm [2.09 x 1.10"]	black	T005753	—
DIN rail mount		SR 1	for snap-on mounting on 35 mm [1.38"] top-hat DIN rail		G300000	
		SR 2	for 2x B16 / B18		G300001	

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Technical data		
Electrical connection	count mechanism	pin $\varnothing$ 1.6 mm [0.063] with push on connector for flying leads 0.5 ... 1.0 mm ²
	socket box	flat pin 0.8 x 2.8 mm [0.032 x 0.11"]
Rated voltage	type 0 / 1 / a	12 / 24 / 48 / 115 / 230 V DC $\pm$ 10 % 24 / 48 / 115 / 230 V AC $\pm$ 10 %
Color of counter		grey
Height of figures	B16	2 x 4.5 mm [0.079 x 0.18]
	B18	2 x 4 mm [0.079 x 0.16]
Color of figures		white on black
Count mechanism shaft		stainless steel
Relative humidity at +30 °C [+86 °F]		$\leq$ 80 % (non-condensing)
Altitude		up to 2000 m [6562']
Mounting position		any
Operating life		approx. 200 x 10 ⁶ pulses
Protection	with reset	IP40 (front side)
	without reset	IP41 (front side)
Weight	without reset	81 g [2.86 oz]
	with reset	83 g [2.93oz]
	socket box	14 g [0.49 oz]
Test voltage		2000 V ~ effective, acc. to VDE 0435
Device safety	designed to	EN 61010 part 1
	protection class	2
	application area	pollution level 2

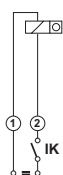
Options	
Color of housing black	Art. no. ref. to type 1.XXX.XX1.XXX
Electr. connection at counter	flat pins 0.8 x 2.8 mm [0.032 x 0.11"] with push on connectors Art. no. 1.XX7.XXX.XXX
Counter with flat pin 6.3 x 0.8 mm [0.25 x 0.032"]	on request 1.XXX.XXX.XXX.011
Screw terminal	Art. no. 1.XXX.XXX.XXX.023
Connection with flying leads	on request 1.XX3.XXX.XXX
Extended temperature range	on request
Key locking reset	grey 1.XXX.XX6.XXX
	black 1.XXX.XX7.XXX
	
	key for reset G050265 (replacement part)

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.	Pulse ratio	On-time	Power consump. approx.	Permi. residual ripple max.	Operating temp. (non-condensing)
V DC	0	10 Hz	60 ms	40 ms	3 : 2	100 %	1 W	48 %	-10 °C ... +60 °C [+14 °F ... +140 °F]
V DC	1	25 Hz	24 ms	16 ms	3 : 2	100 %	2 W	48 %	-10 °C ... +60 °C [+14 °F ... +140 °F]
V AC	a	18 Hz	22.2 ms	33.3 ms	2 : 3	100 %	2.9 VA	—	-10 °C ... +55 °C [+14 °F ... +131 °F]

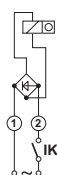
Connection diagram

type
0 a.1, DC



IK = Pulse contact

type
a, AC



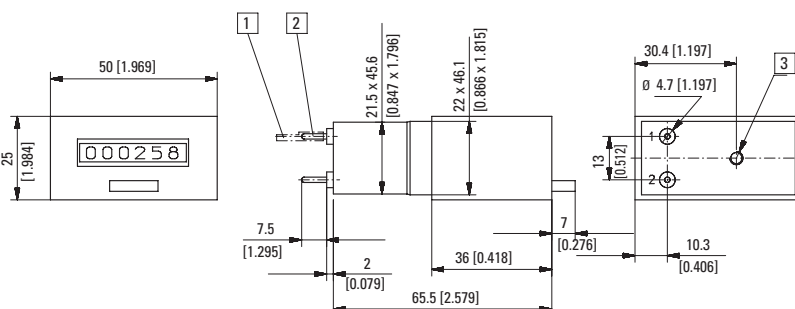
Pulse counters, electromechanical

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Without front bezel, rear mounting

6 digits, with reset

Type B16.01



1 Push on connector $\varnothing 1.5$ [0.059], tinned 2 Round pin $\varnothing 1.6$ [0.063], tinned 3 M4, 5 [0.20] deep
Color of housing: beige (standard) – black, Art. no. 1.230.XX1.XXX

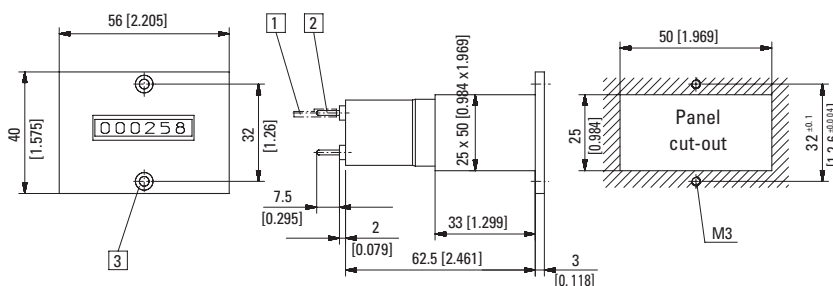
Type	Voltage	Display	Art. no. 12 V	24 V	115 V	230 V
B16.01	DC (10 Hz) / 0	6 digits, with reset	1.230.012.012	1.230.012.013		
	DC (25 Hz) / 1		1.230.012.032	1.230.012.033		
	AC (18 Hz) / a			1.230.012.061	1.230.012.064	1.230.012.066

Panel mount with front bezel size no. 1

and 2 mounting holes

6 digits, without reset

Type B16.10



1 Push on connector $\varnothing 1.5$ [0.059], tinned 2 Round pin $\varnothing 1.6$ [0.063], tinned 3 Countersinking Af3 DIN 74
Color of housing: grey (standard) – black, Art. no. 1.230.101.XXX

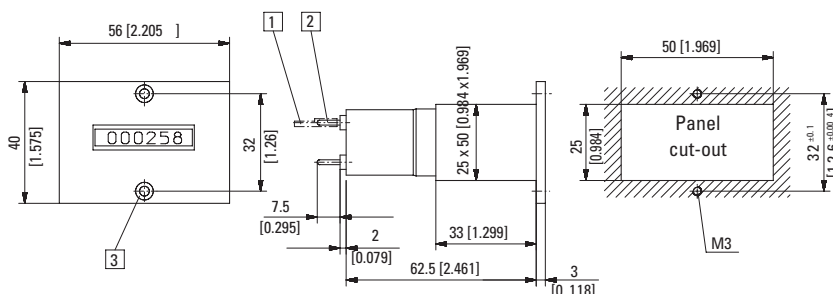
Type	Voltage	Display	Art. no. 12 V	24 V	115 V	230 V
B16.10	DC (10 Hz) / 0	6 digits, without reset	1.230.100.012	1.230.100.013		
	DC (25 Hz) / 1		1.230.100.032	1.230.100.033		
	AC (18 Hz) / a			1.230.100.061	1.230.100.064	1.230.100.066

Panel mount with front bezel size no. 1

with 2 mounting holes

6 digits, with reset

Type B16.11



1 Push on connector $\varnothing 1.5$ [0.059], tinned 2 Round pin $\varnothing 1.6$ [0.063], tinned 3 Countersinking Af3 DIN 74
Color of housing: grey (standard) – black, Art. no. 1.230.111.XXX

Type	Voltage	Display	Art. no. 12 V	24 V	115 V	230 V
B16.11	DC (10 Hz) / 0	6 digits, with reset	1.230.110.012	1.230.110.013		
	DC (25 Hz) / 1		1.230.110.032	1.230.110.033 ¹⁾		
	AC (18 Hz) / a			1.230.110.061 ¹⁾	1.230.110.064	1.230.110.066 ¹⁾

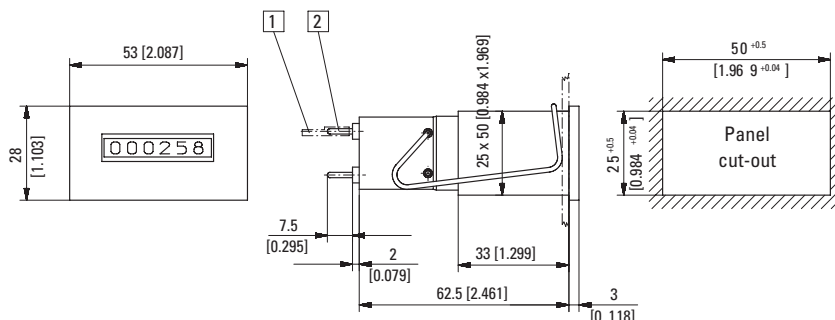
Dimensions in mm [inch]

1) Stock types.

Pulse counters, electromechanical

Standard counters	6 or 8 digits with/without reset (AC+DC)	B16 / B18
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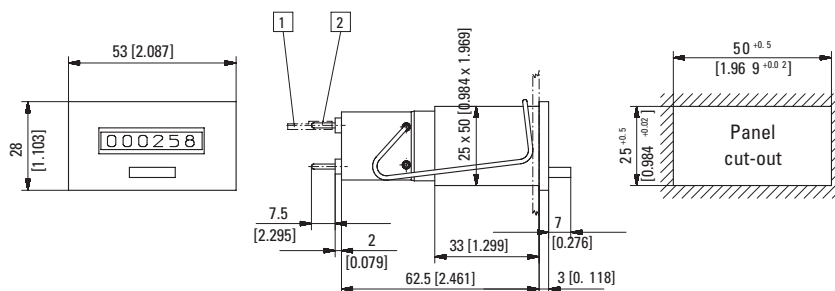
Panel mount for clip mounting
6 digits, without reset
Type B16.20



1 Push on connector $\varnothing$ 1.5 [0.059], tinned 2 Round pin $\varnothing$ 1.6 [0.063], tinned
Color of housing: grey (standard) – black, Art. no. 1.230.201.XXX

Type	Voltage	Display	Art. no. 12 V	24 V	115 V	230 V	Further stock types:
B16.20	DC (10 Hz) / 0	6 digits, without reset	1.230.200.012	1.230.200.013			1.237.201.066 230 V AC/a with flat pins
	DC (25 Hz) / 1		1.230.200.032	1.230.200.033 ¹⁾			
	AC (18 Hz) / a			1.230.200.061	1.230.200.064	1.230.200.066	

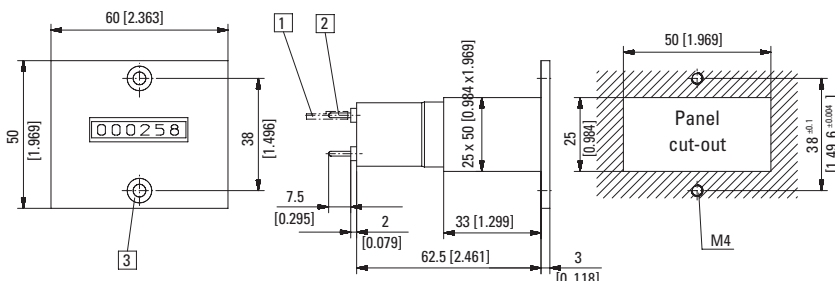
Panel mount for clip mounting
6 digits, with reset
Type B16.21



1 Push on connector $\varnothing$ 1.5 [0.059], tinned 2 Round pin $\varnothing$ 1.6 [0.063], tinned
Color of housing: grey (standard) – black, Art. no. 1.230.211.XXX

Type	Voltage	Display	Art. no. 12 V	24 V	115 V	230 V	Further stock types:
B16.21	DC (10 Hz) / 0	6 digits, with reset	1.230.210.012	1.230.210.013 ¹⁾			1.230.211.033 24 V DC/1 sw 1.230.217.013 24 V DC/0 sw vs 1.237.211.066 230 V AC/a sw
	DC (25 Hz) / 1		1.230.210.032	1.230.210.033 ¹⁾			
	AC (18 Hz) / a			1.230.210.061	1.230.210.064	1.230.210.066 ¹⁾	

Panel mount with front bezel size no. 3
and 2 mounting holes
6 digits, without reset
Type B16.30



1 Push on connector $\varnothing$ 1.5 [0.059], tinned 2 Round pin $\varnothing$ 1.6 [0.063], tinned 3 Countersinking Am 4 DIN 74
Color of housing: grey (standard) – black, Art. no. 1.230.301.XXX

Type	Voltage	Display	Art. no. 12 V	24 V	115 V	230 V	
B16.30	DC (10 Hz) / 0	6 digits, without reset	1.230.300.012	1.230.300.013			
	DC (25 Hz) / 1		1.230.300.032	1.230.300.033			
	AC (18 Hz) / a			1.230.300.061	1.230.300.064	1.230.300.066	

Dimensions in mm [inch]

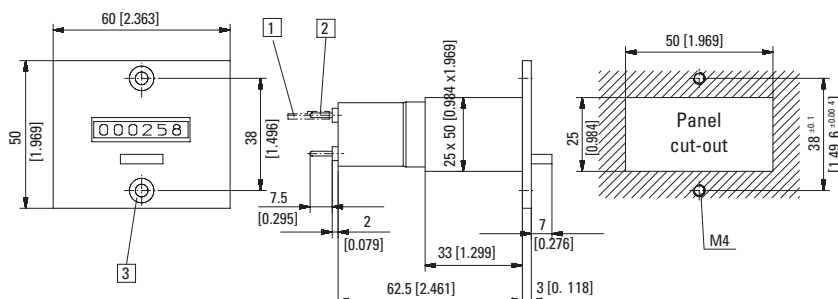
1) Stock types.

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Panel mount with front bezel size no. 3
and 2 mounting holes
 6 digits, with reset

Type B16.31

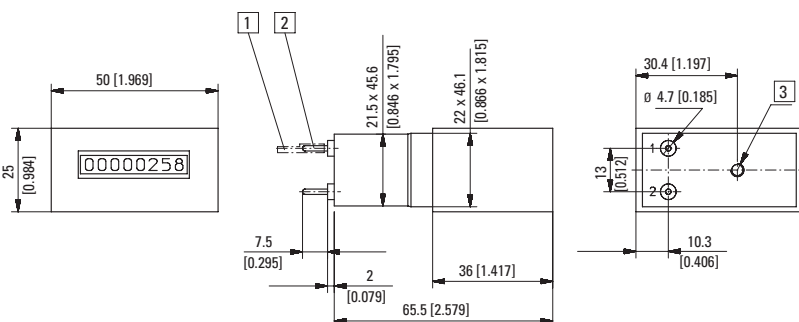


1 Push on connector $\varnothing 1.5$ [0.059], tinned 2 Round pin $\varnothing 1.6$ [0.063], tinned 3 Countersinking Bf 4 DIN 74
 Color of housing: grey (standard) – black, Art. no. 1.230.111.XXX

Type	Voltage	Display	Art. no. 12 V	24 V	115 V	230 V
B16.31	DC (10 Hz) / 0	6 digits,	1.230.310.012	1.230.310.013		
	DC (25 Hz) / 1	with reset	1.230.310.032	1.230.310.033		
	AC (18 Hz) / a			1.230.310.061	1.230.310.064	1.230.310.066

Without front bezel, rear mounting
 8 digits, without reset

Type B18.00

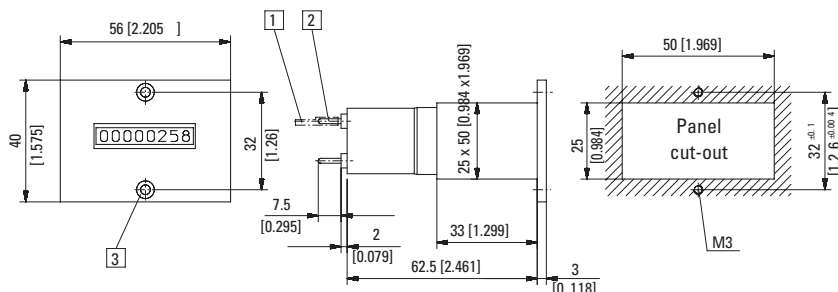


1 Push on connector $\varnothing 1.5$ [0.059], tinned 2 Round pin $\varnothing 1.6$ [0.063], tinned 3 M4, 5 [0.20] deep
 Color of housing: beige (standard) – black, Art. no. 1.260.XX1.XXX

Type	Voltage	Display	Art. no. 12 V	24 V	115 V	230 V
B18.00	DC (10 Hz) / 0	8 digits,	1.260.002.012	1.260.002.013		
	DC (25 Hz) / 1	without reset	1.260.002.032	1.260.002.033 ¹⁾		
	AC (18 Hz) / a			1.260.002.061	1.260.002.064	1.260.002.066

Panel mount with front bezel size no. 1
and 2 mounting holes
 8 digits, without reset

Type B18.10



1 Push on connector $\varnothing 1.5$ [0.059], tinned 2 Round pin $\varnothing 1.6$ [0.063], tinned 3 Countersinking Af3 DIN 74
 Color of housing: grey (standard) – black, Art. no. 1.260.101.XXX

Type	Voltage	Display	Art. no. 12 V	24 V	115 V	230 V
B18.10	DC (10 Hz) / 0	8 digits,	1.260.100.012	1.260.100.013 ¹⁾		
	DC (25 Hz) / 1	without reset	1.260.100.032	1.260.100.033		
	AC (18 Hz) / a			1.260.100.061	1.260.100.064	1.260.100.066

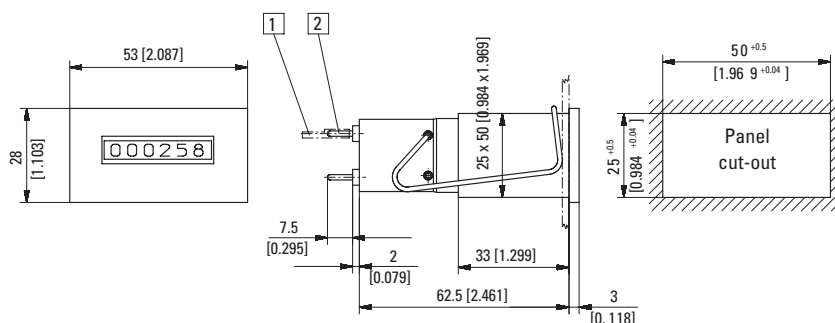
Dimensions in mm [inch]

1) Stock types.

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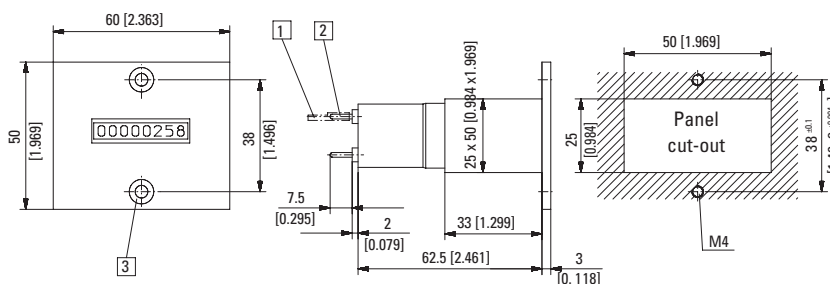
Panel mount for clip mounting
8 digits, without reset
Type B18.20



1 Push on connector $\varnothing$ 1.5 [0.059], tinned 2 Round pin $\varnothing$ 1.6 [0.063], tinned
Color of housing: grey (standard) – black, Art. no. 1.260.201.XXX

Type	Voltage	Display	Art. no. 12 V	24 V	115 V	230 V	Further stock types:
B18.20	DC (10 Hz) / 0	8 digits, without reset	1.260.200.012	1.260.200.013 ¹⁾			1.260.201.013
	DC (25 Hz) / 1		1.260.200.032	1.260.200.033 ¹⁾			
	AC (18 Hz) / a			1.260.200.061	1.260.200.064	1.260.200.066 ¹⁾	

**Panel mount with front bezel size no. 3
and 2 mounting holes**
8 digits, without reset
Type B18.30



1 Push on connector $\varnothing$ 1.5 [0.059], tinned 2 Round pin $\varnothing$ 1.6 [0.063], tinned 3 Countersinking Am 4 DIN 74
Color of housing: grey (standard) – black, Art. no. 1.260.301.XXX

Type	Voltage	Display	Art. no. 12 V	24 V	115 V	230 V	
B18.30	DC (10 Hz) / 0	8 digits, without reset	1.260.300.012	1.260.300.013			
	DC (25 Hz) / 1		1.260.300.032	1.260.300.033			
	AC (18 Hz) / a			1.260.300.061	1.260.300.064	1.260.300.066	