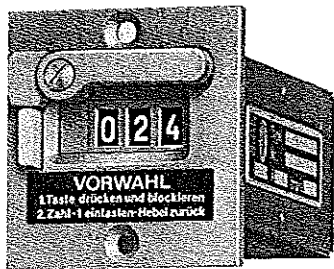


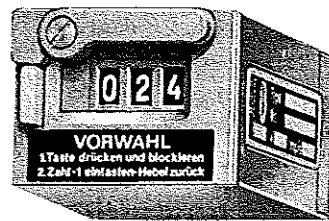


Subtracting preset counters

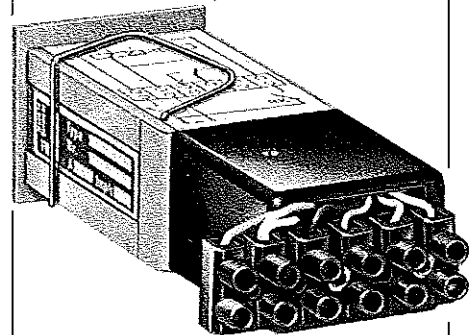
Type series EVs 13 and EVs 15



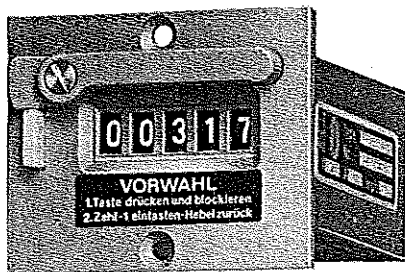
EVs 13.11
EVs 13.11 m



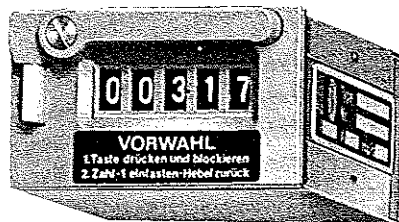
EVs 13.01
EVs 13.01 m



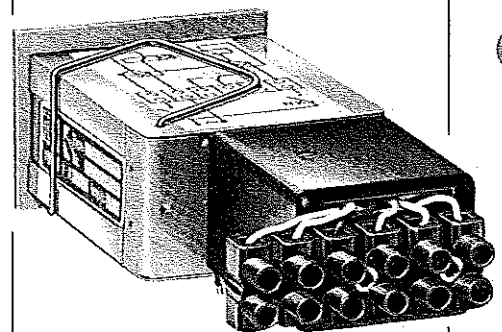
EVs 13.23
EVs 13.23 m



EVs 15.11
EVs 15.11 m
EVs 15.13



EVs 15.01
EVs 15.01 m
EVs 15.03



EVs 15.23 m

Also available with manual and electrical reset.

The counter subtracts one unit in full step, with each impulse from the preset number. On coincidence with the number 0, a contact will be released on the next impulse, i.e. from 000 to 999. This contact is optionally a spring contact or a micro-switch (additional designation "m"). All 3 or 5 figures can be preset. The reset operation, manually by key or remotely by impulse on the reset solenoid, resets the counter to the preset number.

The counter is vibration- and shock-proof in any operating position. The driving components are made of wear-resistant plastics so that a high degree of reliability and service life is obtained.

The front panel is made of fibre-glass reinforced plastic and the frame is nickel-plated metal. Counters with small front panel are mounted from the rear by screws.

The reset solenoid is incorporated in the counters of type series EVs 15, whilst on the EVs 13 series it is attached at the rear. If, on the EVs 15 series, a microswitch is required instead of the standard contact spring, the reset solenoid is also attached at the rear, as shown in the illustrations.

Preset:

1. Depress reset key and lock by turning locking lever.
2. Preset number required less one unit with setting pin included (also possible with ballpoint or paper clip). If e.g. 127 is required, set 126.

3. Return locking lever.

During the preset or reset operation no impulses should pass to the counter since these will not be recorded and may cause failures.

Technical Data:

Electrical connection: Screw terminal.

Figures:

4 mm high numbers, white on black wheel.

Mounting position: optionally.

Colour of front panel:

grey, also black available.

Dimension diagram:

Refer to page 18, 19.

Acceleration influence:

3 g at 10 Hz

6 g at 15 Hz Independent of position

10 g at 20-300 Hz

Rated voltages:

4 6 12 24 48 60 110 220 VDC

± 10 % tolerance

12 24 48 60 110 220 VAC

± 10 % tolerance

Hipotential test: 2000 VAC effective

Weights:

EVs ... man. reset 190 g

EVs 13 ... electr. reset 250 g

EVs 15 ... man. reset 190 g

EVs 15 ... electr. reset 250 g

EVs 15 ... electr. reset and micro switch 255 g

Service life:

approx. 150 millions impulses - without maintenance.

Available types:

	manual reset	man. + electr. reset
without front panel	EVs 15.01 EVs 15.01	EVs 13.03 EVs 15.03
front panel with 2 mounting holes	EVs 13.11 EVs 15.11	EVs 13.13 EVs 15.13
Front panel with spring clip	EVs 13.21 EVs 15.21	EVs 13.23 EVs 15.23

If microswitch is required instead of spring contact add "m" to order code e.g. EVs 15.11.m.



Subtracting preset counters

Type series EVs 13 and EVs 15

a) Counting mechanism

Voltage	Model	Max. imp. freq.	Min. imp. duration ms	Min. imp. interval ms	On time	Power consumption approx.	Perm. residual ripple voltage max.	Ambient temp. °C
VDC	0	10/sec	60	40	100 %	2.0 W	48 %	-10 +45
	I	25/sec	24	16	75 % max. 10 min.	3.3 W	48 %	
	III	50/sec	10	10	50 % max. 3 min.	7.0 W	5 %	- 5 half step +40 only
VAC	a0	10/sec	50	50	100 %	3.2 VA		
	a	18/sec	27.7	27.7	70 % max. 8 min.	4.5 VA		-10 +45

b) Reset solenoid

Voltage: DC or AC via rectifier.

Rated voltages:

4 6 12 24 48 60 110 220 VDC
± 10 % tolerance.
24 48 60 110 220 VAC
± 10 % tolerance.

Hipotential test: 2000 VAC effective.

Power consumption:
Approx. 9.5 W at DC.
Approx. 13 VA at AC.

Minimum impulse duration:
0.15 sec (no impulse should be given for 0.2 sec)

On time: 25 % max. 2 minutes.

Acceleration influence:
same as counting mechanism.

Ambient temperature:
-10 °C up to +45 °C.

Service life:
Approx. 1.5 millions reset operations.

c) Release contact

Spring contact:
1 change-over contact.
Loading capacity at DC:
up to 60 V max. 0.5 A
up to 125 V max. 0.2 A
up to 220 V max. 0.1 A

Loading capacity at AC:
up to 125 V max. 0.6 A
up to 220 V max. 0.3 A

ohmic load

A suitable spark quenching must be provided on inductive load, reducing the max. switching current to about 60 %.

Microswitch: 1 change-over contact
Loading capacity at AC:
max. 250 V max. 5.0 A
Loading capacity at DC:
24 V max. 2.0 A
60 V max. 0.7 A
110 V max. 0.4 A
220 V max. 0.2 A

ohmic load

A suitable spark quenching must be provided on inductive load, reducing the max. switching current to about 60 %.

Contact release:

On impulse start
model 0 after approx. 25 ms
model I after approx. 22 ms
modell III after approx. 18 ms

Order informations:
State exact type designation, voltage, type of voltage (AC or DC), model (impulse frequency)

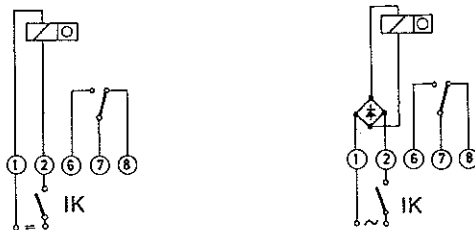
Order example:
EVs 13.13, 24 VDC, model 0.

Options

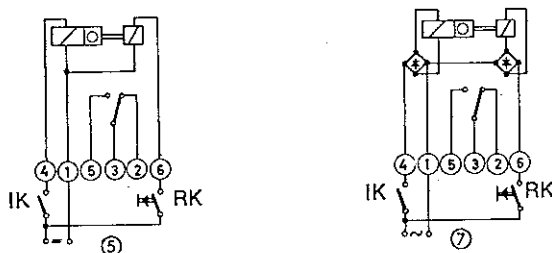
- Front panel**
Also available in black.
- Reset:**
Latch- or key-locking reset, refer to page 7.
- Figures:**
 - Size:
Magnified to 5 mm by magnifying lens.
 - Colour:
Red or yellow numbers on black wheel.
Red or black numbers on white wheel.
- Electrical connection:**
Solder terminals, plug-in version, with flying leads.
Refer to page 16, 17.
- Climate proof**
High and low temperatures
-20 °C up to +60 °C.
Tropicalised version stainless steel shafts.
- Driving system**
Half-step switching – an armature drive switches the unit wheel in 2 half-steps on impulse; 1/2 on starting and 1/2 on dropping.
Order designation 5.
e.g. Type EVs 15.11.5.

Circuit diagrams

a) manual reset



b) manual + electrical reset





Front panel dimension diagrams

Type series E 14, E 16, ED 15, EVs 13, EVs 15

Code 0		Code 1		Code 2			
Type series	a	Type series	a	b	Type series	a	b
E 16, EVs 15, ED 15	48	E 16, EVs 15, ED 15	50	48	E 16, EVs 15, ED 15	50	48
E 14, EVs 13	37	E 14, EVs 13	39	37	E 14, EVs 13	39	37

