



**48vA, 72vA, 96vA**  
**48vV, 72vV, 96vV**

For measuring DC current respective voltage.

### Technical data:

**Movement:** moving-coil,  
pivot & spring-type bearing.

**Instrument case:** non-flammable plastic  
acc. to UL 94-V1.

**Scale length:** 28 mm (48v...), 48 mm (72v...),  
60 mm (96v...).

**Permanent overloading:** 1.2 fold current res. voltage.

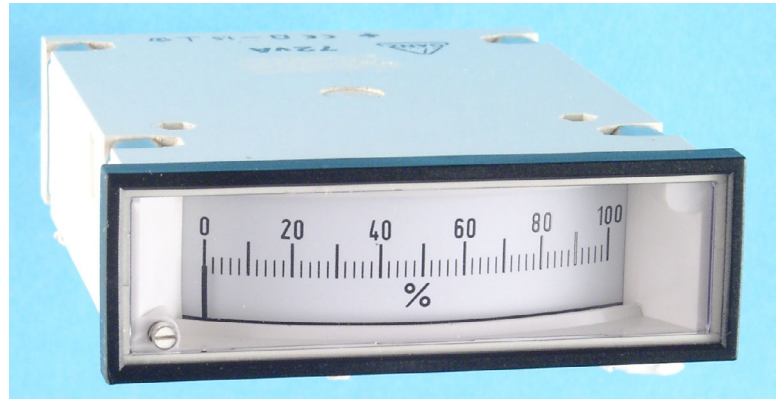
**Class of accuracy:** 1.5

**Connection:** - 2.8 x 0.5 mm faston (DIN 46247) for types 48v... and 72v...  
- 4.8 x 0.5 mm faston (DIN 46247) for types 96v...

**Protection:** case IP40; terminals IP00 in accordance with DIN 40050.

**Weight:** 0.1 kg (48v...); 0.12 kg (72v...); 0.15 kg (96v...).

**Fixing elements:** with two screw-type fastening.



## AMMETERS

Measuring range	Frame dimensions					
	48x24 mm		72x24 mm		96x24 mm	
	Type 48 vA Cat. No. 2069-10-...		Type 72 vA Cat. No. 1093-10-...		Type 96 vA Cat. No. 1026-10-...	
	...	int. resist. $\Omega$	...	int. resist. $\Omega$	...	int. resist. $\Omega$
50 $\mu$ A	001	4150	060	4800	060	5200
100 $\mu$ A	003	2800	001	3500	002	3800
250 $\mu$ A	006	440	003	550	004	600
1 mA	009	24	006	35	007	32
5 mA	014	3.5	010	3.3	011	3.6
10 mA	016	2.3	012	2.5	013	3.5
20 mA	018	2	014	2	015	2
25 mA	019	2.4	015	2.4	016	2.4
100 mA	022	0.6	018	0.6	019	0.6
0.6 A	058	0.1	061	0.1	023	0.1
1 A	059	0.06	062	0.06	024	0.06
1.5 A	060	0.04	063	0.04	025	0.04
2.5 A	061	0.024	064	0.024	026	0.024
4 A	062	0.015	065	0.015	027	0.015
6 A	064	0.01	066	0.01	028	0.01
10 A	-	-	-	-	029	0.006
4...20 mA	023	2.2	501	2.2	501	2.2
* ...A/50 mV	C01	10	C01	10	C01	10
* ...A/60 mV	C02	12	C02	12	C02	12
* ...A/100 mV	C03	20	C03	20	C03	20
* ...A/150 mV	C04	30	C04	30	C04	30
* ...A/300 mV	C05	60	C05	60	C05	60

**Note:** on request types different from tables are accepted

\* For connection to separate shunt.

For calibration of the instruments 0.035  $\Omega$  wire resistance (=2x1m  $\varnothing$ 1 mm<sup>2</sup>) is taken into consideration.  
The tolerance of the internal resistance is generally  $\pm$ 20%.

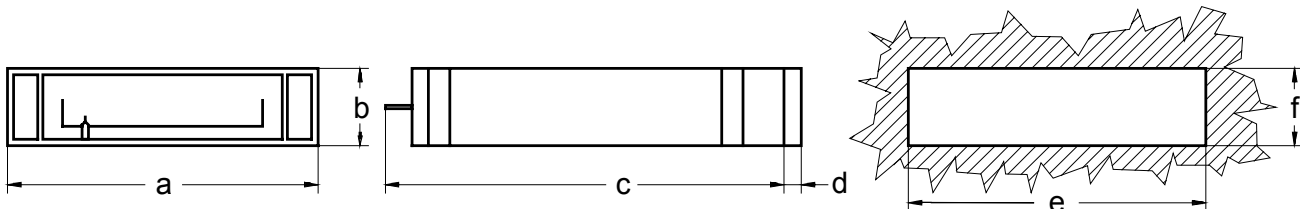


## VOLTMETERS

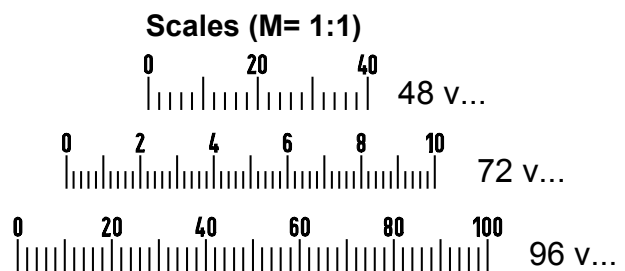
Measuring range	Frame dimensions					
	48x24 mm		72x24 mm		96x24 mm	
	Type 48 vV Cat. No. 2069-10-...		Type 72 vV Cat. No. 1093-10-...		Type 96 vV Cat. No. 1026-10-...	
	...	Internal Resistance	...	Internal Resistance	...	Internal Resistance
0.6 V	036	1000 Ω/V ↓	045	1000 Ω/V ↓	035	1000 Ω/V ↓
1 V	037		020		036	
1.5 V	038		021		037	
2.5 V	039		022		038	
4 V	040		023		039	
5 V	053		053		053	
6 V	041		024		040	
10 V	042		025		041	
15 V	043		026		042	
25 V	044		027		043	
40 V	045		028		044	
60 V	046		029		045	
100 V	047		030		046	
150 V	048		031		047	
250 V	049		032		048	
400 V	050		033		049	
500 V	051	035	051			
600 V	052	034	050			

**Note:** on request types different from tables are accepted  
 - The tolerance of the internal resistance is generally  $\pm 20\%$

## Outline drawing



Type\Dim. (mm)	a	b	c	d	e	f
48 vA 48 vV	48	24	67.6	5.3	$43.2^{+0.3}$	$22.2^{+0.3}$
72 vA 72 vV	72	24	92	5.3	$67^{+0.5}$	$22.2^{+0.3}$
96 vA 96 vV	96	24	125	5.3	$91.5^{+0.5}$	$22.5^{+0.3}$



### Order specification:

- Moving-coil panel mounted ammeter.
- Frame size: 72x24 mm.
- Range: 1 mA.
- Scale: 0 ... 1 mA.

### Ordering data:

- Moving-coil panel mounted ammeter.
- Type: **72 vA**
- Cat. No. **1093-10-006**
- position: vertical