



TUBE-TYPE MOVING-COIL INSTRUMENTS



79DA, 119DA, 79DV, 119DV

For measuring DC current or voltage.

Technical data:

- Movement:** moving-coil
with pivot spring-type bearing.
- Instrument case:** non-flammable plastic
according to UL 94-V1.
- Scale length:** 103° resp. 60 mm (79D...) and 97 mm (119D...)
- Permanent overloading:** 1.2 -fold current resp. voltage.
- Class of accuracy:** 1.5
- Protection:** IP40 for instrument case;
IP00 for connection-pins (DIN 40050).



- Connection:** 4.8 x 0.8 mm faston (DIN 46247)
- Weight:** approx. 0.11 kg (79D...); 0.2 kg (119D...)
- Instrument mounting:** A. on the front side of the assembly-board with frame
B. on the backside of the assembly-board with special frame
C. on the backside of the assembly-board without frame (see on page after next page)

AMMETERS	Type	79DA	119DA
Frame dimensions		80x63 mm	120x90 mm
Measuring range	Cat. No.	1495-12-...	1494-12-...
		Internal resistance (Ω)	
50 μ A	200	4000	
100 μ A	001	1400	
250 μ A	013	1020	
1 mA	031	65	
5 mA	052	5	
10 mA	061	3	
20 mA	070	2.3	
** 25 mA	073	2.3	
** 100 mA	091	0.6	
** 500 mA	112	0.12	
** 1 A	121	0.06	
** 1.5 A	127	0.04	
** 2.5 A	133	0.024	
** 4 A	139	0.015	
** 5 A	142	0.012	
** 6 A	145	0.01	
4 ...20 mA	146	2.3	
* ...A / 50 mV	148	10	
* ...A / 60 mV	149	12	
* ...A / 100 mV	150	20	
* ...A / 150 mV	151	30	
* ...A / 300 mV	152	60	

* For connection to separate shunt.
For calibration of the instruments 0.035 Ω wire resistance (=2x1m \varnothing 1 mm²) is taken into consideration.
The tolerance of the internal resistance is generally \pm 20%.

** Types with external resistance (see on the next page).

Note: on request types different from tables are accepted

Order specification:

- Tube-type moving-coil ammeter.
- Frame size: 80x63 mm.
- Range: 10 mA.
- Mounting: on front side with frame.

VOLTMETERS	Type 79DV	Type 119DV
Frame dimensions		80x63 mm
Measuring range	Cat. No.	1495-12-...
		1494-12-...
1 V		151
1.5 V		157
2.5 V		163
4 V		169
6 V		175
10 V		181
15 V		187
20 V		190
25 V		193
30 V		196
40 V		199
50 V		202
60 V		205
80 V		208
100 V		211
150 V		217
200 V		220
**250 V		223
**300 V		226
**400 V		229
**500 V		232
**600 V		235

Internal resistance : 1000 Ω /V

**Types with external resistance (see on page after next page). The external resistance may be mounted on the instrument by the factory or mounted by the

user

anywhere in the installation they use the instrument on request.

Ordering data:

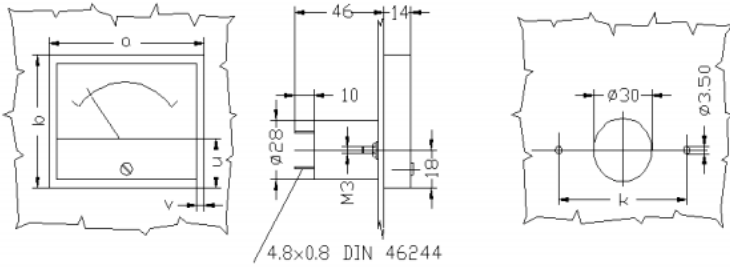
- Tube-type moving-coil ammeter.
- Type: **79DA**
- Cat. No. **1495-12-061**
- Mounting: **Type A.**



TUBE-TYPE INSTRUMENTS MOUNTING

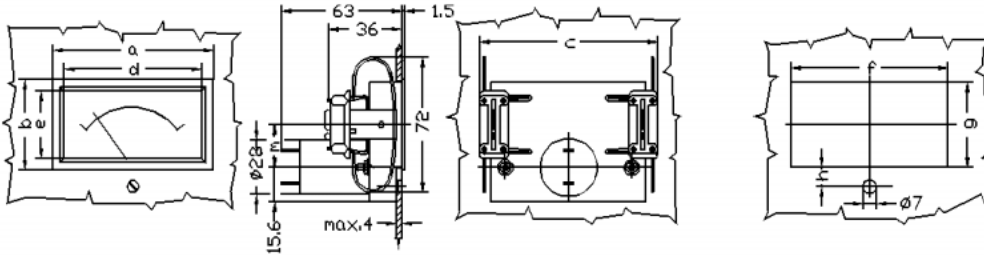


Mounting type: A



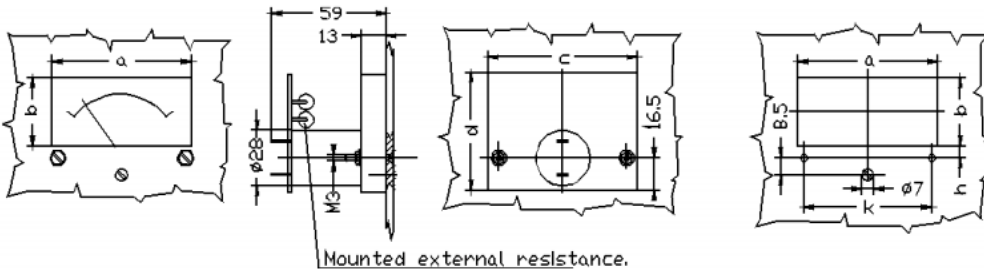
Type \ Dim (mm)	a	b	u	v	k
79...	80	63	23.5	4	66
119...	120	90	31	5	90

Mounting type: B



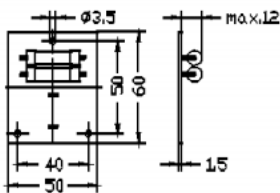
Type \ Dim (mm)	a	b	c	d	e	f	g	h	m
79...	84	47	93	72	35	82 ^{+0.4}	44.5 ^{+0.4}	9.8	23.5
119...	125	68	123	110	53	122 ^{+0.4}	64.5 ^{+0.4}	16.8	40.5

Mounting type: C



Type \ Dim (mm)	a	b	c	d	h	m
79...	72	35	77	60	6	66
119...	110	53	117	87	14	90

External resistance



Scales
M=1:1

