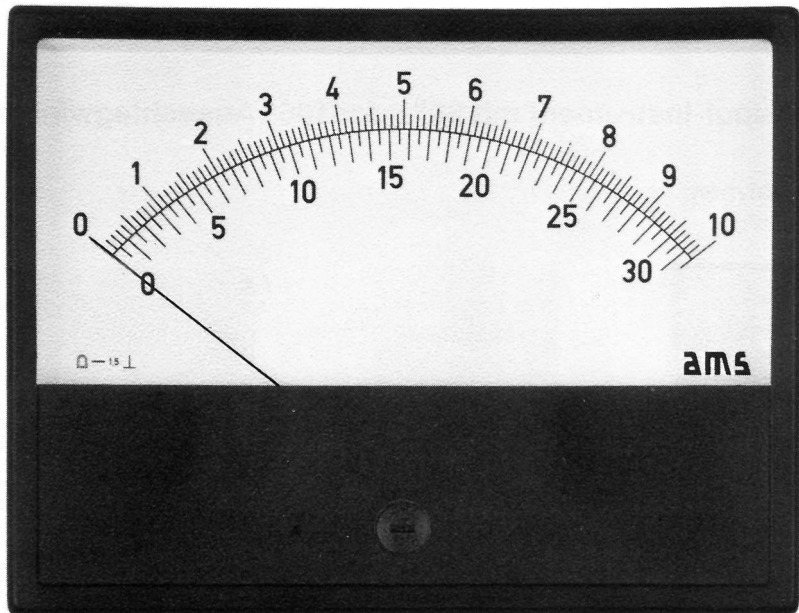


The Measuring Instruments of the "Interserie"

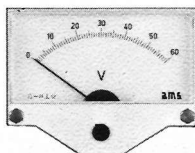
"INTERSERIE" METERS



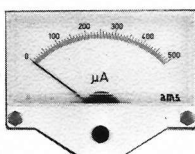
Housings



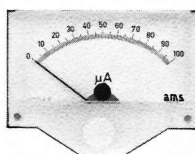
AB



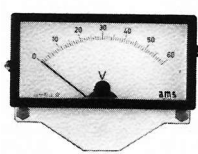
UB



EB



EBN



URB

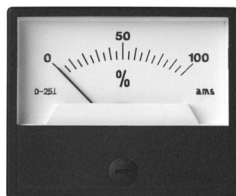
- ☐ are available with moving coil core magnet movements, accuracy class 1.5 or 2.5 (class 1 on request), which are resistant against external magnetic fields.
- ☐ are available in 7 housing sizes for up to 5 built-in variations.
- ☐ are equipped with a pointer deflection of 90° or 105°.
- ☐ have interchangeable slide-in scales by default, on demand translucent or with mirror scale.
- ☐ have scales with flat or normal (360° section) arc.
- ☐ are equipped with tube pointer (knife-edge pointer on request)
- ☐ are in the built-in version 'AB' equipped with a dark grey front frame (similar to RAL 7011) by default, on demand 'light grey' and 'black' are available.
- ☐ are to a great extend optionally available with rectifier for measuring AC values.
- ☐ are available in the sizes 55 - 60 - 75 - 80 - 96 - 100 - 130

Size 55

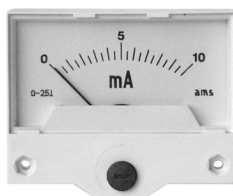
Interserie Moving Coil Meter

90° or 105° Pointer Deflection

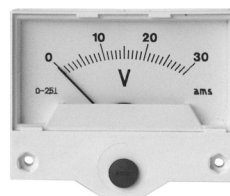
Available housings:



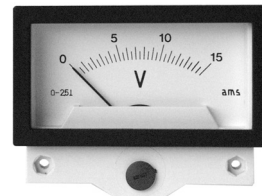
AB 55
panel mounting type



UB 55
submounting type



EB 55
built-in type



URB 55
with submounting frame

Movement

Bearing

Pointer

Accuracy class

Scale

Front frame colour

URB frame colour

moving coil with core magnet
pivots with spring mounted jewels
tube pointer
1.5 or 2.5
interchangeable slide-in scale
if fsd 90° scale length approx. 34 mm
if fsd 105° scale length approx. 40 mm
dark grey similar to RAL 7011;
light grey or black on demand
black

Measuring range

Ammeters

Internal resistance

Voltmeters

Internal resistance

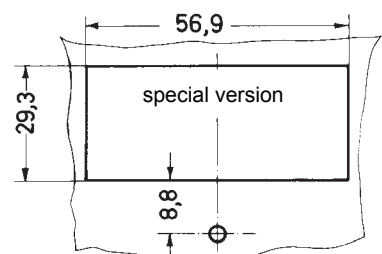
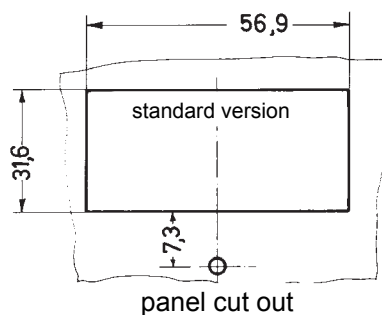
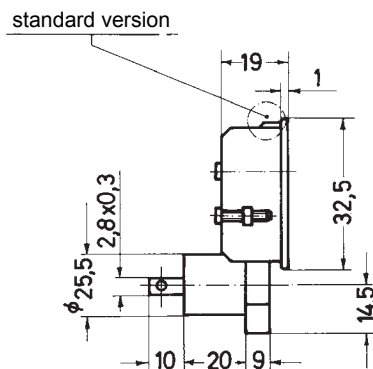
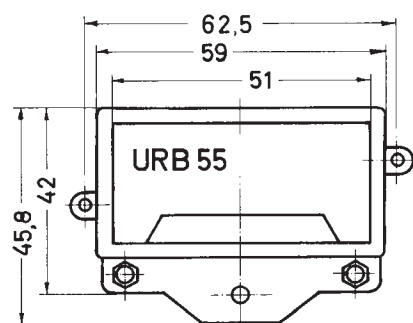
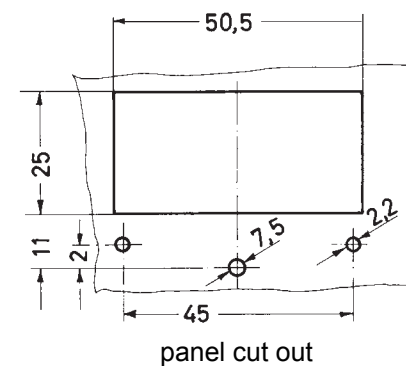
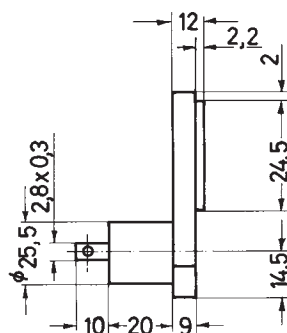
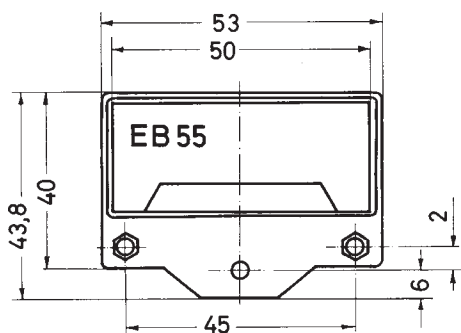
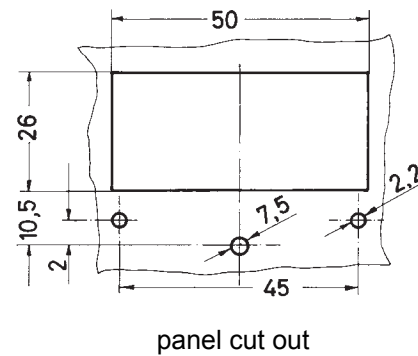
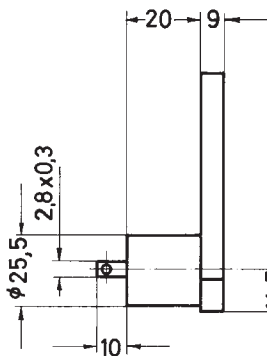
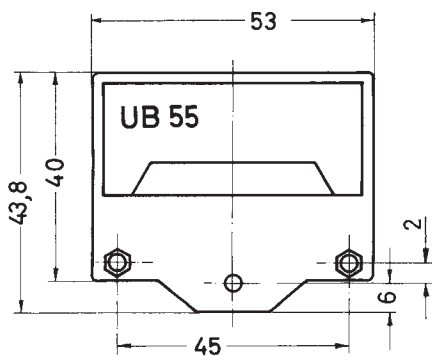
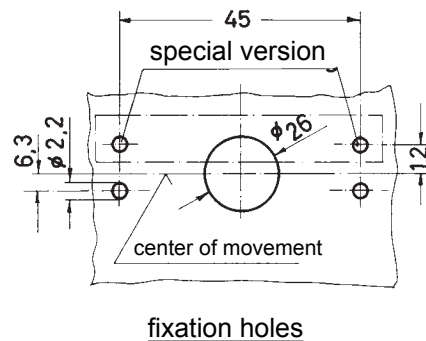
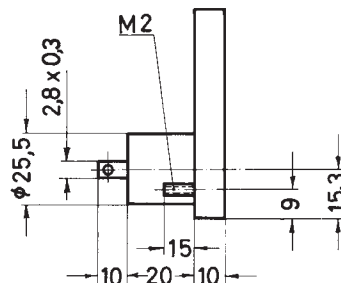
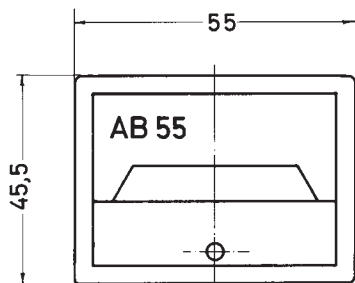
100 µA	4000 Ω	100 mV
150 µA	4000 Ω	150 mV
250 µA	1300 Ω	400 mV
400 µA	1100 Ω	600 mV
600 µA	380 Ω	1 V
1 mA	70 Ω	1.5 V
1.5 mA	30 Ω	2.5 V
2.5 mA	13 Ω	4 V
4 mA	11 Ω	6 V
6 mA	5.5 Ω	10 V
10 mA	3 Ω	15 V
15 mA	2.8 Ω	25 V
20 mA	2.3 Ω	40 V
25-600 mA	60 mV	60 V
1 A•	60 mV	100 V
1.5 A•	60 mV	150 V
2.5 A•	60 mV	250 V
4 A•	60 mV	400 V
60 mV x	12 Ω	500 V
		600 V

1000 Ω/V

• Shunt fitted on the rear
x For operation with separate shunt
Tolerance of the internal resistance ± 20%

Size 55 Moving Coil Meter

"INTERSERIE" METERS

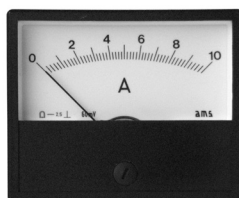


Size 60

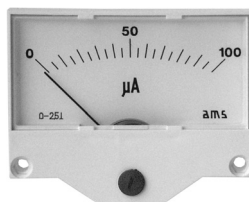
Interserie Moving Coil Meter

90° or 105° Pointer Deflection

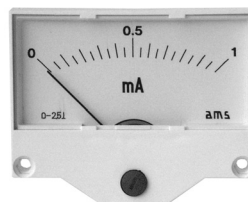
Available housings:



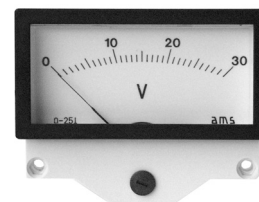
AB 60
panel mounting type



UB 60
submounting type



EB 60
built-in type



URB 60
with submounting frame

Movement

Bearing

Pointer

Accuracy class

Scale

Front frame colour

URB frame colour

moving coil with core magnet
pivots with spring mounted jewels
tube pointer
1.5 or 2.5
interchangeable slide-in scale
if fsd 90° scale length approx. 48 mm
if fsd 105° scale length approx. 54 mm
dark grey similar to RAL 7011;
light grey or black on demand
black

Measuring range

Ammeters

Internal resistance

Voltmeters

Internal resistance

100 µA	4000 Ω	100 mV	} 1000 Ω/V
150 µA	4000 Ω	150 mV	
250 µA	1300 Ω	400 mV	
400 µA	1100 Ω	600 mV	
600 µA	380 Ω	1 V	
1 mA	70 Ω	1.5 V	
1.5 mA	30 Ω	2.5 V	
2.5 mA	13 Ω	4 V	
4 mA	11 Ω	6 V	
6 mA	5.5 Ω	10 V	
10 mA	3 Ω	15 V	
15 mA	2.8 Ω	25 V	
20 mA	2.3 Ω	40 V	
25-600 mA	60 mV	60 V	
1 A •	60 mV	100 V	
1.5 A •	60 mV	150 V	
2.5 A •	60 mV	250 V	
4 A •	60 mV	400 V	
6 A •	60 mV	500 V	
10 A •	60 mV	600 V	
15 A •	60 mV		
60 mV x	12 Ω		

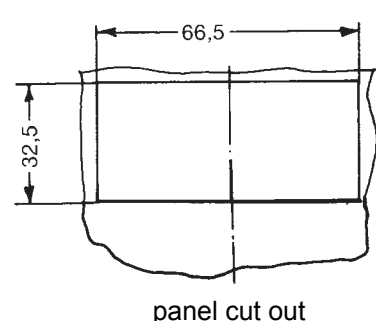
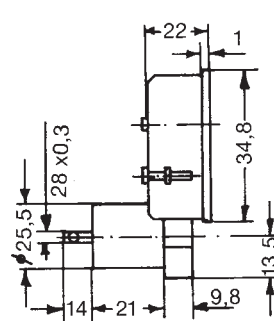
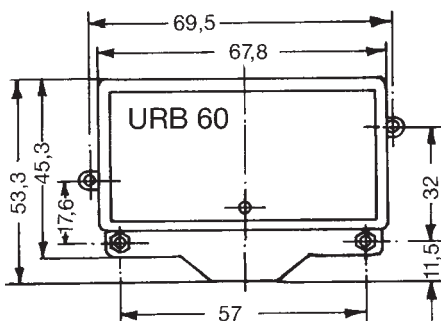
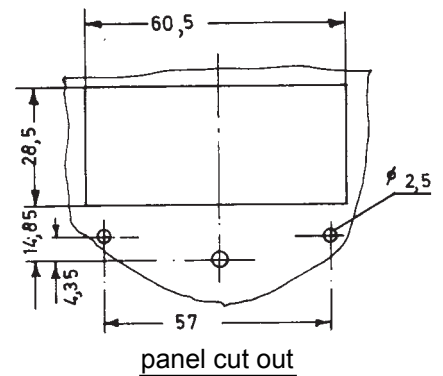
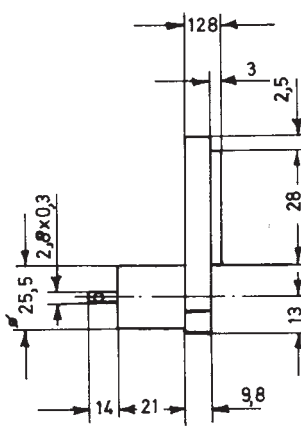
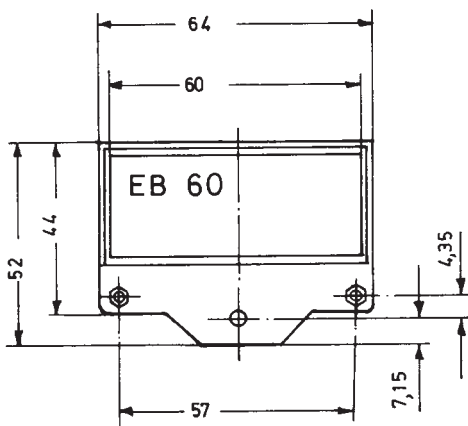
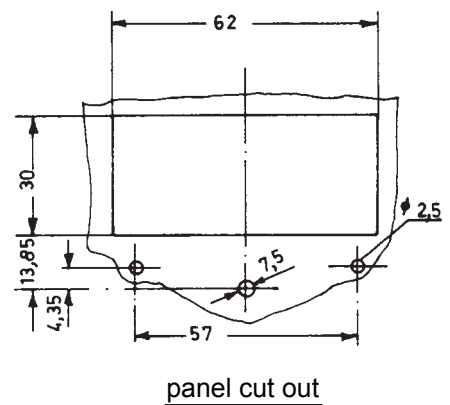
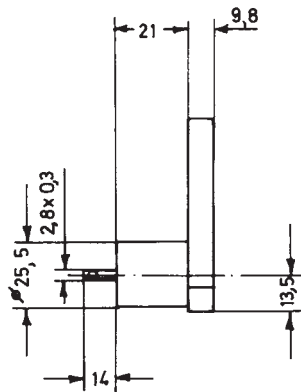
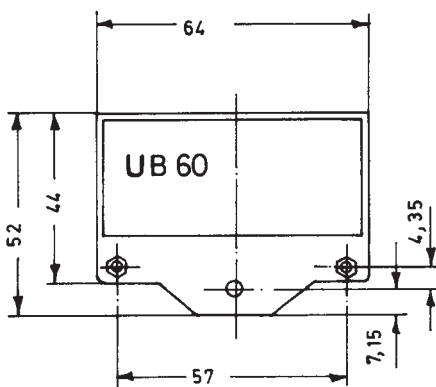
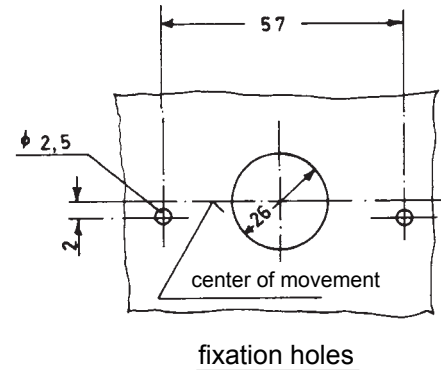
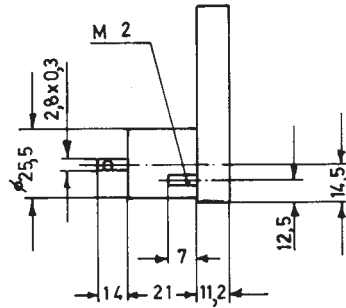
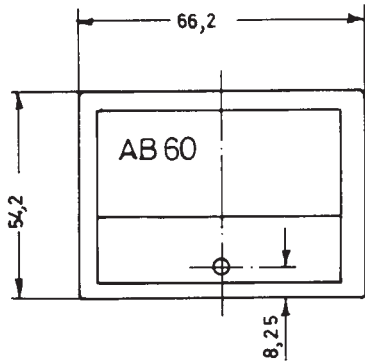
• Shunt fitted on the rear
x For operation with separate shunt
Tolerance of the internal resistance ± 20%

**Ammeters for direct connection of
up to 30 A in housings ... 60 DE**

Size 60

Moving Coil Meter

"INTERSERIE" METERS

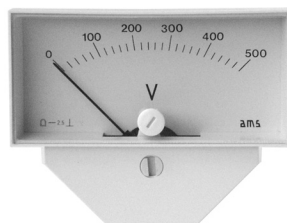


Size 75

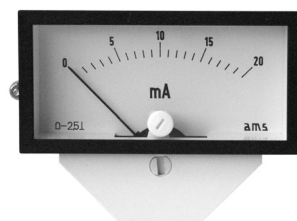
Interserie Moving Coil Meter

90° or 105° Pointer Deflection

Available housings:



EBN 75 I-III
built-in type



URB 75
submounting type

Movement

Bearing

Pointer

Accuracy class

Scale

moving coil with core magnet
pivots with spring mounted jewels
tube pointer as standard; knife-edge pointer for mirror scale
1.5 or 2.5 (class 1 on request)
interchangeable slide-in scale (also available with mirror scale)
if fsd 90° scale length approx. 53 mm
if fsd 105° scale length approx. 61 mm

URB frame colour

black;
light grey or dark grey on demand

Measuring range	Ammeters	Internal resistance	Voltmeters	Internal resistance
	100 μ A	4000 Ω	100 mV	1000 Ω /V
	150 μ A	4000 Ω	150 mV	
	250 μ A	1300 Ω	400 mV	
	400 μ A	1100 Ω	600 mV	
	600 μ A	380 Ω	1 V	
	1 mA	70 Ω	1.5 V	
	1.5 mA	30 Ω	2.5 V	
	2.5 mA	13 Ω	4 V	
	4 mA	11 Ω	6 V	
	6 mA	5.5 Ω	10 V	
	10 mA	3 Ω	15 V	
	15 mA	2.8 Ω	25 V	
	20 mA	2.3 Ω	40 V	
	25-600 mA	60 mV	60 V	
	1 A •	60 mV	100 V	
	1.5 A •	60 mV	150 V	
	2.5 A •	60 mV	250 V	
	4 A •	60 mV	400 V	
	60 mV x	12 Ω		
	150 mV x	58 Ω		

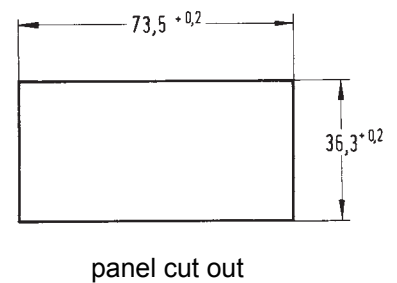
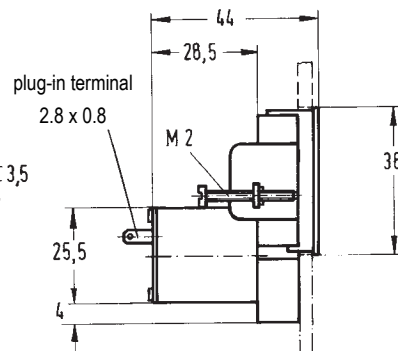
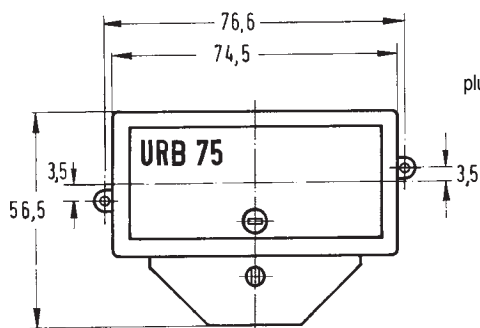
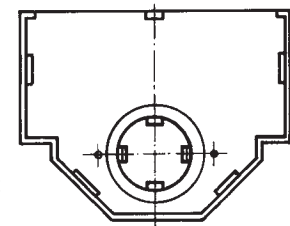
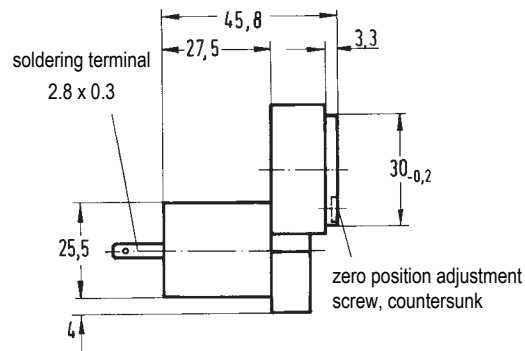
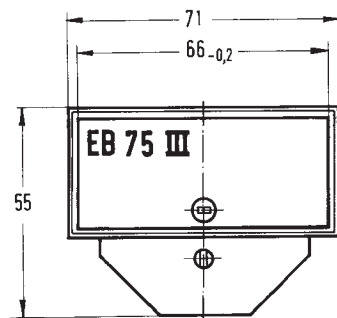
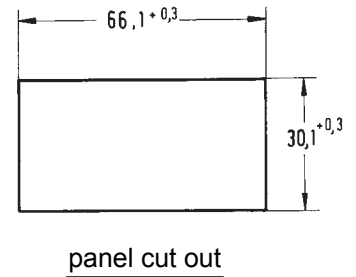
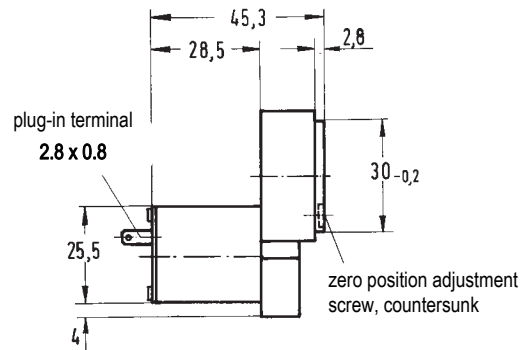
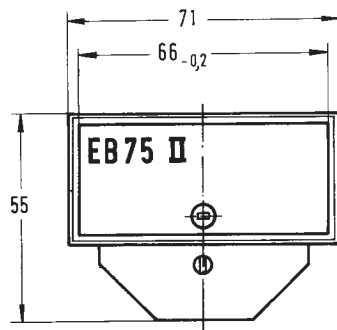
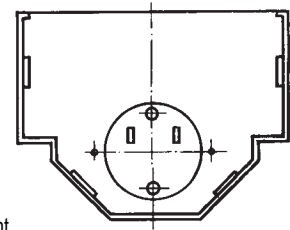
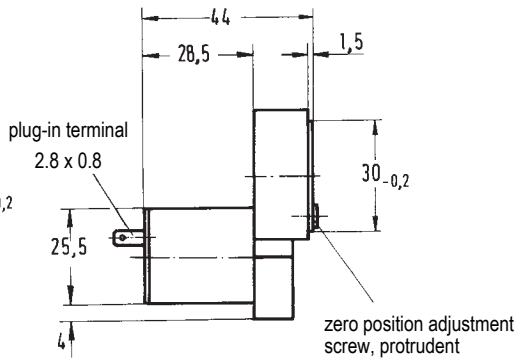
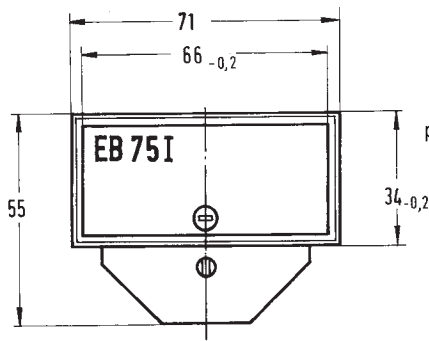
• Shunt fitted on the rear
x For operation with separate shunt
Tolerance of the Internal resistance $\pm 20\%$

**Ammeters for direct connection of
up to 40 A in housings ... 75 DE**

Size 75

Moving Coil Meter

"INTERSERIE" METERS



Size 80

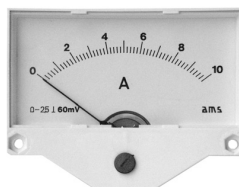
Interserie Moving Coil Meter

90° or 105° Pointer Deflection

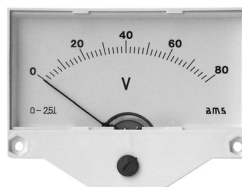
Available housings:



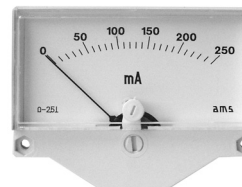
AB 80
panel mounting type



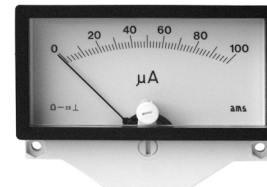
UB 80
submounting type



EB 80
built-in type



EBN 80
built-in type



URB 80
with submounting frame

Movement
Bearing
Pointer

Accuracy class
Scale

Front frame colour

URB frame colour

moving coil with core magnet
pivots with spring mounted jewels
tube pointer as standard; knife-edge pointer for mirror scale
1.5 or 2.5 (class 1 on request)
interchangeable slide-in scale (also available with mirror scale)
if fsd 90° scale length approx. 55 mm
if fsd 105° scale length approx. 62 mm
dark grey similar to RAL 7011;
light grey or black on demand
black

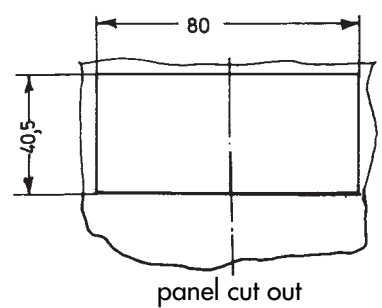
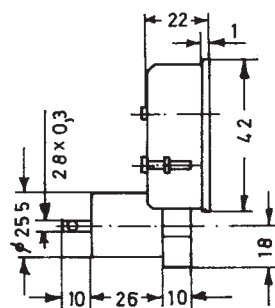
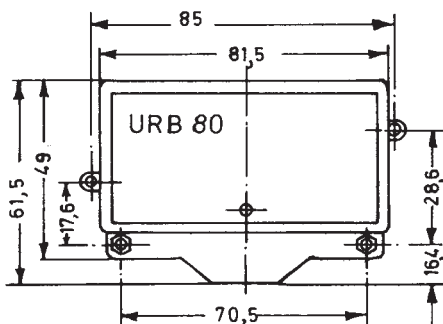
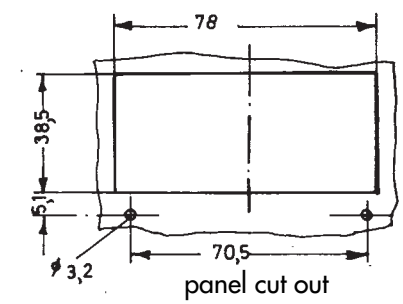
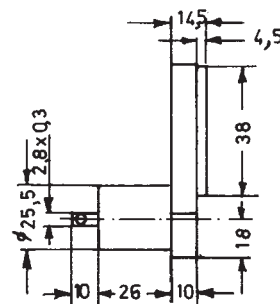
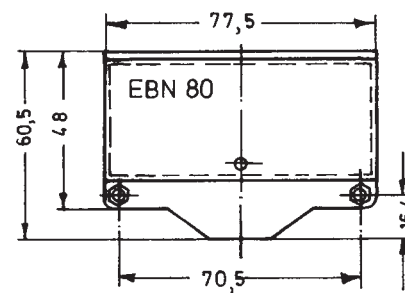
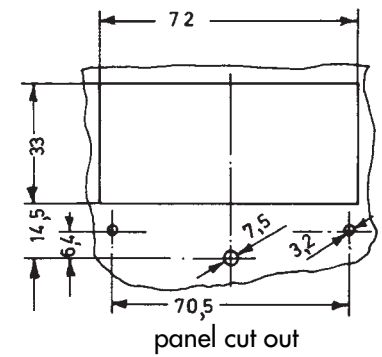
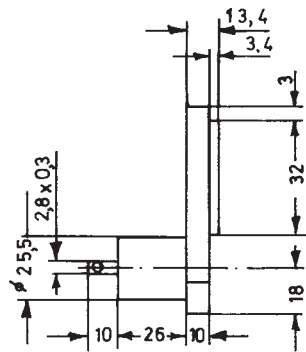
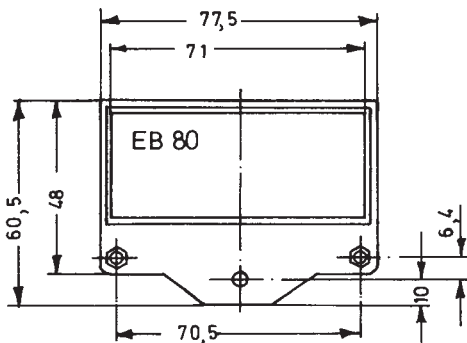
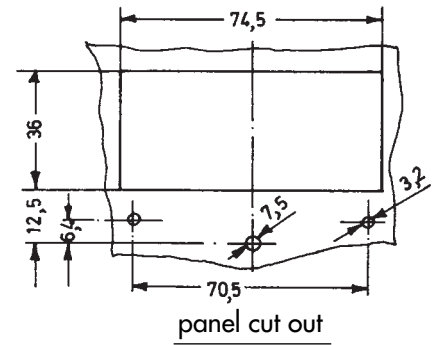
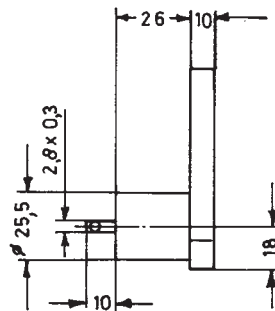
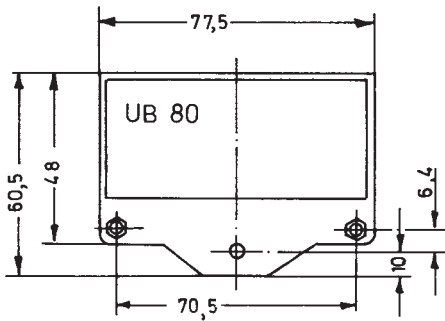
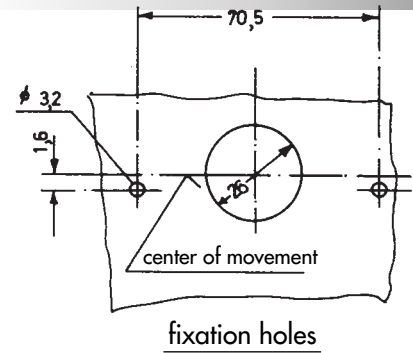
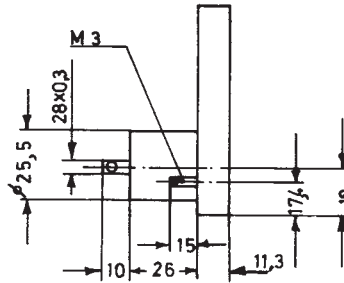
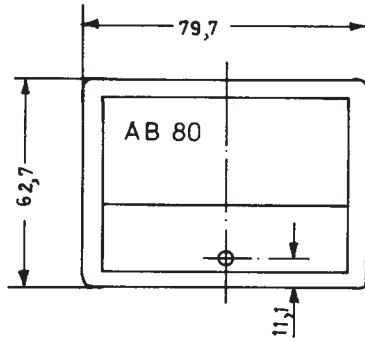
Measuring range	Ammeters	Internal resistance	Voltmeters	Internal resistance
	100 µA	4000 Ω	100 mV	1000 Ω/V
	150 µA	4000 Ω	150 mV	
	250 µA	1300 Ω	400 mV	
	400 µA	1100 Ω	600 mV	
	600 µA	380 Ω	1 V	
	1 mA	70 Ω	1.5 V	
	1.5 mA	30 Ω	2.5 V	
	2.5 mA	13 Ω	4 V	
	4 mA	11 Ω	6 V	
	6 mA	5.5 Ω	10 V	
	10 mA	3 Ω	15 V	
	15 mA	2.8 Ω	25 V	
	20 mA	2.3 Ω	40 V	
	25-600 mA	60 mV	60 V	
	1 A •	60 mV	100 V	
	1.5 A •	60 mV	150 V	
	2.5 A •	60 mV	250 V	
	4 A •	60 mV	400 V	
	6 A •	60 mV	500 V	
	10 A •	60 mV	600 V	
	15 A •	60 mV		
	60 mV x	12 Ω		

• Shunt fitted on the rear
x For operation with separate shunt
Tolerance of the internal resistance ± 20%

**Ammeters for direct connection of
up to 40 A in housings ... 80 DE**

Size 80 Moving Coil Meter

"INTERSERIE" METERS



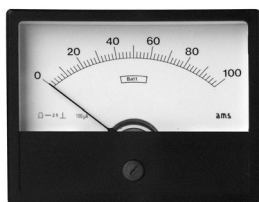
panel thickness 12 mm max.

Size 96

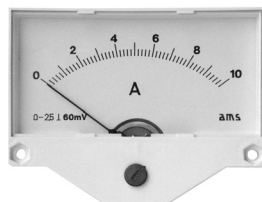
Interserie Moving Coil Meter

90° or 105° Pointer Deflection

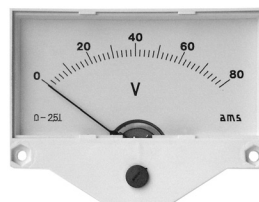
Available housings:



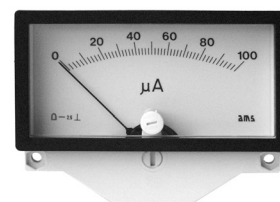
AB 96
panel mounting type



UB 96
submounting type



EB 96
built-in type



URB 96
with submounting frame

Movement

Bearing

Pointer

Accuracy class

Scale

Front frame colour

URB frame colour

moving coil with core magnet
pivots with spring mounted jewels
tube pointer
1.5 or 2.5
interchangeable slide-in scale
if fsd 90° scale length approx. 80 mm
if fsd 105° scale length approx. 87 mm
dark grey similar to RAL 7011;
light grey or black on demand
black

Measuring range

Ammeters

Internal resistance

Voltmeters

Internal resistance

100 µA	4000 Ω	100 mV	} 1000 Ω/V
150 µA	4000 Ω	150 mV	
250 µA	1300 Ω	400 mV	
400 µA	1100 Ω	600 mV	
600 µA	380 Ω	1 V	
1 mA	70 Ω	1.5 V	
1.5 mA	30 Ω	2.5 V	
2.5 mA	13 Ω	4 V	
4 mA	11 Ω	6 V	
6 mA	5.5 Ω	10 V	
10 mA	3 Ω	15 V	
15 mA	2.8 Ω	25 V	
20 mA	2.3 Ω	40 V	
25-600 mA	60 mV	60 V	
1 A •	60 mV	100 V	
1.5 A •	60 mV	150 V	
2.5 A •	60 mV	250 V	
4 A •	60 mV	400 V	
6 A •	60 mV	500 V	
10 A •	60 mV	600 V	
15 A •	60 mV		
60 mV x	12 Ω		

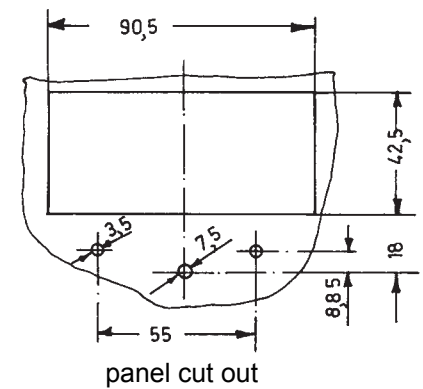
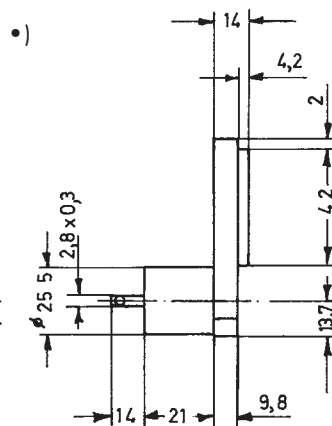
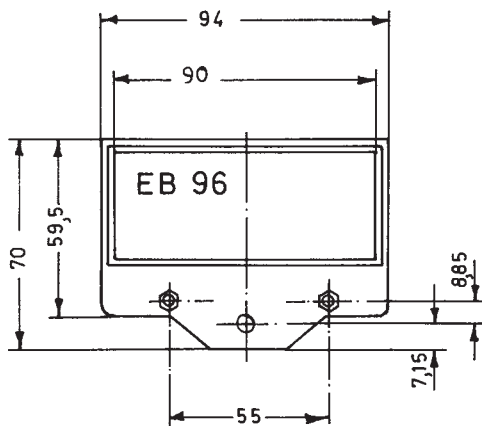
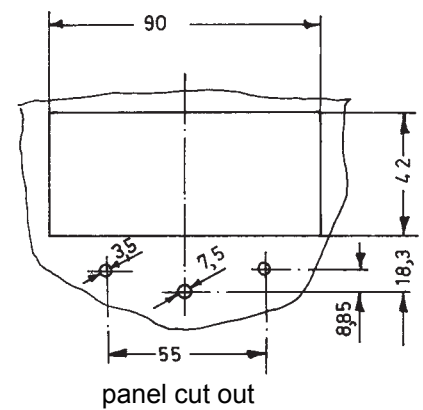
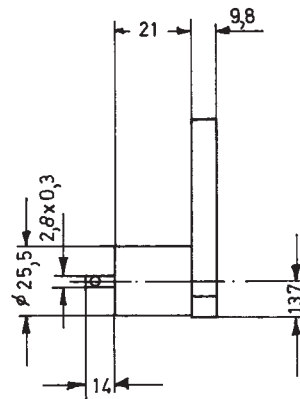
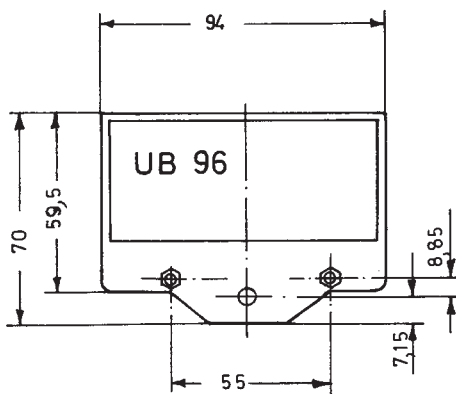
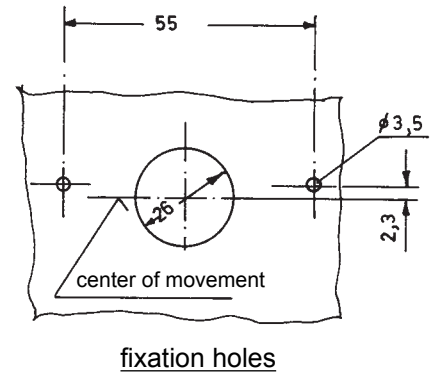
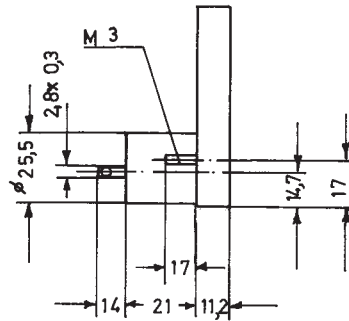
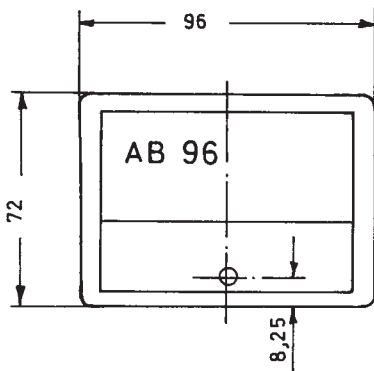
• Shunt fitted on the rear
x For operation with separate shunt
Tolerance of the internal resistance $\pm 20\%$

**Ammeters for direct connection of
up to 40 A in housings ... 96 DE**

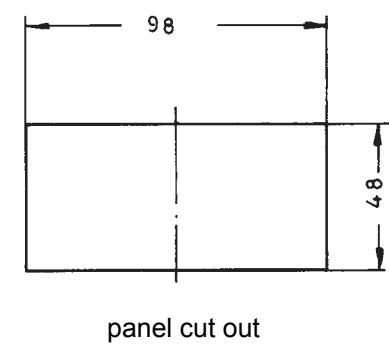
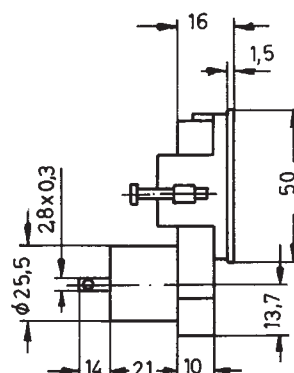
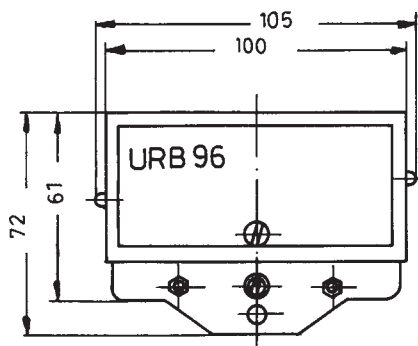
Size 96

Moving Coil Meter

"INTERSERIE" METERS



*) glass also available 2.8 mm thick



Size 100

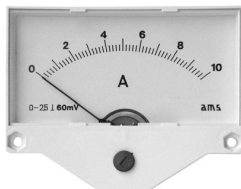
Interserie Moving Coil Meter

90° or 105° Pointer Deflection

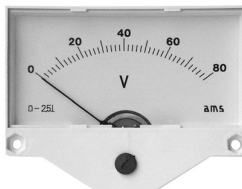
Available housings:



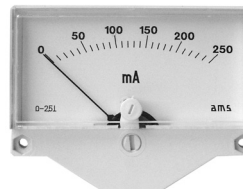
AB 100
panel mounting type



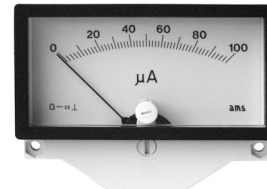
UB 100
submounting type



EB 100
built-in type



EBN 100
built-in type



URB 100
with submounting frame

Movement	moving coil with core magnet
Bearing	pivots with spring mounted jewels
Pointer	tube pointer as standard; knife-edge pointer for mirror scale
Accuracy class	1.5 or 2.5 (class 1 on request)
Scale	interchangeable slide-in scale (also available with mirror scale) if fsd 90° scale length approx. 83 mm if fsd 105° scale length approx. 90 mm
Front frame colour	dark grey similar to RAL 7011; light grey or black on demand
URB frame colour	black

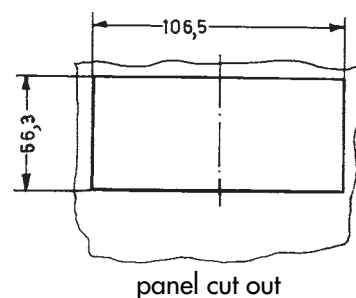
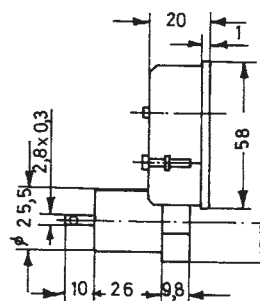
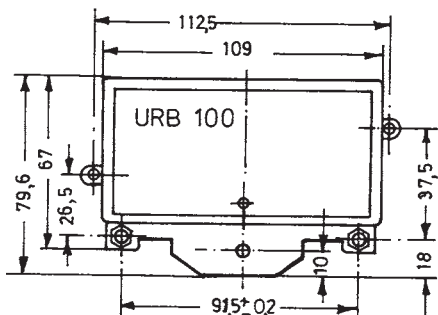
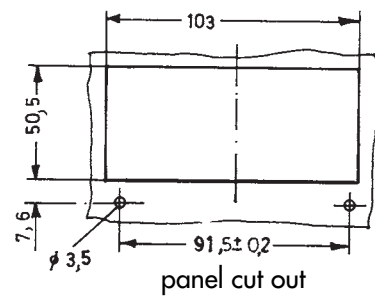
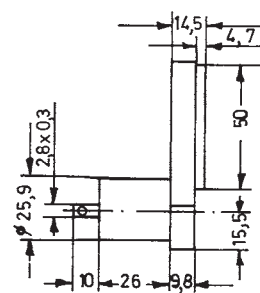
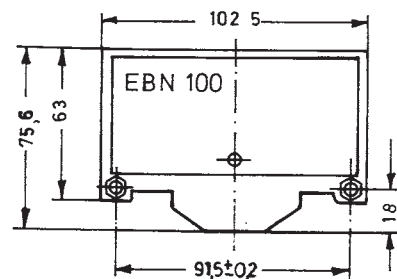
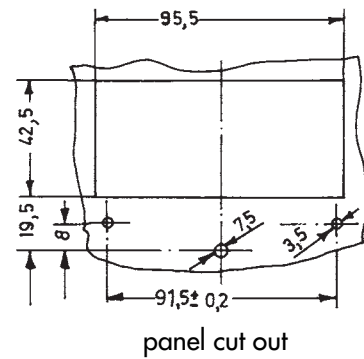
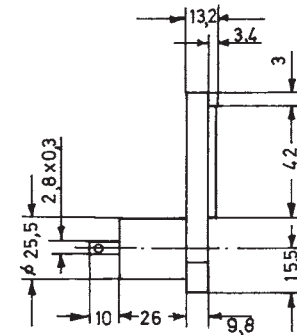
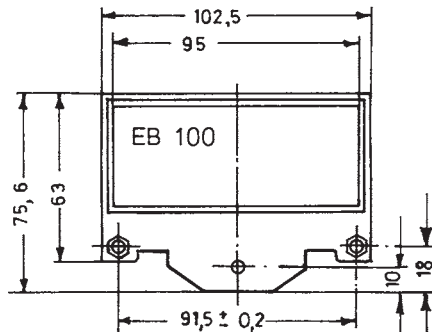
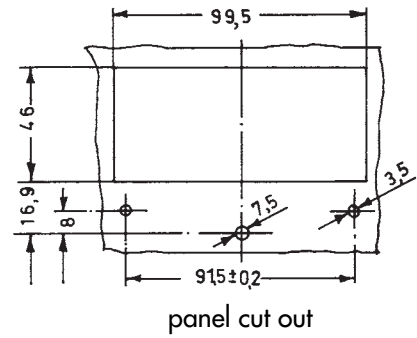
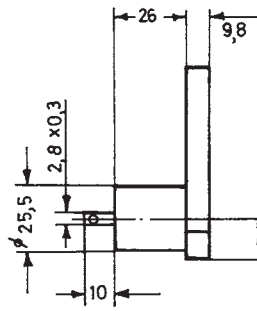
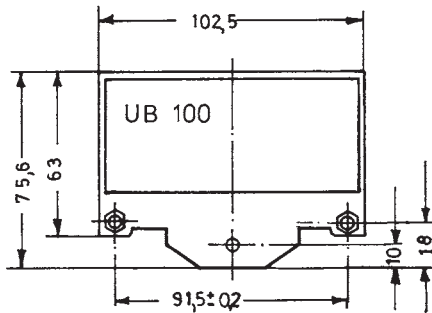
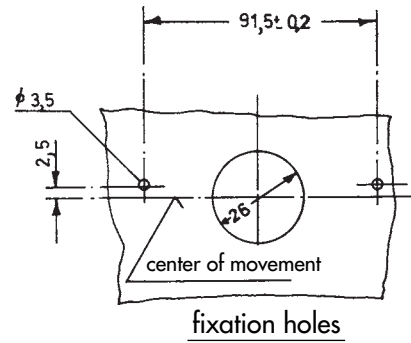
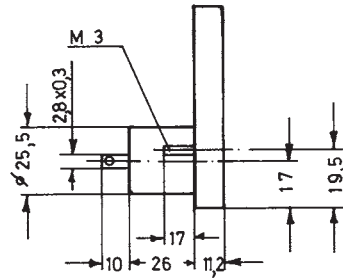
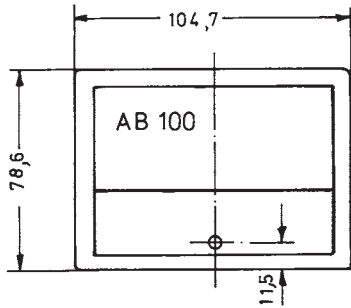
Measuring range	Ammeters	Internal resistance	Voltmeters	Internal resistance
	100 µA	4000 Ω	100 mV	1000 Ω/V
	150 µA	4000 Ω	150 mV	
	250 µA	1300 Ω	400 mV	
	400 µA	1100 Ω	600 mV	
	600 µA	380 Ω	1 V	
	1 mA	70 Ω	1.5 V	
	1.5 mA	30 Ω	2.5 V	
	2.5 mA	13 Ω	4 V	
	4 mA	11 Ω	6 V	
	6 mA	5.5 Ω	10 V	
	10 mA	3 Ω	15 V	
	15 mA	2.8 Ω	25 V	
	20 mA	2.3 Ω	40 V	
	25-600 mA	60 mV	60 V	
	1 A •	60 mV	100 V	
	1.5 A •	60 mV	150 V	
	2.5 A •	60 mV	250 V	
	4 A •	60 mV	400 V	
	6 A •	60 mV	500 V	
	10 A •	60 mV	600 V	
	15 A •	60 mV		
	60 mV x	12 Ω		

• Shunt fitted on the rear
x For operation with separate shunt
Tolerance of the internal resistance ± 20%

Size 100

Moving Coil Meter

"INTERSERIE" METERS



panel thickness 12 mm max.

Size 130

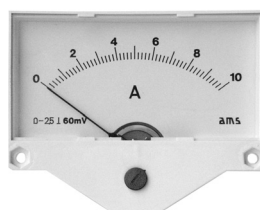
Interserie Moving Coil Meter

90° or 105° Pointer Deflection

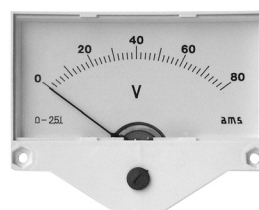
Available housings:



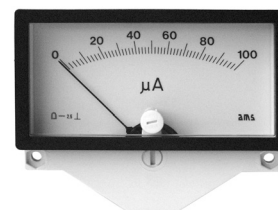
AB 130
panel mounting type



UB 130
submounting type



EB 130
built-in type



URB 130
with submounting frame

Movement

Bearing

Pointer

Accuracy class

Scale

Front frame colour

URB frame colour

moving coil with core magnet
pivots with spring mounted jewels
tube pointer
1.5 or 2.5 (class 1 on request)
interchangeable slide-in scale
if fsd 90° scale length approx. 96 mm
if fsd 105° scale length approx. 115 mm
dark grey similar to RAL 7011;
light grey or black on demand
black

Measuring range

Ammeters

Internal resistance

Voltmeters

Internal resistance

100 µA	6300 Ω	100 mV
150 µA	6300 Ω	150 mV
250 µA	2600 Ω	400 mV
400 µA	1300 Ω	600 mV
600 µA	380 Ω	1 V
1 mA	85 Ω	1.5 V
1.5 mA	47 Ω	2.5 V
2.5 mA	16 Ω	4 V
4 mA	10 Ω	6 V
6 mA	5.5 Ω	10 V
10 mA	3 Ω	15 V
15 mA	2.8 Ω	25 V
20 mA	2.3 Ω	40 V
25-600 mA	60 mV	60 V
1 A •	60 mV	100 V
1.5 A •	60 mV	150 V
2.5 A •	60 mV	250 V
4 A •	60 mV	400 V
6 A •	60 mV	500 V
10 A •	60 mV	600 V
15 A •	60 mV	
60 mV x	12 Ω	

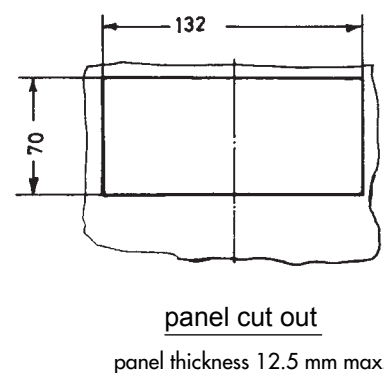
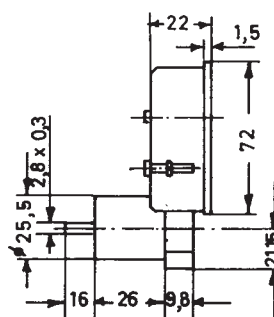
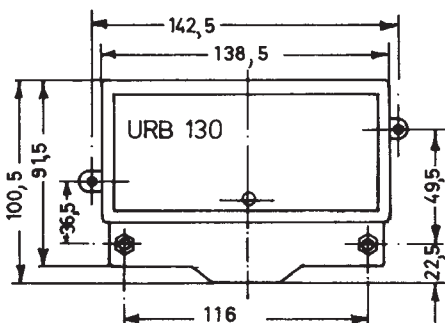
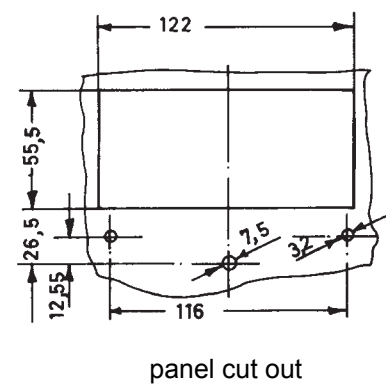
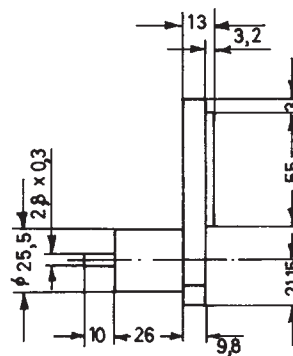
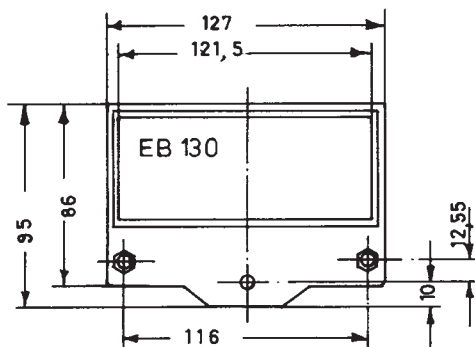
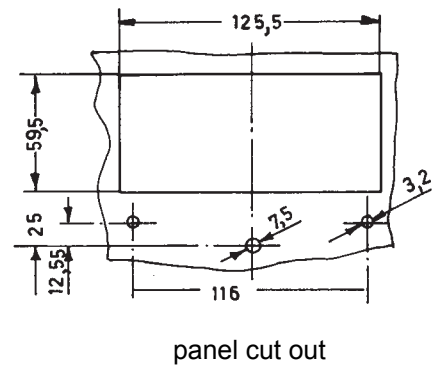
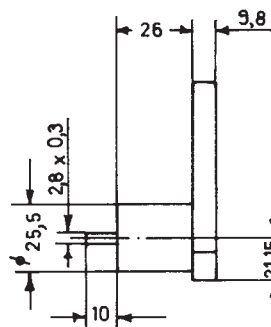
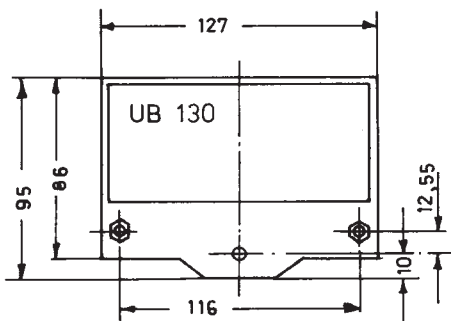
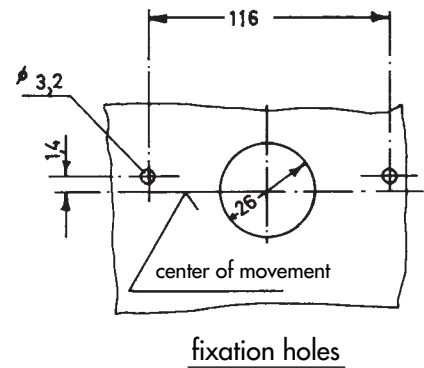
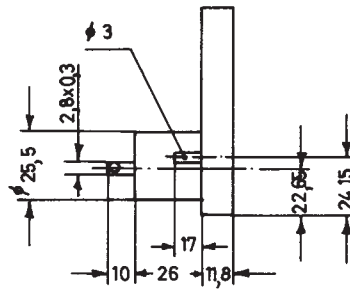
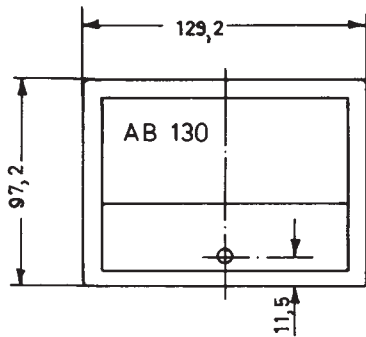
1000 Ω/V

• Shunts fitted to the rear
x For operation with separate shunt
Tolerance of the internal resistance ± 20%

Size 130

Moving Coil Meter

"INTERSERIE" METERS



Special Designs

"Interserie" Moving Coil Meters

Housings

Front frame colour

type AB: standard dark grey
black or light grey on request
type URB: standard black
light grey on request

Zero position screw inside movement tube

sizes 60, 80, 96 and 100

Shortened movement tube

for ammeters, measuring ranges from 100 μ A to 20 mA
tube length approx. 16 mm for sizes 60, 80, 96 and 100

Hole for diode Temperature resistant Illumination

in housing base part and scale
up to +100 °C for all types
all sizes available with translucent housing base and translucent scale
for external illumination
sizes 60, 80 and 100 can be equipped with an illumination tube on the
back of the housing

Scales

Mirror scale Colored scales

for sizes 55, 60, 80, 96, 100 and 130 combined with knife-edge pointer
scale background black, scale division and numbering white or yellow
other colours on request

Scale divisions

coloured scale divisions or marks
double or multiple divisions
calibration according to curve or table

Movements

Internal resistance voltmeter

standard approx. 1000 Ω /V
special versions: 2000 Ω /V
5000 Ω /V
10,000 Ω /V
20,000 Ω /V possible only to a limited extend

Initial range stretched

approximately 25% of the end value at the centre of the scale division

Rectifier (for measuring AC)

voltmeters from 6 to 250 V: built-in rectifier
from 250 V: external rectifier

ammeters up to 20 mA: built-in rectifier
from 1 to 25 A: with separate current transformer n/0.01 A

Mechanical zero position

centre or on side (within the scale division)

Ammeters for direct connection

up to 40 A for sizes 60, 75, 80 and 96
however, in the housing tube for moving iron