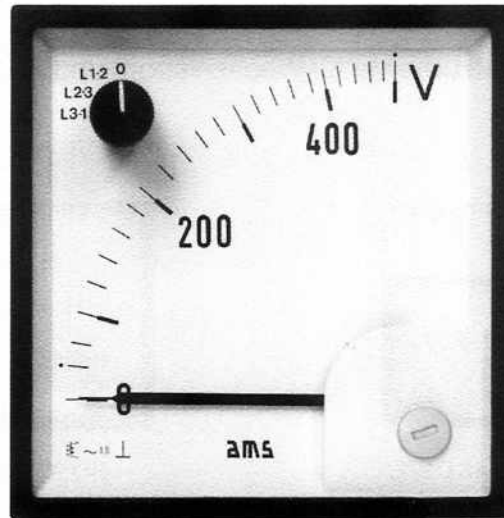
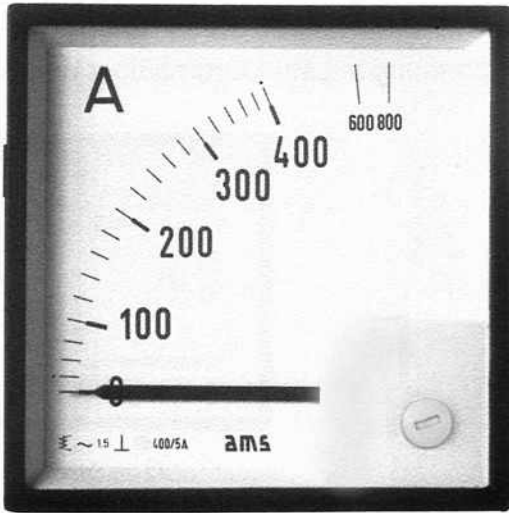


Square Panel Meters



SQUARE MOVING IRON METERS

Moving iron meters

- "Ratioserie"
- steel-sheet series

- Ratioserie in polycarbonate housing with interchangeable scale
- Steel-sheet series with steel housing body and aluminium front frame (scale not interchangeable)
- Magnetic shielding
- Ratioserie with snap-in fixing

Square Panel Meters

"Ratioserie"

Moving Iron Meters

for alternating current and alternating voltage
with interchangeable scale

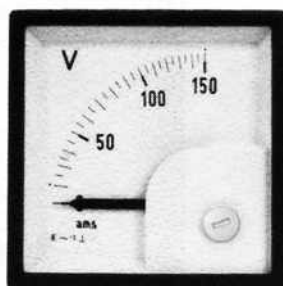
accuracy class 1.5

Available housing types:

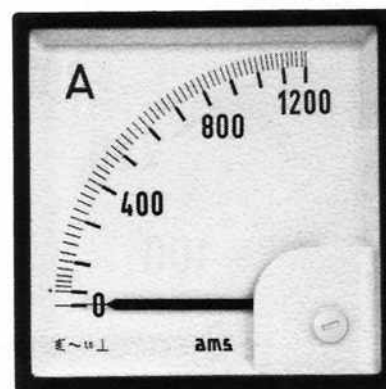
housing according to **DIN 43700**



SQ 48 DE/L



SQ 72 DE



SQ 96 DE

	SQ 48 DE/L	SQ 72 DE	SQ 96 DE
Front frame	48 x 48 mm	72 x 72 mm	96 x 96 mm
Scale length approx.	40 mm	62 mm	97 mm
Weight approx.	0.1 kg	0.15 kg	0.2 kg

Movement

Damping

Bearing

Pointer

Housing

Front frame colour

Measuring ranges

moving iron with magnetic shielding

silicone oil

pivot with spring mounted jewel

beam-type knife-edge pointer

thermoplastic, i.e. self extinguishing and drip-proof polycarbonate

black, grey on request

Ammeters

100 / 200 mA

150 / 300 mA

250 / 500 mA

400 / 800 mA

600 / 1200 mA

1 / 2 A

1.5 / 3 A

2.5 / 5 A

4 / 8 A

6 / 12 A

10 / 20 A

15 / 30 A

25 / 50 A

40 / 80 A

60 / 120 A

100 / 200 A

n / 5 A (for operation with transformer)

n / 1 A (for operation with transformer)

Voltmeters

10 V

15 V

25 V

40 V

60 V

100 V

150 V

250 V

300 V

400 V

500 V

600 V

100 V (for operation with transformer)

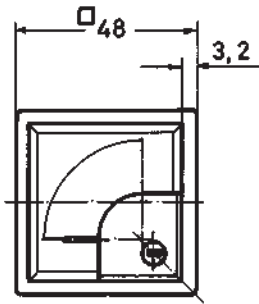
110 V (for operation with transformer)

Type SQ 48 DE/L for direct connection only up to 25/50 A
ammeters also available without overload scale

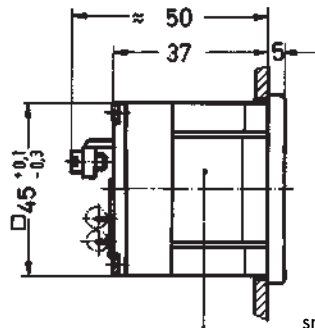
SQUARE MOVING IRON METERS

Square Panel Meters

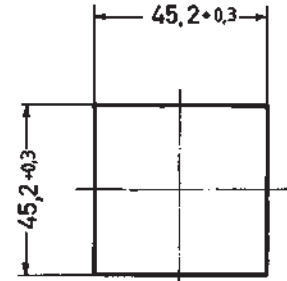
"Ratioiserie"



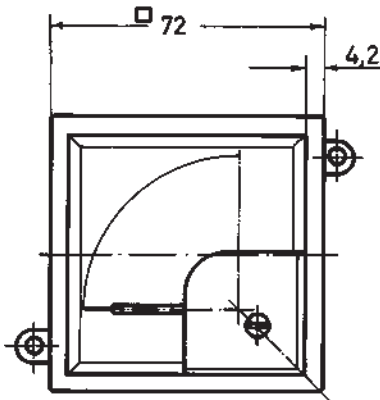
SQ 48 DE/L



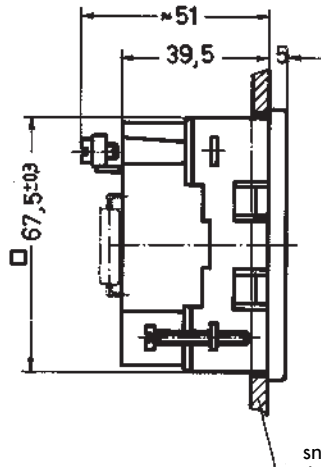
snap-in fixing for panel thickness up to 2.5 mm



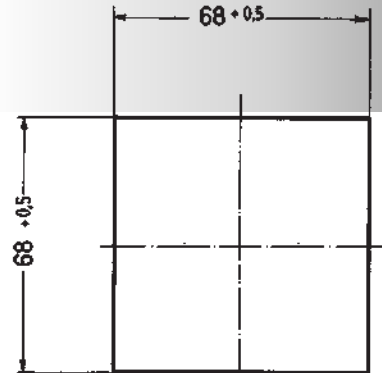
panel cut-out



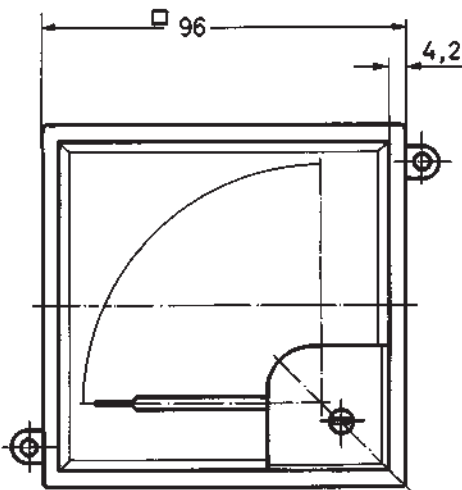
SQ 72 DE



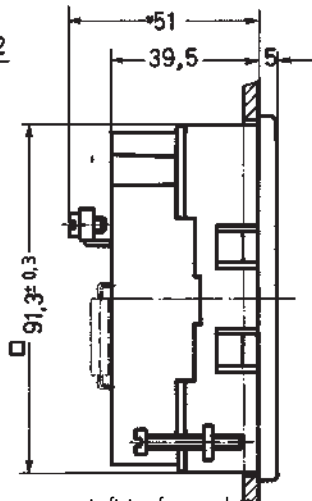
snap-in fixing for panel thickness up to 2.5 mm



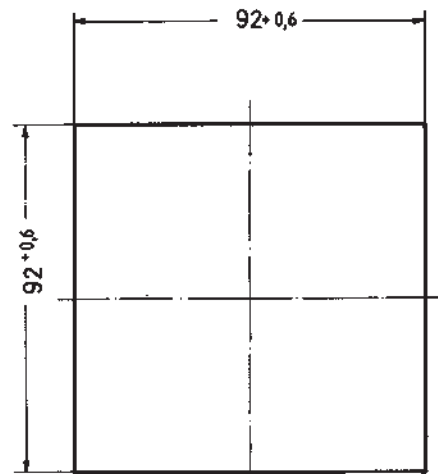
panel cut-out



SQ 96 DE



snap-in fixing for panel thickness up to 2.5 mm



panel cut-out

Connections: voltmeters and ammeters up to 15 A M 4
 ammeters from 25 A to 40 A M 6
 ammeters from 60 A M 8

Protective covers acc. to VGB 4 for connection terminals available

Type SQ 48 DS on request also available with screw fixing

SQUARE MOVING IRON METERS

Square Panel Meters

Steel-Sheet Series

Moving Iron Meters

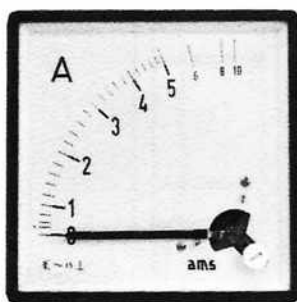
for alternating current and alternating voltage
accuracy class 1.5

housing acc. to **DIN 43700**

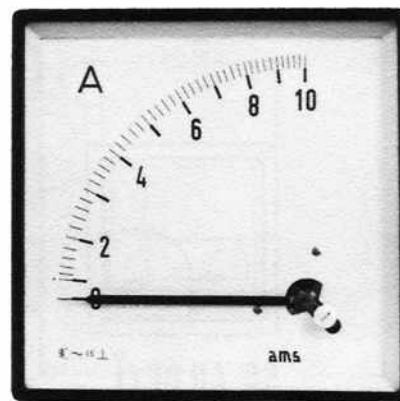
Available housing types:



RQ 72 DE



RQ 96 DE



RQ 144 DE

Front frame	RQ 72 DE	RQ 96 DE	RQ 144 DE
Scale length approx.	72 x 72 mm	96 x 96 mm	144 x 144 mm
Weight approx.	68 mm	97 mm	142 mm
	0.25 kg	0.3 kg	0.6 kg

Movement

Damping

Bearing

Pointer

Housing

Front frame colour

Measuring ranges

moving iron with magnetic shielding

silicone oil

pivot with spring mounted jewel

beam-type knife-edge pointer

steel-sheet casing, plastic base plate

black, grey on request

Ammeters

100 / 200 mA

150 / 300 mA

250 / 500 mA

400 / 800 mA

600 / 1200 mA

1 / 2 A

1.5 / 3 A

2.5 / 5 A

4 / 8 A

6 / 12 A

10 / 20 A

15 / 30 A

25 / 50 A

40 / 80 A

60 / 120 A

100 / 200 A

n / 5 A (for operation with transformer)

n / 1 A (for operation with transformer)

ammeters also available without overload scale

*) for RQ 72 DE and RQ 96 in separate housing

Voltmeters

10 V

15 V

25 V

40 V

60 V

100 V

150 V

250 V

300 V

400 V

500 V

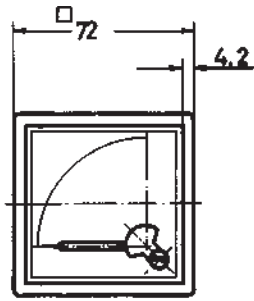
600 V *)

100 V (for operation with transformer)

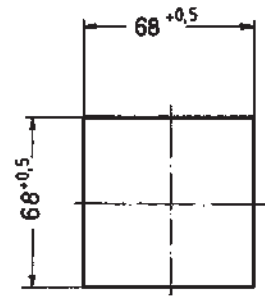
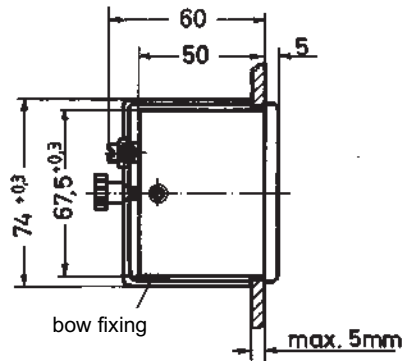
110 V (for operation with transformer)

Square Panel Meters

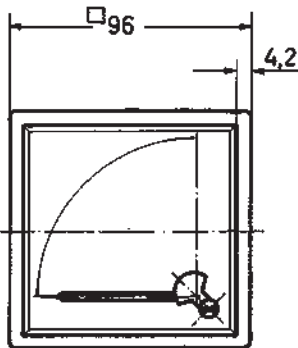
Steel-Sheet Series



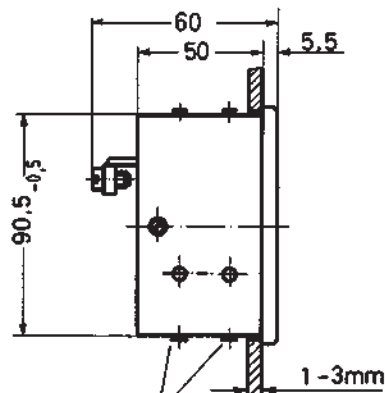
RQ 72 DE



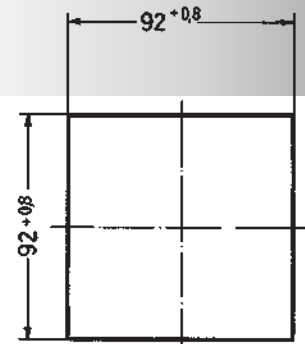
panel cut-out



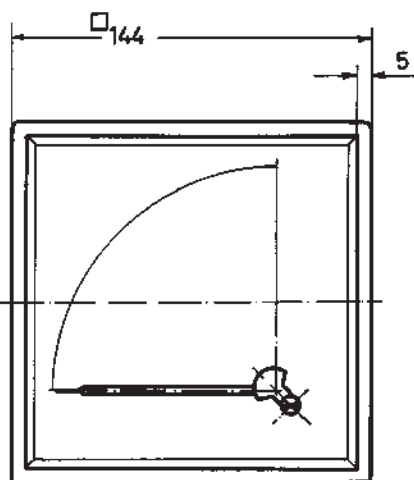
RQ 96 DE



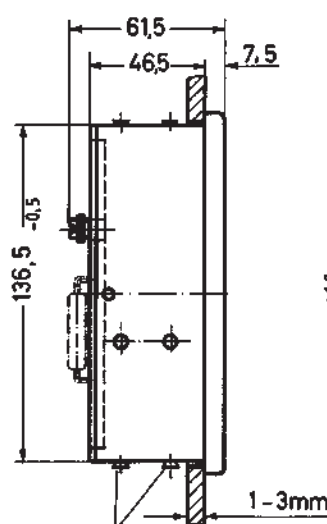
spring fixing acc. to DIN 43 853, Form A;
Form B for panel thickness >3mm



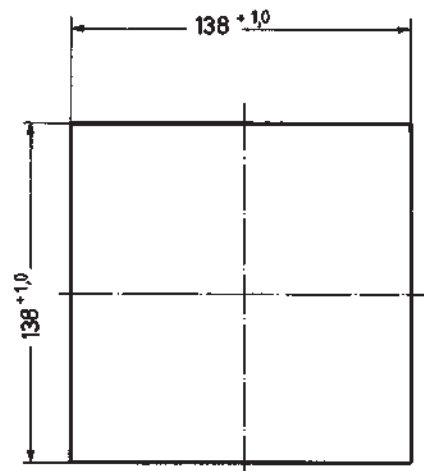
panel cut-out



RQ 144 DE



spring fixing acc. to DIN 43 853, Form A;
Form B for panel thickness >3mm



panel cut-out

Connections: voltmeters and ammeters up to 15 A M 4
ammeters from 25 A M 6
ammeters from 60 A M 8

SQUARE MOVING IRON METERS

Square Panel Meters

"Ratioserie"

Moving Iron Voltmeter with built-in voltmeter switcher accuracy class 1.5

These meters are used for measuring voltage in three-phase AC power grids. With the built-in switcher they can measure voltage between two phases or between phase and neutral wire.

The previously used external voltmeter switch is not necessary anymore.

Available housing types:

housing according to **DIN 43700**

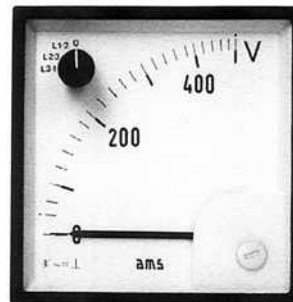
SQUARE MOVING IRON METERS



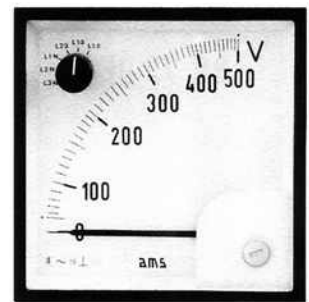
SQ 72 DE/U



SQ 72 DE/U2



SQ 96 DE/U



SQ 96 DE/U2

	SQ 72 DE/U - SQ 72 DE/U2	SQ 96 DE/U - SQ 96 DE/U2
Front frame	72 x 72 mm	96 x 96 mm
Scale length approx.	58 mm	93 mm
Weight approx.	0.18 kg	0.23 kg

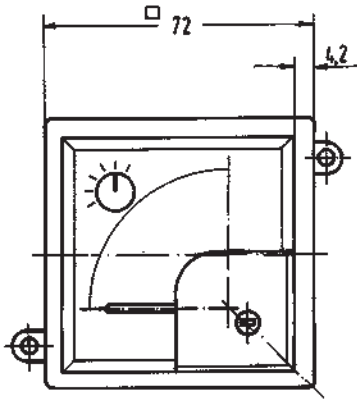
Movement	moving iron with magnetic shielding
Damping	silicone oil
Bearing	pivot with spring mounted jewel
Pointer	beam-type knife-edge pointer
Housing	thermoplastic, i.e. self extinguishing and drip-proof polycarbonate
Front frame colour	black, special edition grey RAL 7037

Measuring ranges	SQ 72 DE/U	SQ 72 DE/U2
	SQ 96 DE/U	SQ 96 DE/U2
	3 x 0 - 260 V	3 x 0 - 260 V
	3 x 0 - 500 V	3 x 0 - 500 V

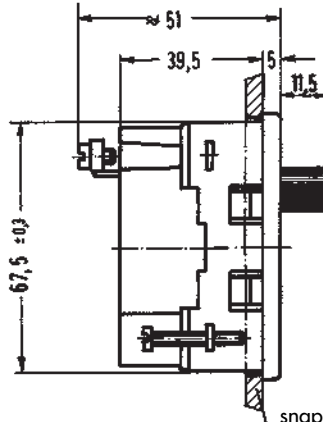
Switch positions	0, L1-2, L2 -3, L3 -1	L1-2, L1-3, L2 -3 L1 - N, L2 - N, L3 - N
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Square Panel Meters

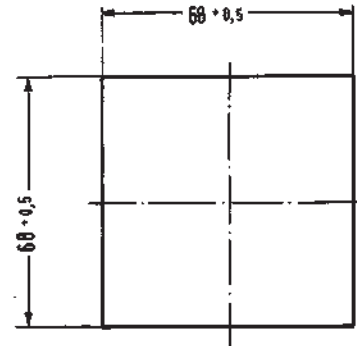
"Ratioserie"



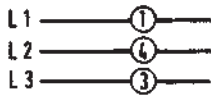
SQ 72 DE/U
SQ 72 DE/U2



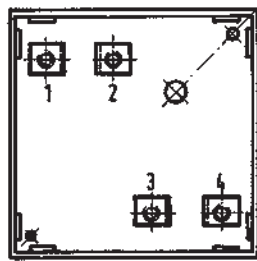
snap-in fixing for panel thickness up to 2.5 mm



panel cut-out



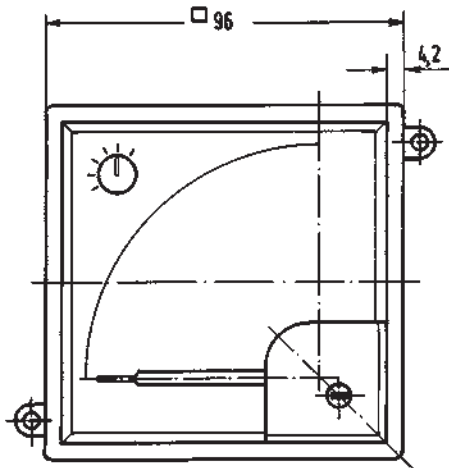
terminal assignment
SQ 72 DE/U



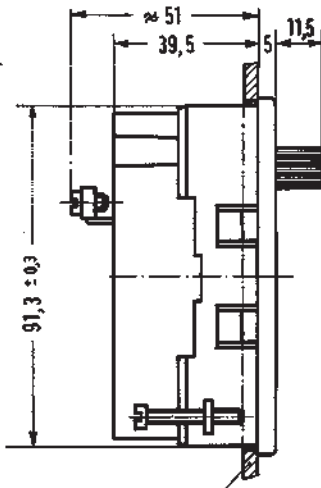
terminal layout



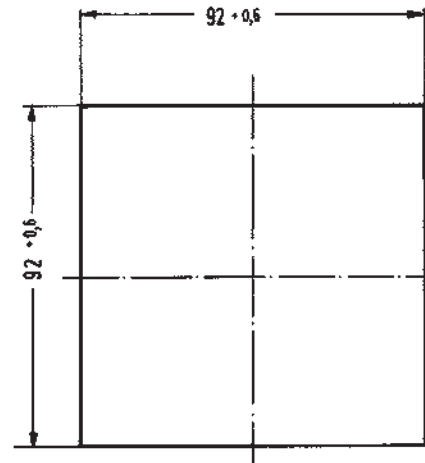
terminal assignment
SQ 72 DE/U2



SQ 96 DE/U
SQ 96 DE/U2



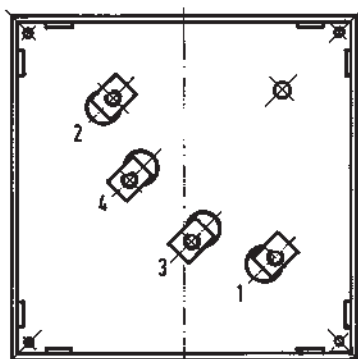
snap-in fixing for panel thickness up to 2.5 mm



panel cut-out



terminal assignment
SQ 96 DE/U



terminal layout



terminal assignment
SQ 96 DE/U2

Square Panel Meters

Special Designs

Square Moving Iron Meters

Housing

Front frame colours

standard: black
special version: grey
other colours on request

Front glass

standard: silicate glass
special version: anti-glare glass, double layer safety glass

Splash protection

standard: IP 52
special version: IP 54
sizes Q 72 and Q 96 with sealing and protective glass
sizes Q 48, Q 72 and Q 96 with rubber sealing
(panel cut-out about 1 mm bigger)

Illumination

for sizes Q 72, Q 96, Q 144

Scales

Coloured scales

scale background black, scale division and numbering white or yellow
other colours on request

Divisions

coloured scale divisions or marks
two or more scale divisions possible
calibration according to a curve or table
calibration in a different measurement variable

Movements

Overload range ammeters

2-fold standard,
up 25 A direct connection 5-fold (not for SQ 48 DE/L)

2nd measuring range

voltmeters up to 300 V
ammeters up to 10 A

Frequency

standard: 16 $\frac{2}{3}$ - 100 Hz
special version: 100 - 400 Hz