

Panel mounted instruments with 240° scale

□ - BQ - INSTRUMENTS WITH A MOVING COIL

FEATURES:

- For measurement of DC currents and voltages
- Good read-out survey on larger distance
- Exchangeable dial
- Resistance to mechanical vibrations
- Protective cover for terminals (optional)



Picture 1: Instrument with 240° scale BQ2207

APPLICATION

Measuring instruments with a moving coil BQ... are intended for measurement of direct currents and voltages. They are intended for incorporation into switchboards, consoles and measuring devices where maximum quantity of instruments can be applied at limited area and where good survey and read-out accuracy on larger distances are kept as well.

CONSTRUCTION

The measuring system, made by light and quality materials is not sensitive to external electromagnetic fields and is resistant to mechanical impacts and vibrations.

The meters with exchangeable dial and linear 240° scale have the standardised square casing. The scale length is much longer as the pointer is placed in the centre of the instrument.

¹⁾For assembly rail mounting according to DIN 46 277 and EN 50022. Bezel measures are 52x45 mm. Technical data are the same as for BQ2407.

TECHNICAL DATA

ACCURACY:

- accuracy class 1,5

DESIGN:

- Material of housing: PC
unflammable, according to **UL 94 V-0**
- Enclosure protection: Case IP 52, terminal contacts IP 00
(IP 20 for connection terminals)
according to **EN 60529: 1989**
- Operating position Vertical
- Test voltage 2 kV rms
according to **EN 61010-1: 1990**

AMBIENT CONDITIONS JVF (DIN 40 040)

- Climatic conditions:
Standards **EN 60051-1: 1995/01**
EN 60051-2: 1984
EN 60051-9: 1988
- Temperature:
Reference range of operation +18 ... +28°C
Nominal range of operation -25 ... +55°C
Storing -40 ... +70°C
- Humidity up to 80% (without condensing)

MEASURING RANGE:

Microammeters

Measuring rating (μA)	100	120	150	200	250	300	400	500	600	800
Internal resistance ($k\Omega$)	5,9	6,4	5,1	3,9	4	4	2,4	1,5	1,3	0,7

Milliammeters

Measuring rating (mA)	1	1,2	1,5	2	2,5	3	4	5	6	8	10	15	20	4-20
Internal resistance ($k\Omega$)	370	310	200	97	78	46	25	8,4	15	10	7	5	3,9	75
Measuring rating (mA)	25 40 50 60 100 150 250 400 600													
Voltage drop	60 mV													

Ammeters

Measuring rating (A)	1	1,2	1,5	2	2,5	3	4	5	6	8
Voltage drop	60 mV									
Measuring rating	A / 60 mV ¹⁾									

¹⁾ For the connection to separated shunts.

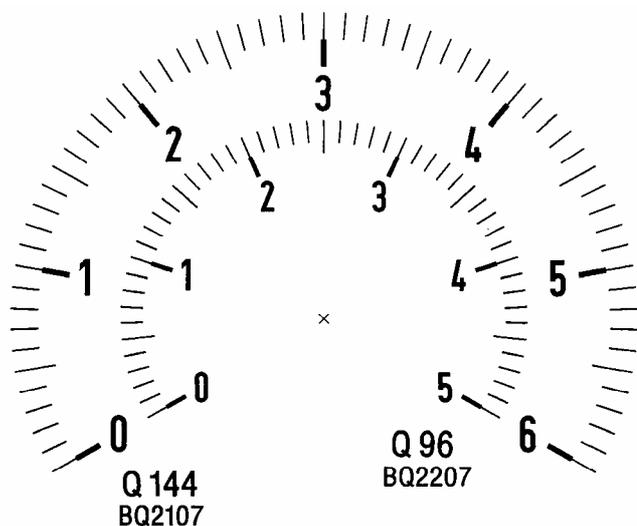
Milivoltmeters

Measuring rating (mV)	60	100	150	200	300
Internal resistance	200 Ω / V				

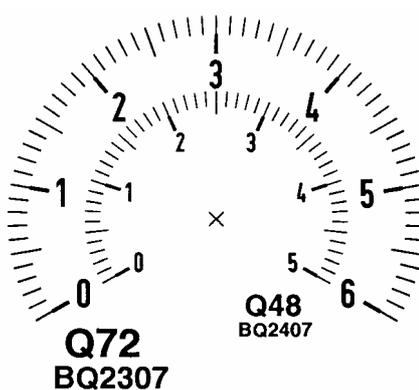
Voltmeters

Measuring rating (V)	1	1,2	1,5	2	2,5	3	4	5	6	8
Internal resistance	100	120	150	200	250	300	400	500	600	
	1 $k\Omega$ / V									

SCALE (natural size):



Picture 2: Drawing of scale BQ2107, BQ2207

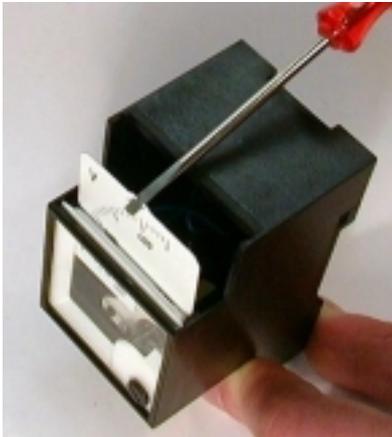


Picture 3: Drawing of scale BQ2307, BQ2407

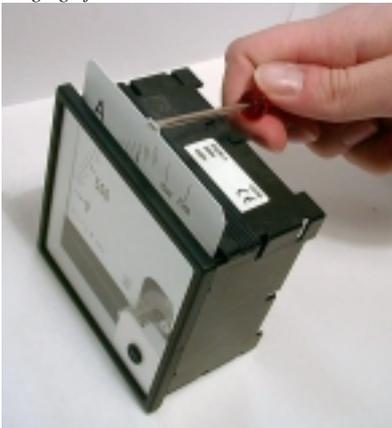
EXCHANGING OF SCALE

The instrument must be switched off during the exchange procedure.

Press the cover, on top of the instrument, in the direction of the arrow and extract the scale with a suitable tool. After exchanging the scale, carefully close the opening with the cover.



Picture 4: Exchanging of scales



Picture 5: Exchanging of scale

DATA FOR ORDERING:

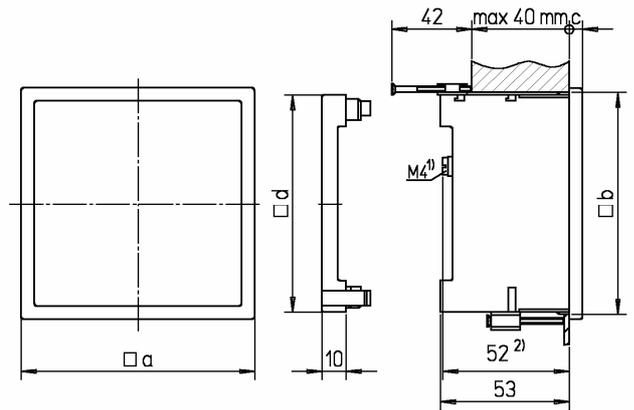
State the instrument type designation and rating. In case for connection to the measuring transformer, the transformer ratio should also be stated.

EXAMPLE FOR ORDERING

- Milliammeter BQ2207, 10 mA
- Voltmeter BQ2307, 120 kV, for the connection to voltage transformer 100/0,1 kV

When ordering scales, state same data as when ordering the instrument.

DIMENSIONAL DRAWING:



Picture 6: Dimensional drawing (all dimensions are in mm)

Type		BQ2107	BQ2207	BQ2307	BQ2407
Bezel (mm)	□ a	144	96	72	48
Panel cut-out (mm)	□ b	138 ^{+1,0}	92 ^{+0,8}	68 ^{+0,8}	45 ^{+0,6}
Bezel height (mm)	c	8,0	5,5	5,5	5,0
Protect cover (mm)	□ d	90	90	66,5	42,5
Scales length (mm)		235	155	113	71
Weight approx. (kg)		0,39	0,25	0,19	0,15

Table 1: Dimensions and weight



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