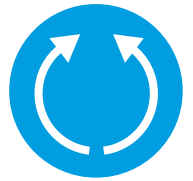


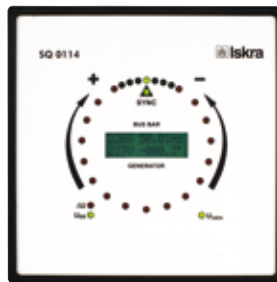
SQ 0104, SQ 0114, SQ 0204, SQ 0214, ZQ 1207, FQ 1207, ZQ 1208, FQ 1208



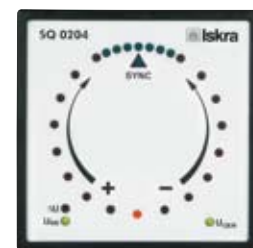
If you want to synchronise a generator and a bus bar manually or semi-automatically, SQ 0214 and SQ 0204 are the right instruments for you. Our synchronization meters are very unique products, especially SQ 0214. Synchronization meters are intended for manual or semiautomatic synchronization of two electric-energy distribution systems. SQ 0204, SQ 0214 synchrosopes are the instruments for measuring a phase angle between two electric-energy distribution systems. The SQ 0214 type also measures voltages and frequencies of both systems. On request, both types can be on request provided with a built-in relay output which signals if the conditions for synchronization have been met. ZQ 1207 or ZQ 1208 two-system frequency meter is used for measuring frequencies in two networks. FQ 1207 or FQ 1208 double voltage meter measures voltages in two networks.



SQ 0104



SQ 0114



SQ 0204



SQ 0214



ZQ 1207
FQ 1207



ZQ 1208
FQ 1208

TYPE	SQ 0104	SQ 0114	SQ 0204	SQ 0214	ZQ 1207	ZQ 1108	ZQ 1208	FQ 1207	FQ 1108	FQ 1208
Front frame (mm)	144 x 144	144 x 144	96 x 96	96 x 96	96 x 96	144 x 144*	96 x 96*	96 x 96*	144 x 144*	96 x 96*
Cutting for mounting (mm)	138 x 138	138 x 138	92 x 92	92 x 92	92 x 92	138 x 138	92 x 92	92 x 92	138 x 138	92 x 92
Scale length (mm)	360°	360°	360°	360°	92/72	2 x 50	2 x 50	92/72	2 x 50	2 x 50
Accuracy class	+/-1° el.	+/-1° el.	+/-1° el.	+/-1° el.	0.5	0.5	0.5	1.5	1.5	1.5
RATING										
100 V, 230 V	•	•	•	•	•	•	•	•	•	•
400 V	•	•	•	•	•	•	•	•	•	•
500 V	•••	•••	•••	•••	•	•	•	•	•	•
600 V	•••	•••	•••	•••	•	•	•	•	•	•
Frequency			•	•	•					

* ZQ 1208 and FQ 1208 for front frame 144 x 144 mm on request.

** Other ratings on demand

Ship version meters SQ 0204, SQ 0214, ZQ 1207 and FQ 1207 are available on request.

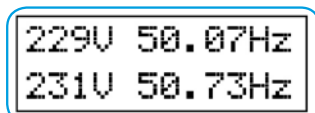
Connection diagrams for SQ 0204, SQ 0214, ZQ 1207, ZQ 1208, FQ 1207, FQ 1208 are shown on page 153.

Connection diagrams on page 201.
Dimensional drawings on page 183.

Two voltages (U_{gen} , U_{bb}) and two frequencies (f_{gen} , f_{bb}) are displayed on LCD at SQ 0214.

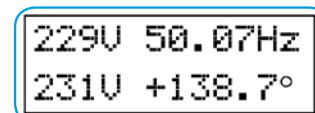
When the difference between f_{gen} and f_{bb} is smaller than 0.02 Hz, U_{BUS} , U_{GEN} , F_{BUS} and $\Delta\phi$ are displayed.

Generator voltage U_{gen} Generator frequency f_{gen}



Bus-bar voltage U_{bb} Bus-bar frequency f_{bb}

Generator voltage U_{gen} Phase difference $\Delta\phi$



Bus-bar voltage U_{bb} Bus-bar frequency f_{bb}