

FCR06/FCR12 professional power factor controllers

new generation of FCR06/FCR12 power factor controller range

New generation of FCR06 / FCR12 controllers brings new features and performance of existing range. Faster processor and better AD converters increase the sensitivity for measurement of current, add the fast measurement of voltage and current for more precise computing and many other interesting improvements.

- 4 quadrant measurement and compensation
- Four digits display and dichromatic indication LED
- **Measurement of current with sensitivity from 2 mA**
- Symbolic menu for easy setting and operation
- Automatic detection of system connection and capacitor battery composition in all 4 quadrants
- Independent input for second tariff
- **Reactive power Offset feature**
- **Menu parameter lock for panel builders**
- Ready for compensation in LV and HV systems
- Independent setting of every step output
- APFR (average power factor regulation) or instantaneous power factor regulation
- Ready for de-compensation reactors usage with possibility to use one reactor tuned by capacitor steps
- Thyristor switching speed up to 25 operations per second
- **Programmable alarm outputs with adjustable response**
- **Temperature measurement with adjustable level for alarm and forced ventilation start**
- **Parallel work of two controllers for two mains inputs or for enlarging the number of outputs till 24 steps**
- Memory for maximum and minimum values recording
- **Step operation counter and working hour counter**
- Communication interface RS485 (Modbus RTU)
- Measurement of U, I, f, $\cos\phi$, THDI, THDU, U harm, I harm, P, Q, S, temp.



Type	Number of stages	Power supply voltage	Measuring voltage	Fast thyristor stages	Alarm output
Low voltage PFC compensation applications					
FCR06	6	400 V	400 V	—	•
FCR12	12	400 V	400 V	—	•
Medium voltage PFC compensation applications					
FCR06V100	6	100 V	100 V	—	•
FCR06V230	6	230 V	100 - 690 V	—	—
FCR12V100	12	100 V	100 V	—	•
FCR12V230	12	230 V	100 - 690 V	—	—
Fast and hybrid PFC compensation applications					
FCR06-06	6	400 V	400 V	6	•
FCR12-12	12	400 V	400 V	12	•
FCR06-03	6	400 V	400 V	1 - 3	•
FCR12-03	12	400 V	400 V	1 - 3	•
FCR12-06	12	400 V	400 V	4 - 6	•



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Parameter	Value
Supply voltage	400, 230, 100 VAC (+10%, -20%)
Measuring voltage	100, 400, 100 - 690 VAC
Frequency	50 / 60 Hz
Current range	2 mA ... 6 A
Measurement accuracy (voltage / current)	± 0,5% / ± 0,2%
Power consumption	< 6 VA
Number of step outputs	6 (FCR06) or 12 (FCR12)
Alarm output	250 VAC / 5 A
Switching power of relay output contacts	250 VAC / 5 A
Switching power of semiconductor output contacts	24 VDC / 100 mA or 230 VAC / 100 mA
Speed of semiconductor stages	25 operations per second
Range of requested power factor	0,8 ind. ... 0,8 cap.
Reconnection delay: semiconductor / contactor stages	0 s / 5 ... 900 s
Switching off delay: semiconductor / contactor stages	0 s / 5 ... 900 s
Communication interface	RS485
Communication protocol	Modbus RTU
Communication speed	up to 38400 Bd
Compensation stages value setting	manually / automatically
Working temperature	-40°C ... +80°C
Front panel	144 x 144 mm
Panel cutout	138 x 138 mm
Site depth	55 mm
Weight	1 kg
Protection degree	IP20 rear cover / IP54 front panel

