Film Capacitors – Power Factor Correction

Multimeasuring interface MMI8003

Series/Type:	**MMI8003**
Ordering code:	**B44066M8003E024**
Date:	February 2015
Version:	1

Preliminary data

Characteristics

- Three phase measurement of several grid parameters:
  - Voltage
  - Current
  - Frequency
  - Real power
  - Reactive power
  - Apparent power
  - Power factor
  - Active energy (+/-)
  - Reactive energy (+/-)
  - Voltage harmonics up to the 39th order
  - Current harmonics up to the 39th order
  - THD-V, THD-I
- Additional internal 24-hrs-ring buffer for the 15-min active energy values
- Internal storage for the cumulated energy values (active/reactive energy)
- Ring buffer (1 month) for daily active energy value storage
- Internal clock for time stamp
- System interface RS485 (Modbus RTU) for processing of measured values

Application examples

- Three phase grid measuring device in panels, e.g. feed-ins
- Measuring of power and harmonics
- Can be integrated into existing networks via interface RS485 (MODBUS)
- Compatible with software MMI-energy for storage, display and evaluation of power and energy data

Preliminary data

Technical data

Operating voltage	24 V DC (external via terminal)
Measuring voltage (3-phase)	3x 30 … 440 V~ (L-N), 50/60 Hz (10…80 Hz) 3x 50 … 690 V~ (L-L), 50/60 Hz (10…80 Hz)
Measuring current (3-phase)	3x X:1A / X:5A selectable
Power consumption	< 1 VA
Sensitivity	50 mA/10 mA
Operation	8-pole DIP-switch for addressing and switching of terminating resistors; key button for software functions
Parametrization	Via PC-software resp. touch panel
Measured parameters	Voltage, current, active-, reactive-, apparent power, frequency, power factor, THD-V, THD-I, energy, single harmonics of voltage and current. All values can be read out via Modbus in real time.
Internal storage	24-h-ring buffer for active power (15-min-values); cumulative buffer for active and reactive power
Accuracy	Current/voltage: 1% Active, reactive, apparent power: 2%
Connection	Voltage: 4-pole via pluggable screw terminal Current: 3x 2-pole via pluggable screw terminal Connection plug included in the delivery
Interfaces	2x system interfaces RS485 at RJ45 (Modbus RTU) for loop-in into existing network 1x service interface (RJ45) for software update resp. enlargement modules
Software for PC	Software (CD) for parametrization of the device; MMI compatible with evaluation software MMI-energy
Special feature	Internal clock for time stamp (only in combination with software MMI-energy)
Error display (red LED)	Collected error message (over voltage, over current, frequency); evaluation via software

Preliminary data

Others	
Casing	Plastic casing for hut rail mounting 92 x 90 x 38 mm
Mounting	On DIN rail TS35 acc. DIN EN 60715
Weight	Approx. 0.5 kg
Operating temperature	-10 … + 50 °C
Protection class	IP20
Safety regulations	IEC 61010-1:2001, EN61010-1:2001
EMV-interference resistance	IEC6100-4-2:8kV; IEC61000-4-4:4kV

Cautions and warnings

General

- The MMI8003 may only be used for the purpose it has been designed for.
- The device has to be projected in such a way that in case of any failure no uncontrolled high current and voltages may occur.
- The device in operation has to be protected against moisture and dust, sufficient cooling has to be assured.
- Please note that the device is under high tension during operation.
- The MMI8003 may only be used indoor. It is not suitable for outdoor applications.
- Voltages above the permitted voltage range may damage the device.

Attention

FAILURE TO FOLLOW CAUTIONS MAY RESULT, WORST CASE, IN PREMATURE FAILURES OR PHYSICAL INJURY.

Note

For detailed information about PFC capacitors and cautions, refer to the latest version of EPCOS PFC Product Profile.

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