

Motor Controlled AC Source EAQ-MT



For line simulation
of 1- and 3- phase networks



The Cost Reduced Solution at High Power

- CV Mode
- AC Voltage 0...270 Vrms (500 V)
- Performances up to 50000 VA !
- Fast Response Times typ. 100V/Sek.
- Adjustable Overcurrent Switching-off
- USB, RS 232, IEEE 488 Interface (Option)
- Measurements Vrms V, Crms A
- Switching-on and off via relay (Option)

*Picture shows EAQ-MT-3P with
Options:*

- IND
- ESA
- AREL
- AF
- FR

The AC sources of the series EAQ-MT have been developed for the simulation and analysis of one or three phase line voltage particularly for high power. The output voltage is infinitely variable between 1 and 100% of the nominal voltage and is being kept constant with a deviation of < 1%. The preset reference input can be reached with the potentiometer as well as via the optional interfaces. In 3 phase units the regulation is controlled by phase L1. The structure of the AC source EAQ-MT consists of a regulated ring transformer with isolation. The regulated ring transformer is operated through a DC motor. The set voltage is being kept constant at deviations of the line input voltage as well as at load variations at the output.

Short specification EAQ-MT 1- and 3 Phase AC Sources						
Type	Power max	Voltage	Current	Phases	Case	
EAQ-MT-2708		2160 VA	3...270Vrms	8.0 A	1	19", 6U,540mm
EAQ-MT-27016		4320 VA	3...270Vrms	16.0 A	1	19", 9U,540mm
EAQ-MT-27020		5400 VA	3...270Vrms	20.0 A	1	19", 9U,540mm
EAQ-MT-27025		6750 VA	3...270Vrms	25.0 A	1	19", 12U,540mm
EAQ-MT-27030		8100 VA	3...270Vrms	30.0 A	1	19", 12U,540mm
EAQ-MT-27035		9450 VA	3...270Vrms	35.0 A	1	19", 15U,600mm
EAQ-MT-27040		10800 VA	3...270Vrms	40.0 A	1	19", 15U,600mm
EAQ-MT-27050		13500 VA	3...270Vrms	50.0 A	1	19", 18U,600mm
EAQ-MT-27065		17550 VA	3...270Vrms	65.0 A	1	19", 18U,600mm
EAQ-MT-3P-2702		540 VA	3...270Vrms	2.0 A	3	19", 12U,540mm
EAQ-MT-3P-2705		1350 VA	3...270Vrms	5.0 A	3	19", 12U,540mm
EAQ-MT-3P-2708		2160 VA	3...270Vrms	8.0 A	3	19", 12U,540mm
EAQ-MT-3P-27016		4320 VA	3...270Vrms	16.0 A	3	19", 15U,600mm
EAQ-MT-3P-27020		5400 VA	3...270Vrms	20.0 A	3	19", 15U,600mm
EAQ-MT-3P-27025		6750 VA	3...270Vrms	25.0 A	3	19", 18U,600mm
EAQ-MT-3P-27035		9450 VA	3...270Vrms	35.0 A	3	19", 18U,600mm
EAQ-MT-3P-27050		13500 VA	3...270Vrms	50.0 A	3	19", 24U,600mm
EAQ-MT-3P-27065		17550 VA	3...270Vrms	65.0 A	3	19", 24U,600mm
The technical data of the 3-phase source refers to each phase						

EAQ

AC
SOURCES

EDQ

DC
SOURCES

ExL

ELECTRONIC
LOADS

EST

SAFETY TEST
UNITS

ERS

RELAY
SCANNER

EE

TEST SYSTEMS

Short specification options EAQ-MT 1- and 3 Phase AC Sources	
Option	Description
-ENC	Without operation and indication (only with Option -A, -RS232, -IEEE488)
-V300	Extended voltage range 3...300 V AC
-V350	Extended voltage range 3...350 V AC
-V400	Extended voltage range 3...400 V AC
-V500	Extended voltage range 3...500 V AC
-ETH	Ethernet Interface, Programming and measurement
-RS232	RS232-Interface, Programming and measurement
-OG	Version without galvanic isolation
-FR	Rack with wheels
-A	Analogue Interface (0...5 Vdc, TTL), Programming and measurement
-SA	Automatic circuit breaker instead of safety fuse at the output
-ESA	Adjustable overcurrent switching-off (10%-110% of nominal current)
-OVP	Adjustable over voltage protection (10%-110% from U-Max)
-OVPM	Einstellbare Überspannungsabschaltung (10%-110% von U-Nenn) nur manuell
-IND	Digital display for voltage and current
-PP	Digital display for voltage Phase-Phase (only together with -IND)
-AREL	On- and off-switching of the output voltage by a power relay
-AF	Additional output on the front of the unit (plug outlet or Cekon socket)

Unit Description EAQ-MT



Analogue Indication : The AC source EAQ-MT has got two and the three phases source six analogue instruments for the indication of voltage and current in each phase. Optionally the source can be equipped with digital indications.

Adjustments : The adjustments of the voltage V_{ac} will follow through a 10-turn potentiometer.

Fuse Protection : The source has got an input and output safety fuse. Optionally the source may be equipped with an automatic circuit breaker at the output. A manual adjustable over-current switching-off is also available. The switching-off can be reached through a power relay.

Analogue Interface : The optionally available analogue interface enables the user the programming and the reading of data via a 0...5 Vdc signal. Changing and checking modes are possible via digital TTL signals.

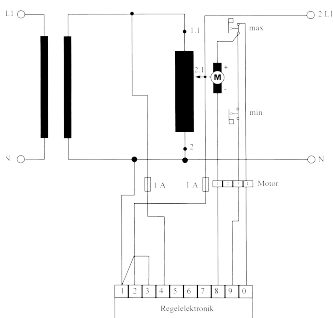


*Picture on the left shows EAQ-MT with options:
-FR*



*Picture on the right shows EAQ-MT-3P with options:
-IND
-PP
-AF
-FR*

Principal EAQ-MT circuit



EAQ-MT-2708

Specification EAQ-MT and EAQ-MT-3P



Type	EAQ-MT-2708	EAQ-MT-27016	EAQ-MT-27020	EAQ-MT-27025	EAQ-MT-27030
Output data					
Power	2160 VA	4320 VA	5400 VA	6750 VA	8100 VA
Output Voltage AC	3 – 270 VAC	3 – 270 VAC	3 – 270 VAC	3 – 270 VAC	3 – 270 VAC
Maximum Effective Current	8 A	16 A	20 A	25 A	30 A
Line Regulation	1%	1%	1 %	1%	1%
Load Regulation	1%	1%	1 %	1%	1%
Programming Accuracy					
AC Voltage	1,0 %	1,0 %	1,0 %	1,0 %	1,0 %
Current switch off (Option)	5,0%	5,0%	5,0 %	5,0%	5,0%
Measurement					
Effective Voltage	0,15 %	0,15 %	0,15 %	0,15 %	0,15 %
Effective Current	0,2%	0,2 %	0,2 %	0,2 %	0,2 %
Wirkleistung (Option)	0,5 %	0,5 %	0,5 %	0,5 %	0,5 %
Mains Input					
Line Input -10%/+15%	230VAC	230VAC	2x400VAC	2x400VAC	2x400VAC
Line Input ±10% (Option -Z)	115VAC	115VAC	2x200VAC	2x200VAC	2x200VAC
Input Frequency	47-400 Hz	47-400 Hz	47-400 Hz	47-200 Hz	47-400 Hz
Insulation Voltage	2000Veff	2000Veff	2000Veff	2000Veff	2000Veff
The technical data of the 3-phase sources refers to each phase					
The line input of EAQ-TIP-3P is always a 3-phase input					
Type	EAQ-MT-27035	EAQ-MT-27040	EAQ-MT-27050	EAQ-MT-27065	EAQ-MT-3P-2702
Output data					
Power	9450 VA	10800 VA	13500 VA	17550 VA	540 VA
Output Voltage AC	3 – 270 VAC	3 – 270 VAC	3 – 270 VAC	3 – 270 VAC	3 – 270 VAC
Maximum Effective Current	35 A	40 A	50 A	65 A	2 A
Line Regulation	1%	1%	1 %	1%	1%
Load Regulation	1%	1%	1 %	1%	1%
Programming Accuracy					
AC Voltage	1,0 %	1,0 %	1,0 %	1,0 %	1,0 %
Current switch off (Option)	5,0%	5,0%	5,0 %	5,0%	5,0%
Measurement					
Effective Voltage	0,15 %	0,15 %	0,15 %	0,15 %	0,15 %
Effective Current	0,2%	0,2 %	0,2 %	0,2 %	0,2 %
Effective Power (Option)	0,5 %	0,5 %	0,5 %	0,5 %	0,5 %
Mains Input					
Line Input -10%/+15%	2x400VAC	2x400VAC	2x400VAC	2x400VAC	230VAC
Line Input ±10% (Option -Z)	2x200VAC	2x200VAC	2x200VAC	2x200VAC	115VAC
Input Frequency	47-400 Hz	47-400 Hz	47-400 Hz	47-200 Hz	47-400 Hz
Insulation Voltage	2000Veff	2000Veff	2000Veff	2000Veff	2000Veff
The technical data of the 3-phase sources refers to each phase					
The line input of EAQ-TIP-3P is always a 3-phase input					

USB, Ethernet. RS232 : Optionally the AC voltage source EAQ-MT may be equipped with the interfaces Ethernet and/or USB and/or RS 232. All adjustments and measurements may be carried out with the interfaces. The resolution of the programming when setting and measuring is 12 bit.

Power outputs : The output of the source is always on the backside of the unit. It is carried out as screw terminal. The types without option -AF have got an additional output on the front panel. Depending on the type and performance, the output is carried out as plug outlet contact or CEKON connector.

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