MPS700C - 1.4 KW

TECHNICAL DESCRIPTION

1 GENERAL DESCRIPTION

The MPS700C - 1.4 KW system is designed to convert AC mains voltage into 48 VDC and to supply telecom equipments with back up time.

The MPS700C - 1.4 KW can house up to two SM700 rectifier modules and can be associated with up to two 48 V valve regulated lead-acid (VRLA) battery strings.

The MPS700C – 1.4 KW is fitted with:

- Wiring and locations for up to two SM700 rectifier modules,
- One ACM1000 alarm and control module,
- A low voltage disconnect contactor (LVD : 15 A rated),
- A temperature probe,
- Battery and rectifier shunts.
- One battery protection fuse rated (see table § 5.3),
- Four load protection single pole fuses (see table § 5.3).

The maximum DC current available the power depends on the number of SM700 rectifiers installed refer to the SM700 technical description.

The MPS700C - 1.4 KW can be installed in 19 inches indoor or outdoor cabinet.
The system allows an easy extension on site by additional rectifier module.

2 STANDARDS

- **Safety:**
  EN 60950-1

- **EMC:**
  Emission:
  EN 55022 level B
  . complies with EN 61000.6-3 (generic residential)
  . complies with EN 61000.6-4 (generic industrial)
  . complies with EN 61000.3-2 (harmonics)
  . complies with EN 61000.3-3 (flicker)
  Immunity:
  . complies with EN 61000.6-1 (generic residential)
  . complies with EN 61000.6-2 (generic industrial)
  . standards from EN 61000.4-2 to EN 61000.4-6
  Telecom standard
  . EN 300 386 – 2

- **Environmental conditions:**
  . Complies with EN 300 019
  . Transport EN 300 019-1-2 class 2.2
  . Storage EN 300 019-1-1 class 1.2
  . Operation EN 300 019-1-3 class 3.1

- **Operating conditions:**
  . Complies with EN 300 132-2 (Telecom standard).

3 CHARACTERISTICS

3.1 ENVIRONMENTAL CHARACTERISTICS

- **Temperature**
  • Shipping and storage : - 40°C to + 85°C.
  • Operating : - 25°C to +70°C.

- **Humidity**
  • Shipping and storage : 10 to 95% without condensation
  • Operating humidity : 20 to 90% without condensation

- **Altitude**
  • Operating: 1000 m (above, power derating of 1% each 100 m, up to 3000 m).

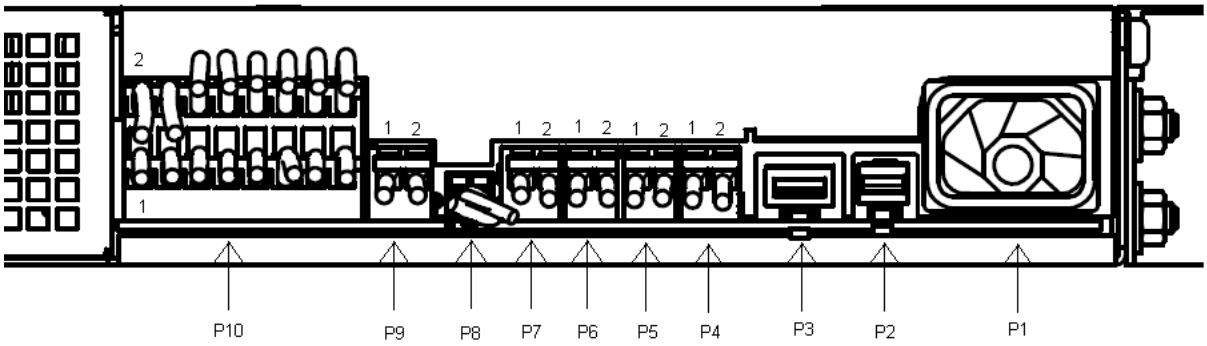
- **Cooling**
  • Forced-air cooling of each module with electronic speed control.

3.2 MECHANICAL CHARACTERISTICS

- Height : 44 mm (complies with 1U standard).
- Width : 482.6 mm (complies with 19" standard).
- Depth : 288.79 mm + 19.2 mm (overall)
- Weight : 3.5 kg (Without module).
- Colour : RAL 7043
- Degree of protection : IP 20.
- Cable entry : by the rear.

Front view of the MPS700C – 1.4 KW with fuses

Rear view of the MPS700C – 1.4 KW with fuses



There are ten connectors on rear side of MPS700C 1.4 KW, P1 to P10, you can see these connectors below:

P1:	AC connector
P2:	I²C bus
P3	RS232 bus com
P4:	DC1, load output n°1
P5:	DC2, load output n°2

P6:	DC3, load output n°3
P7:	DC4, load output n°4
P8:	Temperature probe
P9:	Battery connector
P10:	Alarms/spares inputs connectors

3.3 ELECTRICAL CHARACTERISTICS

DIELECTRIC STRENGTH	
AC line to output	4200 VDC (3000 Vrms)
AC line to chassis	2100 VDC (1500 Vrms)
Output to chassis	700 VDC (500 Vrms)
INPUT	
Nominal voltage	***Single-phase mains :*** 208 / 220 / 230 / 240 V rms.
Normal variations	185 V rms to 280 V rms between phase and neutral
Exceptional variations	80 V to 295 V rms between phase and neutral with . output power derating below 208 Vrms . automatic disconnect below 80 V rms above 280 V rms with automatic re-start.
Frequency	44 to 66 Hz
Nominal current	3.6 A rms per rectifier for 700 W at 230 Vrms
Inrush current	< 15 A per installed rectifier module
Power factor	0.99
OUTPUT	
Nominal voltage	48 VDC Remotely by 2 - 8 V voltage loop Adjustment range : 42 V to 58 V
Floating voltage	Adjustable between 52 VDC and 58VDC
Maximum power	1400 W with mains 700 W with mains and redundancy
Current sharing	< ±5% at P > Pn/2
EFFICIENCY	
≥ 88%	

4 INDICATORS AND ALARMS

4.1 INDICATORS

MPS700: 1 red "fault" LED on front of the subrack.
SM700: refer to the corresponding technical description.

4.2 ALARM LOOPS

The following alarms, delivered by the controller, are available across volts-free contacts on rear connector:

- Spare
- Urgent alarm
- Non-urgent alarm.

5 COMMUNICATION

RJ45 - RS232 connector, on the front of the subrack.
Modem option using RJ45 – RS232 on the rear connector.
SNMP-TCP/IP using RJ45-RS232 on the rear connector.

6 PACKAGING AND PRODUCT REFERENCE

6.1 PACKAGING

In carton.

6.2 PACKING TABLE

***MPS700C – 1.4 KW* packed dimensions and weight**		
W x D x H	mm	550 x 350 x 90
Gross Weight	kg	4.5
Volume	m^3	0.0159

6.3 PRODUCT REFERENCE

AEG PS Code	Battery Protection	Load Protections			
		1	2	3	4
3AW01167BAAAxx / RAL7043 *Phased out*	20 A	20 A	20 A	20 A	20 A
3AW01167BAABxx / RAL7035	20 A	20 A	20 A	20 A	20 A

7 ASSOCIATED PRODUCTS

Designation	AEG PS Code
SM700 / RAL7035	3AW00990AAABxx
ACM1000 • Control board	3AW01012AAAA / BPF003040000
Programmed NCS-1000	B05364630000
Blank panel / RAL7035	3TN20478AAAA

8 SUPPLIER

Find the contact details of your nearest AEG Power Solutions location on our Website:

www.aegps.com

AEG Power Solutions offers installation, customization and technical support services. Contact your local re-seller.