



DC - system type PC10

0,9kW to 11kW – 24/48/110/125/220/440V_{DC}

PC10 is a complete system for uninterruptable supply of DC voltage for industrial switchgear, control equipment, process control, etc. where high demands on safe operation is required.

Plug-in rectifier modules

Provides flexibility by adjusting the output power, easy maintenance by hot swap and high availability with parallel modules.

Safe operation and high availability

We support you with commissioning and service as well as education in handling and maintenance.

Compact design

Monitoring unit, rectifier, distribution and batteries up to 110V/105Ah in the same enclosure.

System monitoring

Monitoring of the batteries, rectifier and distribution, status and alarms distinctly on display, settings via clear menus for easy handling.

Battery status

Battery circuit test and symmetry monitoring provides good conditions for early detection of errors in the battery. Battery temperature is monitored and adjusts the float-charging voltage automatically.

Complete documentation

Makes construction and maintenance efficiently and can be delivered in electronic format.

DC-System type PC10

General

PC05 is a complete system for uninterruptible supply of DC voltage for industrial switchgear, control equipment, process control, etc. where high demands on safe operation is required. Complete with rectifiers, batteries, battery fuse box, distribution boards, monitoring and documentation.

Enclosure

Type: Floor cabinet with 19" framework
 Cable inlet: from bottom or above
 Height: 2051/2 mm
 Width: 740/840 mm
 Depth: 654/845 mm
 Color: RAL 7035 light grey
 Class of enclosure: IP21
 Ventilation: Temperature controlled fans in rectifier modules, otherwise natural

Environment

Ambient temperature: Operation, 0 till +40 °C
 Storage, -40 to +70 °C
 Humidity: < 90 % RH, non-condensed
 Altitude a.s.l.: < 2000 m

Input AC (for rectifier)

Input voltage: 110-240V_{AC} 1-phase, 380/415V_{AC}, 3-phase
 Frequency: 47 – 63 Hz 1-phase, 45 – 65 Hz, 3-phase
 Power factor 1-phase: > 0.95 at 230V_{AC}, full load
 Power factor 3-phase: > 0.97 at 3x400V_{AC}, full load
 Connection 1-phase: 0.2 – 6 mm², per rectifier module
 Connection 3-phase: Connector 4-pole type Molex Mini-Fi
 Other: See table 1 & 2

Output DC

Output voltage, nom.: 24/48/110/125/220/440V_{DC}
 Connection 1-phase: 0.5 – 10 mm², disconnect terminal
 Connection 3-phase: Connector 2x2-pole type Molex Mini-Fit
 Voltage regulation: < 0.5 % of nominal output voltage
 < 1% within 3 seconds, 0-100/100
 10 % load change
 Current regulation: < 1 % of rated current
 Current limit range: 0 – 100 % of rated current
 Ripple voltage: < 0.1 % RMS
 Other: See table 1 & 2

Nominal data		Maximum number of rectifier modules per module type					
U _{NOM} (V _{DC})	I _{RATED} (A)	10A	12A	20A	25A	50A	60A
24	40			2			
	80			4			
	120						2
48	24		2				
	50		4		2		
	100				4	2	
110/125	20	2					
	40	4					

Table 1 Ratings 1-phase system



Output data			Input data			Power loss** W
U _{NOM} (U _{RANGE}) V _{DC}	I _{RATED} A	Output Power W _{MAX}	Input Voltage Range V _{AC}	Mains Power* VA	Mains Current* A _{ARMS}	
24 (21-28)	20	560	85-295	670	3.4	92
	60	1680	180-264	1960	10.0	187
48 (42-56)	12	672	85-295	800	4.1	92
	25	1400	85-295	1600	8.2	156
	50	2800	150-295	3150	16.1	312
110/125 (97.5-145)	10	1250	90-300	1410	7.2	139

Table 2. Ratings 1-phase, * max vid 195V_{AC}, ** typical at 230V_{AC}



PC10- internals with batteries.

Battery fuse box

Configuration: Blade fuses, 4-7 pole separated groups

Distribution module type DM199

Number of modules: 1 – 7 pcs
 Fuse type: Diazed type DII/DIII or MCB
 Groups per module: 9 pcs (DII, MCB), 6 pcs (DIII)
 Monitoring: Bipolar zero voltage
 Indication: Red/green LED per way

Capacity test

Load: Maximum 45 A
 Connection: 35 mm² screw terminal or CEE-connector type UIS 232-6

Monitoring unit type PCM2

Monitoring of the complete DC system.
 Clear graphical display for showing and setting of alarms, operating data, etc.
 Remote alarm via 4 freely configurable relays.



Distribution:

Fuse monitoring, earth fault monitoring, external alarm

Battery:

Temperature monitoring, battery circuit test, battery symmetry monitoring

Rectifier:

Over/under voltage, rectifier fault, temperature compensated float charge, automatic equalizing charge

Battery

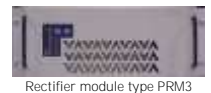
Internally: Valve regulated, up to 110V_{DC} 105Ah
 Externally: Any types on battery stand

Options

Remote alarm: Relay 5-8
 Inverter (0.5, 1 or 2 kVA),
 AC-distribution,
 DC/DC-converter
 Double systems with input switches, alarm panel and other by agreement

Standards

Safety: EN 50178
 EMC, immunity: EN 61000-6-2
 EMC, emission: EN 61000-6-4
 Battery installations: EN 50272-2



Model designation, PRM3	Output data		
	U _{NOM} (V _{DC})	U _{MAX} * (V _{DC})	I _{RATED} (A)
110/70	110	145	70
220/36	220	270	36
440/18	440	500	18

Table 3, Ratings 3-phase (*max at 3x340V_{AC})

