



DC - system type PC05

24/48/110/220V_{DC}

PC05 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_{DC}/62Ah 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.

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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: 2000 mm
 Width: 600 mm
 Depth: 400 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: 230V_{AC} 1-phase
 Frequency: 50/60 Hz
 Power factor 1-phase: > 0.99 at 230V_{AC}, full load
 Connection 1-phase: 6 mm², per rectifier module
 Other: See table 1 & 2

Output DC

Output voltage, nominal: 24/48/110/220V_{DC}
 Connection: 10 mm², disconnect terminal
 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

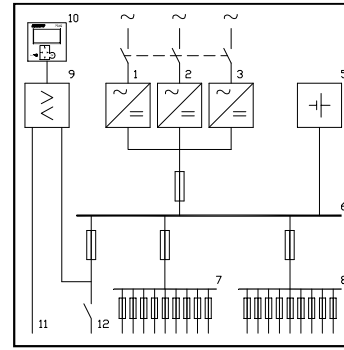


Nominal data		Maximum number of rectifier modules per module type							
U _{NOM} (V _{DC})	I _{RATED} (A)	8A	10A	16A	18A	22A	36A	50A	70A
24	108						3		
	140								2
48	54				3				
	150							3	
110	24	3							
	48			3					
220	66					3			
	30		3						

Table 1. Ratings 1-phase system

Output data			Input data			Power loss**
U _{NOM} (U _{RANGE}) V _{DC}	I _{RATED} A	Output power W	Input voltage range V _{AC}	Mains power* VA	Mains current* A _{RMS}	
24 (22-33)	36	1000	90-290	1150	6	150
	70	2000	90-290	2200	12	175
48 (42-63)	18	1000	90-290	1150	6	135
	50	2700	90-290	2900	15	210
110 (100-158)	8	1000	90-290	1150	6	135
	16	2000	90-290	2200	12	160
	22	2700	90-290	2900	15	200
220 (187-292)	10	2475	90-290	2700	14	200

Table 2. Ratings 1-phase system, * max at 195VAC, ** type at 230VAC



Single line diagram PC05

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: Max 25 A
 Connection: 16 mm² screw terminal

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.



Monitoring unit type PCM2

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} 62Ah
 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
 IP: EN 60529

