



Charging Rectifier type PRX3

9kW to 54kW – 110/125/220/440V_{DC}

PRX3 is a complete modular charging rectifier including rectifier modules and monitoring unit for critical systems with high reliability.

Plug-in rectifier modules

Easy to increase output power by additional modules and ease of service by hot swap modules. High availability due to parallel operation.

Safe operation and high availability
Powerful design with soft switch IGBT technology. Built-in active AC power protection for over- and under voltage. Long-life design with speed controlled and monitored fans. Low noise level and low weight.

System monitoring

Covers battery, rectifier and distribution. Status and alarms distinctly on display, settings by menus for easy handling.

Battery status

Battery circuit test and monitoring of battery symmetry for early warning of battery faults. Battery temperature is monitored and automatically adjusts the float charging voltage.

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General

PRX3 is a complete modular charging rectifier for systems with high reliability. It can be equipped with one or more rectifier modules of type PRM3 with possibility to be swapped during operation. The monitoring unit is a stand-alone unit and communicates with the modules through a serial interface. PRX3 is available in three types of cabinets where the choice mainly depends on the desired output power.

Enclosure

Type: Floor cabinet
 Cable inlet: Above or below
 Dimensions F27 (h/w/d): 1360/600/600 mm
 (mounted in 19" fixed rack frame)
 Dimensions F41 (h/w/d): 2000/600/480 mm
 (mounted in 19" fixed rack frame)
 Dimensions S39 (h/w/d): 2100/840/654 mm
 (mounted in 19" hinged door frame)
 Color: RAL 7035 light grey
 Class of enclosure: IP21
 Ventilation: Temperature controlled fans in rectifier modules, otherwise natural convection

Environmental data

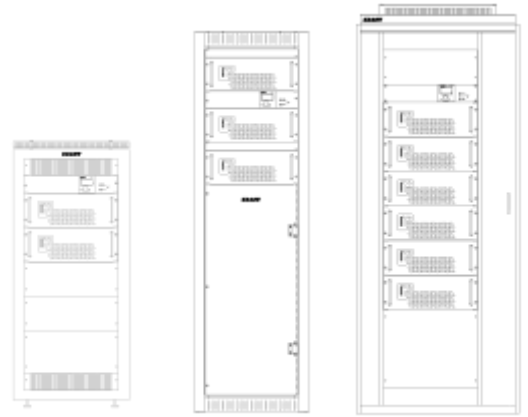
Ambient temperature: Operation, 0 till +40 °C
 Storage, -40 till +70 °C
 Humidity: < 90 % RH, non-condensed
 Altitude a.s.l.: < 2000 m, may be extended with derating

Input AC

Input Voltage: 3x380/415V_{AC}, ±10%
 Frequency: 45 – 65 Hz
 Power factor: > 0.97 at 3x400 V_{AC}, full load
 Other: See table

Output DC

Output voltage, nominal: 110/125/220/440 V_{DC}
 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: < 0.2 %_{RMS}
 Efficiency: >92%
 Other: See table



Cabinet F27 (Up to 2 modules) Cabinet F41 (Up to 3 modules) Cabinet S39 (Up to 6 modules)



Monitoring unit type PCM2

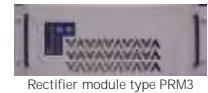
Monitoring unit type PCM2

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

Standards

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



Rectifier module type PRM3

Options

Input Voltage: 3x220V_{AC}, 3x480V_{AC}
 Remote alarm: Relay 5-8
 Class of enclosure: IP43

Model PRX3	Output data					Input data				Power loss**	Rect. module		Cabinet type/Weight		
	U _{NOM}	U _{MAX} *	I _{RATED}	Output power	Terminal	Mains power*	Mains current*	Mains fuse	Terminal		Number of	I _{RATED}	F27	F41	S39
	V _{DC}	V _{DC}	A	kW	mm ²	kVA	A _{RMS}	A _{GL/IG}	mm ²			A	kg	kg	kg
110/70	110	145	70	9	50	10.6	18	25	16	0.7	1	70	90	90	190
110/140			140	18	95	21.2	36	50	16	1.4	2		110	110	210
110/210			210	27	150	31.8	54	63	35	2.2	3		-	130	230
110/280			280	36	240	42.4	72	80	35	2.9	4		-	-	250
110/350			350	45	2x150	53.0	90	100	50	3.6	5		-	-	270
110/420			420	54	2x240	63.6	108	125	95	4.3	6		-	-	290
220/36	220	270	36	9	35	10.6	18	25	16	0.7	1	36	90	90	190
220/72			72	18	50	21.2	36	50	16	1.4	2		110	110	210
220/108			108	27	95	31.8	54	63	35	2.2	3		-	130	230
220/144			144	36	95	42.4	72	80	35	2.9	4		-	-	250
220/180			180	45	2x150	53.0	90	100	50	3.6	5		-	-	270
220/216			216	54	2x150	63.6	108	125	95	4.3	6		-	-	290
440/18	440	500	18	9	35	10.6	18	25	16	0.7	1	18	90	90	190
440/36			36	18	35	21.2	36	50	16	1.4	2		110	110	210
440/54			54	27	50	31.8	54	63	35	2.2	3		-	130	230
440/72			72	36	50	42.4	72	80	35	2.9	4		-	-	250
440/90			90	45	50	53.0	90	100	50	3.6	5		-	-	270
440/108			108	54	95	63.6	108	125	95	4.3	6		-	-	290

* max at 3x340 V_{AC}

** typical at 3x400 V_{AC} and full load



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