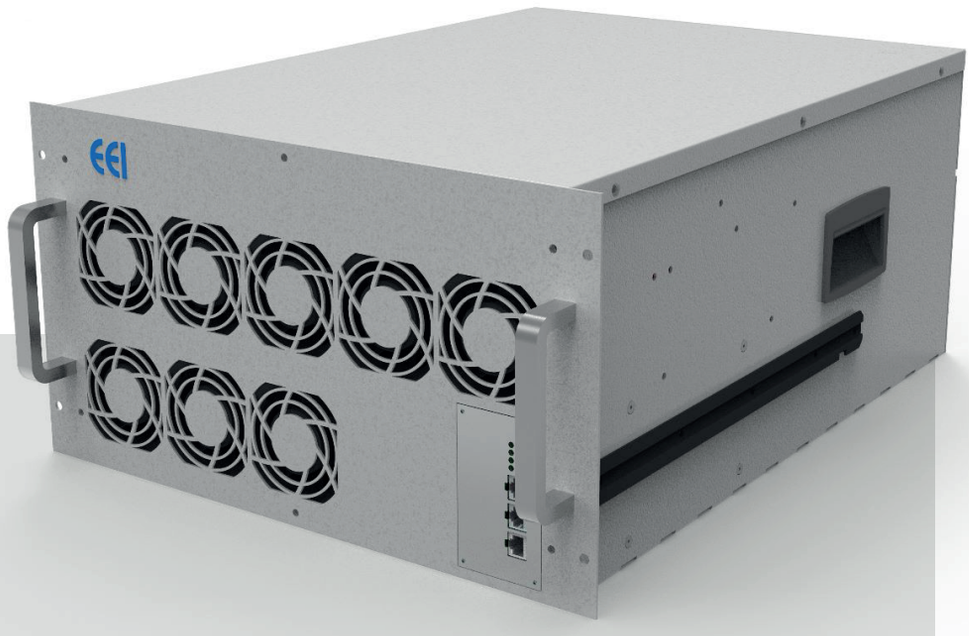
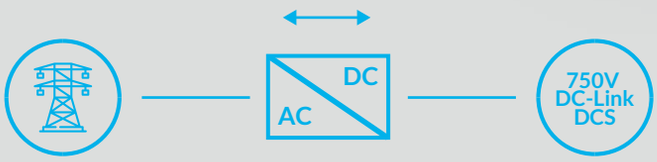
BI - DIRECTIONAL AC/DC CONVERTER

AC Grid Integration with DC Coupled System (DCS)

45kW / 75 kW / 90kW





Key Features

- Designed for 750V DC Coupled System (DCS)
- Bi-directional design for grid and DC Link energy bi-directional flow
- Unique DC Link voltage control strategy to ensure DCS stability
- Support on-grid and off-grid mode
- Weak grid is possible with DCS Controller and external EMS
- Standard 19" rack (3U and 6U) for easy cabinet integration
- Compact and high power density
- Options: quick disconnector and LCD display

ITALIAN
POWER
TECHNOLOGY

	RAC45	RAC75	RAC90
BASIC INFORMATION			
Topology	3 Level NPC	3 Level NPC	3 Level NPC
Power Flow	Bi - directional	Bi - directional	Bi - directional
Format	19” standard 3U Rack	19” standard 6U Rack	19” standard 6U Rack
AC GRID SIDE PARAMETERS			
Rated Power	45 kW	75 kW	90 kW
Nominal Voltage	400V 3Ph + N	400V 3Ph + N	400V 3Ph + N
AC Voltage Range	10% / -10%	10% / -10%	10% / -10%
Nominal Frequency	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz
Nominal Frequency Range	47,5 ... 51,5 Hz / 56, 4 ... 62,4 Hz	47,5 ... 51,5 Hz / 56, 4 ... 62,4 Hz	47,5 ... 51,5 Hz / 56, 4 ... 62,4 Hz
Nominal Current	65 A	110 A	130 A
Power Factor	0 ind ~ 1 ~ 0.Cap. (depending one DC voltage)		
THD (I)	<3%	<3%	<3%
DC LINK SIDE PARAMETERS			
DC Link Voltage Range	650V ÷ 800V	650V ÷ 800V	650V ÷ 800V
Nominal Output Voltage for DC link	750V	750V	750V
Maximum DC current	71 A	118 A	141 A
EFFICIENCY			
Maximum	>98%	>98%	>98%
GENERAL DATA			
Dimension (W / H / D)	483 / 133 / 650 mm	483 / 266 / 650 mm	483 / 266 / 650 mm
Weight	27,5 kg	54 kg	56 kg
Operating Temperature Range*	-10°C / +60°C	-10°C / +60°C	-10°C / +60°C
Max Humidity (non-condensing) Max Altitude	95 % / asl 2000m	95 % / asl 2000m	95 % / asl 2000m
PROTECTION			
EMC Filter	Included	Included	Included
AC-side Disconnection Device	Fuse	Fuse	Fuse
Protective Function	OV, OC, OL, OH, UV	OV, OC, OL, OH, UV	OV, OC, OL, OH, UV
Overvoltage Category	DC : II / AC : III	DC : II / AC : III	DC : II / AC : III
DC Current Injection Control	Included	Included	Included
Protection Class	I	I	I

*power derating for temperature above 40°C





