

High performance, efficiency and reliability 6 and 12-pulse rectifiers

The latest evolution of FALCO BC rectifier series sets new standards in performance, durability, reliability, and functionality.

The FALCO BC is a heavy duty, thyristor-controlled rectifier, specifically designed for the harshest operating environment in industrial applications, such as oil and gas, petrochemical, power generation, energy storage, power distribution and transmission plants for operation throughout the world.

The modular and flexible system concept together with a high number of options enables a fully customized solution that allows to meet any requirement, irrespective how specific it may be.

- Modern DSP-controlled thyristor technology
- Internal power supply with 5 independent DC converters including health monitoring
- Integrated watchdog circuits
- ModBus/TCP or ModBus RS-485 communication bus. Also available DNP 3 as an option
- Built-in HMI with optional web server interface.
- Dedicated I/O board with numerous configurable analogue and digital inputs
- 6 or 12-pulse configuration with optional inverter operation
- Advanced filter and PID control scheme for best diesel generator compliance
- The unique feature of fully segregated, independent and redundant measuring facility (shunt and/or CT) including complete power quality analyzer
- Independent microprocessor-based diode voltage dropper (DVR) controller
- On-board earth fault monitor with leakage current indication
- PT100 based real time temperature display and monitoring, with alarm and trip signaling



Key features:

Based on well proven technology platform
Fully digital DSP-based control technology
State of the art communication software
Built-in power quality analyzer
Fully monitored system platform
Rugged and heavy industrial design
Design life of 25 – 30 years
Intelligent battery management

Benefits:

High reliability
High degree of customization and flexibility
Easy access and intuitive communication
Easier fault diagnosis
Low operational costs
Low maintenance costs
Long durability and high reliability
Extremely high degree of availability

Technical Specifications

FALCO BC

Output DC current (A)	50	100	150	200	300	400	500	600	800	1000
Rectifier input										
Rectifier AC input voltage	3x400 V \pm 10% (3x380 V, 3x415 V, and others on request)									
Rectifier input frequency	50 Hz / 60 Hz \pm 5%									
Rectifier input power factor	Typical > 0.8 ind.									
Rectifier DC output										
Nominal voltage (Vdc)	24 / 48 / 60 / 110 / 125 / 220									
Setting range:	Float voltage	100% – 120%								
	Boost voltage	100% – 130%								
	Initial charge voltage	100% – 150%								
DC voltage tolerance:	Static	\pm 0,5%								
	Dynamic	max. \pm 10% Vrms / \pm 2% Vrms within 100 ms								
DC ripple voltage:	< 2% rms without battery connected (lower on request)									
Charging characteristics	Constant current, remote setting, programmable curve									
General Data										
Efficiency	85% -94% depending on model and DC load									
Noise level	55 dB(A) – 60 dB(A)									
Cooling	Air natural convection					Forced air cooling				
Operating temperature	-10 to +40 °C (up to 55 °C optional)									
Storage temperature	-30 to +80 °C									
Maximum altitude wo. derating	1000 m (up to 4000 m with derating)									
Allowable relative humidity	<95% non-condensing									
Protection degree	IP20 (up to IP54 as option)									
Color / Paint	RAL 7035 (other colors optional)									
Safety	IEC/EN 62040-1									
EMC	IEC/EN 62040-2									
Performance & Test	IEC/EN 60146-1-1 / IEC/EN 62040-5-3									
Conformity	CE marking									
Quality / Environment	ISO 9001:2008 / ISO 14001:2004									
Dimensions (IP20, basic configuration)										
Height (mm)	1900 (2100, 2300 optional)									
Width (mm), 24 Vdc output	600	600	600	600	800	800	800	800	1000	1200
Width (mm), 48/60 Vdc output	600	600	600	800	1000	1000	1000	1000	1000	1200
Width (mm), 110/125 Vdc output	600	600	600	800	1000	1000	1000	1000	1000	1200
Width (mm), 220 Vdc output	600	600	800	800	1000	1000	1000	1000	1000	1200
Depth (mm), 24/48/60 Vdc output	800	800	800	800	800	800	800	800	1000	1200
Depth (mm), 110/125/220 Vdc output	800	800	800	800	800	1000	1000	1000	1000	1200
Output DC current (A)	50	100	150	200	300	400	500	600	800	1000