

Multiple Circuit Rectifier

MCDR IGBT Series for lead-acid battery formation

- High power factor also at partial load – no investment in power factor correction system
- Cascadable and service friendly – save space, stay flexible
- Added Safety: Circuits electrically isolated from each other
- Reduce operating cost: Energy feedback to the AC power line during discharge
- Increase your productivity: Designed for 100 % utilisation assuming all circuits at maximum output
- $\pm 100\text{A} / 370\text{V}$ or $\pm 85\text{A} / 400\text{V}$



regenerative
energy saving



*Directly compatible with

inbatec
for a better production
Acid Recirculation Systems



Digatron
power electronics

■ TECHNICAL DATA*

Multiple Circuit Rectifier MCDR IGBT Series

■ DC DATA

Circuits per cabinet	6 – 16	
Paralleling of circuits	yes	
Voltage range charge, V	0 – 370	0 – 400
Voltage range discharge, V	370 – 20	400 – 20
Continuous power per circuit, kW	27	25.5
Continuous current per circuit, A	±100	±85
Measuring accuracy U_{DC}	< ± 0.1% FSR	
Control accuracy U_{DC}	< ± 1% FSR	
Control accuracy I_{DC}	< ± 1% FSR	
Current ripple	< 1% rms FSR	
System efficiency, %**	≥ 93	
Galvanic isolation per circuit	yes	

■ AC DATA

Mains connection	50Hz ± 3Hz or 60Hz ± 3Hz (3 ph. + PE)
Power factor (cos φ)	≥ 0.99 from 20% nominal power
THD, %	< 5
AC mains contactor	optional for remote operation, replaces mains switch

■ COOLING, ENVIRONMENTAL CONDITIONS

Cooling	air cooled, air flow from bottom to top
Ambient temperature, operating	10 – 40°C (50 – 104°F)
Protection level	IP20
Humidity	10% - 90% RH, non-condensing and non-corroding

■ OPTIONS & ACCESSORIES

Water bath control, Data loggers, contact hazard protection covers
Interface for Inbatec Acid Recirculation System
Remote operable mains contactor to eliminate transformer idling losses

■ AVAILABLE CABINETS & CIRCUITS

HxWxD 1980mm x 880mm x 990mm (78" x 35" x 39"), 6 circuits
HxWxD 1980mm x 1126mm x 990mm (78" x 44" x 39"), 8 circuits
HxWxD 1980mm x 1618mm x 990mm (78" x 64" x 39"), 12 circuits
HxWxD 1980mm x 2111mm x 990mm (78" x 83" x 39"), 16 circuits

■ Why IGBT technology?

IGBT technology rectifiers are exceptionally economic with energy in charge mode. They also have a very good degree of efficiency for power regeneration in discharge mode. Both features contribute directly to reducing the operating cost of your battery formation plant. Thanks to the best possible power factor, any investment in PFC (power factor correction) systems can be omitted. Cost for grid feed-in are minimised, too.

* Design and specifications are subject to change without notice.

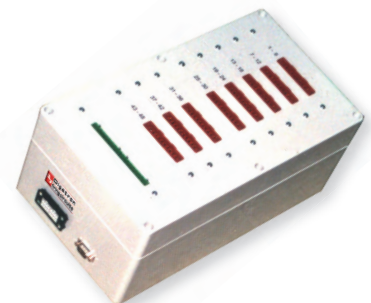
** System efficiency measured at rated power output including transformer, DC out / AC in.



IGBT Power Section



Water Bath Control



CAN Data Logger



Compatible with
Inbatec Acid Recirculation System