



Top view

The MRCC-series is a battery charge regulator for small to medium sized photovoltaic solar systems, which are used for industrial applications. Main areas of application are:

- Marine and aircraft beacons
- Wellhead control
- Monitoring and telemetry
- Telecommunication

The MRCC-series features all functions and properties necessary in the industrial field to safeguard an optimum battery charge and discharge cycle. A unique facility enables field-testing of the proper functioning of its overcharge and deep discharge functions. It is also characterised by its extremely low energy consumption.

Main features are:

- Overcharge and deep discharge protection
- External or internal temperature/voltage sensor
- 80A output MOSFET, fully electronic protected
- Functional test facility
- Possibility to connect alarm relays (LVD and/or pre-warning)
- Protection against:
 - Reverse current
 - Reverse polarity connection of solar modules and battery
 - Overload on output
- LED indicators for:
 - Operational
 - Battery charged
 - Load disconnect

Electrical specifications in airtight enclosure at different environmental conditions.

Electrical specifications	Standard conditions @ 25°C		Extreme conditions @ 75°C	
	MRCC-12	MRCC-24	MRCC-12	MRCC-24
Model / Type:	MRCC-12	MRCC-24	MRCC-12	MRCC-24
Nominal system voltage	12 Vdc	24 Vdc	12 Vdc	24 Vdc
Maximum current solar input	40 A (45A out)	40 A (45A out)	40 A (21A out)	40 A (21A out)
Number of solar inputs	1	1	1	1
Maximum continuous output current at I input = 10 A	60 A	60 A	32 A	32 A
Maximum continuous output current at I input = 20 A	58 A	58 A	30 A	30 A
Maximum continuous output current at I input = 30 A	55 A	55 A	25 A	25 A
Maximum continuous output current at I input = 40 A	45 A	45 A	21 A	21 A
Maximum peak output current (for < 5 sec)	80 A	80 A	60 A	60 A
Dissipation at full input and output current	10,8 W	10,8 W	10,8 W	10,8 W
Typical operating current consumption	6 mA	6 mA	6 mA	6 mA
Temperature compensation	-30 mV/°C	-60 mV/°C	-30 mV/°C	-60 mV/°C
Current compensation	10 mV/A	20 mV/A	10 mV/A	20 mV/A
Maximum modules input voltage	70 Vdc	70 Vdc	70 Vdc	70 Vdc
Maximal battery input voltage	25 Vdc	40 Vdc	25 Vdc	40 Vdc
Maximum alarm relay output current	200 mA	200 mA	200 mA	200 mA
Boost level ⁽¹⁾	14,5 Vdc	29,0 Vdc	14,5 Vdc	29,0 Vdc
Float level ⁽¹⁾	14,2 Vdc	28,4 Vdc	14,2 Vdc	28,4 Vdc
Float reconnect level	13,7 Vdc	27,4 Vdc	13,7 Vdc	27,4 Vdc
Boost reconnect level	12,8 Vdc	25,6 Vdc	12,8 Vdc	25,6 Vdc
Pre-warning low voltage (alarm)	11,8 Vdc	23,6 Vdc	11,8 Vdc	23,6 Vdc
Load disconnect / LVD alarm (alarm)	11,5 Vdc	23,0 Vdc	11,5 Vdc	23,0 Vdc
Load reconnect level	12,2 Vdc	24,4 Vdc	12,2 Vdc	24,4 Vdc
Maximum wire diameter terminal block module, battery, load	16 mm ² (6 AWG)			
Maximum wire diameter terminal block volt/temp sensor, alarms	1,5 mm ² (16 AWG)			

⁽¹⁾ At 20°C

General specifications

General specifications		
Model / Type:	MRCC-12	MRCC-24
Operating temperature	-10°C to +70°C	
Operating relative humidity	5% to 95% non condensing	
Construction	open frame	
Mounting	Indoor	
Storage temperature	-30°C to +70°C	
Unit weight	± 0,4 kg	
Dimensions (L x W x H)	17,3 x 10,2 x 6 cm	

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