

# MRF102



- Warning when the current exceed 80%
- ADELBus I/O for driverer, monotoring and Configuration.
- ADELViewSystem for programming and Control the device
- Sequential Output Switch start. Reduce Inrush Current
- 2 Load Output, with adjustable current range 1..10A
- Power Boost 150%
- Two output switchable in Parallel (max 15A)
- Power limitation of the output to 100 VA, in according to NEC Class 2
- Monitoring for trigger switch off output for max Current or min Voltage on the channel
- Alarm Output Open Collector
- DIN Rail and Wall Mount

## General

Electronic Circuit Breaker Fuse, for protections about Overload and Short Circuit, Two channel electronic circuit with active current limitation for output load. It can operate in the field 12 and 24Vdc, for installation in DIN rail and Wall Mount.

## Technical Data

### Input Data

Supply voltage / at DC / Rated value	12 – 24 V
DC Input Voltage range (Vdc)	8 – 32 V
Overvoltage overload capability	35 V
Input current / at rated input voltage 12 - 24 V / Rated Value	20 A max (30A peak max 10 sec)
Maximum current consumption	Xxx A (12 VDC) - Xxx A (24 VDC)
Required Back Up Fuse	Not required. Integrated failsafe element (internal fuse)

### Output Data

Input Voltage Reset Output	7 ...32 Vdc
Voltage curve / at output	Controlled DC voltage
Drop Out	0.2 V
Number of outputs	2
Output current / up to 60 °C / per output / rated value	10 A
Adjustable switch Off out current	1 ...10A
Type of response value setting	via Blink code Led
Parallel switching of outputs	Yes
Bridging of equipment's	No
Start Up	< 0.5 sec.
Surge voltage shutdown load circuit	>32 Vdc
Max Capacitive Load	50.000 uF
Rated Surge Voltage	0.5 KV

### Efficiency

Efficiency	97%
Power loss [W] (typ)	17W (Nominal Operation)
Power dissipation	0.9 W (No Load operation)

### Switching - off per output

I <sub>out</sub> = 1.0 ...1.5 x set value	switch-off after approx. 5 s
I <sub>out</sub> = 1.5 ...1.8 x set value	switch-off after approx. 1 s
I <sub>out</sub> = 1.2 ...2 x set value	switch-off after approx. 0,1 s
I <sub>out</sub> > 2 x set value	switch-off after approx. 0,03 s
I <sub>out</sub> > set value and Vin < 15% (24V); (12V)	switch-off after approx. 0,03 s
Turn On Output after Switch Off	- Hiccup Mode - Manual Reset - By Press Button - 5 sec (Hover load / Short Circuit)

Waiting time after switch off Out

### Protection and Monitoring

Internal Fuse protection type	16A per output (not replaceable)
Dielectric strength	Max 32 Vdc (on Load Circuit)
Display version	Three-color LED per output: green LED for "Output switched through"; yellow LED for "Output switched off manually"; red LED for "Output switched off due to overcurrent"

Connection for monitoring device:	AUX1: connection 2 pin AMP
Configuration Aux1	1: as ADELBus for Driving, Monitoring, Configuring 2: Out Alarm for For SwitchOff Output
Diagnosis	- Common Signaling for disconnection Last Output - Single Channel: Current, set current threshold, Status On/Off - Reason for Output disconnection

### Connection

Input 12 or 24V	1 Screw Type: 0.2 - 2.5 mm2 (24 - 1
Input 0V	Screw Type 12 AWG); 0.6 - 0.8 1 Screw
Outputs	Type Nm
Signal Output:	AUX1: connection 2 pin AMP

### Ambient Conditions

Nominal Temperature operation	-25 up to +60°C (>60°derating 2.5%/°C)
Ambient Temperature operation	-25 up to +70 °C
Ambient Temperature Storage	-40 up to +85 °C
Humidity at 25 °C, no condensation	95 % to 25 °C (acc. to IEC 60721)
Vibration (operation) IEC 60068-2-6	<15 Hz, amplitude ± 2.5mm <15Hz-150Hz, 2.3G 90 min.
Altitude: 0 to 2 000m - 6560 to 20 000ft	No restrictions

### General Data

Protection Class (EN/IEC 60529)	IP20
Reliability: MTBF IEC 61709 >	700.000 h (Automatically Switch Off Beck Light after 30 sec)
Protection class	III
Housing material	Polycarbonate
Foot latch material	Plastic POM
Screw type connection	0.2 - 2.5 mm2 (24 - 12 AWG) 0.6 - 0.8 Nm
Dimension (w-h-d) mm	18 x 90 x 61
Weight	0.1 kg approx.

### Immunity and Emission

The CE mark in conformity to EMC 2014/30/EU: Electromagnetic Compatibility Directive; 2014/35/EU: Low Voltage Directive; ROHS 2011/65/EU: Restriction of the use of certain Hazardous Substances in Electrical and Electronic Equipment (RoHS), as amended by 2015/863/EU

- EMC Immunity: EN61000-6-2
- EMC Emission: EN61000-6-3, EN 55022 ClassB

### Electrical Safety for mounting

According to:

- Electrical Equipment for Machinery EN 60204
- Electrical safety (of information technology equipment) IEC/EN EN62368-1.
- Safety requirements for electrical equipment for measurement, control and Laboratory use IEC/EN 61010

### Accessory

- RTConn: connector cable for the connection to AUX1. It is possible drive the device true this cable true the net ADELBus.