

Battery isolator CDR 2.0



SAFETY FIRST



Read and understand this instruction, the battery instruction provided by your battery manufacture, and your employer's safety practice, before using, installing, or servicing the product.

Only qualified personnel should install, use or service this product.



WARNING, risk of electric shock.

High output voltage. Do not touch uninsulated battery terminals, connectors or other live electrical parts.

Disconnect the battery before maintenance, servicing or dismantling.

Do not operate the unit if there is any evidence of damage.

INTENDED USE

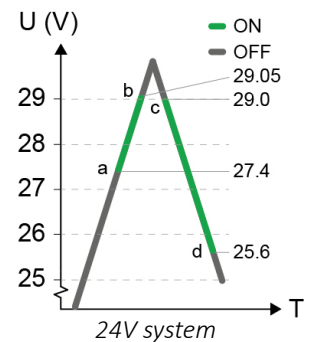
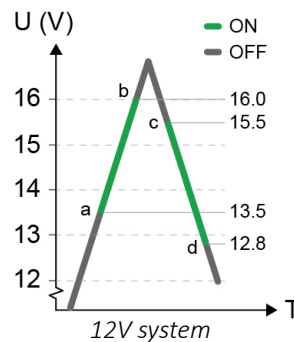
The battery isolator CDR 2.0 is intended for charging current distribution between dual batteries/battery packs but can also be used as an automatic cut-off relay.

CDR 2.0 is suitable in automotive and marine applications.

FEATURES

- Microprocessor controlled function
- Low voltage drops
- On/Off status indication via external LED
- Waterproof and shock resistant
- Plastic housing
- Compact and easy to install
- On/Off function
- Selectable between Unidirectional/Bidirectional
- Overvoltage switch-off
- All voltage levels (on, off, overvoltage) programmable during production

OPERATION



- When a battery is connected and the voltage level is above level **a** and less than level **b**, the CDR switch on and lets the voltage through the terminals.
- If the voltage rises above level **b**, the CDR switch off to protect equipment or auxiliary battery.
- When the voltage then drops below level **c**, the CDR switch on again.
- If the voltage drops below level **d**, the CDR switch off.

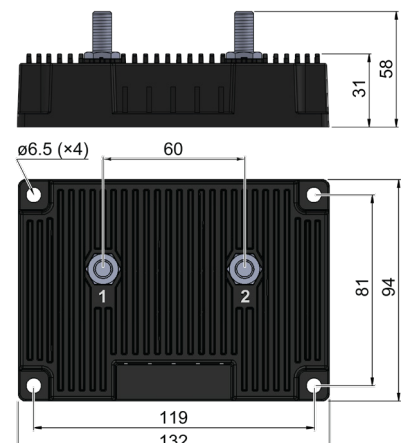
OPERATION STATUS

Operation status can be indicated by connecting a LED to the battery isolator.

LED indication	CDR output	Description
Off	Inactive	Voltage below switch-on level or contact no 3 connected to ground.
Steady	Active	Voltage within switch-on levels or contact no 4 connected to ground.
Flashing × 3	Inactive	Voltage out of range
Flashing 0.5 Hz	Active/ Inactive 0.5 Hz	Voltage > 29.05 V
Flashing × 4, off 1 s, on 2 s	Inactive	Overvoltage protection Voltage > 29.17 V

MECHANICAL INSTALLATION AND DIMENSIONS

- Install the battery isolator close to the batteries and use appropriate cables to avoid unnecessary voltage drop.
- Position the battery isolator so that the air supply is not obstructed.
- The battery isolator should always be securely fastened.
- Protect supply cables with suitable fuse/fuses.
- Max torque = 18 Nm for terminal T-1 and T-2.
- Max torque = 10 Nm for mounting screws.
- Use the insulating caps supplied.

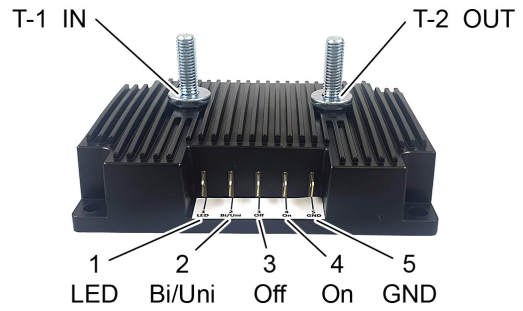


ELECTRICAL INSTALLATION

1. Connect the positive terminal of the starter battery to screw terminal T-1 (input).
2. Connect the positive terminal of the auxiliary battery to screw terminal T-2 (output).
3. Connect an external LED between contact 1 and GND (max 5 mA)
4. Connect contact 5 to ground (GND).
5. Connect the negative terminal of the starter battery and the negative terminal of the auxiliary battery to common ground.

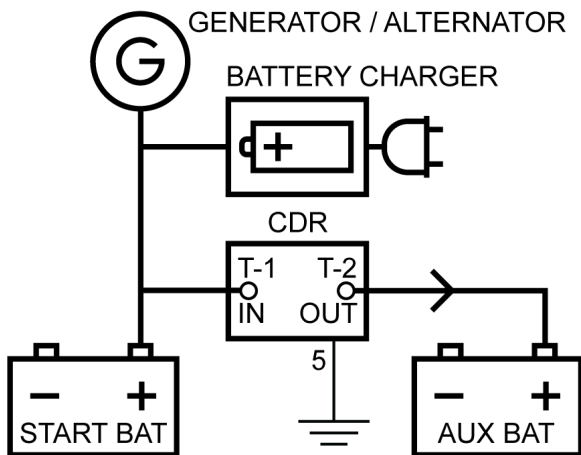
Various optional functions can be installed via the contact terminals 1-4.

CONNECTIONS OVERVIEW



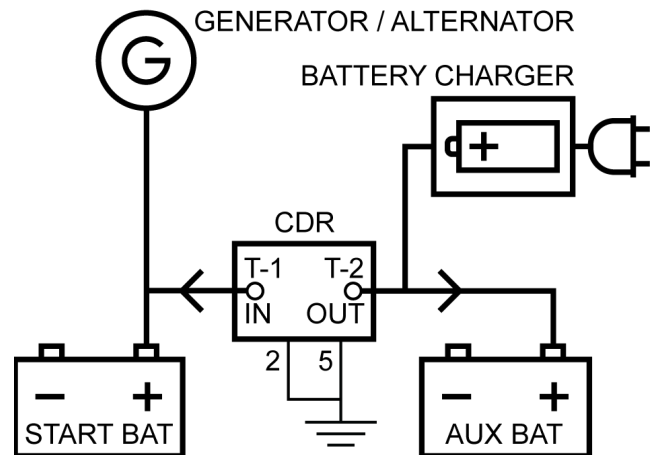
T-1	Screw terminal 1, input
T-2	Screw terminal 2, output
1	LED, for connecting a LED
2	Bi/Uni, for changing the charging current distribution
3	Off, for the switch-off function
4	On, for the bypass function
5	GND

POSITIVE BATTERY CABLE CONNECTION, UNIDIRECTIONAL



The CDR opens for charging current only in one direction, T-1 to T-2.

POSITIVE BATTERY CABLE CONNECTION, BIDIRECTIONAL



The CDR opens for charging current in either direction, T-1 to T-2 or T-2 to T-1.

TECHNICAL DATA

Model	CDR 12/24 V
Input voltage	Universal 12 V or 24 V
Current limit	200 A 100 A
Typical switch-on voltage	13.5 V 27.4 V
Typical switch-off voltage	12.8 V 25.6 V
Quiescent current, off	< 1 mA
Quiescent current, on	< 25 mA
Operating temperature	-40- +60 °C (-40- +140 °F)
Ingress protection (IP class)	IP67
Weight	700 g
Contact terminals	6.3 mm Flat Pin connectors

PRODUCT AND SUPPORT INFORMATION

For more information, visit Micropower Support Center:



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