tbs electronics

THE POWER OF QUALITY

Automatic Charging Relay
TACR-160

Description

In a boat or vehicle with two battery banks, it is useful to be able to charge both banks while underway. The TACR-160 allows two battery banks to be charged from a single source, such as an alternator, but keep batteries isolated when not charging. This is to avoid that one battery bank discharges the other. Additionally, if one battery bank becomes depleted anyway, there will be a charged bank available for emergency starting.

Besides the main functionality of automatic battery combining or separation, the TACR-160 can also act as a remote controlled DC switch or only allowing a load to be connected to the battery when it is being charged. A remote switch can also be used to temporarily combine the auxiliary battery with the starter battery, in order to increase the available power to start an engine.

Features

• Automatically combines batteries during charging, isolates batteries when discharging or at rest
• Bi-directional operation
• Automatic system voltage detection (12V/24V)
• Forced ignition combine by external switch
• Use as voltage dependent switch
• Battery/accessory protection against high voltages
• CE certified
• 24 month warranty

Applications
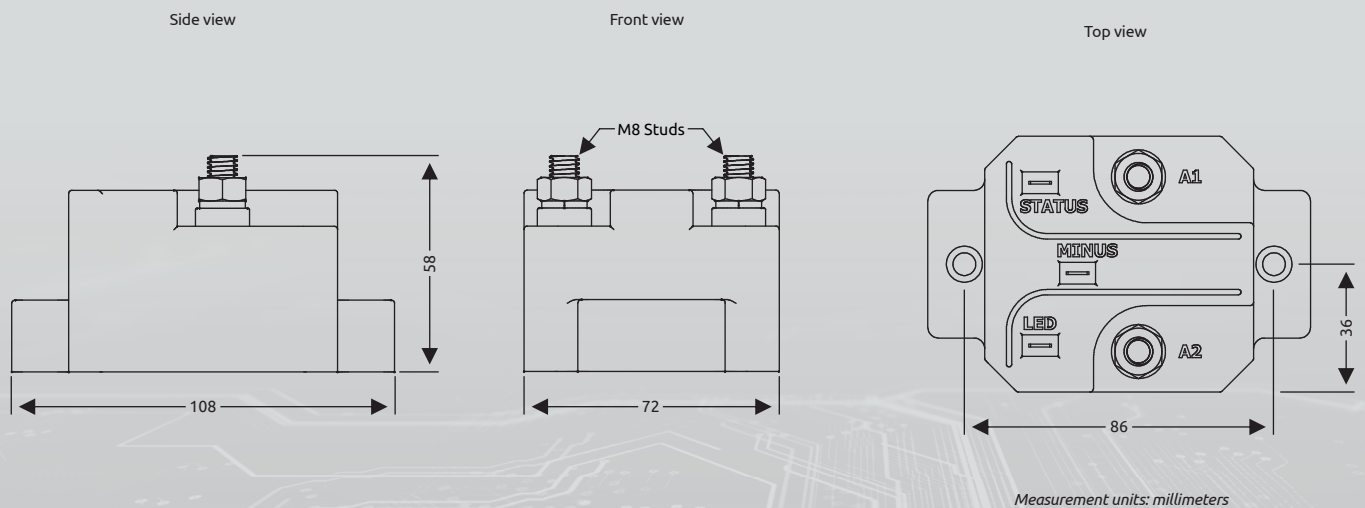
• Road vehicles
• Marine applications
• Hybrid generators

Technical specifications

Parameter	TACR-160 art # 5075200
Supply voltage	12Vdc / 24Vdc (auto detect)
Contact current (cont.)	160Adc
Contact current (peak)	480Adc (250ms)
Relay activation voltage	13.2Vdc (@12V) / 26.4Vdc (@24V)
Relay de-activation voltage	12.8Vdc (@12V) / 25.6Vdc (@24V)
Activation delay	5 sec.
De-activation delay	60 sec.
Quick de-activation voltage	11.8Vdc (@12V) / 23.6Vdc (@24V)
Quick de-activation delay	4 sec.
Overvoltage disconnect	16Vdc (@12V) / 32Vdc (@24V)
Current consumption (passive)	1.8mAdc (@12V) / 2.0mAdc (@24V)
Current consumption (active)	340mAdc (@12V) / 170mAdc (@24V)
Weight / dimensions	470 gr. / 108 x 72 x 58mm (L x W x H)
Connections	M8 (A1 & A2) + 6.3mm male Faston (other)

Note: the given specifications are subject to change without notice.

Dimensions

Side view

58

108

Front view

M8 Studs

72

Top view

STATUS

A1

MINUS

LED

A2

36

86

Measurement units: millimeters

Basic application diagram

TACR-160

G
Alternator

Fuse

+ −
AGM Gel
Lead

Battery
(primary)

− +
AGM Gel
Lead

Battery
(auxiliary)