



Cruzo Smart Relay

NMEA 2000® Certified Product

Our Cruzo Smart Relay acts as a bridge, allowing the panels to control various electronic equipment on-board, such as lights, bilge pumps, blowers, and windlasses. This enhances the overall functionality and convenience offered by your boat.

Key Characteristics

- **CRP8/1:** (Cruzo Smart Relay 8 CHANNEL VER.1)
- **NMEA 2000 Compatibility:** Ensures easy integration with existing marine networks.
- **Four 10A Relays & Four 20A Relays:** Versatile power management for different loads.
- **NMEA 2000 interface:** Opto isolated.
- **Battery Connection via M8 Screw:** Secure and robust connection for continuous power.
- **Continuous Current Management:** Monitors and manages current flow across all relays.
- **Status Indicators:** LEDs provide clear visual feedback for system status, along with dedicated communication and power LEDs. Status indicating LEDs.
- **IP67:** Built to withstand harsh marine environments.





General Characteristics

- Two channels can be used as H-Bridge for reverse polarity
- Main DC (+) M8 stud – Power for logic and loads
- DC (-) M5 stud for reverse polarity
- Two external signals input
- Wide input range 7 - 30VDC
- Max current consumption of 0.6A
- Input voltage and current monitoring
- Short circuit protection on supply power
- Reverse polarity protection
- Individual channel current monitoring
- Led indication for each channel



The CSR8/1 is designed to suit vessels of all sizes, with its compact design making it easy to install in tight spaces.

The **CSR8/1 Smart Relay** offers 8 channels for controlling various DC loads such as lights, motors, and pumps:

- **Four channels can handle up to 20A each**
- **Four channels can handle up to 10A each**

Additionally, **two channels** support reverse polarity loads, making them ideal for devices like linear actuators.

The CSR8/1 also includes:

- **Two signal inputs**, which can be customized for specific roles (e.g., detecting bilge pump activation via a float switch)
- **Current monitoring** on each output channel to prevent relay damage. The maximum current for each channel can be pre-set for added load protection.

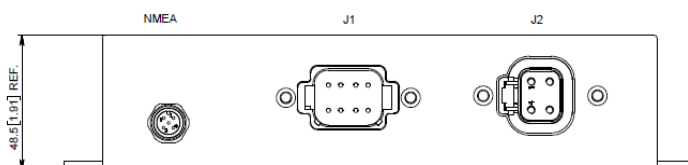
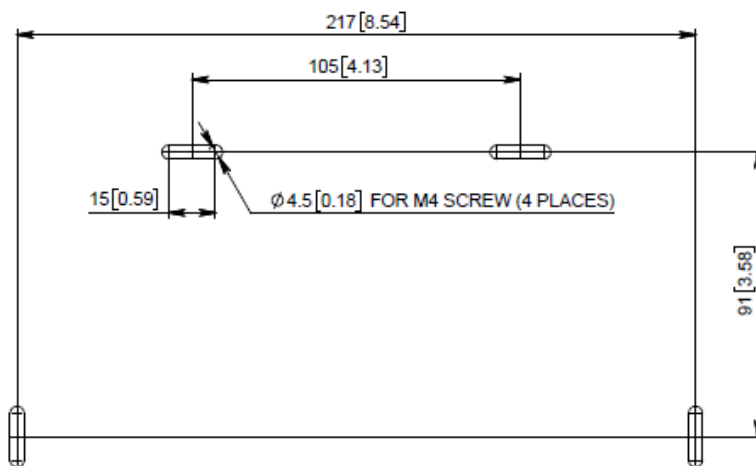
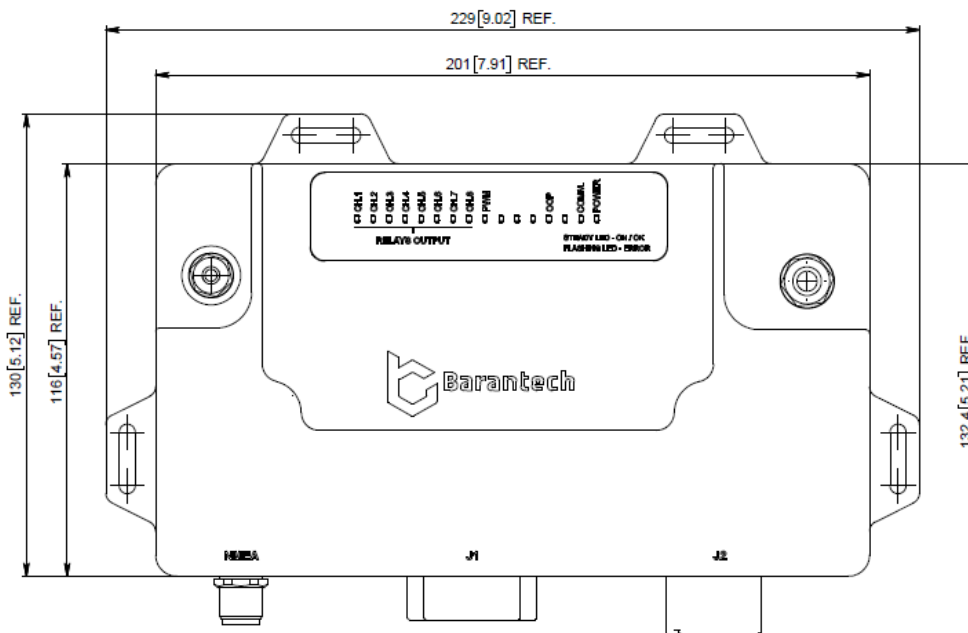
The **LED indicators** provide clear feedback on the system's status:

- **Eight LEDs** show the state of each channel (Open/Closed/Failure)
- **One LED** indicates NMEA communication status
- **One LED** monitors input voltage (No Power/Power OK/Low Power)
- **One LED** alerts for over-current protection mode

The CSR8/1 can be controlled through any **NMEA 2000-compatible** Barantech digital switch or a **third-party MFD** that supports standard digital switching PGNs.



Dimensional Specifications - mm [Inch]



Notes:

1. Temperatures:

- Operating -40°C to 55°C
- STORAGE -55°C to 85°C

2. Mating Connectors:

- J1 - AT06-08SA
- J2 - ATP06-4S
- NMEA - MICRO-C FEMALE M12-



Product Part No.	Description
19005506	8-Channel DC Smart Relay W/O mating cables
80110792	Output (J1) Matting connector with 1m Flying Leads
80110791	Output (J2) Matting connector with 1m Flying Leads

Certifications

NMEA 2000	Certified
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Specifications

Switching Voltage	<30 VDC
Number of Channels	8
Maximum Unit Current Capacity	50 amps
Maximum Channel Current Ratings	4x20A, 4x10A

Electrical Data

Supply Voltage	7 - 30VDC
Power Consumption	max 600 mA
Load Equivalence Number (LEN)	1 (the CRP8 cannot be powered from NMEA BUS)
Reverse Polarity Protection	YES
Channel Current Measurement Accuracy	+/- 0.5 A
Channel Current Measurement Resolution	10 mA
Minimum Current Measurement	150 mA
Programmable Trip Level Resolution	1A
Input Signals Voltage	LOW: 0-1.5V HIGH: 3.3-12.5V



Mechanical Data

Size (Including Mounting Flanges)	229x146.4x48.5 mm / 9.02x5.76x1.91 in Including Flanges for Mounting	
Weight	960 ± 100 gr	
Power Studs		
Type	DC (+)	DC (-)
Size	M8	M5
Max. Tightening Torque	9 Nm	2.2 Nm

NMEA 2000 Parameter Group Numbers

Description	PGN#	PGN Name	Default Rate
Periodic Data PGNs	127501	Binary Switch Bank Status	1 time / 2 seconds
	162464	PGN List	
Response to Requested PGNs	126996	Product Information	
	126998	Configuration Information	
Protocol PGNs	059392	ISO Acknowledge	
	059904	ISO Request	
	060928	ISO Address Claim	
	059392	ISO Acknowledge	
	060160	ISO Transport Protocol, Data	
	060416	ISO Transport Protocol	
	126208	Request group function	
	126993	Heartbeat	1 time / 10 minutes



*The specifications, descriptions and illustrations indicated in this document are based on current information. All content is subject to modifications and amendments. Users should evaluate the suitability and test each product selected for their own applications.