

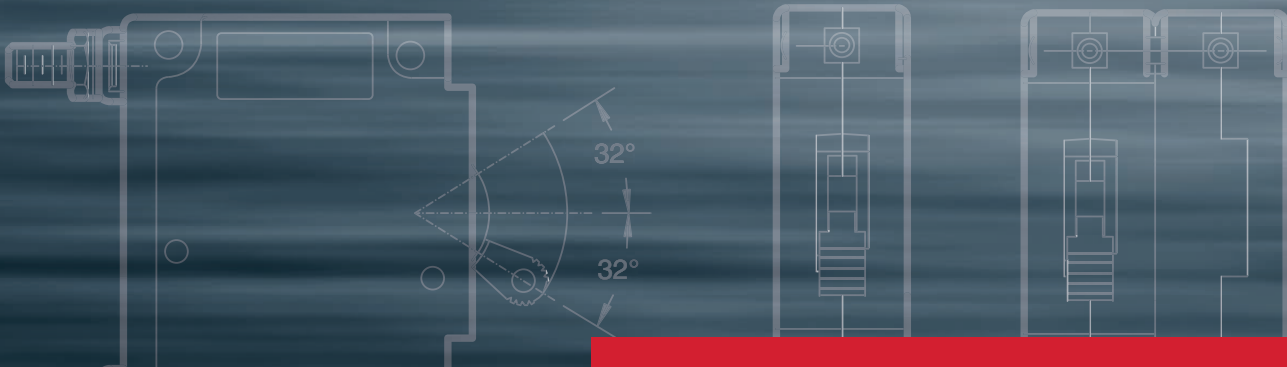
BEP



2 0 1 8

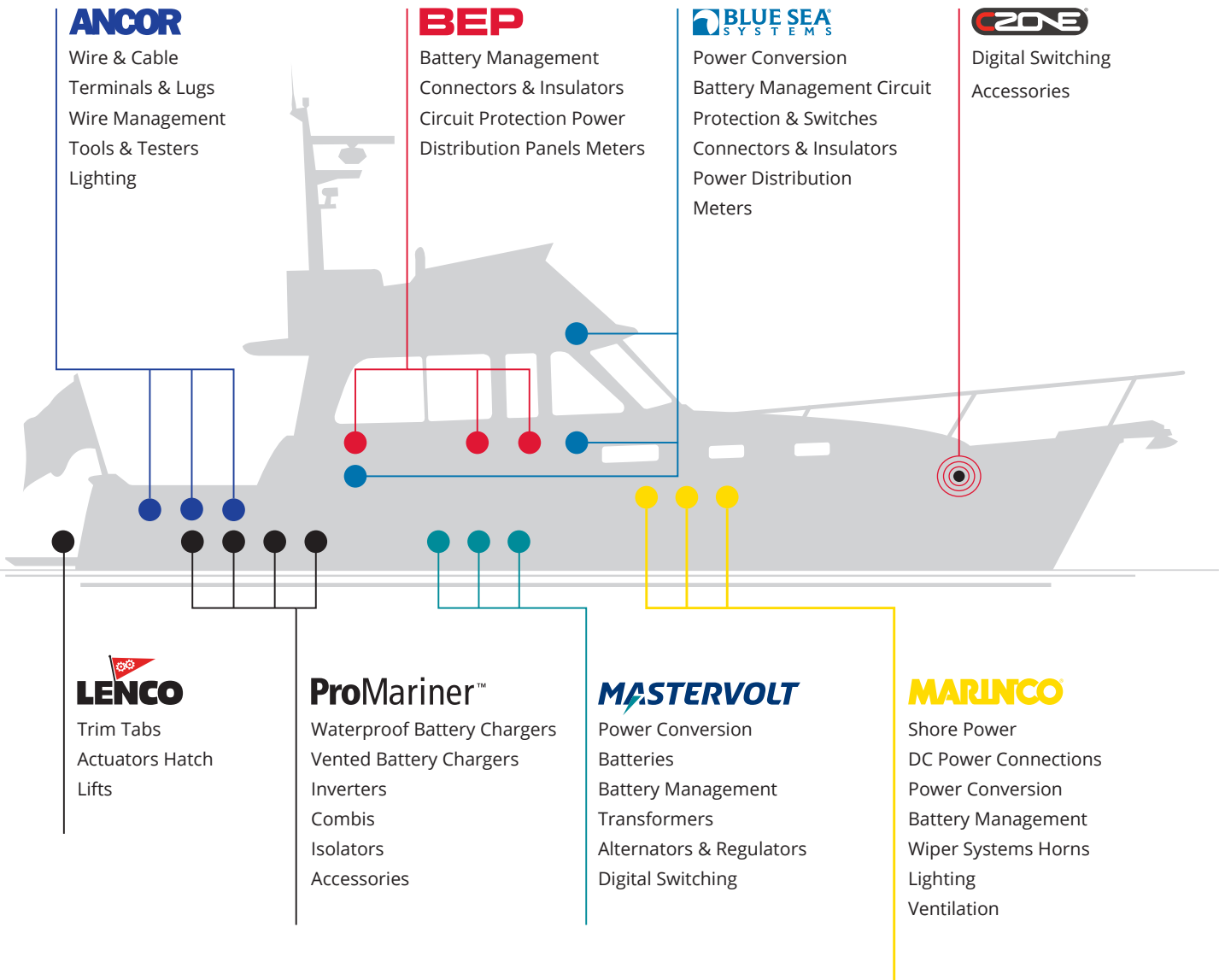
MARINE
EMERGENCY VEHICLE
INDUSTRIAL
RV

Battery Management
Connectors & Insulators
Circuit Protection
Power Distribution Panels
Meters



For decades Ancor, BEP, Blue Sea Systems, CZone, Lenco, Marinco, Mastervolt and ProMariner have worked independently to provide innovative electrical products. Now the eight companies are working together to offer comprehensive electrical solutions for marine and mobile applications.

Providing more than products. Providing Solutions.



What makes BEP different:

Founder's Vision

BEP offers a range of high quality electrical solutions designed for the harsh Marine and RV environments. Every product meets exacting performance specifications and is designed to withstand extreme conditions, both at sea, and on land.

Solutions Focused

The BEP team is intimate with the marine environment and develops solutions that improve the installation and use of the products they design. The new products developed reduce assembly time, save space and improve the user experience.

Innovation & Engineering

BEP's innovative culture and engineering excellence is focused on simplifying the installation and optimizing the user experience with thoroughly tested products that will thrive in the harsh marine environment.

Worldwide Support

BEP customers have global support in APAC, EMEA and the Americas. The network of support will resolve any issues that come up in supply, technical support and installation questions. BEP is committed to provide the products and support needed to make your installation and experience the best in the industry.



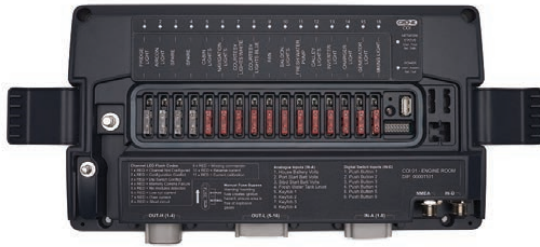
2017 **NEW** Products



Touch 5

Part # 80-911-0124-00

The sleek new Touch 5 adds a compact touch screen option to your CZone® installation. While offering many of the same features as its bigger brother the Touch 10, this new display module adds Wifi connectivity as well as the highest specification IPX7 waterproofing. With a super bright widescreen display and the latest capacitive touchscreen technology, this compact unit is perfect for a flybridge or exposed helm position. It also suits smaller vessels where space is at a premium, or on larger vessels as a secondary display in an owner's cabin or engine room.



Combination Output Interface (COI)

Part # 80-911-0119-00 COI with connectors

Part # 80-911-0120-00 COI without connectors

Digital switching systems just got easier to install, with the new CZone® Combination Output Interface (COI). This one box replaces up to five separate units, with industry-standard Deutsch connectors and IPx5 water resistance. With 12 low-current (10 amp) switched outputs, 4 high-current (25 amp) outputs, 8 analog inputs and 6 digital switch inputs, this one module provides sufficient options for most small to medium sized vessels.



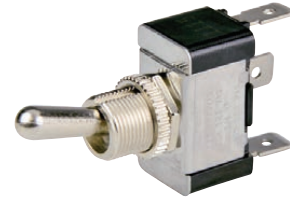
NMEA 2000 Cables & Connectors

Ancor now carries NMEA 2000 cables and connectors for creating or expanding an NMEA 2000 network quickly and easily. Ends are color coded to make identifying the power cable or connector easy. Premium Quality. Universal Fit.



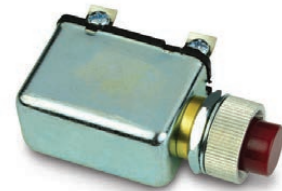
55 Contura Switches

Shock and weather resistant switches are designed for use in harsh marine environments. Compatible with 12V and 24V systems, and rated for up to 20A (12V).



58 Toggle Switches

Shock and weather resistant switches are designed for use in harsh marine environments. Available in standard or illuminated actuators.



62 Alarm Switches

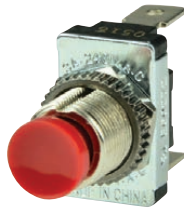
For use with temperature, oil pressure, and engine warning alarm kits. A convenient way to add alarm functionality to your dash.

2018 **NEW** Products



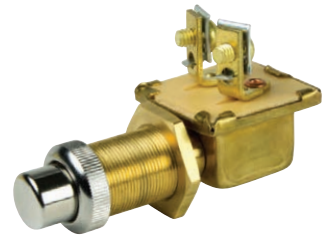
56 Rocker Switches

Shock and weather resistant switches are designed for use in harsh marine environments. 10A, 20A, and 25A (12V) options are available.



57 Contact Switches

Universal applications for marine and industrial usage. Available in red or black actuator styles.



57 Push Button Switches

Available in several weather resistant designs to suit any application. Suitable for 6–36V systems with up to 35A ratings (12V).



60 Push-Pull Switches

Designed to actuate a variety of single or multiple circuit lighting applications. Suitable for 6–36V systems with up to 10A ratings (12V).



60 Pull Switch

Designed to actuate a variety of single or multiple circuit lighting applications. Suitable for 6–36V systems with up to 10A ratings (12V).



61 Ignition Switches

Available in a variety of OFF/ON/Accessory configurations to suit specific applications.



62 Master Disconnect

The compact, lever-operated battery disconnect switch is rated for 175A for use in 12V DC systems.



62 Dimmer Switches

Control the brightness of incandescent bulbs. Not intended for LED lights.



62 Kill Switches

Ideal for adding engine-stop safety to older boats.

63 LED Pilot Indicator

Features bright, chrome-plated body, washer, and hex nut. Available in Amber, Red, Green, and Blue.



63 Solenoids

Remotely switch high amperage loads with low amperage switches. Rated from 65A to 100A for use in 12V DC systems.



Table of Contents

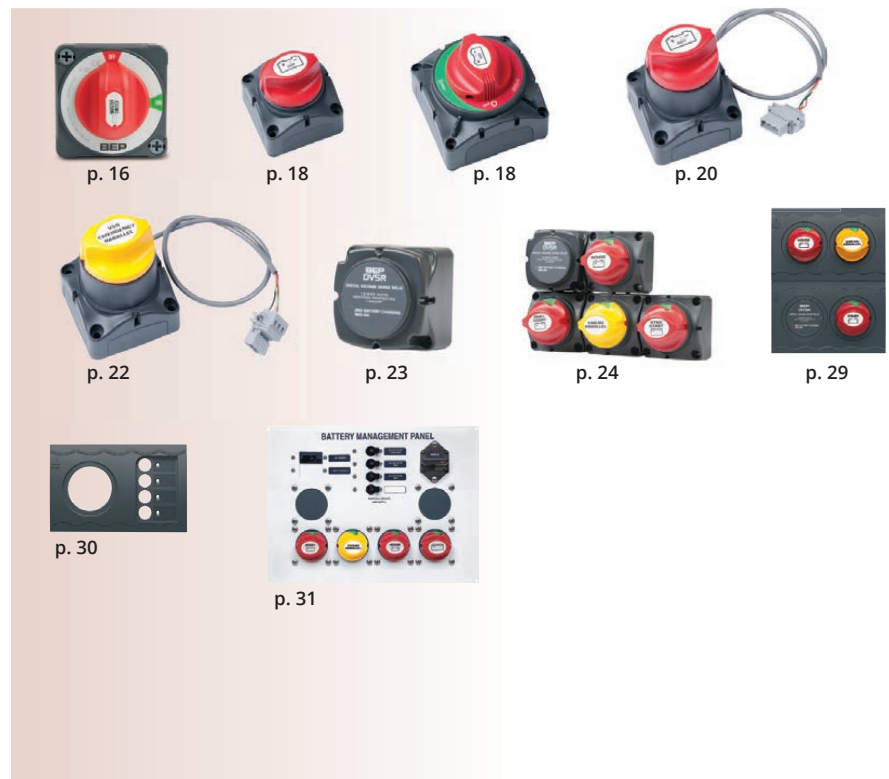
DIGITAL SWITCHING

CZone® Overview 10

BATTERY MANAGEMENT

Pro Installer Battery Switches	14
Battery Switches	18
Remote Operated Battery Switches	20
Voltage Sensing Relays	22
Battery Distribution Clusters	24
Battery Distribution Panels	29
Battery Management Panels	31

CZone Digital Switching is now it's own catalog



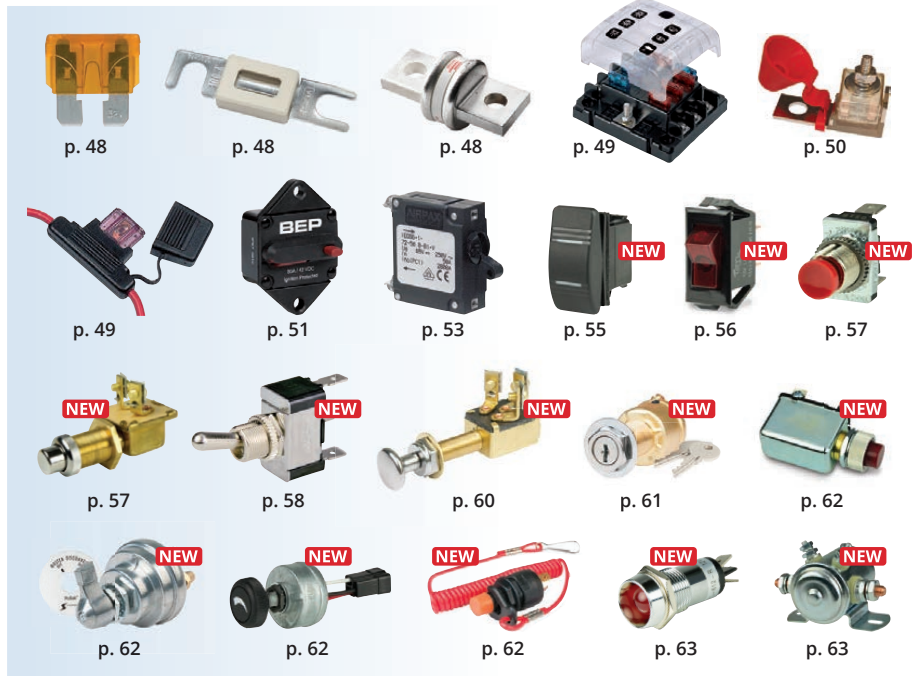
CONNECTORS & INSULATORS

Pro Installer Bus Bars	34
Pro Installer Fuse Holders	37
Pro Installer Insulated Studs	38
Pro Installer Link Bars	39
Insulated Studs	42
Bus Bars	43
Distribution Studs	44
Circuit Breaker Modules	45



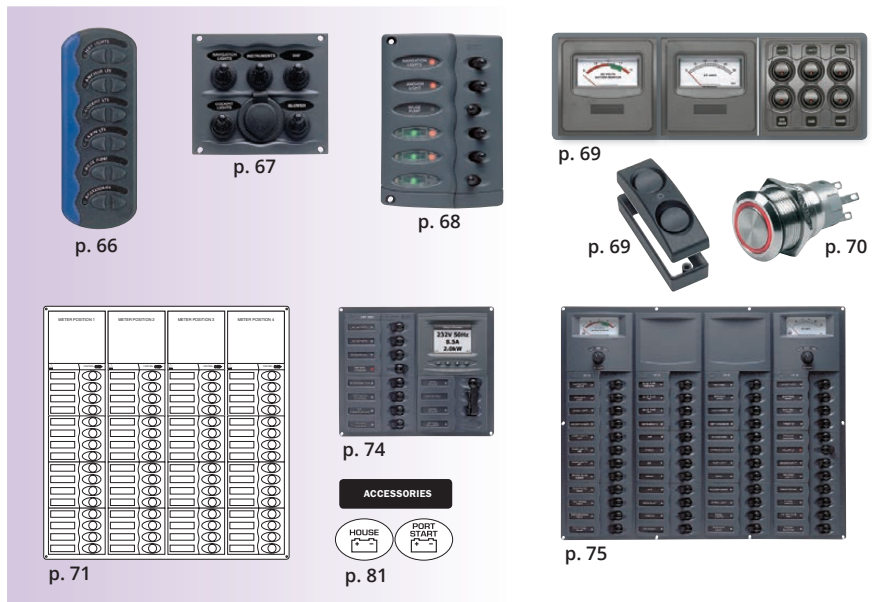
CIRCUIT PROTECTION & SWITCHES

Marine Fuses	48
Fuse Holders	49
Circuit Breakers	50
Switches	54



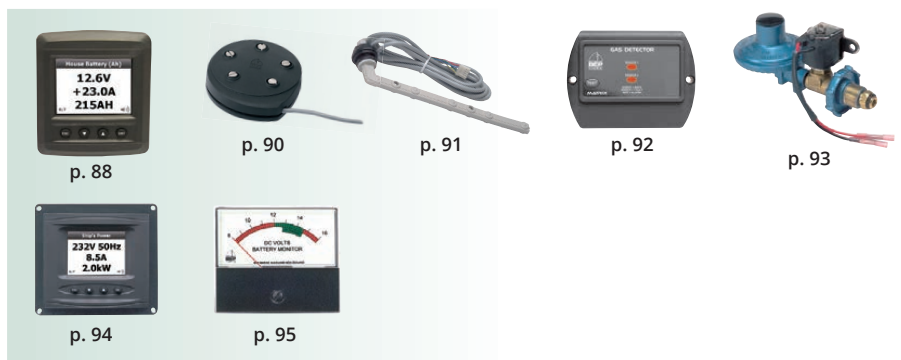
POWER DISTRIBUTION PANELS

Switch Panels	66
Push Button Switches	69
Custom Panel Layouts	71
DC Circuit Breaker Panels	72
AC Circuit Breaker Panels	78
Labels (Panels & Switches)	81



METERS

AC & DC Systems Monitors	88
Tank Senders & Modules	90
Gas Detectors	92
Analog & Digital Meters	94



APPENDIX & INDEX

Wire & Cable Technical Data	96
Part Number Index	99

DIGITAL SWITCHING



Page 1

All Lights Off

Horn

Night Docked Bright

Night Docked Dim

Night Running

All Cabin Lights

Anchor Light

Battery Parallel

On

On

On

On

On

Dim

On

On

Off

Off

Off

Off

Off

Dim

Off

Off

Battery Switches

Bilge Pump All Port

Bilge Pump All Starboard

Bilge Pump Forward

Cabin Door

Cabin Lights

Fish Box Pump Out

Fresh Water Pump

On

On

On

On

Open

Dim

On

On

Off

Off

Off

Off

Close

Dim

Off

Off

GPS Speed
0.94 ^m/_h

GPS Hdg (COG)
349 ^M

Heading
033 ^M

Fresh Water

Time of Day
12:34 ^M

GPS Position
N 25°55.112'
W 080°07.581'

Engage

Waypoints

Info

Home

Menu

Mark

SOS

GARMIN

Engage

Waypoints

Info

Home

CZONE® DIGITAL SWITCHING



CZONE[®] DIGITAL SWITCHING



The Digital Advantage:

CZone digital switching simplifies the operation of your vessel by giving you complete control of all the electrical components with the touch of a button. Customized modes automatically optimize the boat or vehicle for specific situations. Whether it's a day of fishing or cruising, make your time on the water, or on the road, safer and more enjoyable when you let CZone do the thinking.

Control

Avoid complicated switch and fuse panels that can be difficult to access and manage. CZone puts the entire electrical system of your vessel at your fingertips. Dedicated CZone touch screens provide powerful and intuitive control of the entire system. Or take control from your iPad, wireless key fob, or the multi-function display screens from one of CZone's integration partners.



CZone simplifies the electrical system by replacing complicated, cumbersome switch and fuse panels with compact state-of-the-art interfaces and light NMEA 2000 network cable

Modes

CZone optimizes your boat or RV for specific situations. With a single touch, CZone adjusts lights, pumps, stereo, or any other electrical component to suit your needs. Whether it is fishing, day cruising, night cruising, or just relaxing, CZone's modes take control of the on-board environment so you don't have to. Below is a sampling of some of the preset modes.



Day Cruise



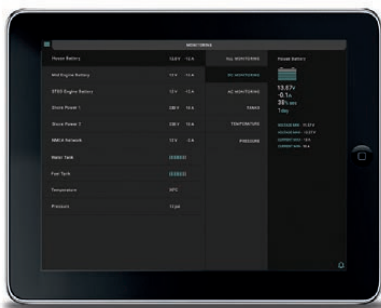
Fishing



Night Cruise



Entertainment



Monitor

CZone constantly monitors critical system components. Through CZone touch screens, iPad, or through the multi-function display of one of our integration partners, CZone displays real-time status of critical elements such as battery charge, fuel levels, and tank levels. System alerts make you aware of potential issues giving you peace of mind that everything is working properly.

Reliability

All CZone modules are designed for harsh marine environments. It operates on a NMEA 2000 network making CZone incredibly durable and reliable. Integrated circuit over-limit protection prolongs the life of your electrical system. Manual fuse overrides are incorporated into the CZone modules, so if there is a power failure, critical systems continue to function.



Check out the complete CZone Digital Switching product line in our new CZone catalog.



BATTERY MANAGEMENT

Pro Installer Battery Switches



The Pro Installer range of premium quality battery switches offer ease and flexibility of installation, and optimal performance in the harsh marine environment.

Battery Switches



BEP has pioneered development of battery switches for marine use. Ongoing R&D has further optimised these products to offer a range of high quality but cost effective manual switching solutions.

Remote Operated Battery Switches



The MD range of battery switches allow you to install the battery switch very close to the battery, to remotely manage the increased electrical loads found on today's boats. They are ideal for remote isolation of bow and stern thrusters.

Voltage Sensing Switches



These switches automatically sense connected battery bank voltages and provide optimal, efficient charging of the second bank. The VSS allows for independent battery banks to be combined or isolated based on the presence of a charging source while also offering remotely activated, high current, emergency parallel connection.



BATTERY MANAGEMENT

Digital Voltage Sensing Relay (DVSR)



The Digital Voltage Sensing Relay (DVSR) provides a highly efficient but inexpensive solution for automatic charging of a second battery bank. It ensures correct charging while removing the risk of flat start batteries.

Battery Distribution Clusters



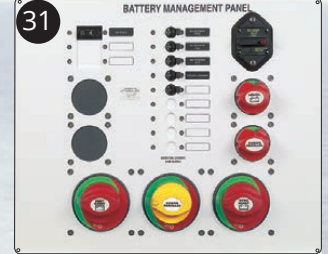
With the successful release of the BEP battery distribution system, BEP saw the need for ready assembled clusters for different applications to make the installation within the battery area even easier.

Battery Distribution Panels



The fastest and easiest way to panel mount a battery switch cluster, Contour Connect panels provide low profile panel mounting plus flexibility in layout.

Battery Management Panels



Battery Management Panels: We've integrated our battery switch clusters, circuit protection and secondary charging accessories into one convenient to install panel. In addition to our standard range, we can build custom panels to suit your requirements.

Quality and performance are critical to Maritimo yachts which is why they specify BEP electrical products.



Pro Installer Battery Switches

The Pro Installer range of premium quality battery switches offer ease and flexibility of installation, and optimal performance in the harsh marine environment. With models that offer on/off, selector and dual bank control functionalities, the switches feature improved contactor design, ergonomics that provide clear intuitive operation, an industry standard mounting footprint (Perko, Guest, Blue Sea E Series) and all switches meet global industry standards. The innovative dual bank control switch offers the functionality of three switches in one. The patent pending, EZ-Mount switch range allows wiring from the front simplifying installation and saving labor. All Pro Installer EZ-Mount switches feature a common interconnection height with the full line of Pro Installer power management products, which allow them to “cluster” with other products utilizing solid link bars. Attention to all aspects of switch function and use has created superior installation options, high power capacity and improved reliability.

All Pro Installer Switches:

- Meet global industry standards UL1107, CE and ABYC
- Ignition protected
- IP66 rated
- Removable side plates
- Ergonomic removable switch knobs

See page 34 for more Pro Installer products to complete your cluster.



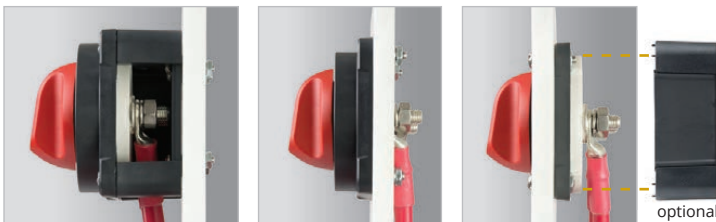
Pro Installer Standard Mount Switches

This powerful generation of battery switches have a 400 Amp rating with outstanding performance and features for both the installer and end user. Three mounting options: surface, rear panel and front panel mounting, plus optimized cable access makes installation a breeze. Pro Installer switches set the new benchmark with outstanding ergonomics, intuitive look/feel, and are engineered from the finest materials to withstand the harsh marine environment.

- Switch studs face back of switch (when viewed from front)
- Panel mounting allows direct access to the switch studs from rear of panel
- Does not share Pro Installer interconnection height due to different mount options
- Accepts metric or imperial fasteners with innovative nut retention



Standard Mounting Options



Surface Mount

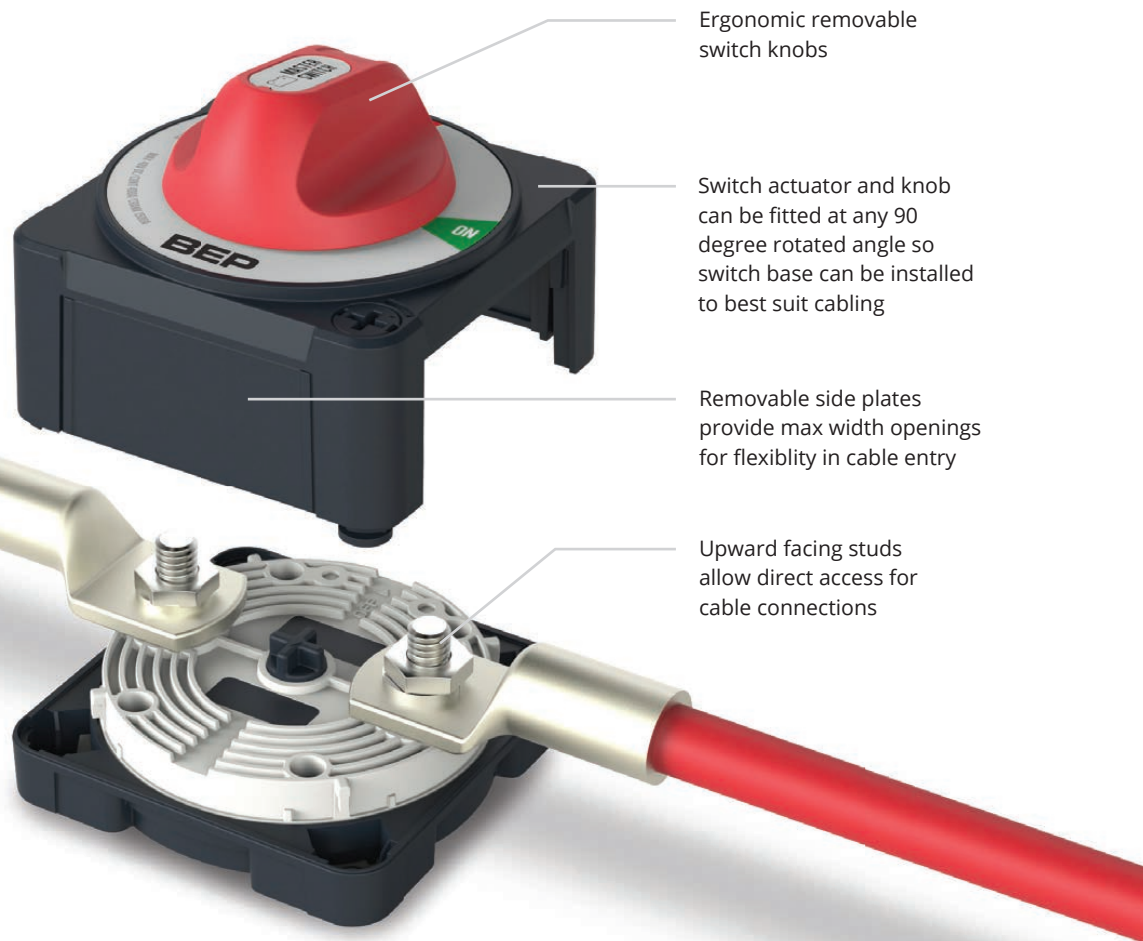
Front Panel Mount

Rear Panel Mount

optional

Check out our Award winning Pro Installer EZ-Mount Switches

- 1** Fit base
- 2** Add wiring
- 3** Clip on actuator



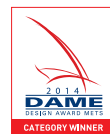
Pro Installer EZ-Mount Switches

Why Pro Installer EZ-Mount?

As easy as 1, 2, 3, these revolutionary, patent pending battery switches from BEP allow you to wire from the front. Simply remove the back, wire, and then clip the actuator and cover in place. Never has installation been so easy. These durable switches accept large cables or multiple lugs and feature intuitive, ergonomic switch positioning and clear graphics. The EZ-Mount switches have a compact, industry standard footprint, the ability to cluster with other Pro Installer products saving valuable onboard space, and are rated 400A continuous, 600A intermittent. Constructed for longevity in the marine environment, they meet rigorous global standards.



Surface Mount Only



Multi award winning including the prestigious METS DAME award.

Pro Installer Battery Switches

On/Off Battery Switches

For isolation of a single positive supply e.g. as a main House or Start battery switch

Double Pole On/Off Battery Switches

Used where positive and negative supplies must be isolated at the same time.

Note: 770-DP & 770-DP-EZ are replacing 720-DP

Selectors (771-S-EZ & 771-S) & Selector with Field Disconnect (771-SFD) Battery Switches

Power requirements on boats have increased, and these Selector switches offer high power capacity (400 amps continuous), the ability to easily fit doubled cables, and conform to the industry standard mounting footprint (Guest, Perko, Blue Sea Systems).

Please note selector switches will not separate electronics from harmful engine starting spikes.

Note: 771-S & 771-S-EZ are replacing 721

Related Products

START

Label Sets
page 84



770-DP-EZ

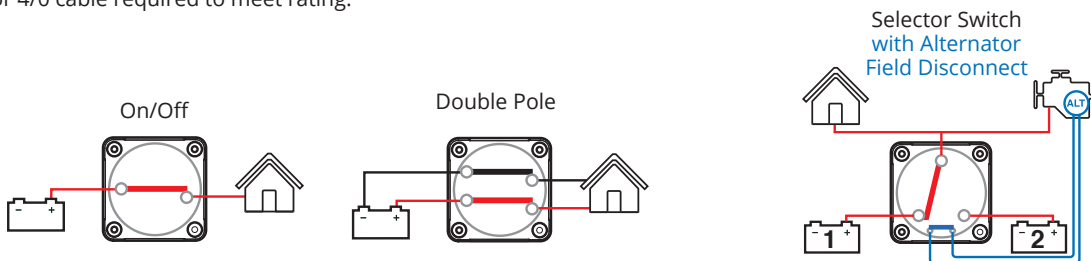


771-S

	On/Off Switch		Double Pole Switch		Selector Switch		Selector w/ Field Disconnect
	EZ-Mount	Standard	EZ-Mount	Standard	EZ-Mount	Standard	Standard
Part #	770-EZ	770*	770-DP-EZ	770-DP	771-S-EZ	771-S	771-SFD
OEM #	770-EZ-B	770-B	770-DP-EZ-B	770-DP-B	771-S-EZ-B	771-S-B	771-SFD-B
Mounting	Surface ONLY	Surface, Rear or Front	Surface ONLY	Surface, Rear or Front	Surface ONLY	Surface, Rear or Front	
Voltage	48V DC (for 12-48V systems)				48V DC (for 12-48V systems)		
Rating‡	400 Cont / 600 Inter / 1500 Crank				400 Cont / 600 Inter / 1500 Crank		
Dims	3.85" x 3.85" x 3.62" / 98 x 98 x 92 mm				3.85" x 3.85" x 3.62" / 98 x 98 x 92 mm		
Operation	On/Off				1-2-Both-Off		
Stud	2x 10 mm (3/8")		4x 10 mm (3/8")		3x 10 mm (3/8")		

*Emergency Parallel option Part # 770-KEY-EP.

‡120mm² or 4/0 cable required to meet rating.



SAFETY NOTE 770-DP & 770-DP-EZ: These switches are not recommended for switching house and start battery systems at the same time, for safety reasons. You may need to isolate your engine battery in an emergency, but not your house battery which typically powers the communications. For this application please use the new Dual Bank Control Switch (772-DBC or 772-DBC-EZ) or one of our battery switch clusters.

Dual Bank Control Battery Switches

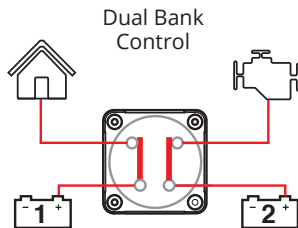
These innovative (patent pending) switches combine the functions of 3 battery switches into one to intuitively manage 2 battery banks and 2 loads. A unique safety position isolates one load e.g. House "On", Start "Off" in case of engine malfunction, so an emergency radio call can still be made. Significant savings in both space and installation cost can be made, without compromising functionality or safety.



772-DBC-EZ

Dual Bank Control Switch

EZ-Mount	Standard
772-DBC-EZ	772-DBC
772-DBC-EZ-B	772-DBC-B
Surface ONLY	Surface, Rear or Front
48V DC (for 12-48V systems, both banks must be same voltage)	
400 Cont / 600 Inter / 1500 Crank	
3.85" x 3.85" x 3.62" / 98 x 98 x 92 mm	
1, 1/2, Parallel, Off	
4x 10 mm (3/8")	



Battery Knob Options for 770 Series

- For applications where emergency parallel switch needs to be highlighted
- Order separately - replaces existing knob

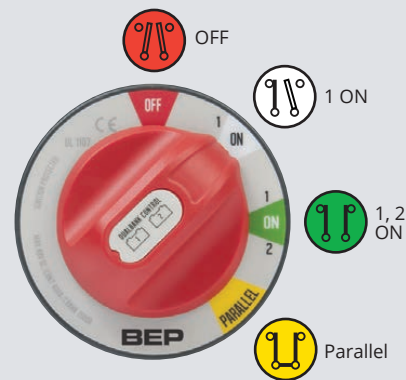
770-KEY-EP



▶ POWER tip

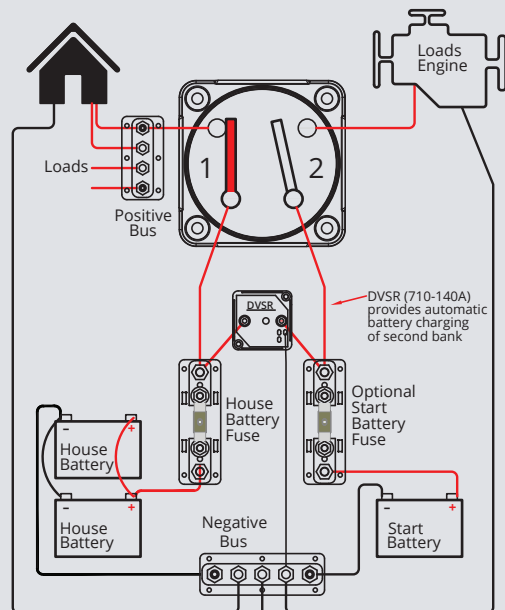
Dual Bank Control—3 Battery Switches in One

The Dual Bank Control Battery Switches are an ideal all-in-one solution for a boat or RV with one engine, and two battery banks. This switch combines functionality of 3 switches in one—House, Start, and Emergency Parallel. The unique, patented safety "1 On" position provides isolation of the Start circuits while leaving the House circuits powered. This allows the user to make an emergency radio call following engine malfunction, or to safely service the engine while House circuits are operational. Intuitive switch operation with ergonomically shaped knob allow for easy operation. Unsurpassed cable access, switch studs placed to allow doubled, back-to-back cable lugs provide for tidy installations.



System Example and the Isolated 1-ON Position

In the example below charging is automated by the Digital VSR, so normal control of the system is accomplished by simply turning the Dual Bank Control switch Off/On. Battery banks have been optimized to suit their respective loads, and the load groups are completely isolated during normal operation. The Isolated 1-ON and Emergency Parallel functions are available as additionally required by the user.



Battery Switches



701



701S



700

Contour Battery Master Switch

- Patented Contour Locking System allows switch to be a stand alone unit, or locked together with other switches
- Control knob can be removed by switching to counter-clockwise 45° position
- Interchangeable labeling system allowing a full range of applications (Part # 713 or 715 on page 84)
- Three removable side plates for access of up to 1/0 cables plus a rear cover insulating the rear terminals against any short circuits. This ensures the switch meets ABYC requirements
- 2.1" (52 mm) hole for mounting
- Available with house knob (OEM # 701B-HB) or with chassis knob (OEM # 701B-CH)

Battery Selector Switch

The 701S is the most compact selector switch available on the market.

- Housed in the same dimensions as the 701, and includes the same removable side plates and back cover ensuring that it meets ABYC requirements
- While BEP recommends isolated battery systems as outlined with our distribution clusters, the 701S offers a simple economical way of separating two batteries

Please note selector switches will not separate electronics from harmful engine starting spikes.

Easyfit™ Battery Switch

Created primarily for installations where switches need to be recessed through varying thicknesses of panels.

- Easily removable threaded ring allows for panel thicknesses up to 3/4" (19 mm)
- Same features as the 701 with the removable knob 45° past the off position
- Includes removable back cover ensuring that it meets ABYC requirements
- Surface mount option offers a unique style compared to other switches available on the market
- Can easily be retro-fitted in place of most European post and lever type switches



720

Heavy-Duty Battery Switch

- The 720 Heavy-duty Battery Switch is well suited to larger vessels, being capable of handling the high electrical loads found on today's boats and RV's plus starting large diesel engines
- Rated at 600A continuous and 2500A cranking
- Can be rear panel, or surface mounted
- Uses the same proven style of self cleaning sliding copper contact used inside the 701
- Interchangeable labeling system allowing a full range of applications (Part # 713 or 715 on page 84)

▶ POWER tip

BEP Battery Switch Construction

All BEP battery switches are molded in a high strength, fiber reinforced plastic which provides excellent high temperature performance, and the greatest resistance to chemicals that damage other plastic types.

Related Products



Label Sets
page 84

Specifications - All recessed or surface mount, tin-plated copper studs & nuts, ignition-protected

Part #	OEM #	in LxWxH	mm LxWxH	Rating (A DC)			Voltage (V DC)	Operation	Stud size Studs x (in/mm)	Cable to meet rating (AWG/mm)
				Cont (1 hr)	Inter (5 min)	Crank (10 sec)				
700	700B	2.7" x 2.7" x 4.3"	68 x 68 x 110 mm	275	455	1250	48	On/Off	2x 3/8" / 10mm	3/0 / 95mm ²
701	701B	2.75" x 2.75" x 3"	69 x 69 x 75 mm	275	455	1250	48	On/Off	2x 3/8" / 10mm	3/0 / 95mm ²
701S	701S-B	2.75" x 2.75" x 3"	69 x 69 x 75 mm	200	300	1000	48	1-2-Both-Off	3x 5/16" / 8mm	1/0 / 50mm ²
720	720B	4" x 4" x 3.5"	102 x 102 x 90 mm	600	800	2500	48	On/Off	2x 1/2" / 12mm	2x 3/0 / 2x 95mm ²

Panel Mounted Battery Switches

Panel Mounted Switches

Designed specifically for panel mount applications. This range gives a very compact, versatile solution.

- Compact, lightweight
- Removable knob on 701-PM
- Countersunk recesses for surface mount application
- Standard 2-1/16" (52 mm) hole cut out (same as standard gauge hole)
- Inside: captive inserts for 3/16" (4.8 mm) nuts; full access for cables - no restrictions
- Standard interchange label system (page 84)
- 701-PM provides On/Off operation for one battery bank
- 701-S-PM offers Selector functionality (1/2/1&2) to select between 2 battery banks



Mounting Plates

Single recessed. Supplied with all the mounting hardware and come in a matching grey finish.

For	Part #	LxW
701	BSP-1	3.75" x 3.75" / 95 x 95 mm

As shown in Contour Connect panels



701S-PM



701-PM



Specifications

Part #	OEM #	in LxWxH	mm LxWxH	Rating (A DC)			Voltage (V DC)	Operation	Stud size Studs x (in/mm)	Cable to meet rating (AWG/mm²)
				Cont	Inter	Crank				
701-PM	701B-PM	2.75" x 2.75" x 3"	69 x 69 x 67 mm	275	455	1250	48	On/Off	2x 3/8" / 10mm	3/0 / 95mm²
701S-PM	701S-B-PM	2.75" x 2.75" x 3"	69 x 69 x 67 mm	200	300	1000	48	1-2-Both-Off	3x 5/16" / 8mm	1/0 / 50mm²

Related Products



Label Sets
page 84

Battery Knob Options for 701 Series

- For applications where emergency parallel switch needs to be highlighted
- Order separately - replaces existing knob



701-KEY-EP



701-KEY

Remote Operated Battery Switches

The MD range of battery switches allow you to install the battery switch very close to the battery, to remotely manage the increased electrical loads found on today's boats. This reduces cable lengths and sizes, providing significant savings in expense and weight of copper battery cable. They are ideal for remote isolation of bow and stern thrusters. The 720-MDO has been enhanced to offer easy standard installation, or advanced options capable of switching different voltage circuits from the main supply.

- Remote operation
- Battery switch can be mounted alongside battery, reducing cable lengths and cable sizes (large cost and weight saving in copper cables)
- Reduced installation labor, due to shorter battery cable runs
- Manual override option to meet CE/ABYC requirements
- Power Draw 701-MD / 701-MDCZ: Switch off: 12mA
- LED status identification for remote control switch
- Can be either surface, or rear panel mounted
- Uses interchangeable labelling system (Part # 713 or 715 on page 84)

Optical sensor benefits (720-MDO only)

- Same easy connection for standard installation
- Ability to control different voltage circuits
- Can be used to switch positive or negative lines
- Main contacts can be isolated from control circuit allowing operation via another battery source
- Low stand by current draw (<5mA)

CZone® Optimized Remote Battery Switch with Buzzer Option (701-MDCZ only)

Optimised for use with, or alongside CZone® digital switching systems, the 701-MDCZ offers:

- Momentary positive remote activation allows multiple remote switches to be connected to the same battery switch e.g. a wireless remote control plus a switch on the dashboard
- Positive activation allows direct wiring from CZone output modules, simplifying and speeding installation
- Red wire output can directly drive a piezo buzzer, so "ON" (2 chirps) and "OFF" (1 chirp) signals are sounded to acknowledge remote control activation
- Battery switch remains in the same state even if remote control power is lost providing greater fail-safe reliability
- Note: Not suitable for emergency parallel applications
- Wago and Deutsch plug versions

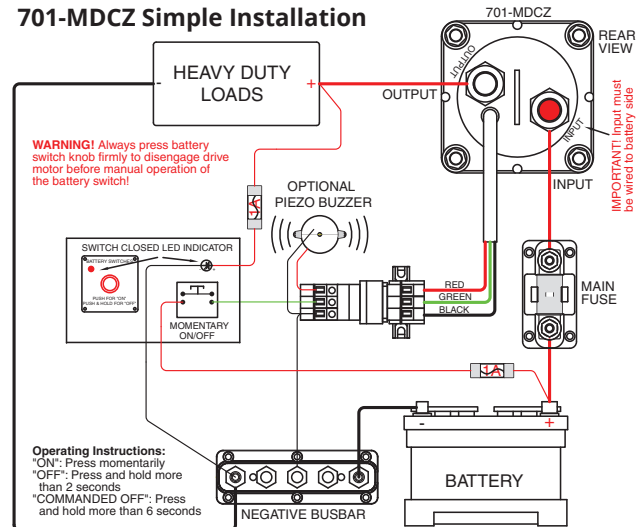


701-MD &
701-MDCZ



720-MDO

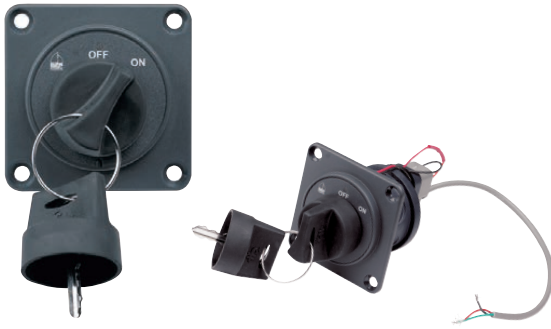
701-MDCZ Simple Installation



Example System: This diagram is a guide only showing 701-MDCZ connections and is not intended as a full electrical systems wiring diagram

Specifications - All recessed or surface mount, tin-plated copper studs & nuts, ignition-protected UL1107

Part #	OEM #	in LxWxH	mm LxWxH	Rating (A DC)			Voltage (V DC)	Function	Stud size Studs x (in/mm)	Cable to meet rating (AWG/mm ²)
				Cont	Inter	Crank				
701-MD	—	2.7" x 2.7" x 4"	69 x 69 x 101 mm	275	455	1250	9.5-32	On/Off	2x 3/8" / 10 mm	3/0 / 95mm ²
701-MD-D	—	(Deutsch Plug)	Same dimensions and ratings as above							
720-MDO	—	4" x 4" x 4.33"	102 x 102 x 110 mm	500	700	2500	9.5-32	On/Off	2x 1/2" / 12 mm	3/0 / 95mm ²
701-MDCZ	701-MDCZ-B	2.7" x 2.7" x 4"	69 x 69 x 101 mm	275	455	1250	9.5-32	On/Off	2x 3/8" / 10 mm	2x 3/0 / 2x 95mm ²
—	701-MDCZ-D-B	(Deutsch Plug)	Same dimensions and ratings as above							



Remote On/Off Key Switch

For the remote operation of the 701-MD and 720-MDO battery switches (above).

Can be mounted standalone or within the Contour Connect panel range.

Part # 80-724-0006-00



Terminal Link Kits (TLK's)

Now available for the 701 and 720 size battery switches, the TLK's allow for cable connections to be made outside of the body of the switches.

Part # 80-708-0017-00 701-MD
 Part # 80-708-0013-00 720-MDO



Wireless Remote Control

You can now wirelessly operate your BEP motorized battery switches from a distance of up to 250 feet (80 meters) away.

- Control up to 4 separate 5A circuits; eg, 701-MD/720-MDO battery switches, anchor light, navigation lights, and courtesy lights
- No more lifting hatches to turn on battery switches — it's now all controlled from the remote key fob
- Control battery switches easily (On/Off) from the dock
- Remote has a rolling code, for security
- Requires 12V supply for operation, relay channels are fully isolated and are rated 0–32V, 5A
- Activation of the 4 circuits may be either latching (all 4 the same), or momentary

Part # 80-911-0045-00



Piezo Buzzers For 701-MDCZ

Piezo buzzers provide an excellent means to alert users to alarm conditions. These buzzers provide a loud, constant tone, with a choice of 2 output sound levels. They can be used as alarms with our DCSM systems monitor, or directly driven by the 701-MDCZ motorized battery switches to provide automotive style feedback when you switch your boat on and off.

Part #	OEM #	Db	Diameter	Voltage
54-27C4/DSP	54-27C4	85	30 mm / 1.2"	5-30V
54-35C2/DSP	54-35C2	97	42 mm / 1.65"	5-20V (30V w/701-MDCZ)

Battery Knob Options for 701 Series

For applications where emergency parallel switch needs to be highlighted.

Order separately - replaces existing knob.



701-KEY-EP



701-KEY

Dual Operation VSS (Voltage Sensitive Switch) and Emergency Parallel

These Voltage Sensitive Switches automatically sense connected battery bank voltages and provide optimal, efficient charging of the second bank. The VSS allows for independent battery banks to be combined or isolated based on the presence of a charging source (such as an engine alternator or battery charger), while also offering remotely activated, high current, emergency parallel connection. Designed and constructed for longevity in the marine environment with tinned copper conductors, stainless steel nuts, and high temperature, fiber reinforced plastics. The units are ignition protected, provide On/Off switching operation, and may be recessed or surface mounted.

- Dual battery sensing
- Remote emergency parallel function: can be operated through a momentary button on the dash which will parallel the batteries for 10 minutes. Once this 10 minutes has passed, if the voltage is up high enough, the voltage sensitive switch will stay engaged. If not, it will disengage. If not, it will disengage.
- Manual override option

720-MDVSO benefits

- Dual 12/24 volt operation (both banks must be same voltage)
- Low power consumption (<6mA)
- Lowered cut in voltage (13.3/26.6V) suits low output alternators and high temperature environments

80-701-0018-00, and 720-MDO-EP: Emergency Parallel Only

- 10 minute remotely activated emergency parallel function (no voltage sensitive function)
- 12/24 volt operation (both banks must be same voltage)

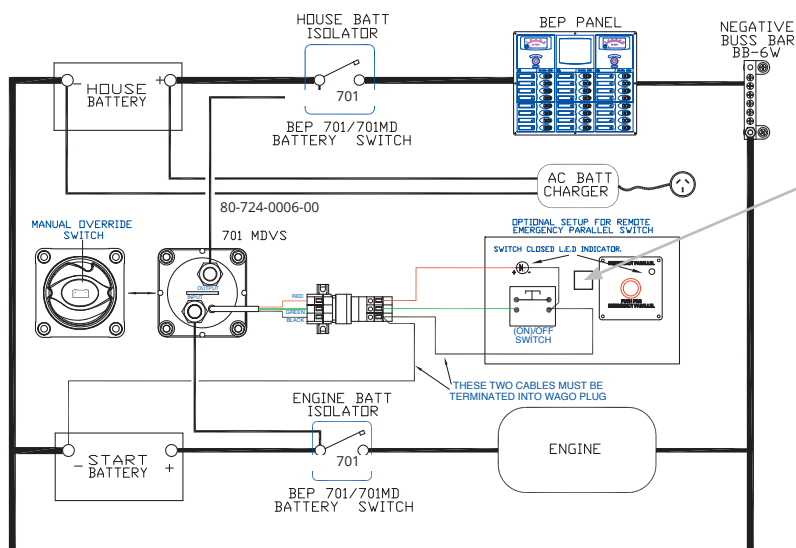


80-701-0018-00



720-MDO-EP

Part #	in LxWxH	mm LxWxH	Volts (V)	Rating (A)	Engages (V DC)	Disengages (V DC)	Cable to meet rating (AWG/mm)
701-MDVS	2.7" x 2.7" x 4"	69 x 69 x 101 mm	12	275	13.7	12.2-13.00	3/0 / 95mm ²
720-MDVSO	4" x 4" x 4.3"	102 x 102 x 110 mm	12/24	500	13.3/26.6	12.7/25.4	2x 3/0 / 2x 95mm ²
701-MDVS-24V	2.7" x 2.7" x 4"	69 x 69 x 101 mm	24	275	27.4	24.4-26.00	3/0 / 95mm ²
80-701-0018-00	2.7" x 2.7" x 4"	69 x 69 x 101 mm	12/24	275	Emergency Parallel Only		3/0 / 95mm ²
720-MDO-EP	4" x 4" x 4.3"	102 x 102 x 110 mm	12/24	500	Emergency Parallel Only		2x 3/0 / 2x 95mm ²



Remote Emergency Parallel Switch

Used for convenient remote activation of the 10 minute emergency parallel function on these motorised Voltage Sensitive and Emergency Parallel switches. It can be mounted standalone or within the Contour Connect panel range.

Part # 80-724-0007-00

DVSR: Dual Battery Charging Made Easy

The Digital Voltage Sensing Relay (DVSR) provides a highly efficient but inexpensive solution for automatic charging of a second battery bank. It ensures correct charging while removing the risk of flat start batteries. When the voltage on the first bank rises sufficiently, the DVSR engages allowing the second battery bank to charge. When charging stops and voltage falls, the DVSR automatically isolates the battery banks, ensuring that engine start batteries are kept fully charged. Digital circuitry provides superior reliability and extremely low power consumption.

- Safely charge two or more independent battery banks from one charge source (alternator, battery charger...)
- Charges engine starting batteries before combining auxiliary bank for charging
- Protects start batteries from becoming flattened by domestic loads
- Isolates electronics from harmful electrical surges from starter motors
- Simple to install 3 wire connection, leaves alternator wiring intact
- No volt drop vs. diode isolators
- Ignition protected
- Surface or panel mountable

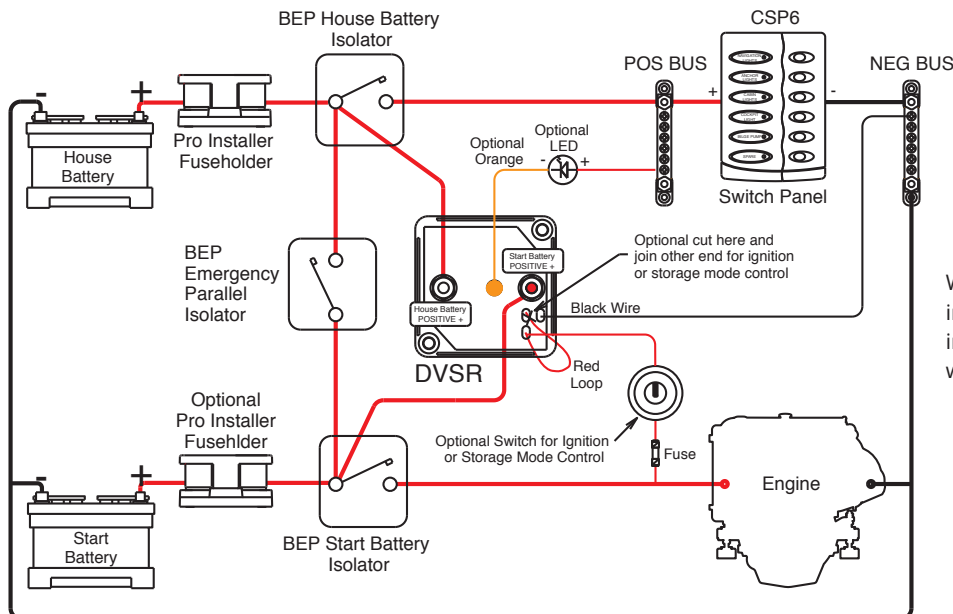
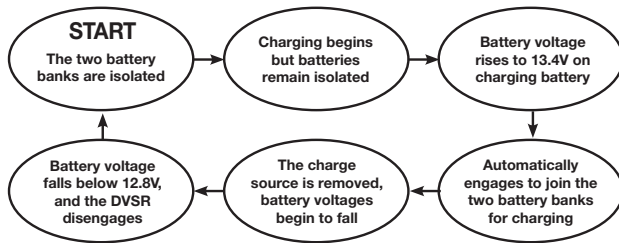
Digital Technology Provides:

- Multi voltage, auto selects between 12V and 24V DC operation
- Digital circuits provide very low power consumption (<2mA in standby, up to 8x more efficient than analog models) and enhanced performance
- Remote sensing circuitry allows optional connection from ignition switch, provides same functionality as single sense VSR and zero power consumption when engine is off
- Zero stand by current draw when remote sensing circuit utilized with storage mode switch fitted (switch in open position)
- Remote status LED output option



Part #	OEM #	in LxWxH	mm LxWxH	Volts (V)	Rating (A) Continuous	Rating (A) Intermittent	Engages (V DC)	Disengages (V DC)	Cable to meet rating (AWG/mm)
710-140A	710-140A-B	2.75" x 2.75" x 2"	69 x 69 x 50 mm	12/24	125	140	13.4/26.8	12.8/25.6	8 / 8mm ²

DVSR Operation (shown for 12V system)



Wiring diagrams indicative of installation only, for full instructions see the BEP website.

Battery Distribution Clusters

With the successful release of the BEP battery distribution system, BEP saw the need for ready assembled clusters for different applications to make the installation within the battery area even easier. Following is the range as outlined in each diagram, which are overviews only.

All clusters are completely bused and pre-wired internally and are supplied with mounting fastenings along with easy to follow instructions. These include all connecting points clearly marked with ABC labels as shown in all illustrations.

All existing VSR enabled Battery Distribution Clusters now come standard with the new Digital Voltage Sensing Relay. Upgrade your existing model that ends in "-100A" or "-100A-B" with any of the models on the following three pages.



See page 29
for panel versions

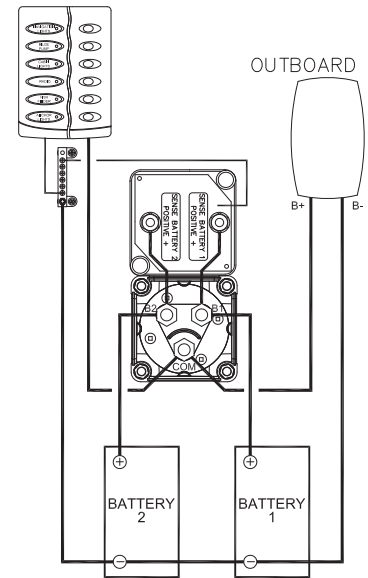
Single Engine, Two Battery Banks

The 714-140A-DVSR uses a dual sensing DVSR (710-140A). This system ensures you will always have a fully charged reserve battery. When the switch is in position one, it becomes the sensing battery for the VSR. Battery two, which is in isolation, will be charged via the VSR when the engine is running, ensuring it is always fully charged. When the switch is in battery two position, this becomes the sensing battery and battery one is charged via the VSR. The fact that there is always a fully charged battery in reserve is a huge safety factor.

Please note: With the 714-140A-DVSR the electronic loads are run off the same battery as the engine starting battery.

Part # 714-140A-DVSR
OEM # 714-140A-DVSR-B

See table on page 26 for specifications



Single Engine, Two Dedicated Battery Banks

Available as horizontal or vertical units.

To be used in the following systems:

- 1) Single outboard dual battery bank
- 2) Single alternator dual battery bank
- 3) Twin alternator dual battery bank

Part # 715-H horizontal

Part # 715-V vertical

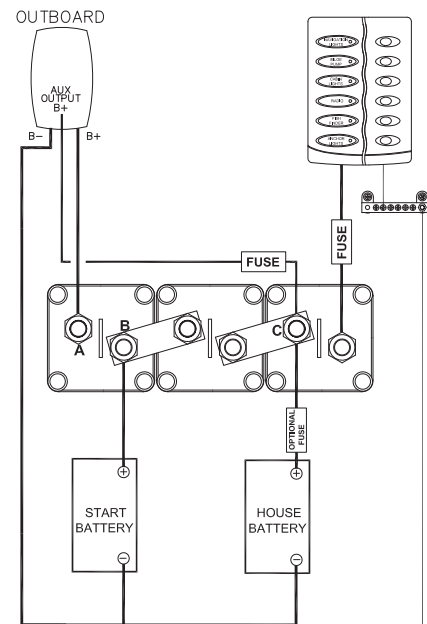
See table on page 26 for specifications



715-V



715-H



See page 29
for panel versions

Single Engine, Two Battery Banks

An ideal replacement for a Battery Selector Switch. Just remove selector switch and connect existing wires to a 716 cluster, no extra wires are required for a fully automatic battery management system.

No more flat start batteries.

Electronics protection from harmful engine start spikes.

The 716 cluster is for use on charging systems up to 150A.

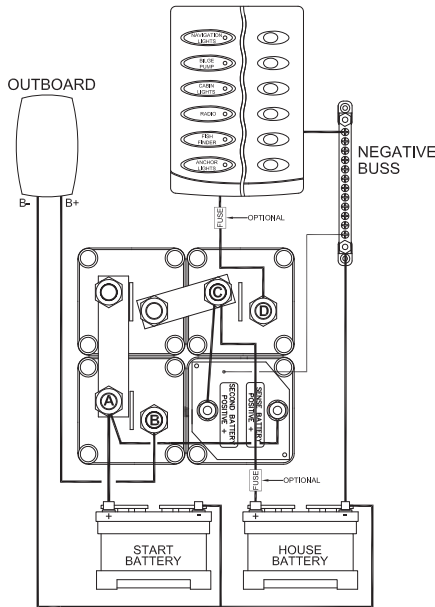
To be used in the following systems:

1. Single outboard dual battery bank.
2. Single alternator inboard engine dual battery bank.

The 716 cluster replaces battery isolator systems.

For VSR operation, see page 22.

- Part # 716-H-140A-DVSR horizontal
- Part # 716-V-140A-DVSR vertical
- Part # 716-SQ-140A-DVSR square



716-SQ-140A-DVSR



716-H-140A-DVSR



See page 29 for panel versions



Twin Engine, Two Banks

The 715-S allows the house loads to be switched between port and starboard batteries. The selector switch can also be used to parallel the batteries when in both positions.

See table on following page for specifications.

Part # 715-S



Twin Engine, Three Banks

The 718-140A-DVSR is designed for twin inboard systems when it is not practical to have both engine alternators in parallel because of the types of regulators used on these alternators. The house battery is charged from the port engine when the VSR is engaged. For VSR operation read, see page 23.

See table on following page for specifications.

Part # 718-140A-DVSR



Twin Engine, Three Banks

This system is designed for twin engine installations. It will allow the port engine to charge the port start battery and the house battery when the VSR is engaged. It will also allow the starboard engine to charge the starboard start battery and the house battery when the starboard VSR is engaged, giving a combined charge from two engines into the house battery until the voltage regulators on both engines control the charge. It will also allow the house battery to be charged if steaming on one engine.

See table below for specifications.

Part # 717-140A-DVSR



Triple Engine, Four Banks

This system is designed for triple engine installations. Once again using multiple VSRs off each start battery giving combined charge from all 3 engines into the house battery via VSRs.

See table below for specifications.

Part # 719-140A-DVSR



See page 29
for panel versions

Dimension guide

Clusters are made from uniformly square switches, each side 2.7" (69 mm)



Specifications

Engine type	Battery (banks)	DVSR	Orientation	Part #	in LxWx3	mm LxWx75
Single inboard or outboard	2	yes	vertical	714-140A-DVSR	5.4" x 2.75"	138 x 69
		yes	horizontal	716-H-140A-DVSR	10.85" x 2.75"	276 x 69
		yes	vertical	716-V-140A-DVSR	10.9" x 2.7"	276 x 69
		yes	square	716-SQ-140A-DVSR	5.4" x 5.4"	138 x 138
		no	horizontal	715-H	8.1" x 2.75"	207 x 69
		no	vertical	715-V	2.75" x 8.1"	69 x 207
Twin inboard or outboard	2	no	horizontal	715-S	8.1" x 2.75"	210 x 69
Twin inboard	3	yes	horizontal	718-140A-DVSR	8.1" x 5.4"	207 x 138
Twin outboard	3	yes	horizontal	717-140A-DVSR	5.4" x 8.1"	138 x 207
Triple outboard	4	yes	square	719-140A-DVSR	8.1" x 8.1"	207 x 207

VSR Charging Current: 125A continuous Battery Switch Rating: 275A continuous



Single Engine, Two Battery Banks with Motorized VSR

Offers the same features as the 716-SQ-140A-DVSR (page 25), with two important differences. The VSR and Emergency Parallel switches are combined into one voltage-sensitive switch, and that switch is able to be remote-operated. For features of the motorized VSR, see page 23. The layout allows all cables to be attached from the bottom of the cluster.

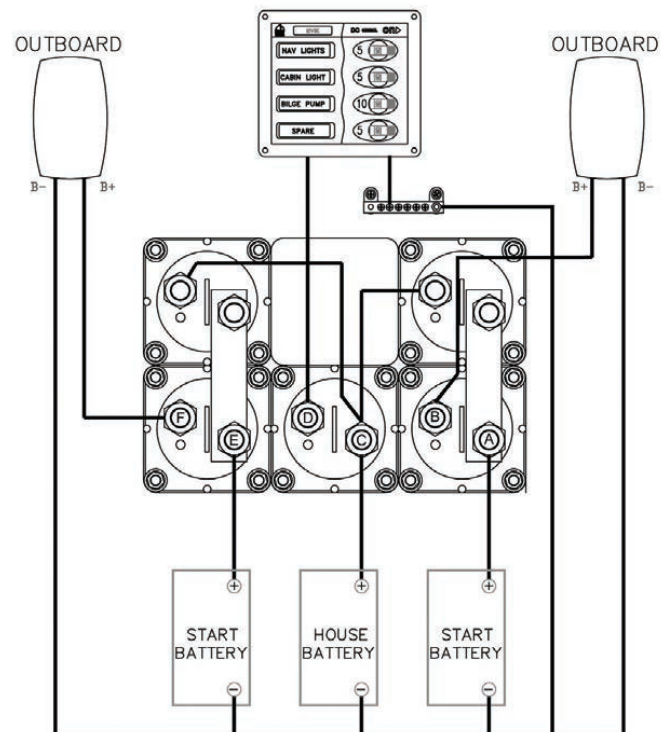
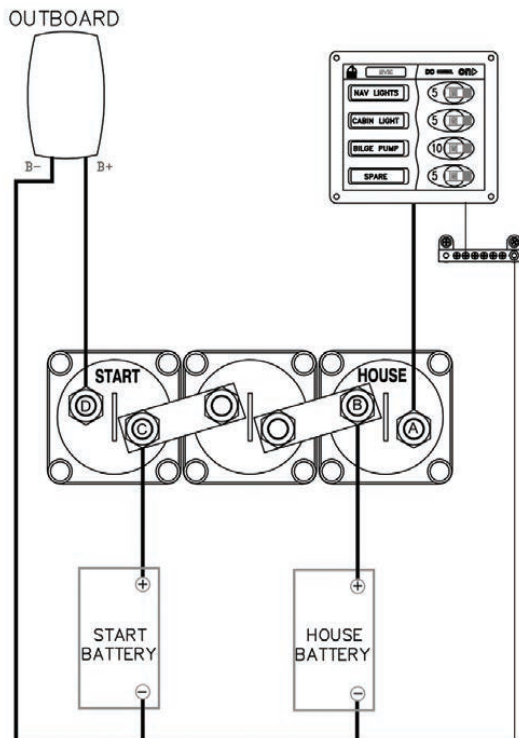
Part # 80-716-0017-00



Twin Engine, Three Banks with Motorized VSR

Offers the same features as the 717-140A-DVSR (page 26). The VSR and Emergency Parallel switches are combined into one voltage-sensitive switch, and that switch is able to be remote-operated. For features of the motorized VSR, see page 23. The layout allows all cables to be attached from the bottom of the cluster.

Part # 80-716-0018-00



See page 29 for panel versions

Remote Battery Management Clusters

- Complete system including all cable links (Battery Control Center ordered separately—see below)
- Offers all features of motorized battery switches and Motorized VSRs in one kit. Makes ordering easy!
- Clusters are surface mount, and can be rearranged to meet specific needs, such as port and starboard configurations and can be combined with other battery distribution products
- Available in single, dual and triple engine configurations

Single Engine



80-716-0014-00

Dual Engine



80-716-0015-00

Triple Engine



80-716-0016-00

Battery Control Center

Sophisticated Electrical Systems Need Reliable Automation. That's Key. Centralize power handling with the BEP Battery Control Center.

Cluster or Contour Connect mounted, delivers hard-handling, good-looking power management where it's needed. The Battery Control Center (BCC) is equipped with locks on each battery switch position. This ensures group operation at the turn of the key. Any switch can be isolated by disengaging its lock and toggling the switch off.

Description	Part #
Single engine remote	80-700-0050-00
Twin engine remote	80-700-0051-00
Triple engine remote	80-700-0052-00



80-700-0051-00

Battery Distribution Panels

Fast fit, flush mounting battery distribution panels

1. Use template to mark rectangular hole in fascia
2. Cut hole
3. Fit panel and screw into place
4. Add trim pieces
5. Connect cables



Single Engine, Two Battery Banks

This panel incorporates a version of our very successful 714-140A-DVSR cluster (page 24).

Supplied pre-wired with back cover and CC-J joiner to allow it to be combined with other modules.

Supplied standard in charcoal with grey wave strip. Other trim colors are available for volume OEM orders.

Part # CC-801

Dimensions for Contour Connect Panels

Part #	LxWxH in		LxWxH mm	
	Module	Cut-out	Module	Cut-out
CC-801	6.5" x 4.2" x 2.2"	5.75" x 3.4"	166 x 106 x 55 mm	146 x 86 mm
CC-810	9.2" x 4.2" x 2.2"	8.5" x 3.4"	233 x 106 x 55 mm	213 x 86 mm
CC-802	6.5" x 8.3" x 2.2"	5.75 x 7.5"*	166 x 212 x 55 mm	88 x 148 mm*
CC-803N	9.2" x 8.3" x 2.2"	8.5" x 3.4"*	223 x 212 x 55 mm	213 x 86 mm*

*Single hole only.



Single Engine, Two Battery Banks

The CC-810 is supplied standard with 3 x 701-PM battery switches pre-assembled.

Ideal for installing alongside any other Contour Connect Modules.

Part # CC-810

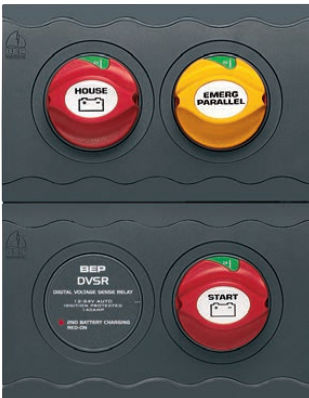
Single Engine, Two Battery Banks

The CC-802 incorporates a version of our very successful single engine battery switch cluster (page 25).

The CC-802 is supplied loosely assembled with links and joiners to allow it to be assembled in either the vertical or horizontal orientation as shown in illustrations.

Full wiring instructions are supplied to allow pre assembly for both orientations.

Part # CC-802



Twin Engine, Three Battery Banks

The CC-803N incorporates a version of our very successful dual engine battery switch cluster (page 26).

The CC-803N is supplied with cables to allow for horizontal or vertical configurations.

The components can also be easily removed and reconfigured if the factory layout does not suit your application.

Part # CC-803N





The below panels are designed for applications where the OEM or panel builder wishes to construct a custom system. They're supplied as empty panels with all necessary mounting hardware, including one CC-joiner.

CC-1



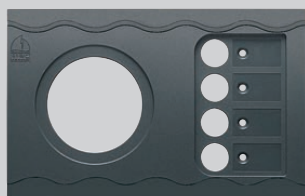
CC-5



CC-1 & CC-5 Modules

Will house the following components:

- 701-PM Panel mount battery on/off (page 19).
- 701S-PM Panel mount battery selector switch (page 19).
- 185 Series Heavy-duty circuit breakers (page 51). (CC-HDBM must be ordered with 185 series circuit breakers, one per breaker).
- 710-140A Voltage Sensitive Relay (see page 23).



CC-2 Module

Will house the following components:

- CLB series (push reset) Carling circuit breakers (page 52).
- Toggle Magnetic Hydraulic Carling circuit breakers (page 53).



CC-HDBM

BEP CB Panel Mount

The CC-HDBM module must be ordered separately if ordering BEP 184 & 185 series circuit breakers. Mounting hardware for CB and panel attachment is supplied with module.

5 Way CB Panel

- 1x Heavy-Duty CB, 1x Toggle, 3x Push Reset
- Equipped to cover essential circuits requirements (bilge, pumps etc)
- 50A CB for DC mains or treatment systems
- 135A 185 Series CB for anchor windlass
- Compliments the other modules for either single or dual engine installations

Part # CC-804



Wave Strips

- Supplied with Contour Connect panels (standard)
- Can be ordered separately (top and bottom pair)
- Available in single, double and triple lengths

Part # CC-3WS/CH



Blanking Plate

The CC-BLANK will cover an unused hole in CC-1 and CC-2. Attached from the rear of the panel, it allows for expanding with other options at a later date.

Part # CC-BLANK



Solid Links

708-42.5 Solid terminal links supplied pre-connected with spare links for different orientations (horizontal or vertical) of Contour Connect panels.

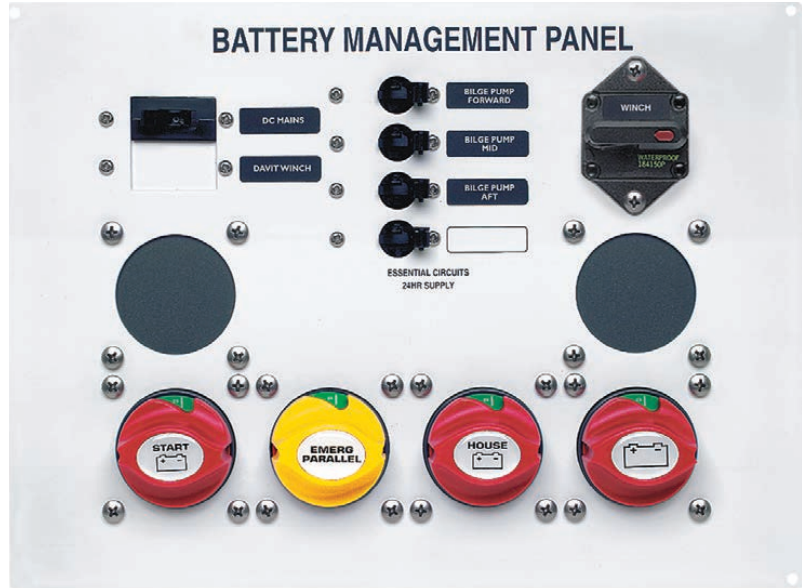
Must be ordered separately when ordering CC Kitset panels.



Part #	Application
708-42.5	For horizontal linking of battery switches in the same panel
708-70.0	For horizontal linking of battery switches studs between 2 separate panels
708-107	For vertical linking of battery switches between panels

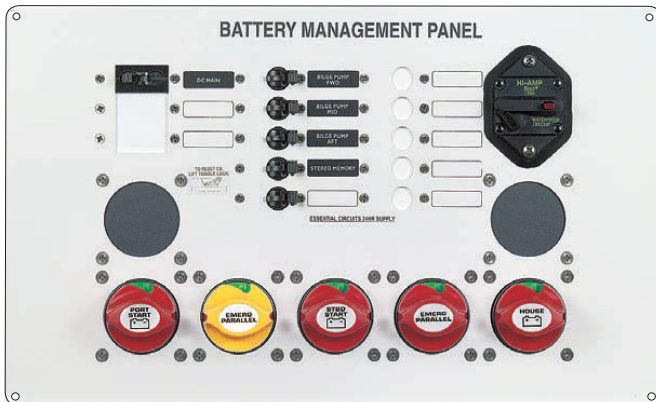
Battery Management Panels

- Essential circuits, 24 hour supply
- Mains breakers for control panels, davit winches, or treatment systems
- Panels are supplied with a BEP 703-300A/B heavy-duty negative bus, to accommodate all the negative connections at the battery (Please note: 800-MS4 is supplied with 702B negative stud)
- Heavy-duty breakers for anchor winches
- Powder coated aluminum panel
- Supplied with a full label set for panel circuit breakers - Part # SET-MSP; additional label sets available (page 83)
- Spare positions for additional battery switches and circuit breakers for extras such as radio batteries and genset batteries
- NOTE: Custom panels made on request



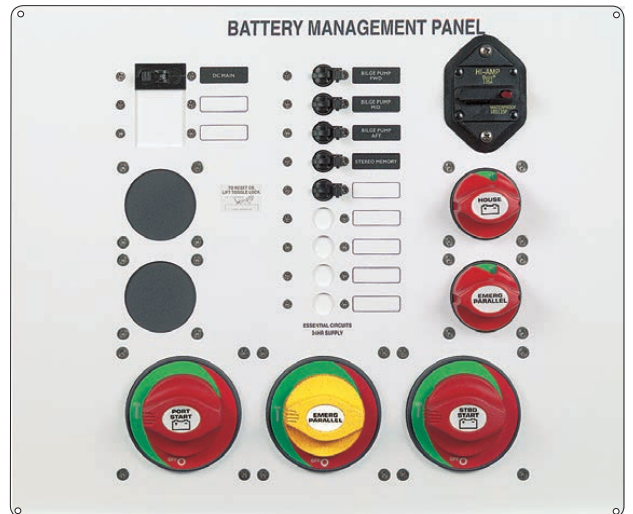
800-MS1

The 800-MS1 panel is designed for power or sail boats between 10-12m (32.9-39.5 ft) with single engines. 260 x 351 x 75 mm (10.25" x 13.8" x 2.9")



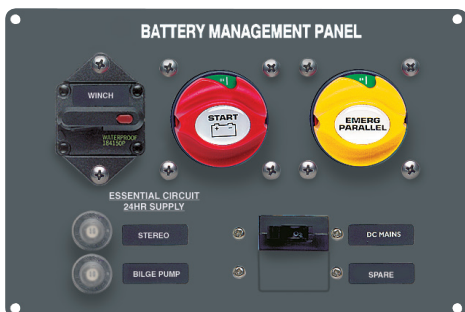
800-MS2

The 800-MS2 panel is designed for power boats between 10-12 m (32.9-39.5 ft) with twin engines. 281 x 463 x 75 mm (11.1" x 18.25" x 2.9")



800-MS3

The 800-MS3 panel is designed for power boats between 12-16 m (39.5 - 52.5 ft) with larger diesels. 380 x 463 x 95 mm (15" x 18.25" x 3.75")



800-MS4

The 800-MS4 panel is designed for sail boats up to 14 m (46 ft) and power boats up to 10 m (32.9 ft) with single engine. 160 x 239 x 75 mm (6.3" x 9.4" x 2.9")

Auxiliary Parts (ordered separately)

- Part # 701 Battery switches to fit panel cutouts
- Part # 713 Battery switch label sheet

Circuit Breakers

For treatment systems, davit winches and sub-mains.

- Part # CBL-50A-SP 50A
- Part # CBL-75A-SP 75A
- Part # CBL-100A-SP 100A

Enquire about our custom battery management panels!

CONNECTORS & INSULATORS

Pro Installer Bus Bars

36



Pro Installer Busbars are the ultimate solution for compact termination of small cables.

Pro Installer Fuse Holders

37



Pro Installer fuseholders offer flexibility to cover fusing requirements from 30-750 Amps.

Pro Installer Insulated Studs

38



Pro Installer Insulated Studs are available in single and twin stud versions.

Pro Installer Link Bars

40



The Pro Installer range features modular products which can be linked together in order to provide space saving, fast installation clusters. These tinned copper link bars provide the means to join battery switches, bus bars, fuse holders and insulated studs.

CONNECTORS & INSULATORS

Insulated Studs



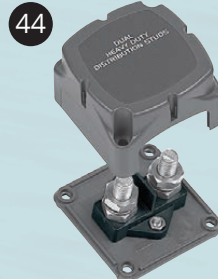
An economical range of connection studs for smaller electrical loads.

Bus Bars



Bus bar range for smaller connections and loads under 150A.

Distribution Studs



For connections where a robust, mechanically fastened cover is required for protection.

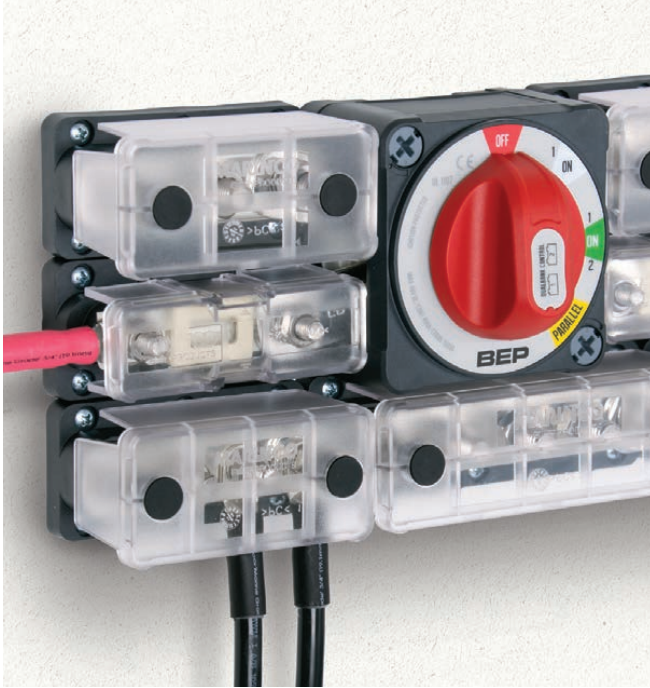
Circuit Breakers



Convenient surface mounting circuit breaker modules for main, secondary, or 24-hour circuit protection.



Australia's Riviera Boats specifies BEP products aboard their line of yachts, including the 75 Enclosed Flybridge.



Pro Installer Series

Onboard power demands continue to increase as boaters request the comforts of home on their boats. BEP looked at the common products used by electrical installers every day and made significant improvements to their design and construction. The result is a robust product line with greater capacity and extended product life.

The valuable space saved onboard gives builders or installers greater flexibility when designing power systems. Since Pro Installer modular assemblies are designed for fast, flexible installation in tight spaces, it's easy to "cluster" products and reduce their mounting footprint. The common interconnection height enables solid link bars to connect multiple Pro Installer products — a smart design feature for watercraft. Like all BEP products, you can be assured of durable construction engineered specifically to handle the challenging marine environment. High-temperature, fiber-reinforced base material provides strength and chemical resistance.

All Pro Installer products include a common interconnection height, label recess on the cover, ability to "cluster" and a compact footprint. All studs, washers and nuts are made of stainless steel.

See page 16 for Pro Installer Battery Switches to complete your cluster.

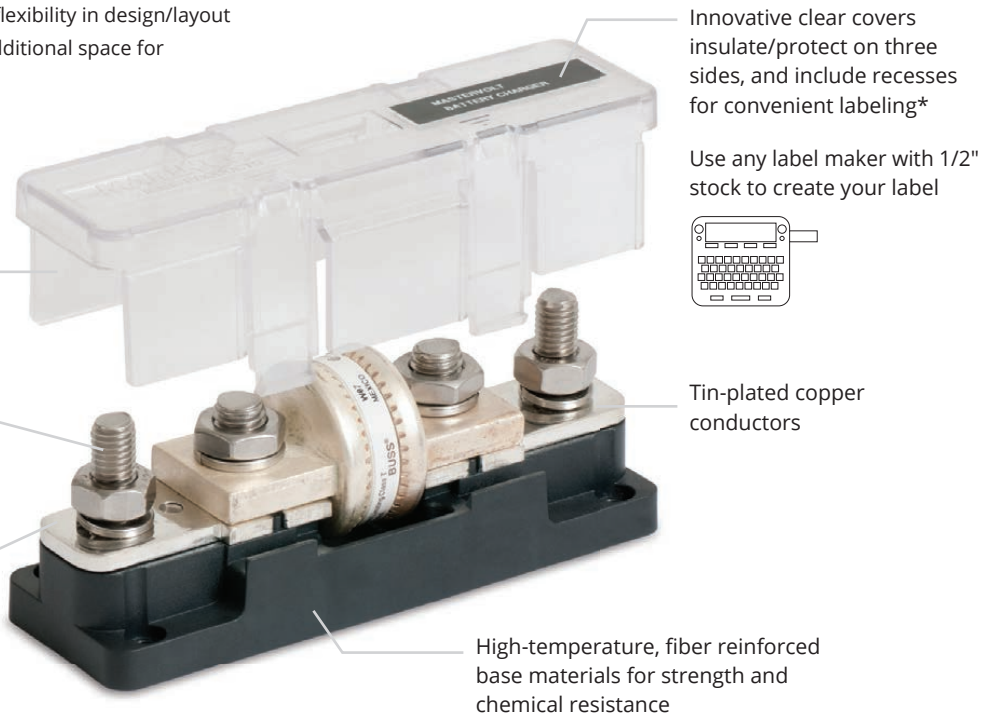
Features and Benefits:

- Common interconnection height makes it easy to 'cluster' products
- Modular assemblies offer unrivalled flexibility in design/layout
- Reduced individual footprints save additional space for the most compact installations
- Robust construction for the harshest of marine environments

Covers feature snap-out side skirts for additional cable entry as required

Stainless steel studs, washers and nuts

Radiused bar ends and generous stud lengths improve cable routing options for large cables



Innovative clear covers insulate/protect on three sides, and include recesses for convenient labeling*

Use any label maker with 1/2" stock to create your label



Tin-plated copper conductors


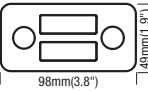
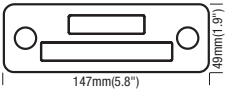
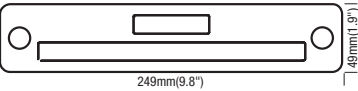
High-temperature, fiber reinforced base materials for strength and chemical resistance

*Does not come with label fitted

Typical Cluster example



Product Footprints

		.5x 	1x 	1.5x 	2.5x 
Heavy-duty Bus Bars					
777-BB4S-500	4 Stud		✓		
777-BB3S-650	3 Stud		✓		
777-BB5S-650	5 Stud			✓	
777-BB8S-650	8 Stud				✓
Z Bus Bars					
777-Z10W-200	10 Way		✓		
777-Z18W-200	18 Way			✓	
ANL Fuseholders					
778-ANL	ANL		✓		
778-ANL2S	ANL with additional cable clamping studs			✓	
778-ANLTP	ANL Through Panel		✓		
Class-T Fuseholders					
778-T2S-400	225-400A			✓	
778-T2S-600	450-600A			✓	
Insulated Studs					
IST-8MM-1S	Single 8 mm	✓			
IST-8MM-2S	Double 8 mm	✓			
IST-10MM-8MM	Double 10 mm / 8 mm	✓			
IST-10MM-1S	Single 10 mm	✓			
IST-10MM-2S	Double 10 mm	✓			
IST-8MM-1SPT	Single 8 mm with power tapping plate	✓			
IST-10MM-1SPT	Single 10 mm with power tapping plate	✓			

Pro Installer Heavy-duty Bus Bars

Pro Installer Heavy-duty Bus Bars provide a robust means to connect (bus) together the multitude of large cables found in modern electrical installations. They offer unrivaled flexibility to meet the requirements of any installation, saving significant cost and space.

Specifications:

- 4 Stud-500A bus bar: 8 mm (5/16") stainless steel studs
- 3, 5, and 8 stud-650A bus bars: 10 mm (3/8") stainless steel studs
- Studs treated with anti-seize lubricant
- 50V DC
- Tinned CDA102 Copper conductors
- Stainless steel studs, washers, nuts for longevity in the marine environment
- Generous stud lengths, metric threads

Description	Part #	OEM #	Footprint*
3 Stud Bus Bar	777-BB3S-650	777-BB3S-650-B	1 x
4 Stud Bus Bar	777-BB4S-500	777-BB4S-500-B	1 x
5 Stud Bus Bar	777-BB5S-650	777-BB5S-650-B	1.5 x
8 Stud Bus Bar	777-BB8S-650	777-BB8S-650-B	2.5 x

* See page 35 for Footprint details

Related Products



Pro Installer
Link Bars
page 39

Pro Installer Z Bus Bars

BEP Products have created a completely new concept for small cable termination with the Z-Bar range. These Bus Bars maximize power density by utilizing high and low level bars to optimize cable runs, saving even more installation space.

Specifications:

- 10 Way and 18 Way versions
- 4x 6 mm (1/4") studs with anti-seize lubricant
- 4 mm (5/32") terminals with captive lock washers
- 200A maximum per bar (2x 200A)
- 50V DC
- Tinned CDA102 Copper conductors
- Stainless steel studs, washers, nuts for longevity in the marine environment
- Metric threads

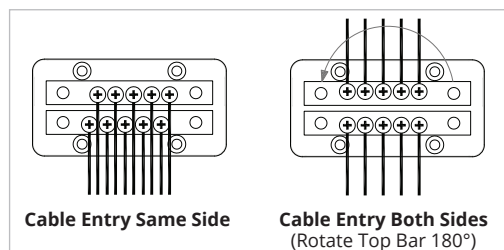
Description	Part #	OEM #	Footprint*
10 way, Z Bus Bar	777-Z10W-200	777-Z10W-200-B	1 x
18 way, Z Bus Bar	777-Z18W-200	777-Z18W-200-B	1.5 x

* See page 35 for Footprint details

Related Products



Pro Installer
Link Bars
page 39



Pro Installer ANL Fuse Holders

These ANL fuseholders offer unparalleled circuit protection choice for both the installer and end-user. The innovative Through-Panel fuseholder (778-ANLTP) provides superior access for fuse inspection and replacement. Small electrical loads are catered to with the compact 778-ANL unit while additional cable security and highest capacity is provided by the 778-ANL-2S, featuring additional studs for separate clamping of cables.

Specifications:

- Cable connection studs: 8 mm (5/16") studs on 778-ANL, 10 mm (3/8") studs on 778-ANL-TP and 778-ANL-2S
- Fuse mounting studs: 8 mm (5/16")
- Double washers allow any ANL fuse brand to be fitted
- Fuse type: ANL or ANN (fast blow)
- Swinging fuse style allows changing fuse without removal of fastening nuts
- Amperage: determined by fuse sizing, 778-ANL: 35-300A, 778-ANL2S: 35-750A, 778-ANLTP, 35-500A
- 50V DC
- Tinned CDA102 copper conductors 778-ANL-2S
- Tinned CDA260 high conductivity brass conductors 778-ANLTP

Description	Part #	OEM #	Footprint*
Fuseholder, ANL	778-ANL	778-ANL-B	1 x
Fuseholder, ANL with additional cable clamping studs	778-ANL2S	778-ANL2S-B	1.5 x
ANL Through Panel	778-ANLTP	778-ANLTP-B	1 x

* See page 35 for Footprint details



Related Products



Pro Installer Link Bars
page 39



ANL Fuses
page 48

Pro Installer Class-T Fuse Holders

Class-T fusing provides the ultimate protection for high power circuits, and where extremely fast fuse blow characteristics are required. Modern battery technologies such as Mastervolt Lithium Ion or AGM are capable of very high short circuit currents which may be beyond the interrupt rating of standard circuit breakers and other types of fuse. Two sizes of Pro Installer Class-T Fuseholder are available which accommodate fuses from 225-400 amps, and 450-600 amps respectively.

Specifications:

- Cable connection studs: 10 mm (3/8") studs
- Fuse mounting studs: 10 mm (3/8") 225-400A holder, 12 mm (1/2") 450-600A holder
- Fuse type: Class-T (JLLN / TJN / A3T)
- Maximum amperage: Determined by fuse sizing, either 400A or 600A
- 50V DC
- High temperature, fiber reinforced plastic base provides strength and chemical resistance
- Clear polycarbonate cover
- Tinned CDA102 Copper conductors
- Stainless steel studs, washers and nuts for longevity in the marine environment
- Metric threads

Description	Part #	OEM #	Footprint*
Fuseholder, Class-T 225-400A	778-T2S-400	778-T2S-400-B	1.5 x
Fuseholder, Class-T 450-600A	778-T2S-600	778-T2S-600-B	1.5 x

* See page 35 for Footprint details



Related Products



Pro Installer Link Bars
page 39



Class T Fuses
page 48

Pro Installer Insulated Studs

Pro Installer Insulated studs are available in single and twin stud versions, featuring 8 mm (5/16") and 10 mm (3/8") variants. A double stud version with 10 mm and 8 mm studs is also included for extending outboard motor cables. The Power Tapping Plate single stud models provide convenient termination points for additional small cables. Pro Installer family features are replicated with these insulated studs, generous stud length, modular footprint, insulating covers with label recess, and common interconnection height.

Specifications:

- Power tapping plate: 4x 4 mm (5/16") terminals
- Maximum current through power tapping plate: 50A per terminal (4x 50A maximum)
- Note: no power passes through the stud so no amp rating is given 50V DC
- High temperature, fiber reinforced plastic base provides strength and chemical resistance
- Clear polycarbonate cover with snap-out extra cable access
- Stainless steel studs, screws and nuts for longevity in the marine environment
- Insert moulded studs with metric threads
- Double studs feature 'snap out' insulating partition, to allow linking of studs

Description	Part #	OEM #	Footprint*
Single 8 mm	IST-8MM-1S	IST-8MM-1S-B	0.5 x
Double 8 mm	IST-8MM-2S	IST-8MM-2S-B	0.5 x
Double 10 mm / 8 mm	IST-10MM-8MM	IST-10MM-8MM-B	0.5 x
Single 10 mm	IST-10MM-1S	IST-10MM-1S-B	0.5 x
Double 10 mm	IST-10MM-2S	IST-10MM-2S-B	0.5 x
Single 8 mm with power Tapping Plate	IST-8MM-1SPT	IST-8MM-1SPT-B	0.5 x
Single 10 mm with power Tapping Plate	IST-10MM-1SPT	IST-10MM-1SPT-B	0.5 x

* See page 35 for Footprint details

Related Products



Pro Installer
Link Bars
page 39



IST-8MM-1S



IST-8MM-2S



IST-10MM-8MM



IST-10MM-1S



IST-10MM-2S



IST-8MM-1SPT



IST-10MM-1SPT

Pro Installer Link Bars

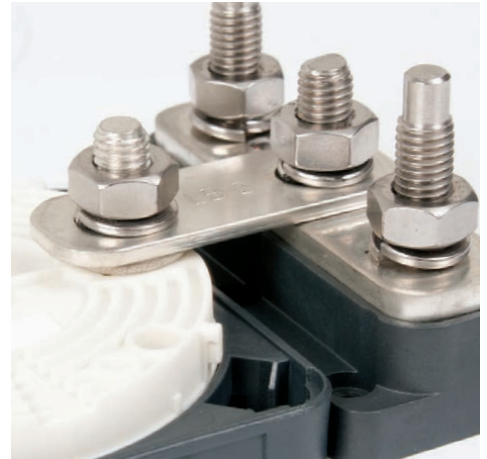
- A range of linking bars to complement the Pro Installer range of products
- High purity copper, tin plated for optimum marine electrical performance
- Fastest, most economic way of connecting products
- Saves space, allows clustering for the most compact installations
- Links can be doubled for higher loads

Choosing a Link Bar

Step 1: Use selection guide on the following pages to determine the correct link bar.

Step 2: If multiple options exist, see diagrams for layout options.

Step 3: Find the part below or on page 41.



Actual Size



LB-1 (marking)
OEM # 779-LB-1-B 5/pkg



LB-2 (marking)
OEM # 779-LB-2-B 5/pkg



LBJ-2 (marking)
OEM # 779-LBJ-2-B 5/pkg



LBZ-1 (marking)
OEM # 779-LBZ-1-B 5/pkg

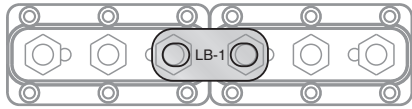


LBZ-2 (marking)
OEM # 779-LBZ-2-B 5/pkg

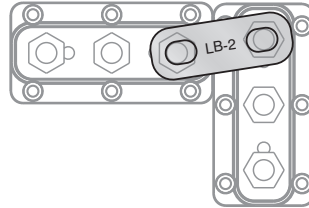
See page 41 for amp ratings, and dimensions.

Pro Installer Link Bars

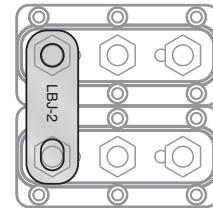
Diagrams



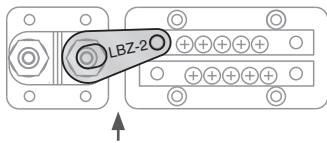
E:E End to End linking



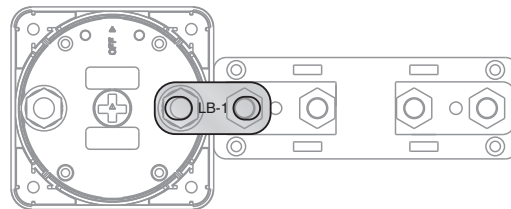
S:E Side to End linking



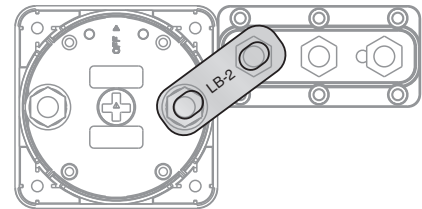
S:S Side to Side joining



Gap For small gaps between products



C: Centerline linking



O: Offset linking

Side to Side Joining
on following page

Linking Selection Guide

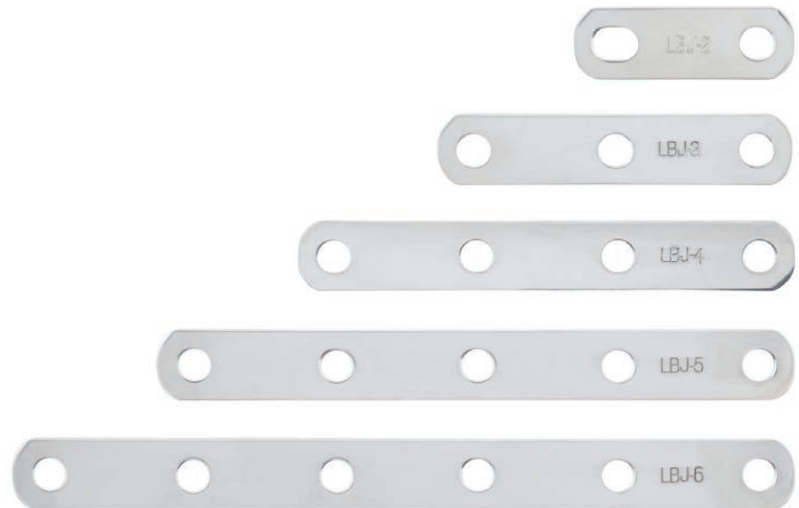
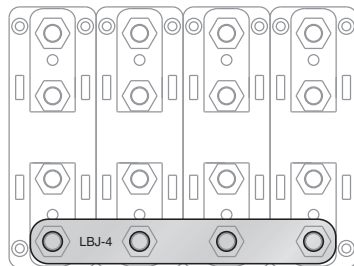
	3, 4, 5, & 8 Stud Heavy Duty Bus Bars	10 & 18 Way Z Bus Bars	778-ANL Fuseholder	ANL Through Panel Fuseholder	ANL & Class T Double Stud Fuseholders	Single Insulated Studs	Double Insulated Studs	EZ Mount Battery Switch On/Off
Bus Bars								
3, 4, 5, & 8 Stud Heavy Duty Bus Bars	LB-1	LBZ-2	LB-1	—	LB-1 (4 Stud Gap)	LB-2	S:E LB-1 Gap LB-1	O: LB-2 C: LB-1
10 & 18 Way Z Bus Bars	LBZ-2	LBZ-1	LBZ-2	—	LBZ-2	—	Gap LBZ-2	LBZ-2
Fuseholders								
778-ANL Fuseholder	LB-1	LBZ-2	LB-2	—	LB-1	LB-2	S:E LB-1 Gap LB-1	O: LB-2 C: LB-1
ANL Through Panel Fuseholder	—	—	—	LB-2	—	—	—	—
ANL & Class T Double Stud Fuseholders	LB-1	LBZ-2	LB-1	—	LB-1	LB-2	S:E LB-1 Gap LB-1	O: LB-2 C: LB-1
Insulated Studs								
Single Insulated Studs	LB-2	—	LB-2	—	LB-2	LBJ-2	LB-1	LBJ-2 C: LB-2
Double Insulated Studs	S:E LB-1 Gap LB-1	Gap LBZ-2	S:E LB-1 Gap LB-1	—	S:E LB-1 Gap LB-1	LB-1	S:S LBJ-2 Gap LB-1	O: LB-1 C: Gap LB-1
EZ Mount Battery Switches								
EZ Mount Battery Switch On/Off	O: LB-2 C: LB-1	LBZ-2	O: LB-2 C: LB-1	—	O: LB-2 C: LB-1	O: LBJ-2 C: LB-2	O: LB-1 C: Gap LB-1	LB-1
EZ Mount Selector Battery Switch - "Battery" Studs	LB-2 (4 Stud LB-1)	LBZ-2	LB-2	—	O: LB-1 C: LB-2	LBJ-2	LB-1	—
EZ Mount Selector Battery Switch - "Common" Stud	O: LB-2 C: LB-1	LBZ-2	O: LB-2 C: LB-1	—	O: LB-2 C: LB-1	O: LBJ-2 C: LB-2	O: LB-1 C: Gap LB-1	—
EZ Mount Double Pole/ Dual Bank Control	O: LB-2 C: LB-1	—	O: LB-2 C: LB-1	—	O: LB-2 C: LB-1	O or C: LB-1	O: LBJ-2 C: LBJ-2	LB-2

See pages 34–38 for the full line of Pro Installer Bus Bars, Fuseholders and Insulated Studs.

Side to Side Joining Selection Guide

	Marking	OEM #	Qty
Joining 2 products	LBJ-2	779-LBJ-2-B	5/pkg
Joining 3 products	LBJ-3	779-LBJ-3-B	1/pkg
Joining 4 products	LBJ-4	779-LBJ-4-B	1/pkg
Joining 5 products	LBJ-5	779-LBJ-5-B	1/pkg
Joining 6 products	LBJ-6	779-LBJ-6-B	1/pkg

NOT Actual Size

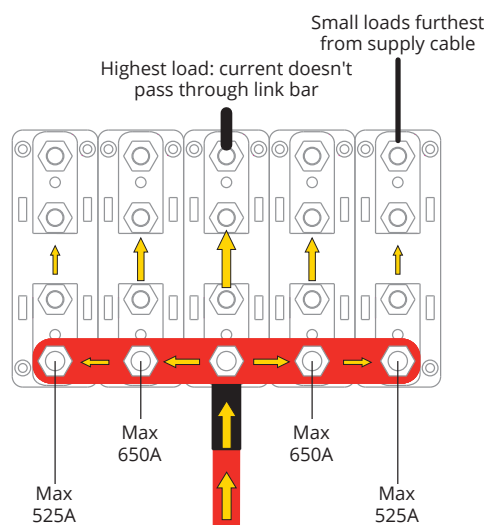


Specifications

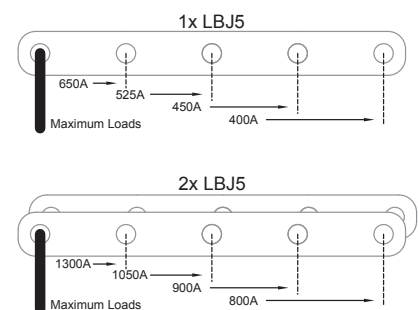
Marking	Part #	OEM #	Pkg Qty	Description	Function	Max Amps	L x W in	L x W mm
LB-1	—	779-LB-1-B	5	Link Bar 31-34.7 mm	Short Link Bar 8 & 10 mm studs	650	2.2" x 1.0"	56 x 25
LB-2	—	779-LB-2-B	5	Link Bar 35.5-42.5 mm	Medium Link Bar 8 & 10 mm studs	650	2.8" x 1.0"	69 x 25
LBJ-2	—	779-LBJ-2-B	5	Joiner 2-way 46-50 mm	Long Link Bar 8 & 10 mm studs	650	3.0" x 1.0"	74 x 25
LBZ-1	—	779-LBZ-1-B	5	Link Z Bar to Z Bar	Joins Z Bars End to End, Back to Back	250	2.0" x 0.5"	49 x 12
LBZ-2	—	779-LBZ-2-B	5	Link Z Bar to Bus Bar or F-holder	Joins Z Bars to Bus Bars or F-holders	400	2.1" x 1.0"	53 x 25
LBJ-2	779-LBJ-2	779-LBJ-2-B	1	Joiner 2-way	Side to Side joiner 2 products	650	3.0" x 1.0"	74 x 25
LBJ-3	779-LBJ-3	779-LBJ-3-B	1	Joiner 3-way	Side to Side joiner 3 products	525	4.9" x 1.0"	123 x 25
LBJ-4	779-LBJ-4	779-LBJ-4-B	1	Joiner 4-way	Side to Side joiner 4 products	450	6.9" x 1.0"	172 x 25
LBJ-5	779-LBJ-5	779-LBJ-5-B	1	Joiner 5-way	Side to Side joiner 5 products	400	8.8" x 1.0"	221 x 25
LBJ-6	779-LBJ-6	779-LBJ-6-B	1	Joiner 6-way	Side to Side joiner 6 products	350	10.8" x 1.0"	270 x 25

Best Electrical Practice for High Loads:

- Supply power to the center of link bars or bus bars to balance loads
- Connect highest loads directly/closest to the supply cable



Note: Link bars can be doubled to increase load capacity



Pro Installer Clusters

Example shown below using Pro Installer distribution components, link bars and the award winning EZ-Mount Battery Switch (page 16).



- Saves Time
- Saves Space
- Eliminates the need for jumper wires between products
- Common Interconnection heights allow “clustering” utilizing solid link bars
- Customize clusters for your application



Insulated Studs & Covers

- Made with high temperature plastic bases
- Dual studs ideal for +ve / -ve connections, branch circuits, windlass or inverter installations.
- Stud covers push securely over the threaded stud covering to ABYC standards
- Covers supplied with display versions.



IS-6MM-1



IS-10MM-1



IS-10MM-1R



IS-6MM-2



IS-10MM-2



IS-10MM-2/L

Single Studs

Part #	OEM #	Stud Size	Polarity
IS-6MM-1R/DSP*	IS-6MM-1R	1/4" / 6 mm	Positive
IS-6MM-1/DSP*	IS-6MM-1	1/4" / 6 mm	Negative
—	IS-10MM-1R	3/8" / 10 mm	Positive
—	IS-10MM-1	3/8" / 10 mm	Negative

*Part #'s come with cover, OEM #'s do not.

Dual Studs

Part #	OEM #	Stud Size
IS-6MM-2/DSP*	IS-6MM-2	2 x [1/4" / 6 mm]
—	IS-10MM-2	2 x [3/8" / 10 mm]
—	IS-10MM-2/L	2 x [3/8" / 10 mm] with link plate

*Part #'s come with cover, OEM #'s do not.

Covers

Part #	Description
ISC-10BK	Double 10 mm
ISC-6-2	Double 6 mm



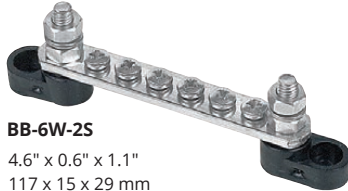
ISC-10BK



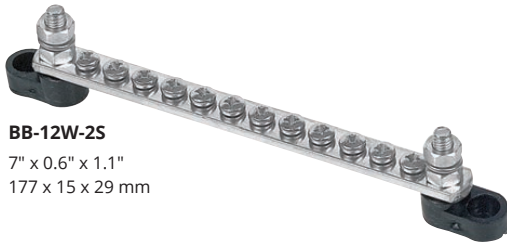
ISC-6-2

Bus Bars

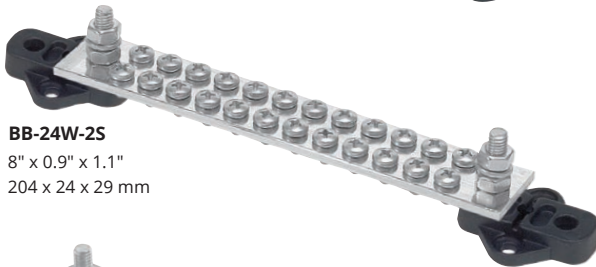
- Now with easy-fit covers to ABYC standards, with polarity ID
- 5/32" (4 mm) stainless steel screws with shakeproof washers
- 2 x 1/4" (6 mm) input studs
- Tin-plated, brass-insulated mounting bases with recessed mounting holes to avoid accidental shorts on aluminum surfaces
- Supplied standard with all BEP AC & DC control panels
- Display pack versions supplied with cover



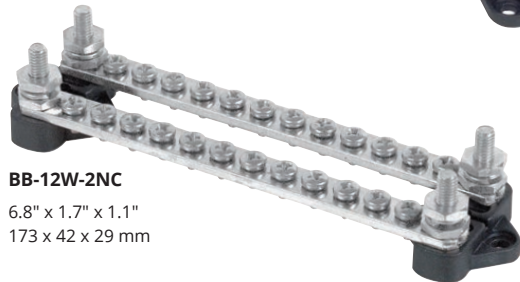
BB-6W-2S
4.6" x 0.6" x 1.1"
117 x 15 x 29 mm



BB-12W-2S
7" x 0.6" x 1.1"
177 x 15 x 29 mm



BB-24W-2S
8" x 0.9" x 1.1"
204 x 24 x 29 mm



BB-12W-2NC
6.8" x 1.7" x 1.1"
173 x 42 x 29 mm



BB-4S-150A/DSP
5.4" x 1.4" x 1.1"
138 x 35 x 29 mm

Part #	OEM #	Bus Type	Output screws	Input studs	Rating (A)
BB-6W-2S/DSP	BB-6W-2S	Single	6	2	100
BB-12W-2S/DSP	BB-12W-2S	Single	12	2	100
BB-24W-2S/DSP	BB-24W-2S	Single	24	2	150
BB-12W-2NC/DSP	BB-12W-2NC	Double	2 x 12	2 x 12 way	100
BB-4S-150A/DSP	BB-4S-150	4-way	1 x 4	4 x 6 mm (1/4 stud)	150

Bus Bar Covers

- Flame-resistant flexible plastic
- Color-coded for polarity
- Unique push-on fit
- Supplied standard with bus bars when ordered in display packs (for bulk packaging ordered separately)

6 W

BBC-6WR Positive
BBC-6WBK Negative



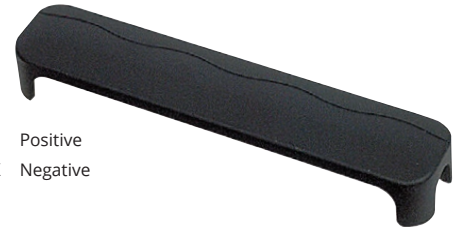
12 W

BBC-12WR Positive
BBC-12WBK Negative



24 W

BBC-24WR Positive
BBC-24WBK Negative



Terminal Blocks

Ideal for isolated connections up to 30A. Suitable for connecting tails from AC and DC panels.

Base material: Phenolic; Current rating 30A; Max. voltage rating: 300V AC/DC; Screw size: 0.25" (6.3 mm)

TB-118-6P 6 connections

TB-118-10P 10 connections





Distribution Stud

The Contour Distribution Stud allows terminating of heavy-duty cables for one or more connections. Contour Lock housing has removable side plates which allows for connections from all sides.

OEM # 702B



Dual Distribution Stud

Designed specifically for transom areas for connecting battery cables from outboards. It also has many other applications where heavy-duty positive and negative connections need to be terminated.

OEM # 702-2SB



Four Way Distribution Stud

The 704-4S was designed for multiple heavy-duty connections which need to be isolated from each other. This model completes the range of heavy-duty connectors and meets ABYC standards for exposed terminals.

OEM # 704-4S/B

The patented Contour Locking System is an innovative feature that allows for multiple battery management components to be connected to each other providing for a clean finished installation. These locking tabs can be found on battery switches, heavy-duty buss bars, fuse holders, distribution studs and breaker modules.

Description	Stud Size	OEM #	LxWxH (in)	LxWxH (mm)
Distribution Stud	10 mm, 3/8"	702B	2.75" x 2.75" x 2"	69 x 69 x 50 mm
Dual Distribution Stud	2 x (10 mm, 3/8")	702-2S/B	2.75" x 2.75" x 2"	69 x 69 x 50 mm
	1 x (8 mm, 5/16") 1 mm x (10 mm, 3/8")	702-8-10-B	2.75" x 2.75" x 2"	69 x 69 x 50 mm
Dual Distribution Stud with Link Plate	2 x (10 mm, 3/8")	702-2SB/L	2.75" x 2.75" x 2"	69 x 69 x 50 mm
Four Way Distribution Stud	4 x (10 mm, 3/8")	704-4S/B	5.3" x 2.75" x 2"	138 x 69 x 50 mm



Terminal Links

The 708 links are designed for space saving interconnections of terminals when battery distribution modules are linked together. Four standard solid links are available for interconnection of the 701 battery switch with other Battery Distribution products and two larger links which are intended for the heavy-duty battery switch.

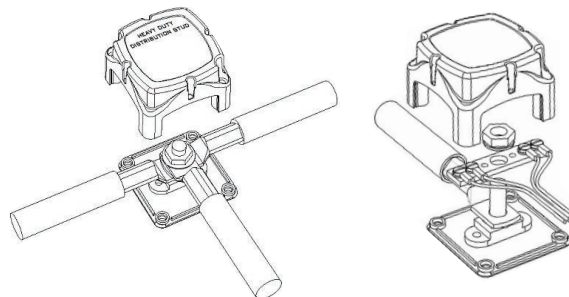
Part #	Distance between centers	Hole diameter
708-42.5	1.7" 43 mm	3/8" 10 mm
708-54.5	2.2" 55 mm	3/8" 10 mm
708-64.5	2.5" 65 mm	3/8" 10 mm
708-68.5	2.7" 69 mm	3/8" 10 mm
708-62.0	2.45" 62 mm	1/2" 12 mm

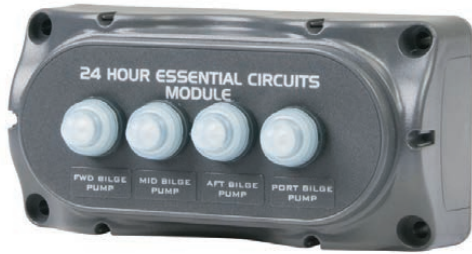


Secondary Bus

Fitted to Distribution Stud 702 allows for small wire connections without cluttering main stud. Terminal screws 1/8" (4 mm).

Part # 702SB





24hr Service Circuit Breaker Module (4W)

Consists of 1 x 15A and 3 x 15A push to reset Carling CLB Series thermal CBs. Suitable for essential circuits such as bilge pump, auto float switch supplies and stereo memory circuits. The push to reset function ensures essential 24-hour circuits cannot be switched off inadvertently. This is contained in the contour lock double module. Labels: SET-714

Part # 706-4WB
OEM # 706-4W/B



Contour Circuit Breaker

Allows switchable protection for heavy-duty circuits like Windlasses or Davit winches using Busman Heavy-duty thermal circuit breakers (120). Modular sizing with Contour Lock housing allows easy grouping. LED to indicate circuit is on. Five standard ratings available.

Part #	OEM #	Rating
705-50A	705-50A/B	50A
705-80A	705-80A/B	80A
705-100A	705-100A/B	100A
705-135A	705-135A/B	135A
705-150A	705-150A/B	150A



24hr Essential Circuit Module

Designed for smaller systems where only 2 circuit breakers are required. Supplied with 2 x 10A Carling CLB Series circuit breakers - push to reset.

Part # 706-2W
OEM # 706-2W/B

Related Products



CLB Series Push Reset Thermal Circuit Breakers
page 52



Circuit Breaker Module

Provides 3 CBs ideal for medium duty loads, like waste treatment systems and electric toilets. Designed to separate these loadings from the main DC panel, avoiding voltage spikes. Supplied standard with 1 x 50A and 2 x 25A B Series CBs in a Contour Lock housing for easy modulation. Extra CBs available (page 53).

Labels ordered separately: SET-714.

Part # 707

Related Products



IEG Magnetic CB's
page 53

Specifications

Part #	OEM #	Rating (A)	in LxWxH	mm LxWxH	Stud Size
707	—	1x 50A, 2x 25A	5.4" x 2.71" x 3"	138 x 69 x 75 mm	3/16" 5 mm
705-50A	705-50A/B	50A	5.4" x 2.71" x 3"	138 x 69 x 75 mm	1/4" 6 mm
705-80A	705-80A/B	80A	5.4" x 2.71" x 3"	138 x 69 x 75 mm	1/4" 6 mm
705-100A	705-100A/B	100A	5.4" x 2.71" x 3"	138 x 69 x 75 mm	1/4" 6 mm
705-135A	705-135A/B	135A	5.4" x 2.71" x 3"	138 x 69 x 75 mm	1/4" 6 mm
705-150A	705-150A/B	150A	5.4" x 2.71" x 3"	138 x 69 x 75 mm	1/4" 6 mm
706-4WB	706-4W/B	1x 5A, 3x 15A	5.4" x 2.71" x 3"	138 x 69 x 75 mm	5/32" 4 mm
706-2W	706-2W/B	2x 10A	2.71" x 2.71" x 2.75	69 x 69 x 70 mm	5/32" 4 mm

CIRCUIT PROTECTION & SWITCHES

Marine Fuses

48



Fast-acting, corrosion resistant fuses open quickly to protect circuits from overloads and short-circuits.

Fuse Holders

49



For protection of smaller systems and branch circuits, for ATO/ATC and maxi fuse ranges.

Marine Rated Battery Fuse

50



Highly compact fuses/holders which are ignition protected and able to protect main supply connections.



CIRCUIT PROTECTION & SWITCHES

Thermal Circuit Breakers

51



Thermal Circuit Breakers & RCD's:
Major DC circuit protection from 30-200
Amps, push to reset breakers for 10-40A
circuits, and RCD/RCBO panels for AC
Main circuit protection.

Magnetic Circuit Breakers

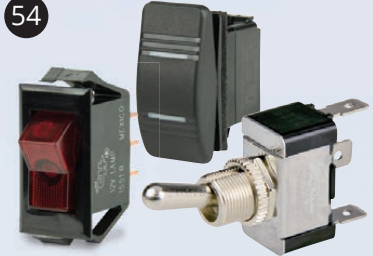
53



Precision operation circuit breakers,
5-100 Amps, single, double and triple pole.

Switches

54



BEP Marine now offers a full line of
manual switches including: toggle, rocker,
push/pull, push-button, solenoids, and
relays. The comprehensive selection
ensures that BEP has the right switch to
meet your needs.



Gunfleet Marine uses BEP circuit protection aboard their 58 Blue Water Cruising Yacht

Marine Fuses

- Fast-acting, corrosion resistant fuses open quickly to protect circuits from overloads and short-circuits.
- Time-delayed to allow temporary, harmless in-rush currents to pass but open on sustained overloads and short-circuits.



ATM Fuses

Diameter: 7/16" (11 mm)
Length: 5/8" (16 mm)
Maximum voltage: 32V DC

Rating (A)	Qty/Pkg	OEM #
5	2	JJ05A
10	2	JJ10A
15	2	JJ15A
20	2	JJ20A
30	2	JJ30A



ATO®/ATC® Fuses

Diameter: 3/4" (19 mm)
Length: 3/4" (19 mm)
Maximum voltage: 32V DC

Rating (A)	Qty/Pkg	OEM #
1	1	J01A
2	1	J02A
3	1	J03A
5	1	J05A
7.5	1	J7.5A
10	1	J10A
15	1	J15A
20	1	J20A
25	1	J25A
30	1	J30A
40	1	J40A



MAXI® Fuses

Fuses available: 30-80A
Interrupt capacity: 1000A DC
Maximum voltage: 32V DC

Rating (A)	Qty/Pkg	Part #	OEM #
30	1	BFHD-30A/DSP	BFHD-30A
40	1	BFHD-40A/DSP	BFHD-40A
50	1	BFHD-50A/DSP	BFHD-50A
60	1	BFHD-60A/DSP	BFHD-60A
70	1	BFHD-70A/DSP	BFHD-70A
80	1	BFHD-80A/DSP	BFHD-80A



ANL Fuses

Use with:

- Pro Installer ANL Fuse Holders (page 37)

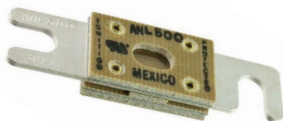


Length: 3.23" (82 mm)

Width: 0.88" (22 mm)

Stud Clearance: 0.43" (11 mm)

Rating (A)	Qty/Pkg	Part #	OEM #
20	1	—	77049020
40	1	—	IP40
50	1	IP50P/DSP	IP50
63	1	IP63P/DSP	IP63
80	1	IP80P/DSP	IP80
100	1	IP100P/DSP	IP100
125	1	—	IP125
150	1	IP150P/DSP	IP150
160	1	—	77049160
175	1	—	IP175
200	1	IP200P/DSP	IP200
250	1	IP250P/DSP	IP250
300	1	IP300P/DSP	IP300
355	1	IP355P/DSP	IP355
400	1	—	77049400
425	1	IP425P/DSP	IP425
500	1	IP500P/DSP	IP500



Heavy-duty ANL Fuses

Use with:

- 5/16" (8 mm) mounting studs
- Pro Installer ANL Fuse Holders (page 37)



Rating (A)	Qty/Pkg	OEM #
600	5	FANL-600-B
675	5	FANL-675-B
750	5	FANL-750-B



Class T Fuses

Interrupt Capacity: 20,000A DC

Maximum voltage: 160V DC

Diameter: 1.34" (34 mm)

Length: 2.77" (70 mm)

Use with:

- Pro Installer Class T Fuse Holders (page 37)



Rating (A)	Qty/Pkg	OEM #
225	1	FT-225-B
250	1	FT-250-B
300	1	FT-300-B
350	1	FT-350-B
400	1	FT-400-B

Heavy-duty Class T Fuses

Interrupt Capacity: 20,000A DC

Maximum voltage: 160V DC

Diameter: 1.62" (41 mm)

Length: 3.03" (77 mm)

Use with:

- Pro Installer Class T Fuse Holders (page 37)



Rating (A)	Qty/Pkg	OEM #
450	1	FT-450-B
500	1	FT-500-B
600	1	FT-600-B

Fuse Holders



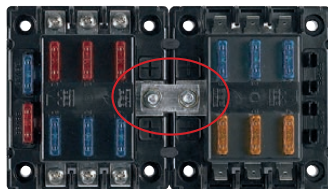
ATC-6W

ATO®/ATC® Fuse Holders

The BEP ATC Fuse Holder provides compact, easy access to fuses with the design integrity only BEP can offer.

- Allows for multiple fuse holders and bus bars to be joined together, increasing the number of circuits protected
- Fuse holder inputs can be linked together to form a single continuous fuse holder
- Includes patented Contour Lock system, see-thru clip-on cover and label set
- Available with screw terminals or quick connect terminals
- Max. current/circuit: 30A; Max. current/block: 100A; Max. voltage: 32V DC; Base & cover material: polycarbonate
- Positions for spare fuses
- ATC Fuse holder: 80 x 90 x 47 mm (3.1" x 3.6" x 1.9")
- ATC Bus bar: 35 x 90 x 47 mm

Description	Pack Qty	Part #	OEM #
6 Way fuse holder screw terminals w/ cover & link	1/blister	ATC-6W	—
6 Way fuse holder Quick Connect w/ cover & link	1/blister	ATC-6WQC	—
6 Way negative bus, 5 mm stud, cover, joiners	1/blister	80-712-0039-00	—
6 Way fuse holder screw terminals w/ cover	24/pack	—	ATC-6W/B
6 Way negative bus, 5 mm stud, cover, joiners	24/pack	—	80-712-0039-01



BB-LINK17MM

Allows two 6 way ATC fuse holders to be joined together providing twelve fused positions running off one feed.



80-712-0039-00

ATO®/ATC® Bus Bar

The expandable ATC negative Bus uses the BEP Contour Lock system to allow it to be joined to the ATC fuse holder. This keeps wiring tidy and conveniently located. Current rating 100A.

MAXI® Fuse Holder

An economical way of fusing heavy loads 30–80A. Ideal for battery charger outputs or mains feeds. 1/4" (6 mm) studs accept ring terminals and cables up to 25 mm² (4 gauge). Fuse is clamped between tinned brass clamps for positive connection. Covers enclose exposed terminals to meet ABYC standards. 2.8" x 2" x 1.42" (71 x 53 x 36 mm)



Part # 702-MFH
OEM # 702-MFH-B

Inline MAXI® Fuse Holder

For installations where space is tight and fuse needs to be installed inline with the cable. Supplied with 8 mm (8G) tails for inline connections. An economical solution to heavy-duty fusing. 3.15" x 2.15" x .6" (80 x 55 x 15 mm)

Part # HDBFH/DSP
OEM # HDBFH



Inline ATC Fuseholder

Part # WAFH-14



Marine Rated Battery Fuse

Features:

- Weatherproof IP66 design
- Compact heavy duty protection
- Insulated cap to prevent short circuit
- Ignition Protected
- Easy installation
- Suitable for high capacity battery banks

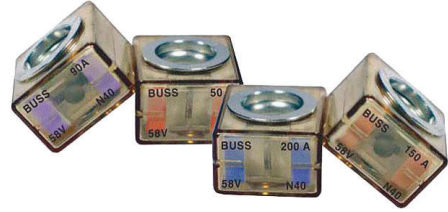
Specifications:

- **Voltage Rating:** 58V DC Maximum
- **Amperage Rating:** 30A - 300A
- **Ingress Protection:** IP66
- **Ignition Protected:** Per SAEJ1117
- **Interrupt Rating:** 10000A @ 14V DC, 5000A @ 32V DC, 2000A @ 58V DC
- **Torque Rating:** Maximum 12Nm (106 in-lbs)
- **Material:** Body – Ceramic, Housing & Cover: UL-rated 94V0
- Thermoplastic, Ring Terminals - Tin Plated
- **Compliances:** ISO 8820-6
- Available in other sizes upon request, from 30–300 amps



MRBF

Terminal mount heavy-duty fuse holder and cover



Rating (A)	Qty/ Pkg	Part #	OEM #
50	1	MRBF-50A	MRBF-50A-B
80	1	MRBF-80A	MRBF-80A-B
100	1	MRBF-100A	MRBF-100A-B
125	1	MRBF-125A	MRBF-125A-B
150	1	MRBF-150A	MRBF-150A-B
200	1	MRBF-200A	MRBF-200A-B
250	1	MRBF-250A	MRBF-250A-B
300	1	MRBF-300A	MRBF-300A-B

Single Pole Switchable Manual Reset Thermal Circuit Breaker

Features:

- Weatherproof IP66 design
- Trip free safety feature
- Switchable circuit protection
- Easy installation/ operation
- Ignition Protected
- CE Approved

Specifications:

- **Rating:** 25-200A, 48V DC
- **Interrupt Rating:** Main Breaker Protection Interrupt Rating (5,000A@ 14V DC, 3,000A@ 28V DC and 1,500A@ 48V DC)
- **Operating Temperature Rating:** -40°F (-40°C) to 185°F (85°C)
- **Storage Temperature Rating:** -40°F (-40°C) to 260°F (125°C)
- **Materials:** Black UL-rated 94V0 thermoset plastic body
- Cover and lever are UL-rated 94V0 thermoplastic
- **Marking:** Standard marking includes amp/volt ratings
- **Termination:** 5/16-18 threaded studs
- **Torque Rating:** 75 in-lbs (8.5Nm) max
- **Mounting Torque Rating:** Panel or surface-mount options; 50 in-lbs (5.6 Nm) max
- **Ingress Protection Rating:** IP66
- **Compliances:** ABYC E-11; CE; SAE J1171 (ignition protected)
- Available in other sizes upon request, from 25–150 amps



MRCBF-200A



MRCBP-200A

Mounting	Rating (A)	Part #	OEM #
Surface	200	MRCBF-200A	MRCBF-200A-B
Panel	200	MRCBP-200A	MRCBP-200A-B

Single Pole Thermal Type Breakers

- **Ratings:** 30-150A; 30V DC
- **Interrupt Capacity:** 3000A
- **Operating Temperature:** -25°F (-32°C) to 180°F (82°C)
- **Storage Temperature:** -30°F (-34°C) to 300°F (149°C)
- **Applications:** Auxiliary and accessory circuits – trucks, buses, RVs and marine applications, battery chargers and DC audio systems. Series 184 & 185 are sealed for engine compartment and bilge area applications.
- **Housing:** Thermoset plastic; UL rated 94VO; 311°F (155°C). Stud insulators are provided on covered units with F (Surface Mount) bases; tin plated copper studs, brass rivets and stainless steel locking nuts.
- **Mounting:** Panel or surface
- **Terminal Stud Torque:** 50 in-lb (5.6Nm) max.
- **Indicator:** Series 184 & 185 have a unique reset mechanism providing visible indication of tripped condition
- **Ingress Protection Rating:** IP67
- **Approvals:** Complies with SAEJ1625, J1171 and UL1500 (Ignition protected) specifications.



184100F-01-1



185080P-01-1

Manual reset versions only switch off on electrical overload i.e. cannot be manually switched

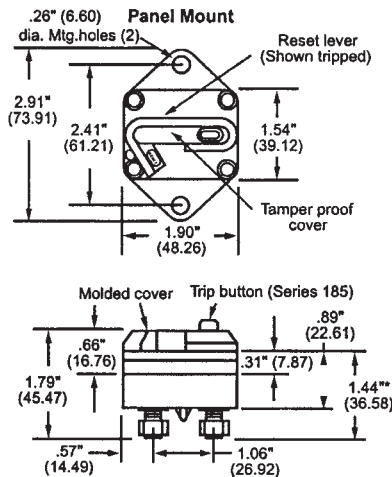
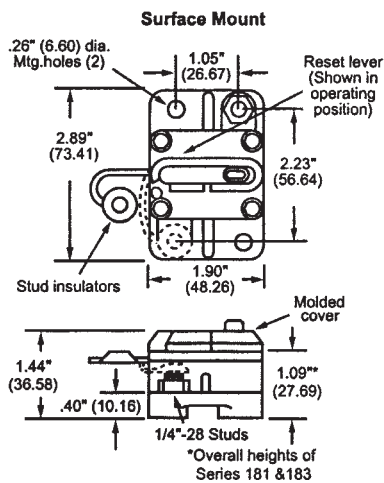
Switchable reset versions can be manually switched to isolate the circuit

Manual Reset

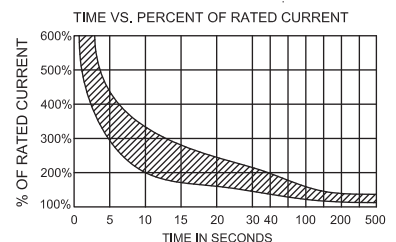
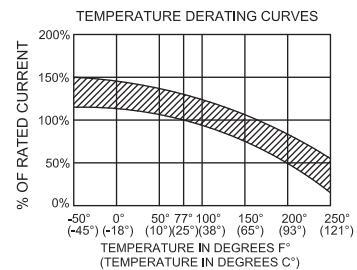
Rating (A)	Panel Mount OEM #	Surface Mount OEM #
50	184050P-01-1	—
60	184060P-01-1	—
80	184080P-01-1	—
100	184100P-01-1	184100F-01-1
150	184150P-01-1	184150F-01-1

Switchable Reset

Rating (A)	Panel Mount Part #	Panel Mount OEM #	Surface Mount Part #	Surface Mount OEM #
30	185030P/DSP	185030P-01-1	185030F/DSP	185030F-01-1
40	185040P/DSP	185040P-01-1	185040F/DSP	185040F-01-1
50	185050P/DSP	185050P-01-1	185050F/DSP	185050F-01-1
60	185060P/DSP	185060P-01-1	185060F/DSP	185060F-01-1
70	185070P/DSP	185070P-01-1	185070F/DSP	185070F-01-1
80	185080P/DSP	185080P-01-1	185080F/DSP	185080F-01-1
100	185100P/DSP	185100P-01-1	185100F/DSP	185100F-01-1
120	185120P/DSP	185120P-01-1	185120F/DSP	185120F-01-1
135	185135P/DSP	185135P-01-1	185135F/DSP	185135F-01-1
150	185150P/DSP	185150P-01-1	185150F/DSP	185150F-01-1



Temperature and Current Rating



CLB Series Push Reset Thermal Circuit Breakers

- **Ratings:** 5–40A; 200A @ 250V AC Interrupt Capacity
- **Operating Temperature:** 14–140°F (-10–60°C)
- **Interrupting capacity:** 2500A
- **Resettable overload capacity:** 10 x rated current
- **Approvals:** UL, CUL, TUV, CE, UL1500ISO8846 for ignition protection/marine

Rating (A)	Part #*	OEM #
5	CLB-5/DSP	CLB-05
10	CLB-10/DSP	CLB-10
15	CLB-15/DSP	CLB-15
20	CLB-20/DSP	CLB-20
25	CLB-25/DSP	CLB-25
30	CLB-30/DSP	CLB-30
40	CLB-40/DSP	CLB-40

*DSP versions include circuit breaker, washer and boot

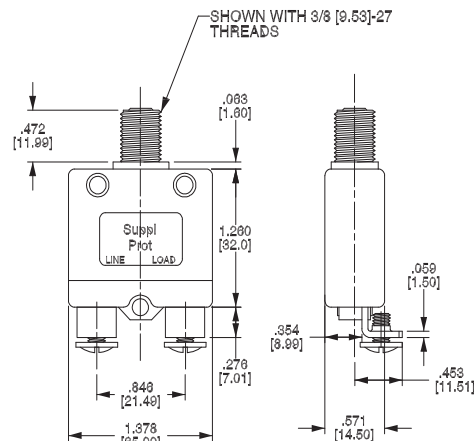
Description	OEM #
Boot	CLB-BOOT
Washer	PMCC-10



CLB-BOOT

Boot required to install breaker.

PMCC-10 washer



RCD Panels

We supply two Residual Current Devices (RCD) ratings (16 & 32 A). These also act as a circuit breaker (RCBO type), have an insulation rating of 400V AC, make/brake current of 6000A, a 30mA trip rating against electric shocks, and 300mA trip protection against fire risks. Due to the different mounting dimensions of the RCD's, these panels are made to be mounted separately from the main AC panel.

Rating (A)	Part #	HxWx2.5"	HxWx65 mm
16	900-RCD-16A	4.5" x 5"	115 x 127 mm
32	900-RCD-1X16-32A	4.5" x 5"	115 x 127 mm
16x2	900-RCD-2X16A	4.5" x 5"	115 x 127 mm
32x2	900-RCD-2X32A	4.5" x 5"	115 x 127 mm
16x1, + 32x1	900-RCD-32A	4.5" x 5"	115 x 127 mm

Cutout size - 3/8" (10 mm) inside all external edges



900-RCD-16A



900-RCD-2X16A

CB Options

- 230 volt

Rating (A)	Part #	Type
16	RCD16A30MA	Residual CB Overload
32	RCD32A30MA	Residual CB Overload
63	RCD63A	Residual CB Overload
16	MCB16A	Miniature CB
32	MCB32A	Miniature CB
63	MCB63A	Miniature CB
16	124001000	Shore Fix 30 mA



RCD
(see chart)



MCB
(see chart)



MCB-3WENC
6.3" x 3.6" x 3.5"
160 x 92 x 90 mm



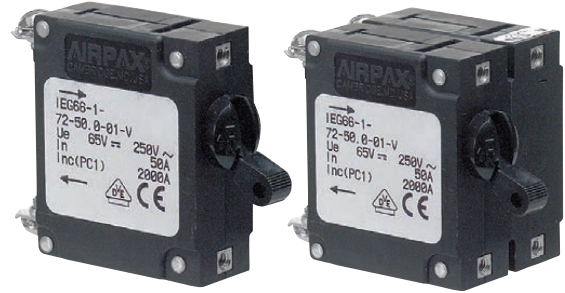
124001000
7.87" x 4.33" x 4.53"
200 x 110 x 115 mm

For installations in Australia and New Zealand to comply with AS/NZ3004 an approved double pole mains circuit breaker must be mounted upstream of the BEP Control Panel in the form of a RCD or MCB. The MCB-3WENC is an enclosure with IP65 rating. The enclosure and CB is ordered separately. The Shore Fix is already assembled, no additional item parts need to be ordered.

IEG Magnetic Circuit Breakers

IEG magnetic circuit breakers provide reliable circuit protection and accurate circuit control for equipment in the international market place. Designed using the latest in sensitive hydraulic magnetic technology, the IEG line adapts itself to many applications and environments. They are ideal for marine applications, data processing and business machines, as well as medical instrumentation, broadcast equipment, vending and amusement machines, military applications and wherever precision operation is required. Temperature differences which affect fuses and other thermal devices are not a concern. One important feature of this breaker line is a 'trip free' action, which means the circuit will trip in the presence of an overload even though the handle is held in the ON position. The delay mechanism senses the fault and the contacts open.

- Spacing compliance: IEC specification 601, 950; VDE 0804, 0805
- UL recognised; CSA certified; VDE 0660 approved; Part 101 & CE compliant
- Available in single or double pole; triple pole available on special orders

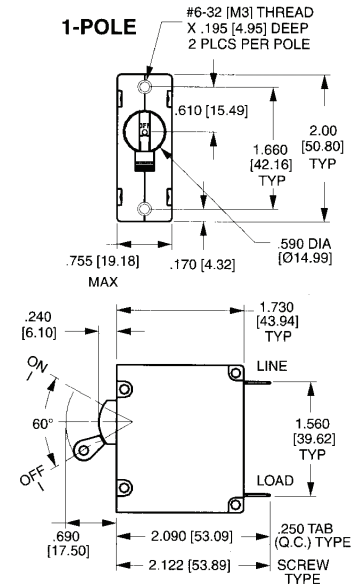


CBS-50A-SP-IG

CBS-50A-DP

Single pole	Rating (A)	Double pole	Rating (A)	Triple pole	Rating (A)
CBS-5A-SP	5	CBS-10A-DP	10	CBS-50A-TP / 50	50
CBS-10A-SP	10	CBS-15A-DP	15	D / Pold trip coil pole	Volts (V)
CBS-15A-SP	15	CBS-20A-DP	20	CBS-15A-DP-TC230	230
CBS-20A-SP	20	CBS-25A-DP	25	CBS-20A-DP-TC230	230
CBS-25A-SP	25	CBS-30A-DP	30	CBS-30A-DP-TC230	230
CBS-30A-SP	30	CBS-40A-DP	40	CBS-50A-DP-TC230	230
CBS-40A-SP	40	CBS-50A-DP	50		
CBS-50A-SP-IG	50				

Compatible with BEP panels.



Handle Lock

Image shows "handle lock" as used in all our battery management panels for essential CBs to prevent accidental or unintended actuation of essential circuits CB's from either the "on" or "off" position. (ordered separately)

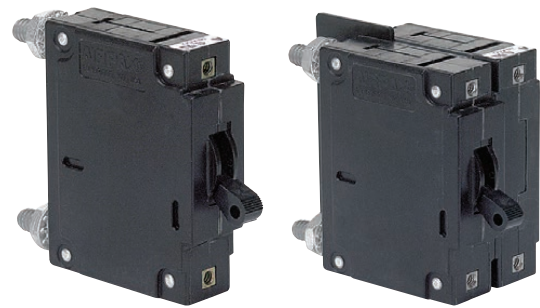
Part # 121-710-1101/1

IUL Magnetic Circuit Breakers

Provide reliable circuit protection and accurate circuit control for equipment in the international market place. BEP uses the IUL range of circuit breakers where current requirements exceed 50A and are within 100A. Available in single and double pole with triple pole available on special orders.

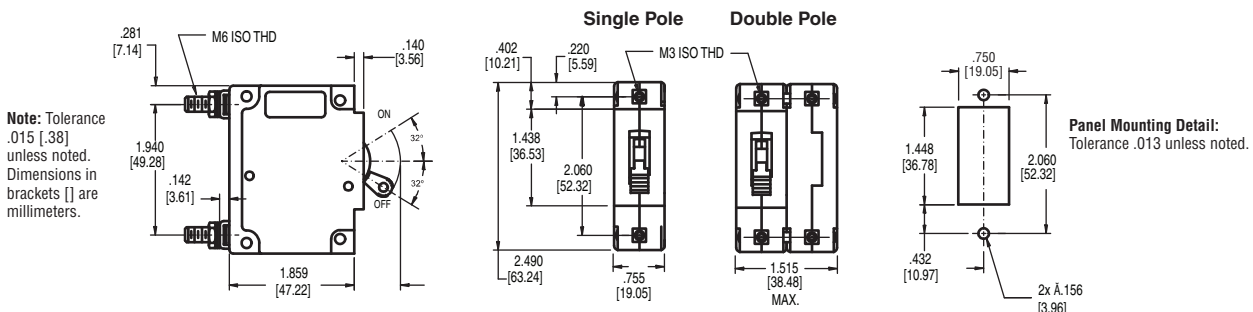
Single pole	Rating (A)	Double pole	Rating (A)	Triple pole	Rating (A)
CBL-50A-SP	50	CBL-50A-DP	50	CBL-80A-TP	80
CBL-60A-SP	60	CBL-60A-DP	60	CBL-100A-TP	100
CBL-75A-SP	75	CBL-75A-DP	75		
CBL-100A-SP	100	CBL-100A-DP	100		

Compatible with BEP panels.



CBL-50A-SP

CBL-100A-DP



Switches

We have expanded our line to cover all of your manual switch needs.

BEP Marine now offers a full line of manual switches including: toggle, rocker, push/pull, push-button, solenoids, and relays. The comprehensive selection ensures that BEP has the right switch to meet your needs. All of our switches are shock and weather resistant and built for harsh marine and industrial environments. In addition, common applications are associated with each style to simplify selection. BEP switches are available in the following classifications:



SPST

Single Pole, Single Throw:

- Turns a single circuit on and off
- 1 input and 1 output terminals



DPST

Double Pole, Single Throw:

- Turns two circuits on simultaneously
- 2 input and 2 output terminals
- Each input terminal has a dedicated output terminal



SPDT

Single Pole, Double Throw:

- Turns one of two circuits on and off
- 1 input and 2 output terminals



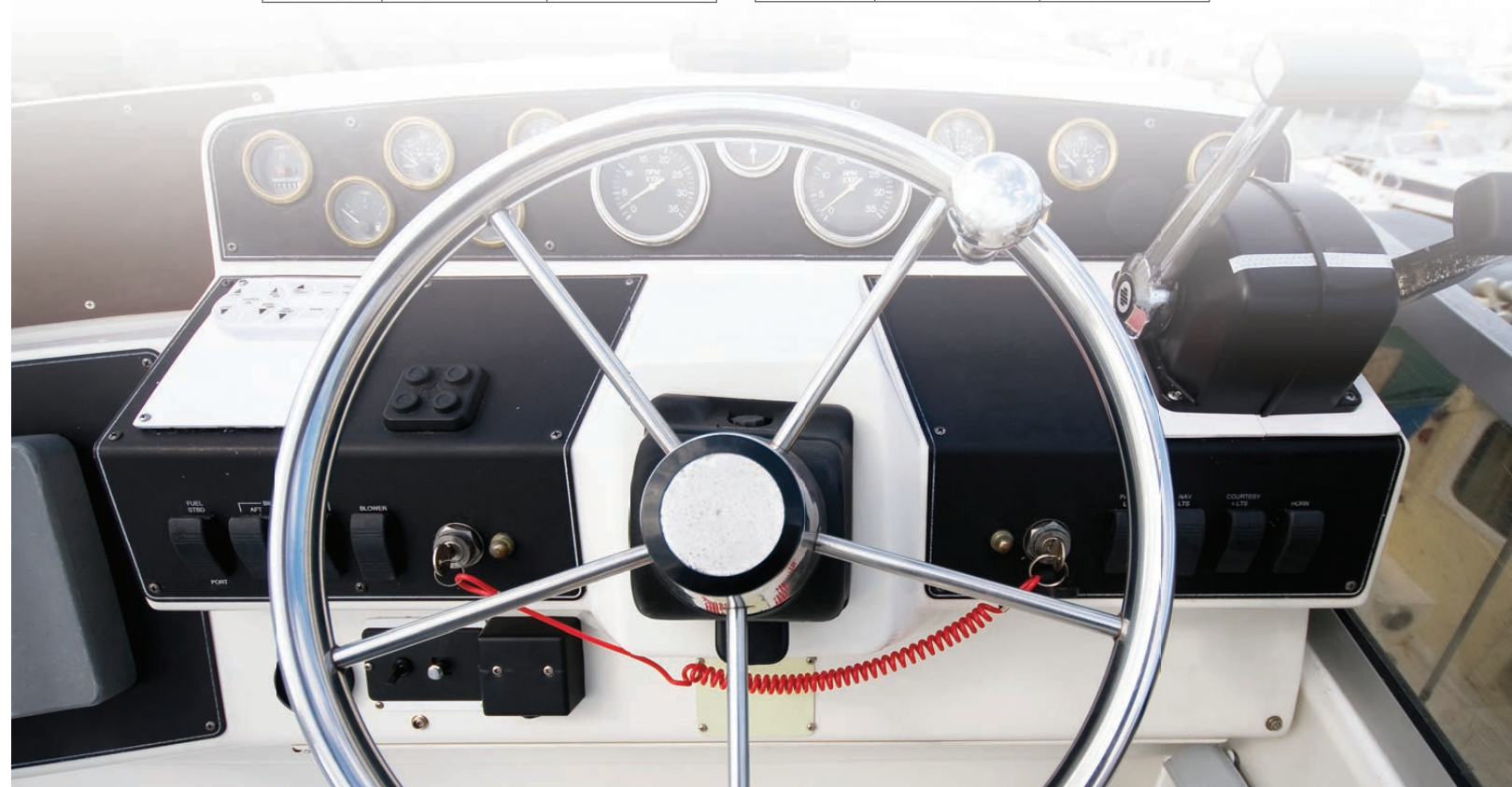
DPDT

Double Pole, Double Throw:

- Turns one circuit in each of 2 pairs of circuits
- 2 input and 4 output terminals
- Enables different modes of operation on a circuit

Action	Style	Primary Use
SPST	Off-On	Lights
SPST	Off-(On)	Horn
SPDT	On-Off-On	Nav Lights
SPDT	(On)-Off-On	Bilge Pump
SPDT	On-Off-(On)	Bilge Pump
SPDT	(On)-Off-(On)	Trim Tabs
SPDT	On-On	Hallway Lights

Action	Style	Primary Use
DPST	Off-On	Nav Lights
DPST	Off-(On)	Dual Horns
DPDT	On-Off-On	Nav Lights
DPDT	(On)-Off-On	Dual Wipers
DPDT	On-Off-(On)	Dual Wipers
DPDT	(On)-Off-(On)	Hatches
DPDT	On-On	Hallway Lights



Contura Switches **NEW**

- Shock and weather resistant for use in harsh marine and industrial environments
- Compatible with 12V and 24V systems, rated for up to 20A (12V)
- Standard or illuminated actuators
- Mount in BEP Rocker/Contura switch brackets

Ideal for:

- Interior and Exterior Lighting
- Trim Tabs
- Power Hatches
- Horns
- Wipers

Part #	1001801	1001802	1001803	1001805	1001804	1001806
Type	SPST			SPDT		
Action	Off-On	Off-(On)	On-Off-On	On-Off-(On)	(On)-Off-(On)	(On)-Off-(On)
Nominal Voltage	12V/24V DC	12V/24V DC	12V/24V DC	12V/24V DC	12V/24V DC	12V/24V DC
Ratings	20A at 12V DC, 15A at 24V DC	20A at 12V DC, 15A at 24V DC	20A at 12V DC, 15A at 24V DC	20A at 12V DC, 15A at 24V DC	20A at 12V DC, 15A at 24V DC	20A at 12V DC, 15A at 24V DC
Termination Type	1/4" blades	1/4" blades	1/4" blades	1/4" blades	1/4" blades	1/4" blades
LED	● 1-Amber	None	● 2-Amber	● 1-Amber	None	None

Part #	1001811	1001810	1001812	1001808	1001807	1001809
Type	DPST			DPDT		
Action	Off-On	Off-(On)	On-On	On-Off-On	On-Off-(On)	(On)-Off-(On)
Nominal Voltage	12V/24V DC	12V/24V DC	12V/24V DC	12V/24V DC	12V/24V DC	12V/24V DC
Ratings	20A at 12V DC, 15A at 24V DC	20A at 12V DC, 15A at 24V DC	20A at 12V DC, 15A at 24V DC	20A at 12V DC, 15A at 24V DC	20A at 12V DC, 15A at 24V DC	20A at 12V DC, 15A at 24V DC
Termination Type	1/4" blades	1/4" blades	1/4" blades	1/4" blades	1/4" blades	1/4" blades
LED	● 1-Amber	None	● 2-Amber	● 2-Amber	● 1-Amber	None

() = Momentary

Contura and Rocker Switch Mounting Brackets **NEW**

- Mount multiple Contura or Rocker style switches in one opening
- Provides a neat, finished appearance on dash or panel surfaces



1001718 Plug

1001717 Single

1001703 End (L or R)

1001702 Double








1001701 Triple (plug included)







Rocker Switches **NEW**

- Shock and weather resistant for use in harsh marine and industrial environments
- Available in 12V and 24V system configurations
- 10A, 20A, and heavy duty 25A (12V) rated options
- Standard and illuminated actuators

Ideal for:

Interior and Exterior Lighting
Horns
Wipers
Trim Tabs
Power Hatches

							
Part #	1001705	1001707	1001708	1001714	1001716	1001704	1001709
Type	SPST						
Action	Off-On	Off-On	Off-On	Off-On	Off-On	Off-On	Off-(On)
Nominal Voltage	12V DC	12/24V DC	12V DC	12V DC	12V DC	12/24V DC	12V DC
Ratings	10A at 12V DC	20A at 12V DC, 10A at 24V DC	25A at 12V DC	25A at 12V DC	25A at 12V DC	20A at 12V DC, 15A at 24V DC	25A at 12V DC
Termination Type	1/4" blades	#8-32 screws	#8-32 screws	1/4" blades	1/4" blades	1/4" blades	1/4" blades
LED	● Red	None	● Red	● Red	● Changeable	None	None

						
Part #	1001706	1001710	1001715	1001711	1001712	1001713
Type	SPDT			DPDT		
Action	On-On	On-Off-On	On-Off-On	(On)-Off-(On)	On-Off-On	(On)-Off-(On)
Nominal Voltage	12V DC	12V DC	12V DC	12V DC	12V DC	12V DC
Ratings	10A at 12V DC	25A at 12V DC	25A at 12V DC	25A at 12V DC	25A at 12V DC	25A at 12V DC
Termination Type	1/4" blades	1/4" blades	1/4" blades	1/4" blades	1/4" blades	1/4" blades
LED	None	None	● 2-Red	None	None	None

() = Momentary

Contura and Rocker Switch Mounting Brackets **NEW**



- Mount multiple Contura or Rocker style switches in one opening
- Provides a neat, finished appearance on dash or panel surfaces



Contact Switches **NEW**

- Universal applications for marine and industrial environments
- Choose from red or black actuator styles

Ideal for:
 Horns
 Other Momentary Applications







		
Part #	1001401	1001402
Type	SPST	
Action	Off-(On)	Off-(On)
Nominal Voltage	12V DC	12V DC
Ratings	10A at 12V DC	10A at 12V DC
Termination Type	1/4" blades	1/4" blades
Button Color	● Red	● Black

() = Momentary

Push Button Switches and Caps **NEW**

- Offered in a variety of weather resistant options to suit any application environment
- Suitable for 6–36V system configurations with up to 35A ratings (12V)
- Momentary actuation ideal for use with horns
- Optional weather proof rubber caps available with threaded or press-on installation

Ideal for:
 Horns

						
Part #	1001503	1001504	1001505	1001506	1001507	1001508
Type	SPST					
Action	Off-(On)	Off-(On)	Off-(On)	Off-(On)	Off-(On)	Off-(On)
Nominal Voltage	6–36V DC	6–36V DC	6–36V DC	6–36V DC	6–36V DC	6–36V DC
Ratings	10A at 12V DC	35A at 12V DC	10A at 12V DC	10A at 12V DC	35A at 12V DC	35A at 12V DC
Termination Type	#8–32 screws	#8–32 screws	#8–32 screws	wire leads, 16 AWG, 8"	#8–32 screws	#8–32 screws

() = Momentary

Push Button Caps



1001502
Screw Fit









1001501
Press Fit

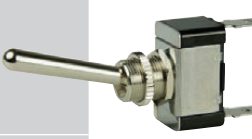



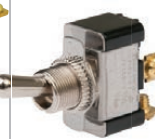
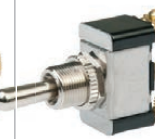

Toggle Switches **NEW**







- Shock and weather resistant for use in harsh marine and industrial environments
- Available in 12V and 24V system configurations
- 10A and heavy duty 25A (12V) rated options
- Standard or illuminated actuators

Ideal for:


Interior and Exterior Lighting
Horns
Wipers
Trim Tabs
Power Hatches

						
Part #	1001901	1001906	1001902	1001908	1002010	1002006
Type	SPST					
Action	Off-On	Off-On	Off-On	Off-On	Off-On	Off-(On)
Nominal Voltage	12V DC	12V DC	12V DC	12V DC	12V/24V DC	12V/24V DC
Ratings	25A at 12V DC	25A at 12V DC	25A at 12V DC	25A at 12V DC	25A at 12V DC, 15A at 24V DC	25A at 12V DC, 15A at 24V DC
Terminal Type	1/4" blade	1/4" blade	#6-32 screws	#6-32 screws	wire leads, 14 AWG, 10"	wire leads, 14 AWG, 10"
LED	None	● Red	None	● Red	None	None

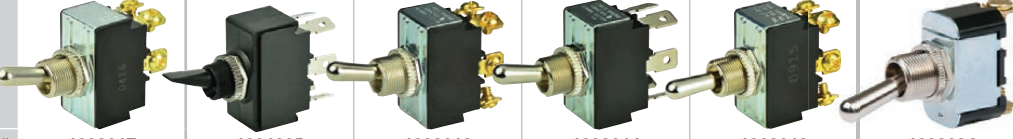
							
Part #	1002013	1002021	1002022	1002002	1002024	1002025	1002023
Type	SPST						
Action	Off-On	Off-On	Off-On	Off-(On)	On-Off	Off-On	Off-On
Nominal Voltage	12V/24V DC	12V DC	12V DC	12V DC	12V/24V DC	12V/24V DC	12V DC
Ratings	25A at 12V DC, 15A at 24V DC	10A at 12V DC	10A at 12V DC	25A at 12V DC	25A at 12V DC, 15A at 24V DC	25A at 12V DC, 15A at 24V DC	10A at 12V DC
Terminal Type	1/4" terminals	#6-32 screws	#6-32 screws	#6-32 screws	#6-32 screws	#6-32 screws	wire leads, 18 AWG, 6"
LED	None	None	None	None	None	None	None

						
Part #	1001907	1001903	1001904	1002001	1002015	1002004
Type	SPDT					
Action	On-Off-On	On-Off-On	(On)-Off-(On)	On-Off-On	On-Off-(On)	(On)-Off-(On)
Nominal Voltage	12V DC	12V DC	12V DC	12V DC	12V/24V DC	12V/24V DC
Ratings	25A at 12V DC	25A at 12V DC	25A at 12V DC	25A at 12V DC	25A at 12V DC, 15A at 24V DC	25A at 12V DC, 15A at 24V DC
Terminal Type	1/4" blades	#6-32 screws	#6-32 screws	1/4" blades	#6-32 screws	#6-32 screws
LED	● Red	None	None	None	None	None

() = Momentary




Part #	1002008	1002007	1002009
Type	SPDT		
Action	On-On	On-Off-On	(On)-Off-(On)
Nominal Voltage	12V/24V DC	12V/24V DC	12V/24V DC
Ratings	25A at 12V DC, 15A at 24V DC	25A at 12V DC, 15A at 24V DC	25A at 12V DC, 15A at 24V DC
Terminal Type	wire leads, 14 AWG, 10"	wire leads, 14 AWG, 10"	wire leads, 14 AWG, 10"
LED	None	None	None



Part #	1002017	1001905	1002018	1002014	1002012	1002026
Type	DPST	DPDT				
Action	Off-On	On-Off-On	On-Off-On	On-Off-(On)	(On)-Off-(On)	On-Off-On
Nominal Voltage	12V DC	12V DC	12V/24V DC	12V DC	12V/24V DC	12V/24V DC
Ratings	25A at 12V DC	25A at 12V DC	25A at 12V DC, 15A at 24V DC	25A at 12V DC	25A at 12V DC, 15A at 24V DC	25A at 12V DC, 15A at 24V DC
Terminal Type	#6-32 screws	1/4" blades	#6-32 screws	1/4" blades	#6-32 screws	#6-32 screws
LED	None	None	None	None	None	None

Sealed Dipped Switches



Part #	1002016	1002003	1002011	1002005
Type	SPST		SPDT	
Action	Off-On	Off-(On)	On-Off-On	(On)-Off-(On)
Nominal Voltage	12V DC	12V/24V DC	12V/24V DC	12V/24V DC
Ratings	25A at 12V DC	25A at 12V DC, 15A at 24V DC	25A at 12V DC, 15A at 24V DC	25A at 12V DC, 15A at 24V DC
Terminal Type	wire leads, 16 AWG, 8"	wire leads, 16 AWG, 8"	wire leads, 16 AWG, 8"	wire leads, 16 AWG, 8"
LED	None	None	None	None

() = Momentary

Toggle Switch Boots NEW

- UV resistant, resists cracking and discoloration
- Full boot provides maximum protection. IP67 rated, will withstand saltwater and fresh water immersion up to 30 min.
- Tipless boot provides increase weather resistance while retaining the look of the stainless actuator










Push-Pull Switches **NEW**

- Push-Pull switches are well suited for managing a variety of single or multiple circuit lighting applications
- Shock and weather resistant for use in harsh marine and industrial environments
- Suitable for 6–36V system configurations with up to 10A ratings (12V)


Ideal for:

Single or multiple circuit lighting applications

				
Part #	1001306	1001302	1001303	1001307
Type	SPST			
Action	Off-On	Off-On	Off-On (two circuit)	Off-On
Nominal Voltage	6–36V DC	6–36V DC	6–36V DC	6–36V DC
Ratings	10A at 12V DC	10A at 12V DC	10A at 12V DC	10A at 12V DC
Termination Type	wire leads, 16 AWG, 8"	#8–32 screws	#8–32 screws	#8–32 screws





			
Part #	1001304	1001301	1001305
Type	SPDT		
Action	Off-On1-On2	Off-On1-On1&2	Off-On1&2-On1&3
Nominal Voltage	6–36V DC	6–36V DC	6–36V DC
Ratings	10A at 12V DC	10A at 12V DC	10A at 12V DC
Termination Type	#8–32 screws	#8–32 screws	#8–32 screws





Pull Switch **NEW**

	
Part #	1001308
Type	SPST
Action	Off-(On)
Nominal Voltage	6–36V DC
Ratings	10A at 12V DC
Termination Type	#8–32 screws

Ignition Switches **NEW**


- Available in a variety of Off/On/Accessory/Ignition configurations to suit specific applications
- Suitable for 6–36V DC system configurations
- All ignition switches include 2 keys

			
Part #	1001605	1001608	1001607
Action	Off–On	Off–On	Off–Ignition & Accessory–Start
Nominal Voltage	12V DC	12V DC	12V DC
Ratings	Ignition 10A at 12V DC	5A at 12V DC	Ignition 10A, Start 5A at 12V DC
Termination Type	#8–32 screws	#8–32 screws	#8–32 screws

			
Part #	1001610	1001604	1001609
Action	Off–Ignition–Start	Off–Ignition & Accessory–Start	Accessory–Off–Ignition & Accessory–Start
Nominal Voltage	6–36V DC	12–48V DC	12V DC
Ratings	15A Ignition, 5A Start	10A at 12V DC, 5A at 24V DC, 3A at 36V DC, 2A at 48V DC	Accessory 10A, Ignition 5A, Start 5A at 12V DC
Termination Type	#8–32 screws	Deutsch Connector (included)	#8–32 screws

Alarm **NEW**


- A convenient way to add alarm functionality to your dash or panel
- Buzzer sounds and bright red light illuminates when voltage is present
- For use with temperature, oil pressure, and engine warning alarm kits



Part #	1002301
Family	12V
Nominal Voltage	12V DC
Termination Type	#8-32 screws
LED	● Red

Master Disconnect **NEW**

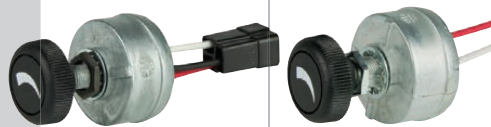
- Compact lever-operated battery disconnect switch
- Rated for 175A for use in 12V DC systems
- Suitable for 6-36V DC system configurations
- Includes face plate



Part #	1001001	1001002
Action	Off-On	Off-On
Family	175A	125A
Nominal Voltage	6-36V DC	6-36V DC
Ratings	175A at 12V continuous	175A at 12V continuous
Termination Type	3/8" Brass Nut	3/8" Brass Nut

Dimmer Switches **NEW**


- Easily control the brightness of incandescent bulbs from dim to bright
- Not intended for use with LED lights



Part #	1002101	1002102
Family	12V - 4A	12V - 7A
Nominal Voltage	12V DC	12V DC
Ratings	4A at 12V DC	7A at 12V DC
Termination Type	3-way connector	wire leads, 16 AWG, 2"

Kill Switch **NEW**









- Ideal for adding engine-stop safety to older boats
- Available as a switch & lanyard combo, or replacement lanyard only



Part #	1001601	1001602
Family	Switch & Lanyard	Lanyard Only
Nominal Voltage	12-24V DC	—
Ratings	10A at 12-24V DC	—
Termination Type	1/4" blades	—






LED Pilot Indicator **NEW**



- This 12V solid-state LED never needs replacement
- Feature bright chrome-plated body, washer and hex nut
- Polarized quick connect terminals for ease of wiring
- Available in Amber, Red, Green, and Blue

				
Part #	1001101	1001102	1001103	1001104
Family	12V	12V	12V	12V
Nominal Voltage	12V DC	12V DC	12V DC	12V DC
Termination Type	1/4" blades	1/4" blades	1/4" blades	1/4" blades
LED	 Amber	 Blue	 Green	 Red

Solenoids **NEW**

- Remotely switch high amperage loads with a low amperage on-off switch
- Rated from 65A up to 100A for use in 12V DC systems
- Available with steel and PVC coated housings

					
Part #	1002203	1002201	1002205	1002204	1002202
Family	Remote Switching	Motor Reversing	PVC Coated	Remote Switching	Solid State
Nominal Voltage	12V DC	12V DC	12V DC	12V DC	9-31V DC
Ratings	65A at 12V DC	75A at 12V DC	85A at 12V DC	85A at 12V DC	85A at 12V DC
Termination Type	10-32 thread and 5/16-24 thread	5/16-24 thread & 1/4 blade	10-32 thread and 5/16-24 thread	10-32 thread and 5/16-24 thread	5/16-18 thread & wire leads, 16 AWG, 8"
Amperage	65A	75A	85A	85A	85A

		
Part #	1002206	1002207
Family	Engine Starting	Remote Switching
Nominal Voltage	12V DC	12V DC
Ratings	100A at 12V DC	120A at 12V DC
Termination Type	5/16"-24 thread	10-32 thread and 5/16-24 thread
Amperage	100A	120A

POWER DISTRIBUTION PANELS

Switch Panels



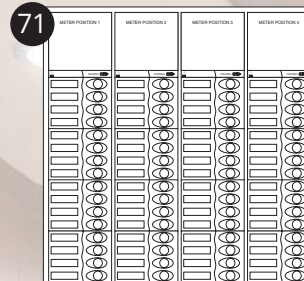
A range of switch panels for interior and exterior use, choices with and without in-built circuit protection.

Switches



Switch options for interior and exterior including high quality waterproof stainless steel push buttons with LED status.

Custom Panel Layouts



Custom Panels can be made to fit the needs of custom and production boatbuilders. For example, a panel can be made up with eight circuit breakers, four systems in operation lights plus a meter, or a panel can consist of a mixture of analog and digital meters if required.



POWER DISTRIBUTION PANELS

DC Circuit Breaker Panels

72



Off-the-shelf solution for controlling your vessel or vehicle's DC system with quality panels which include backlighting and circuit on status. Monitoring options range from basic analog metering, through to full systems in operation and tank monitoring.

AC Circuit Breaker Panels

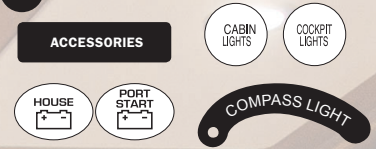
78



Complimentary to the standard DC Panels, these AC circuit break panels cover systems ranging from 4 outputs through to multiple inputs and 16 output circuits. Monitoring options range from analog through to comprehensive digital meters.

Circuit Breaker Panel Labels

81



Circuit Breaker Panel & Switch Labels: Standard labels sets for circuit breaker panels, switch panels and for battery.



Contour Generation II Switch Panels

The Contour Generation II Spray Proof Range offers unique styling using the latest techniques in injection molding. The switch tray is molded plastic with a rubber gasket and seal molded into the plastic. The cover is molded in a clear plastic with a rubber over-mold allowing the flexibility to operate the switches through the front of the panel while providing a clear window for label backlighting. The contour wave strip is interchangeable allowing for custom colors for OEM applications. Standard color supplied is black panel with charcoal strip.

G2 can be mounted vertically or horizontally and is available in 2, 4 and 6 way configurations.

A joiner (CG2-JB) is available for multiple panel installations. Supplied complete with on/off switches, these can be interchanged with a variety of different switch options.

- Replaceable clip-on contour wave (customized colors available for OEMs)
- Mounting screws covered by switch cover
- Backlit LEDs
- Flexible overshoot cover allows for easy switch operation
- Ribbed gasket provides watertight seal with switch cover
- Molded gasket on panel base creates watertight seal against mounting surface
- Unique design allows labels to be read whether mounted vertically or horizontally
- Switches rated at 16A DC
- Panel supplied standard with label SET-G2-1 (labels SET-G2-2 ordered separately, page 85)



Switches	Color	Fuses	Label Set #	Part #
2	Charcoal	No	SET-G2-1	CG2-2W
2	Charcoal	1	SET-G2-1	CG2-2W-F
4	Charcoal	No	SET-G2-1	CG2-4W
4	Charcoal	2	SET-G2-1	CG2-4W-F
6	Charcoal	No	SET-G2-1	CG2-6W
6	Charcoal	3	SET-G2-1	CG2-6W-F
2	White	No	SET-G2-1	CG2-2W-W
2	White	1	SET-G2-1	CG2-2W-F-W
4	White	No	SET-G2-1	CG2-4W-W
4	White	2	SET-G2-1	CG2-4W-F-W
6	White	No	SET-G2-1	CG2-6W-W
6	White	3	SET-G2-1	CG2-6W-F-W



Spare Switches for Contour Generation II

Part #	Switch type
SW-CG1	On/Off
SW-CG2	On/Off Momentary
SW-CG3	On/Off/On
SW-CG4	Momentary On/Off/ Momentary On
SW-CG5	On/On

Related Products

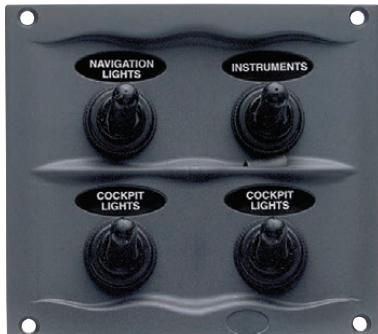


Label Sets
page 85

Waterproof Series Panels

- Compact panel size
- Sprayproof inline fuse holders with fuses included
- Waterproof power receptacles (16A) in five and three way models
- Waterproof to IP56
- Switches rated at 20A DC
- LxWxH is 3.75" x 4.25" x 2.9" (95 x 107 x 75 mm)
- Panel supplied with label LBL-WP

Switches	Color	Part #
3	charcoal	900-3WPS
	white	900-3WPSW
4	charcoal	900-4WP
	white	900-4WPW
5	charcoal	900-5WPS
	white	900-5WPSW
6	charcoal	900-6WP
	white	900-6WPW



900-4WP



900-6WPW



900-5WP

Related Products

NAVIGATION LIGHTS
Label Sets
page 83

Micro Series Panels

- Green LED backlit labels; red when on
- Full range of text or graphic labels available; mix n' match labels and panels to suit
- Switches rated 20A DC
- 3.4" x 2.3" x 1.2" (86 x 58 x 28 mm)
- Waterproof to IP56
- Label see LBL-MIC included; additional label sets available



900-2WPOFO



900-2WP
2 x 2 way switches



900-2WPMOM



900-SOP
2 x 10 mm LEDs showing systems in operation



900-BA
Bilge alarm and bilge pump control panel includes: 1 on/off/on switch for auto manual control; 1 warning light and alarm for high water level alarm. (Float switch ordered separately - Part # SB1-FS)

Related Products

HOLDING TANK PUMP
Label Sets
page 85

Contour Switch Panels

- CSP6-PTC(W) uses the latest in overload protection technology— Positive Temperature Co-efficient
- Green LED backlit labels; red systems on indicator
- Switches rated 20A DC
- Removable cover plates conceal screws & water drain
- Label set SET-1SP included
- **CSP6(W)** Includes 6 switches unfused for installation where separate fused supply is available.
- **CSP6-F(W)** Includes 6 switches and 3 inline fuse holders with fuses behind panel.
- **CSP6-PTC(W)** fuses are solid state resettable fuses which change to a high resistance device on over-current. The panel is supplied with 6 x 9A PTC fuses mounted internally. No more changing fuses!

Part # charcoal	Part # white	Fuses	PTC	LxWxH	Label Set #
CSP6	CSP6W	No	No	6.25" x 4.4" x 2.5"	SET-1SP
CSP6-F	CSP6-FW	3	No	158 x 112 x 64 mm	
CSP6-PTC	CSP6-PTCW	No	6		



CSP6

Related Products

ACCESSORIES

Label Sets
page 83

Spare Parts for Waterproof, Micro and Contour Switch Panels



Toggle Switches

Part #	Operation
SW-32111	on/off
SW-32113	on/on
SW-32114	on/off/on
SW-32115	(on)off/momentary
SW-32120	(on)off(on) momentary
SW-32123	on/off/on double pole



Splash Proof Boot SW-M331

Deluxe 12V Plug & Receptacle

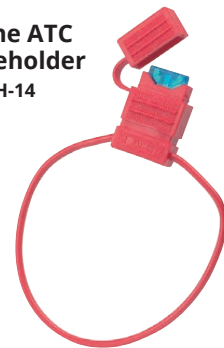


12VRC



12VPG

Inline ATC Fuseholder WAFH-14



Contour Interior 1000 Series Switch Panels

The smart, economical interior option for smaller vessels. Fully modular and built with ease of access in mind.

- Removable frame conceals mounting screws
- Concealed ATC fuses accessible from front of panel; ATC fuses supplied
- 16A rocker switches
- Panels are modular and square for vertical or horizontal stacking
- LED Systems On light
- Supplied with: Spacer for accurate mounting placement, label set sheet # SET-1000
- Maximum panel load 50A

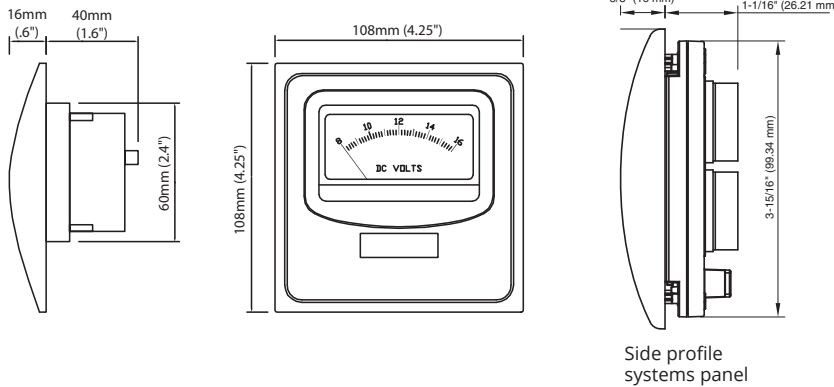


1000-VM-12V Voltmeter 1000-AM50 Ammeter 1000-6W Switch Panel

Description	Part #
10A Ammeter (internal shunt)	1000-AM10
20A Ammeter (internal shunt)	1000-AM20
50A Ammeter (external shunt, supplied)	1000-AM50
12 Volt Systems	1000-VM-12V
24 Volt Systems	1000-VM-24V
DC Systems Monitor	1000-DCSM
AC Systems Monitor	1000-ACSM

Now available with digital AC and DC systems monitors

Part #	Switches	Fuses	Voltage
1000-6W	6	6x 15A	12
1000-6W-24V	6	6x 15A	24



Related Products



SW-RVS2
ON/OFF



Label Sets
page 85

Contour 1100 Series Switches

The Contour Interior switch can be either surface or recess mounted.

The interior series is supplied standard with a three terminal on/on switch which can be used for on/off circuits or two way light installations.

For applications, eg: shower drain pumps or electric toilets, momentary switches can be interchanged into the switch plate.

Switches can be turned 90° for horizontal mounting, and all are current rated at 10A DC.

All switches include a label set.

Replacement and/or different Operational Switch

Description	Part #
On/On (On/Off)	SW-6064B3P
On/Off/On	SW-6064C3P
On/Off Spring-loaded in "on" position	SW-6064D3P



Related Products



Labels Sets
page 83

Part #	1100-BK	1101-BK	1101-BK-TS
Interior/Exterior	Interior	Interior	Exterior
Single/Double	Single	Double	Double
Rated	10A	10A	20A
LxWxH	2.4" x 1.2" x 0.75" 60 x 30 x 18 mm	3.6" x 1.2" x 0.75" 91 x 30 x 18 mm	3.6" x 1.2" x 0.75" 91 x 30 x 18 mm



12V & 24V Push-button Switches & Buzzers with LED Ring

New push-button Switches & Buzzers are built to last with their stainless steel components and silver alloy contacts. The through panel mount switches are ideal for lighting, switch, or dash panels, with colored rings that can be wired to either display power to the system or switch back lighting. The product line includes both switches and warning buzzers with LED light rings.

Features & Benefits:

- Maximum switch current rating 5 amps
- IP67 environmental protection switches
- IP50 environmental protection buzzers
- 80 decibel buzzer sound intensity
- Warning buzzers flash red on alarm

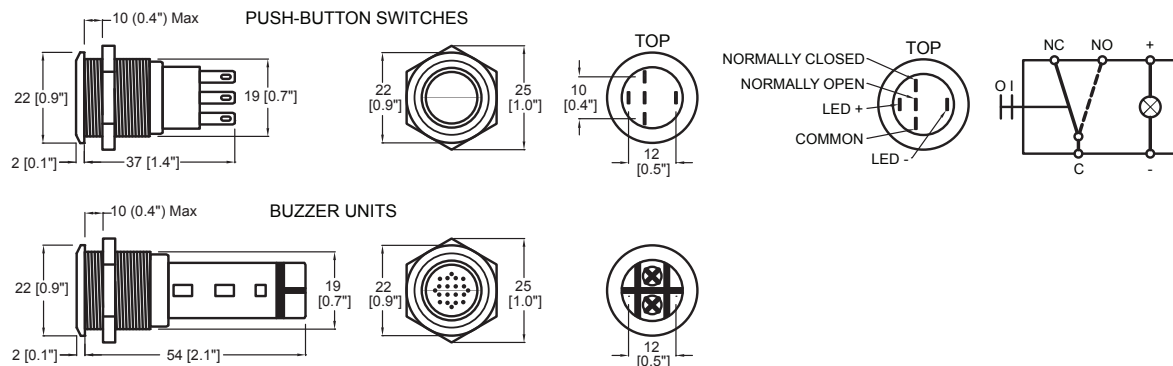


12V

Description	Color	Part #	OEM #
Latching On/Off	Red	80-511-0001-00	80-511-0001-01
Latching On/Off	Blue	80-511-0003-00	80-511-0003-01
Latching On/Off	Green	—	80-511-0011-01
Momentary (On)/Off	Red	80-511-0002-00	80-511-0002-01
Momentary (On)/Off	Blue	80-511-0004-00	80-511-0004-01
Momentary (On)/Off	Green	—	80-511-0012-01
Buzzer	Red	80-511-0009-00	80-511-0009-01

24V

Description	Color	Part #	OEM #
Latching On/Off	Red	80-511-0005-00	80-511-0005-01
Latching On/Off	Blue	80-511-0007-00	80-511-0007-01
Momentary (On)/Off	Red	80-511-0006-00	80-511-0006-01
Momentary (On)/Off	Blue	80-511-0008-00	80-511-0008-01
Buzzer	Red	80-511-0010-00	80-511-0010-01



Connection Cable

This 300 mm (12") cable simply pushes onto the back of the push button switches and features 0.8 mm² / 18g cables for switch and backlight connections that comply with ISO/ABYC. Other end is stripped wire for easy connection.



Part # 80-511-0031-00
OEM # 80-511-0031-01

Custom Panel Layouts

Although the panels shown in this catalog are our standard range, there are a number of changes that can be made to fit the needs of custom and production boatbuilders. For example, a

panel can be made up with eight circuit breakers, four systems in operation lights plus a meter, or a panel can consist of a mixture of analog and digital meters if required.



See label index starting on page 81.

Mark your selections:

Voltage: AC DC 12V 24V 110V 230V

Backlighting: 12V 24V

Meters: Yes Blank

Digital: ACSM (page 89) DCSM (page 88) 600-VM3 600-TG 600-SOM

Meter Position: 1 2 3 4

Anlg Volts DC: 8-16 16-32

Anlg Amps DC: 0- 50 0-100 0-150

Anlg Volts AC: 0-150 0- 300

Anlg Amps AC: 0-60 0-100AAC

Meter Position: 1 2 3 4

Meter Position: 1 2 3 4

Meter Position: 1 2 3 4

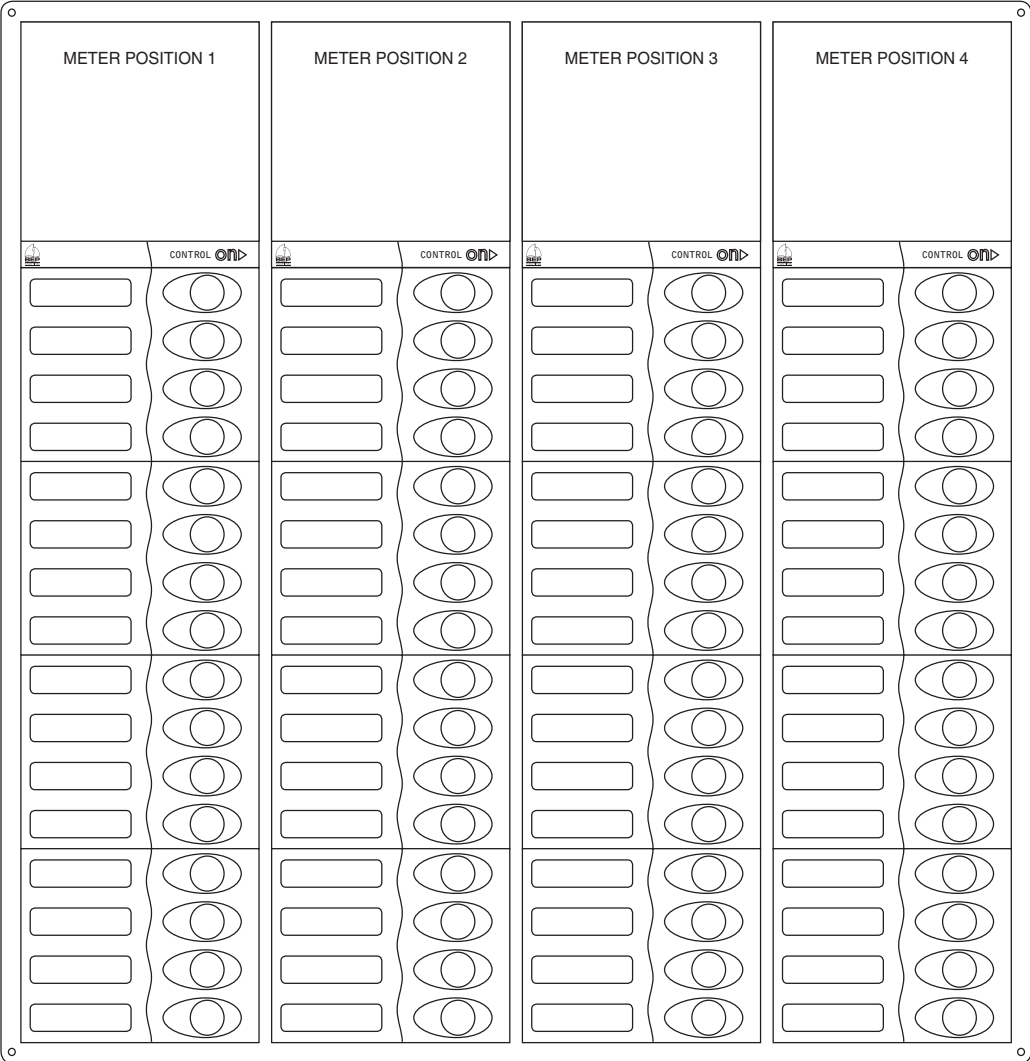
Meter Position: 1 2 3 4

If the panel involves a total custom layout, as described above, a specific Part # will be applied to that panel and quoted accordingly.

If the design is unable to be achieved we will notify the customer.

Alternatively a customer may request a standard panel with circuit breakers laid out to their requirements with labels factory fitted. This involves a personalized layout charge with the following part numbers applying, eg:
901V is ordered as NPF-901V.
902A-12V-12V is ordered as NPF-902A-12V-12V

When ordering personalized panels see our label selection that starts on page 81. We can also do specific label sets, priced per-job.



DC Circuit Breaker Panels—No Meters

- Red systems on LED
- 12V (24V Backlighting Upgrade Kits on page 73)
- Marine grade powder coated aluminium
- ABYC standard voltage indication
- Green LED backlit labels
- Stylish clip on contour fascia
- Label set(s) and buss bar supplied with panels
- Depth for mounting 2.5" (64 mm) all panels

▶ POWER tip

Maximum Amperage Explained

To reach the 160A maximum stated amperage rating each copper bus on rear of DC Panel requires a separate 16 mm² / 6 AWG feed cable that is attached to center of the bus bar i.e. on a 16 circuit breaker panel with a single bus the feed cable should be attached between circuit breakers #8 and #9.



Part #	900-DC	901H	901V	902NMH
Total Positions	4 Loads	8 Loads	8 Loads	12 Loads
Circuit Breakers (single pole)	1x 5A, 2x 10A, 1x 15A	2x 5A, 2x 10A, 3x 15A, 1x 20A	2x 5A, 2x 10A, 3x 15A, 1x 20A	3x 5A, 4x 10A, 4x 15A, 1x 25A
Nominal Voltage	12V*	12V*	12V*	12V*
Maximum Amperage	80A	160A	160A	100A
HxWx2.5"	4.5" x 5"	4.5" x 9.75"	7.9" x 5"	4.5" x 13.9"
HxWx65 mm	115 x 127 mm	115 x 239 mm	200 x 127 mm	115 x 351 mm
Neg Bus	6 way	6 way	6 way	6 way
Label Sheet	1	1	1	1

*24V Backlighting Upgrade Kits on page 73.

Related Products

ACCESSORIES

Label Sets
page 81-82



Part #	902NMV	904NM	904NMH
Total Positions	12 Loads	16 Loads	16 Loads
Circuit Breakers (single pole)	3x 5A, 4x 10A, 4x 15A, 1x 25A	4x 5A, 5x 10A, 5x 15A, 1x 20A, 1x 25A	4x 5A, 5x 10A, 5x 15A, 1x 20A, 1x 25A
Nominal Voltage	12V*	12V*	12V*
Maximum Amperage	160A	160A per bus	80A per bus
HxWx2.5"	11.25" x 5"	7.9" x 9.75"	4.5" x 18.25"
HxWx65 mm	285 x 127 mm	200 x 239 mm	115 x 463 mm
Neg Bus	6 way	12 way	12 way
Label Sheet	1	1	1

Cutout size - 3/8" (10 mm) inside all external edges.

24V Backlighting Upgrade Kits

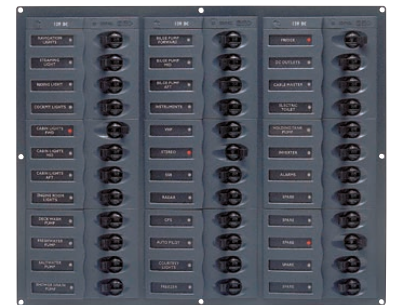
For changing 12V panels to 24V backlighting.

# of Circuits	Part #	# of Circuits	Part #	# of Circuits	Part #
4 way	RES-4WAY	20 way	RES-20WAY	36 way	RES-36WAY
8 way	RES-8WAY	24 way	RES-24WAY	44 way	RES-44WAY
12 way	RES-12WAY	28 way	RES-28WAY	56 way	RES-56WAY
16 way	RES-16WAY	32 way	RES-32WAY		



Part #	904NMV	905NM	905NMV
Total Positions	16 Loads	24 Loads	24 Loads
Circuit Breakers (single pole)	3x 5A, 4x 10A, 4x 15A, 1x 25A	5x 5A, 8x 10A, 8x 15A, 1x 20A, 1x 25A, 1x 30A	5x 5A, 8x 10A, 8x 15A, 1x 20A, 1x 25A, 1x 30A
Nominal Voltage	12V*	12V*	12V*
Maximum Amperage	160A	160A per bus	160A per bus
HxWx2.5"	11.25" x 5"	7.9" x 13.9"	11.25" x 9.75"
HxWx65 mm	285 x 127 mm	200 x 351 mm	285 x 239 mm
Neg Bus	6 way	12 way	12 way
Label Sheet	1	1-3	1-3

*24V Backlighting Upgrade Kits above.



Part #	906NMH	906NMV	NC36NM
Total Positions	32 Loads	32 Loads	36 Loads
Circuit Breakers (single pole)	7x 5A, 11x 10A, 11x 15A, 1x 20A, 1x 25A, 1x 30A	7x 5A, 11x 10A, 11x 15A, 1x 20A, 1x 25A, 1x 30A	8x 5A, 12x 10A, 12x 15A, 2x 20A, 1x 25A, 1x 30A
Nominal Voltage	12V*	12V*	12V*
Maximum Amperage	160A per bus	160A per bus	160A per bus
HxWx2.5"	7.9" x 18.25"	14.6" x 9.75"	11.25" x 13.9"
HxWx65 mm	200 x 463 mm	370 x 239 mm	285 x 351 mm
Neg Bus	24 way	24 way	24 way
Label Sheet	1-4	1-4	1-4, 6

DC Circuit Breaker Panels—With Digital/Analog Monitoring

- All panels are available with either Analog or Digital meters
- 12V (24V Backlighting Upgrade Kits on page 73)
- Label set(s) and buss bar supplied with panels
- Depth for mounting 2.5" (64 mm) all panels



Part #	900V-DCSM	900-AM	901V-DCSM	901V-AM	902-DCSM	902-AM	902V-DCSM	902V-AM
Meter	digital	analog	digital	analog	digital	analog	digital	analog
Total Positions	4 Loads		8 Loads		12 Loads		12 Loads	
Circuit Breakers (single pole)	1x 5A, 2x 10A, 1x 15A		2x 5A, 2x 10A, 3x 15A, 1x 20A		3x 5A, 4x 10A, 4x 15A, 1x 25A		3x 5A, 4x 10A, 4x 15A, 1x 25A	
Nominal Voltage	12V*		12V*		12V*		12V*	
Maximum Amperage	80A		160A		160A/80A buses		160A	
HxWx2.5"	7.9" x 5"		11.6" x 5"		7.9" x 9.75"		15" x 5"	
HxWx65 mm	200 x 127 mm		295 x 127 mm		200 x 239 mm		380 x 127 mm	
Neg Bus	6 way		6 way		6 way		6 way	
Label Sheet	1		1		1		1	

*24V Backlighting Upgrade Kits on page 73.



Part #	904-DCSM	904-AM	903-DCSM	903-AM	905-DCSM	905-AM	905V-DCSM	905V-AM
Meter	digital	analog	digital	analog	digital	analog	digital	analog
Total Positions	16 Loads		20 Loads		24 Loads		24 Loads	
Circuit Breakers (single pole)	4x 5A, 5x 10A, 5x 15A, 1x 20A, 1x 25A		5x 5A, 6x 10A, 7x 15A, 1x 20A, 1x 30A		5x 5A, 8x 10A, 8x 15A, 1x 20A, 1x 25A, 1x 30A		5x 5A, 8x 10A, 8x 15A, 1x 20A, 1x 25A, 1x 30A	
Nominal Voltage	12V*		12V*		12V*		12V*	
Maximum Amperage	160A per bus		160A/80A/160A buses		160A per bus		160A per bus	
HxWx2.5"	11.6" x 9.75"		7.9" x 9.75"		11.6" x 13.9"		15" x 9.75"	
HxWx65 mm	295 x 239 mm		200 x 351 mm		295 x 351 mm		380 x 239 mm	
Neg Bus	12 way		12 way		12 way		12 way	
Label Sheet	1-2		1-3		1-3		1-3	

*24V Backlighting Upgrade Kits on page 73.



Part #	906-DCSM	906-AM	906V-DCSM	906V-AM	907-AM
Meter	digital	analog	digital	analog	analog
Total Positions	32 Loads		32 Loads		48 Loads
Circuit Breakers (single pole)	7x 5A, 11x 10A, 11x 15A, 1x 20A, 1x 25A, 1x 30A		7x 5A, 11x 10A, 11x 15A, 1x 20A, 1x 25A, 1x 30A		12x 5A, 15x 10A, 15x 15A, 3x 20A, 1x 25A, 2x 30A
Nominal Voltage	12V*		12V*		12V*
Maximum Amperage	160A per bus		160A per bus		160A per bus
HxWx2.5"	11.6" x 18.25"		18" x 9.75"		15" x 18.25"
HxWx65 mm	295 x 463 mm		455 x 239 mm		380 x 463 mm
Neg Bus	24 way		24 way		2 x 24 way
Label Sheet	1-4		1-4		1-5

All analog panels supplied with one shunt, extra shunts ordered separately. Digital panels supplied with 450A-50mV shunt.
 Cutout size - 10 mm (3/8") inside all external edges.
 All panels available in 12V or 24V configuration. All part numbers shown are 12V backlighting.
 Order upgrade kits to suit number of breakers in panel. See page 73 for upgrade part number.

Related Products



Ammeters
page 95

Related Products

ACCESSORIES

Label Sets
page 81-82

Cruiser Series DC Branch Circuit Breaker Panels

- 12V / 24V
- Mimic panel for quick reference of systems in operation
- Blank space for addition of extra meter
- Digital or analog readouts
- Depth for mounting 2.5" (64 mm) all panels



Part #	NC32Y-DCSM	NC32Y-AM	NC36L-DCSM	NC36L-AM
Meter	digital	analog	digital	analog
Total Positions	32 Loads		36 Loads	
Circuit Breakers (single pole)	7x 5A, 11x 10A, 11x 15A, 1x 20A, 1x 25A, 1x 30A		8x 5A, 12x 10A, 12x 15A, 2x 20A, 1x 25A, 1x 30A	
Nominal Voltage	12V or 24V*		12V or 24V*	
Maximum Amperage	160A per bus		160A per bus	
HxWx2.5"	15" x 13.9"		15" x 13.9"	
HxWx65 mm	380 x 351 mm		380 x 351 mm	
Neg Bus	24 way		24 way	
Label Sheet	1-4, 6		1-4, 6	

Related Products

ACCESSORIES

Label Sets
page 81-82

All analog panels supplied with one shunt, extra shunts ordered separately. Digital panels supplied with 450A – 50mV shunt. Cutout size – 3/8" (10 mm) inside all external edges.

*All panels available in 12V or 24V configuration. If 24V is required, please specify when ordering by adding -24V to part number.

Double Pole Panels

- Double pole panels available in all panel sizes.
- Double pole CBs use twice the space of single pole breakers; an 8-Load single pole panel will become 4-Load when using double pole circuit breakers
- AC or DC versions available
- Single toggle



904NM-DP

Millennium Series DC Branch Circuit Breaker Panels

- 12V / 24V
- Compact sizing
- Battery monitoring using BEP multifunction meter (voltage on 3 battery banks, charge, discharge amps and amp-hours remaining on main battery bank)
- Depth for mounting 2.5" (64 mm) all panels



Part #	M28-DCSM	M32-DCSM	M44-DCSM
Meter	digital	digital	digital
Total Positions	28 Loads	32 Loads	44 Loads
Circuit Breakers (single pole)	8x 5A, 8x 10A, 8x 15A, 2x 20A, 2x 30A	7x 5A, 11x 10A, 11x 15A, 1x 20A, 1x 25A, 1x 30A	10x 5A, 14x 10A, 14x 15A, 3x 20A, 1x 25A, 2x 30A
Nominal Voltage	12V or 24V*	12V or 24V*	12V or 24V*
Maximum Amperage	160A per bus	160A per bus	160A per bus
HxWx2.5"	14.6" x 9.75"	11.25" x 13.9"	14.6" x 13.9"
HxWx65 mm	370 x 239 mm	285 x 351 mm	370 x 351 mm
Neg Bus	24 way	24 way	24 way
Label Sheet	1-4	1-4, 6	1-4, 6



Part #	M44H-DCSM	M56-DCSM
Meter	digital	digital
Total Positions	44 Loads	56 Loads
Circuit Breakers (single pole)	10x 5A, 14x 10A, 14x 15A, 3x 20A, 1x 25A, 2x 30A	12x 5A, 18x 10A, 18x 15A, 4x 20A, 2x 25A, 2x 30A
Nominal Voltage	12V or 24V*	12V or 24V*
Maximum Amperage	160A per bus	160A per bus
HxWx2.5"	11.25" x 18.25"	18" x 13.9"
HxWx65 mm	285 x 463 mm	455 x 351 mm
Neg Bus	24 way	2x 24 way
Label Sheet	1-4, 6	1-4, 6

Related Products

ACCESSORIES

Label Sets
page 81-82

AC Main Circuit Breaker Panels—No Meters

- Ideal for AC shore power installations and on board inverter installations
- For standard twin input systems, eg: one shore power and one genset input
- Depth for mounting 2.5" (64 mm) all panels



Part #	900-ACM2W-110V	900-ACM2W	900-ACM6W-110V	900-ACM6W	900-AC1-110V	900-AC1	900-ACCH-110V	900-ACCH
Nominal Voltage	110V AC	230V AC	110V AC	230V AC	110V AC	230V AC	110V AC	230V AC
Total Positions	2 Loads + 1 Input		6 Loads + 1 Input		4 Loads + 2 Inputs		2 Input Selector	
Circuit Breakers (single + double pole)	2x 15A + 1x 30A	2x 10A + 1x 20A	3x 15A, 2x 20A, 1x 25A + 1x 30A	2x 10A, 3x 15A, 1x 20A + 1x 20A	2x 15A, 2x 20A + 2x 30A	2x 10A, 2x 15A + 2x 20A	2x 30A	2x 15A
Maximum Amperage	30A	20A	30A	20A	30A	20A	30A	15A
HxWx2.5"	4.5" x 5"		7.9" x 5"		4.5" x 9.4"		7.9" x 5"	
HxWx65 mm	115 x 127 mm		200 x 127 mm		115 x 239 mm		200 x 127 mm	
Neg Bus	IS-6MM-2		IS-6MM-2		IS-6MM-2		IS-6MM-2	
Label Sheet	5		5		5		5	



Reverse Polarity Auto Trip Breaker

Now standard on all 230V, 50Hz panels (Euro and Asia-Pacific). This will automatically trip when it detects reverse polarity.

Part # CBS-20A-DP-TC230

AC Main Circuit Breaker Panels—Analog/Digital

- All available in 110V/60 Hz or 230V/50 Hz
- All supplied with transducers
- Reverse polarity indicator
- Double pole mains input CBs with side lockout
- Digital meter shows volts, amps and frequency
- LED wired to indicate live panel with mains breaker either on or off
- AC source selector ensures no cross over between AC inputs (ship or shore power)
- AC voltage/frequency label to comply with ABYC Standards



Part #	900-ACM2-AM-110	900-ACM2-AM	900-ACM6V-AM-110	900-ACM6V-AM	900-AC2H-AM-110	900-AC2H-AM
Nominal Voltage	110V AC	230V AC	110V AC	230V AC	110V AC	230V AC
Meter	analog	analog	analog	analog	analog	analog
Total Positions	2 Loads + 1 Input		6 Loads + 1 Input		8 Loads + 2 Inputs	
Circuit Breakers (single + double pole)	2x 15A + 1x 30A	2x 10A + 1x 20A	3x 10A, 2x 15A, 1x 20A + 1x 30A	2x 10A, 3x 15A, 1x 20A + 1x 20A	2x 10A, 3x 15A, 2x 20A, 1x 25A + 1x 30A, 1x 50A	1x 5A, 3x 10A, 3x 15A, 1x 20A + 1x 20A, 1x 30A
Maximum Amperage	30A	20A	30A	20A	50A	30A
HxWx2.5"	7.9" x 5"		11.6" x 5"		7.9" x 9.75"	
HxWx65 mm	200 x 127 mm		295 x 127 mm		200 x 239 mm	
Neg Bus	IS-6MM-2		IS-6MM-2		2x6 way	
Label Sheet	5		5		5	



Part #	900-AC2H-ACSM-110	900-AC2H-ACSM	900-AC2V-AM-110	900-AC2V-AM	900-AC2V-ACSM-110	900-AC2V-ACSM
Nominal Voltage	110V AC	230V AC	110V AC	230V AC	110V AC	230V AC
Meter	digital	digital	analog	analog	digital	digital
Total Positions	8 Loads + 2 Inputs		8 Loads + 2 Inputs		8 Loads + 2 Inputs	
Circuit Breakers (single + double pole)	2x 10A, 3x 15A, 2x 20A, 1x 25A + 1x 30A, 1x 50A	1x 5A, 3x 10A, 3x 15A, 1x 20A + 1x 20A, 1x 30A	1x 5A, 2x 10A, 3x 15A, 2x 20A, 1x 25A + 1x 30A, 1x 50A	1x 5A, 3x 10A, 3x 15A, 1x 20A + 1x 20A, 1x 30A	1x 5A, 2x 10A, 3x 15A, 2x 20A, 1x 25A + 1x 30A, 1x 50A	1x 5A, 3x 10A, 3x 15A, 1x 20A + 1x 20A, 1x 30A
Maximum Amperage	50A	30A	50A	30A	50A	30A
HxWx2.5"	7.9" x 9.75"		15" x 5"		15" x 5"	
HxWx65 mm	200 x 239 mm		380 x 127 mm		380 x 127 mm	
Neg Bus	2x6 way		2x6 way		2x6 way	
Label Sheet	5		5		5	



Part #	900-AC3-AM-110	900-AC3-AM	900-AC3-ACSM-110	900-AC3-ACSM	900-AC4-ACSM-110	900-AC4-ACSM
Nominal Voltage	110V AC	230V AC	110V AC	230V AC	110V AC	230V AC
Meter	analog	analog	digital	digital	digital	digital
Total Positions	12 Loads + 2 Inputs		12 Loads + 2 Inputs		16 Loads + 2 Inputs	
Circuit Breakers (single + double pole)	3x 10A, 4x 15A, 3x 20A, 1x 25A, 1x 30A + 1x 30A, 1x 50A	1x 5A, 4x 10A, 5x 15A, 1x 20A, 1x 25A + 1x 20A, 1x 30A	3x 10A, 4x 15A, 3x 20A, 1x 25A, 1x 30A + 1x 30A, 1x 50A	1x 5A, 4x 10A, 5x 15A, 1x 20A, 1x 25A + 1x 20A, 1x 30A	5x 10A, 7x 15A, 2x 20A, 1x 25A, 1x 30A + 1x 30A, 1x 80A	1x 5A, 5x 10A, 7x 15A, 2x 20A, 1x 25A + 1x 20A, 1x 50A
Maximum Amperage	50A	30A	50A	30A	80A	50A
HxWx2.5"	7.9" x 13.9"		7.9" x 13.9"		7.9" x 13.9"	
HxWx65 mm	200 x 351 mm		200 x 351 mm		200 x 351 mm	
Neg Bus	2x12 way		2x12 way		2x12 way	
Label Sheet	5		5		5	

Cutout size – 3/8" (10 mm) inside all external edges. All panels available in 12V or 24V backlighting configuration.

Related Products

ACCESSORIES

Label Sets
page 81-82

Back Panel Covers

- Designed to insulate exposed rear terminals
- Flame retardant PVC in two styles
- Flange Mount: for access to control panel back when mounted in place. Attaches to the rear of the same mounting surface as the panel.
- Panel Mount: for access only when panel is removed. Supplied with mounting pedestals.



BC-PM1



BC-FM1



BC-FM2



BC-PM2

Part #	Mount type	Cover Description	in HxWx3.5	mm HxWx90
BC-FM1	Flange	1 column 8-12 CBs + meter	15" x 5"	380 x 127
BC-FM2	Flange	2 column 8-12 CBs + meter	15" x 9.4"	380 x 239
BC-FM3	Flange	1 column 8-12 CBs	11.2" x 5"	285 x 127
BC-FM4	Flange	2 column 8-12 CBs	11.2" x 9.4"	285 x 239
BC-PM1	Panel	1 column 8-12 CBs + meter	14.2" x 4.2"	360 x 107
BC-PM2	Panel	2 column 8-12 CBs + meter	14.2" x 8.6"	360 x 219



Labels–Circuit Breaker Panels

ACCESSORIES

SET-1N

ACCESSORIES
ANCHOR LIGHT
AUTO PILOT
BILGE PUMP
CABIN LIGHTS
CABIN LIGHTS
COCKPIT LIGHTS
COMPASS LIGHTS
DC OUTLETS
DEPTHSOUNDER
FREEZER
FRESHWATER PUMP
GPS
INSTRUMENTS
LPG CONTROL
MAST LIGHT
NAVIGATION LIGHTS
SALTWATER PUMP
SHOWER DRAIN PUMP
SPARE
SPOTLIGHT
SPREADER LIGHT
STEAMING LIGHT
STEREO
TRIM TABS
VHF
WINCH
WIPER

BAIT TANK PUMP

SET-2N

BAIT TANK PUMP
BILGE PUMP AFT
BILGE PUMP FORWARD
BILGE PUMP MID
BILGE PUMP PORT
BILGE PUMP STARBOARD
BLOWER
BOARDING LIGHT
CABIN LIGHTS AFT
CABIN LIGHTS FWD
CABIN LIGHTS MID
CABIN LIGHTS PORT
CABIN LIGHTS STARBOARD
DECK WASH PUMP
ELECTRIC TOILET
ENGINE ROOM LIGHTS
FRIDGE
HORN
NAV LT'S PORT
NAV LIGHTS STARBOARD
PANEL LIGHTS
RADAR
SALOON LIGHTS
SSB
START
STERN LIGHT
STOP
TRI LIGHT

12V OUTLETS

SET-3N

12V OUTLETS
24V OUTLETS
AFT DECK LIGHT
BILGE AUTO MAN.
BOW LIGHTS
DOCKING LIGHTS
EMERGENCY PARALLEL
ENGINE ALARM
ENGINE BLOWERS
EXTRACTION FAN
FLOOD LIGHTS
FORE DECK LIGHT
GALLEY LT
GENERATOR LIGHTS
HOLDING TANK PUMP
HOUSE BATTERIES
LAZERETTE LIGHT
PORT
RADIO BATTERY
SEARCH LIGHT
STARBOARD
START BATTERIES
STEP LIGHT
STROBE LIGHT
TOILET LT
WEATHER FAX
WINDEX LIGHT
WINDOW WASHERS

AFT LIGHTS

SET-4N

AFT LIGHTS
BEDROOM/CONVERTER
DAVIT WINCH
ENGINE ALTERNATOR
FIRE SYSTEM
FISH FINDER
FISHING LIGHT
GALLEY/BATH
HOUSE ALTERNATOR
INTERCOM
LOAD
LOCKER LIGHT
MID WIPER
MID LIGHTS
MIZZEN SPREADER LIGHT
PLOTTER
PORT WIPER
PREHEAT
SOLE LIGHT
HEATER FANS
STARBOARD WIPER
SUB MAIN
SUMP PUMP
TANK ROOM LIGHTS
TOILET PUMP
TOWING LIGHT
TV/STEREO
WALVAC

AC MAINS

SET-5N

AC MAINS
AC OUTLETS
AC OUTLETS
AIR CONDITIONING
BATTERY CHARGER
COOK TOP
DISHWASHER
DIVE COMPRESSOR
DRYER
FREQUENCY
GENSET
HEATER
HOTWATER CYLINDER
ICE MAKER
INVERTER
INVERTER OUTLETS
MICROWAVE
OVEN
REFRIGERATION
REVERSE POLARITY
SHIPS POWER
SHORE POWER
TRASH COMPACTOR
TV
VIDEO
WASHING MACHINE
WASTE MASTER
WATER MAKER

AC MAINS

SET-6N

AC MAINS
ACCESSORIES
ANCHOR WASH
AUTOMATIC
AUTOPILOT
AUXILIARY
BILGE AUTO MANUAL
BILGE LIGHTS
BOOM FURL
BRIDGE LIGHTS
BURGLAR ALARM
CABIN FAN
CB RADIO
CELL PHONE
COMPUTER
DC MAINS
FUEL TRANSFER
GALLEY FAN
HATCH CONTROLS
HYDRAULICS
LOUD HAILER
MACERATOR
MANUAL
NIGHT LIGHTS
PELLET LIGHTS
SOLAR PANEL
STOVE
TV ANTENNA

AFT PEAK LIGHT

SET-7N

AFT PEAK LIGHT
DECK FLOOD LIGHTS
FWD
DECK FLOOD LIGHTS
AFT
DECK LIGHTS
DECK LIGHTS PORT
DECK LIGHTS
STARBOARD
DECK LIGHTS FORWARD
DECK LIGHTS AFT
FISHING LIGHTS
FISHING LIGHTS WHITE
FISHING LIGHTS RED
FISHING LIGHTS GREEN
FISH ROOM LIGHTS
FISH ROOM PUMP
FORE DECK LIGHT
FOCSLE LIGHT
MAST FLOOD LIGHTS
FWD
MAST FLOOD LIGHTS
AFT
NET RECORDER
NOT UNDER COMMAND
NUC LIGHTS
PLOTTER
PORT FLOOD LIGHTS
SHOWER LIGHTS
STBD FLOOD LIGHTS
TOILET FAN
TOILET LIGHT
WINCH FLOOD LIGHTS

ANCHOR LIGHT

SET-8N

ANCHOR LIGHT
BARAGRAPH POWER
CABIN FANS
CABIN FANS FWD
CABIN FANS AFT
COURTESY LTS
COURTESY LTS FWD
COURTESY LTS MID
COURTESY LTS AFT
DIESEL HEATER
FIRE SYSTEM
FUEL PUMP
HAILER
LECTRASAN
LECTRASAN FWD
LECTRASAN STBD
PORT ENGINE
CONTROLS
PORT IGNITION
SAT COM
SHOWER LIGHT
SALOON LIGHTS
SPARE
SPARE
STABILIZER
STBD ENGINE
CONTROLS
STBD IGNITION
TOILET LIGHT
WASTE TREATMENT

BOILER/HEATER

SET-9N

BOILER / HEATER
BOW THRUSTER
DC/DC CONVERTER
DECK LIGHTS FORWARD
DECK LIGHTS AFT
DECK LIGHTS MID
DECK LIGHTS UPPER
DEFROSTER
GALLEY LIGHTS
GREY WATER PUMP
GUEST STATE LIGHTS
HEAD PUMP 1
HEAD PUMP 2
MASTER STATE LIGHTS
NAV LIGHTS
OIL PUMP
PILOT HOUSE LIGHTS
SALOON LIGHTS
SEARCH LIGHT
SPARE
SPARE
STEREO
TRIM TAB CONTROL
V-BERTH LIGHTS
VHF LOWER
VHF UPPER
WASH DOWN PUMP
WINDLASS

AIR COMPRESSOR

SET-10N

AIR COMPRESSOR
AIR CON GALLEY
AIR CON GUEST ROOM
AIR CON MASTER STATE
AIR CON PILOT HOUSE
AIR CON SALON
AIR CON SALOON
AIR CON STATE ROOM
AIR CON V-BERTH
AIR CONDITIONING
AIR CONDITIONING 1
AIR CONDITIONING 2
AIR CONDITIONING 3
CENTRAL VACUUM
CHARGER GENERATOR
CHARGER HOUSE
CHARGER INVERTER
COMPACTOR
ENGINE ROOM FANS
HOT CIRC PUMP
ICE MAKER LOWER
ICE MAKER UPPER
OUTLETS ENGINE ROOM
OUTLETS EXTERNAL
OUTLETS GALLEY
OUTLETS LOWER DECK
OUTLETS UPPER DECK
WATER HEATER

24-12V REDUCER

SET-12N

24-12V REDUCER
AERATOR
BALLAST AFT
BALLAST CONTROL
BALLAST FWD
BLACK TANK AFT
BLACK TANK FWD
BLACK WATER PUMP
BOOM LIGHT
BRIDGE LIGHTS
BRIDGE SUPPLY
DINING LIGHTS
FIRE ALARM
FLOW ALARM
INTERIOR LIGHTS
LUFF LIGHT
MODEM
NAV AREA FAN
OUTLETS AFT
OUTLETS FWD
OUTLETS MID
OUTLETS PORT
OUTLETS STBD
PORT ENGINE
STBD ENGINE
STEP LIGHTS
STROBE
RIDING LIGHT

ANCOR LIGHT

SET-A

ANCHOR LIGHT
CABIN LIGHTS
CABIN LIGHTS
DC MAINS
DISCHARGE
DISCHARGE
DISCHARGE
ELECTRONICS
ELECTRONICS
FRIDGE
HELM SUPPLY
INVERTER
MACERATOR
MACERATOR
OVEN
PORT ENGINE CONTROL
PORT ENGINE CONTROL
PUMP
REFRIDGERATION
STBD ENGINE CONTROL
STBD ENGINE CONTROL
<STOP START> GENSET
STOVE
TOILET
WASHER/DRYER
WATER HEATER
12V BATTERY CHARGER
24V BATTERY CHARGER

AC OUTLETS GALLEY

SET-B

AC OUTLETS GALLEY
AC OUTLETS PORT
AC OUTLETS STBD
APPLIANCES
BAR-B-QUE
BILGE PUMP AUTO/
MANUAL
BLACK WATER PUMP
CHART LIGHT
DECK LIGHTS
ENGINE ALT
ELECTRIC TOILET
ENGINE ROOM BILGE
PUMP
GALLERY FRIDGE
GAS DETECTOR
GENSET
HEATER
INSTRUMENT LIGHTS
LIGHTS
PORT LIGHTS
RADIO
READING LIGHT
SHOWER SUMP PUMP
STBD LIGHTS
STEREO
TV
UNDER FLOOR LIGHTS
VHF
WIPER

AFT BILGE ALARM**SET-13N**

AFT BILGE ALARM
 BILGE ALARM
 BILGE ALARM TEST
 BILGE AUTO
 BILGE LIGHTS
 BILGE MANUAL
 BILGE PUMP AUTO/
 MANUAL
 FWD BILGE ALARM
 HIGH WATER ALARM
 MID BILGE ALARM
 PORT AFT BILGE ALARM
 PORT AFT BILGE AUTO
 PORT AFT BILGE MANUAL
 PORT FWD BILGE ALARM
 PORT FWD BILGE AUTO
 PORT FWD BILGE MANUAL
 PORT MID BILGE ALARM
 PORT MID BILGE AUTO
 PORT MID BILGE MANUAL
 STBD AFT BILGE ALARM
 STBD AFT BILGE AUTO
 STBD AFT BILGE MANUAL
 STBD FWD BILGE ALARM
 STBD FWD BILGE AUTO
 STBD FWD BILGE MANUAL
 STBD MID BILGE ALARM
 STBD MID BILGE AUTO
 STBD MID BILGE MANUAL

210KHz TX**SET-14N**

210KHZ TX
 33KHZ TX
 AFT HOLD LIGHT
 COCKPIT FREEZER
 ENGINE CONTROLS
 FRIDGE/FREEZER
 FIRE PUMP
 FLUXGATE COMPASS
 FLYBRIDGE FREEZER
 FUEL GAUGE
 FUEL TRANSFER PORT
 FUEL TRANSFER STBD
 FWD HOLD LIGHT
 GANTRY LIGHTS
 HOLDING TANK PORT
 HOLDING TANK STBD
 MASTHEAD LIGHT
 PILOT LIGHT RED
 PILOT LIGHT WHITE
 PORT FUEL FILTER
 RUDDER INDICATOR
 STBD FUEL FILTER
 STEERING
 TOILET AFT
 TOILET FWD
 TOWING LIGHT AMBER
 TOWING LIGHT WHITE
 TUNA TUBES

**12V OUTLETS
FLYBRIDGE****SET-15N**

12V OUTLET FLYBRIDGE
 ARCH LIGHTS
 BILGE PUMP CLUTCH
 CABIN HEATER
 COMPASS
 DRY HEAD PUMP
 DEMISTER
 ENGINE CLUTCH PUMP
 FLYBRIDGE HATCH
 FLYBRIDGE WIPERS
 FREEZER CLUTCH
 FWD STATEROOM LIGHTS
 GREYWATER PUMP 1
 GREYWATER PUMP 2
 GUEST CABIN STEREO
 INMARSAT
 INSTRUMENT LIGHTS
 INSTRUMENTS
 FLYBRIDGE
 INSTRUMENTS
 PILOTHOUSE
 MASTER HEAD LIGHTS
 NAV AREA LIGHTS
 OVERHEAD LIGHTS
 OVERHEAD SALOON
 LIGHTS
 SALOON WIPERS
 SECURITY SYSTEM
 UNDERFLOOR LIGHTS
 24V DC MAINS
 BOW BILGE HIGH WATER

AC OUTLETS AFT**SET-16N**

AC OUTLETS AFT
 AC OUTLETS AFT CABIN
 AC OUTLETS COCKPIT
 AC OUTLETS DECK
 AC OUTLETS FWD
 AC OUTLETS FWD CABIN
 AC OUTLETS GALLEY
 AC OUTLETS GUEST CABIN
 AC OUTLETS MID
 AC OUTLETS PORT
 AC OUTLETS SALON
 AC OUTLETS SALOON
 AC OUTLETS STATEROOMS
 AC OUTLETS STBD
 AC OUTLETS WHEELHOUSE
 AIRCON AFT
 AIRCON AFT DECK
 AIRCON CABIN
 AIRCON FWD
 AIRCON FWD DECK
 AIRCON HELM
 AIRCON PUMP
 AIRCON PORT
 AIRCON STBD
 AIRHANDLER FWD
 STATEROOM
 AIRHANDLER MSTR
 STATEROOM
 AIRHANDLER PILOTHOUSE
 AIRHANDLER SALOON

24 HOUR CIRCUITS**SET-17N**

24 HOUR CIRCUITS
 AFT BILGE PUMP
 AUTO / MAN
 AFT HEAD
 ALARM MUTE
 DEPTH / SPEED
 ELECTRONICS
 ENGINE ALARM
 FANS
 FWD BILGE PUMP
 AUTO / MAN
 FWD HEAD
 GALLEY / HEAD VENT
 GALLEY FRIDGE
 GAS STOVE
 GAUGES
 HEAD PUMP
 LEVEL INDICATOR
 LIGHTS
 MID BILGE PUMP
 AUTO / MAN
 NAV & INST LIGHTS
 OIL PRESSURE
 PT ENGINE
 PT ENGINE START / STOP
 STBD ENGINE
 STBD ENGINE START / STOP
 SUM LOG
 SYNCHRONIZER
 WATER TEMP
 WINDSHIELD

27 MEG**SET-18N**

27 MEG
 AFT HOLDING TANK
 AFT WATER HEATER
 CABIN OUTLETS
 COCKPIT FRIDGE
 DC MAINS 1
 DC MAINS 2
 DEHUMIDIFIER
 DVD
 ENGINE BLOWER
 ENGINE ROOM OUTLETS
 ENTERTAINMENT
 FLYBRIDGE MAIN
 FWD HOLDING TANK
 FWD WATER HEATER
 GALLEY
 GAS SOLENOID
 GENERATOR
 GFCI OUTLET
 HATCH LIFTER
 HELM MAIN
 HOUR METER
 LAUNDRY
 LPG/COOKTOP
 NAVIGATION
 RANGE
 TV /DVD
 UHF

**12V BATTERY
CHARGER****SET-19N**

12V BATTERY CHARGER
 24HR BILGE PUMP
 24V BATTERY CHARGER
 12V BATTERY CHARGER
 BILGE PUMP PORT FWD
 BILGE PUMP PORT MID
 BILGE PUMP STBD AFT
 BILGE PUMP STBD FWD
 BILGE PUMP STBD MID
 BOARDING PLATFORM
 BULWARK LIGHTS
 BUNK LIGHTS
 CABLE MASTER
 DESALINATOR
 DISHWASHER
 ELECTRIC WINDOWS
 ENGINE CONTROLS
 MACERATOR
 OIL PUMP
 PITCH CONTROL
 PORT AIR CON
 PORT ENGINE
 SONAR
 STOREROOM LIGHTS
 SPA
 STBD AIR CON
 STBD ENGINE
 TV

12V AUX HORN**SET-20N**

12V AUX HORN
 AFT FRIDGE
 ALTERNATOR
 ANCHOR WINCH
 BATHROOM FAN
 BATHROOM OUTLETS
 BRIDGE SUPPLY
 DOCKING LIGHTS
 ENGINE ROOM BILGE ALARM
 FAX
 FISH FINDER
 HOLDING TANK GAUGE
 ICEMAKER
 INVERTER/CHARGER
 LAKE WATER
 MASTER HEAD
 RCD
 RESET
 SALON LIGHTS
 SHAVEN OUTLETS
 SOUNDER
 SPEED
 SUM LOG
 TOILET PORT
 TOILET STBD
 TV LIFT
 WIND INSTRUMENTS

BOILER/HEATER**SET-22N**

ALARMS
 CCTV
 COCKPIT FRIDGE
 COMMUNICATIONS
 CONTROL MAX 2.0
 DECK LIGHTS
 EARTH LEAKAGE LIGHTS
 EMERGENCY PARALLEL
 ENGINE ROOM MAIN
 EQUIPMENT ROOM
 FLYBRIDGE LIGHTS
 FRESH WATER PUMP PORT
 FRESH WATER PUMP STBD
 GENSET START
 GENSET STOP
 GRILL
 HEAD/GALLEY VENT
 HF RADIO
 IGNITION START
 MID HOLD LIGHTS
 RADIO LIGHT
 RADIOS
 REFRIGERATOR
 REVERSE POLARITY TEST
 UHF RADIO
 VHF RADIO
 WHEELHOUSE LIGHTS
 WINE COOLER

**AIR CON
FLYBRIDGE****SET-23N**

AIR CON FLYBRIDGE
 AIR CON FWD
 AIR CON PORT
 AIR CON STBD
 BERTH LIGHTS
 BLOWER
 CABIN LIGHTS MAIN
 COOLING PUMP 1
 COOLING PUMP 2
 DISCHARGE
 DISCHARGE
 DISCHARGE
 EMERGENCY LIGHTS
 GALLERY FRIDGE
 HELM LIGHTS
 MACERATOR
 MASTER CABIN LIGHTS
 PORT ENGINE CONTROLS
 PORT ENGINE CONTROLS
 PORT ENGINE CONTROLS
 QUARTZ LIGHTS
 STBD ENGINE CONTROLS
 STBD ENGINE CONTROLS
 STBD ENGINE CONTROLS
 STEREO MEMORY
 STORAGE BIN PUMP
 WATERBLASTER

CABINE AVANT**SET-FRENCH**

CABINE AVANT
 CABINE BABORD
 CABINE TRIBORD
 DESSALINISATEUR
 DIVERS
 ECL INTERIEUR
 ESSUIE-GLACE
 FEU DE HUNE
 FEU DE MOUILLAGE
 FEU DE PONT
 FEUX DE NAVIGATION
 FLAPS TRIM TABS
 GPS
 GROUPE D'EAU
 GUINDEAU
 INSTRUMENTS
 PILOTE AUTOMATIQUE
 POMPE DE CALE
 PRISE 12V
 REFRIGERATEUR
 SALLE DE BAIN
 SALLE MACHINE
 SONDEUR
 STEREO
 TABLE A CARTE
 TIMONERIE
 VENTILATEUR DE CALE
 VHF

AUXILIARE 1**SET-FRENCH 2**

AUXILIAIRE 1
 AUXILIAIRE 2
 AVERTISSEUR
 CABIN 2
 CABIN 3
 CABIN I
 CENTRALE NAV
 CHAUFFAGE
 CHAUFFE-EAU
 CONFORT
 CONGELATEUR
 DIVERS
 ECLAIRAGE BABORD
 ECLAIRAGE CARRE
 ECLAIRAGE NACELLE
 ECLAIRAGE TRIBORD
 ELECTRONIQUE
 FEU TRICOLORE
 HI-FI
 MICRO-ONDES
 POMPE BABORD
 POMPE DE LAVAGE
 POMPE DOUCHE
 POMPE TRIBORD
 RADAR
 SPOTS
 TOILETTES
 WINCH

Labels–Sprayproof / Battery Management Panels

CSP6

ANCHOR LIGHT

SET-2SP
 ANCHOR LIGHT
 BILGE AUTO MAN
 BOOM LIGHT
 CABIN LIGHT
 COCKPIT LIGHTS
 COMPASS LIGHT
 DECK LIGHTS
 DEPTH SOUNDER
 E/R BLOWER
 FREEZER
 INSTRUMENTS
 LOCKER LIGHTS
 NAV LIGHTS
 PORT NAV LIGHTS
 PORT WIPER
 SHOWER DRAIN PUMP
 SPARE 1
 SPARE 2
 SPARE 3
 STBD NAV LIGHTS
 STBD WIPER
 STEAMING LIGHT
 STERN LIGHT
 TRANSOM LIGHTS
 TRI LIGHT

CSP6

ACCESSORIES

SET-1SP/F
 <MOUILLAGE NAVIGATION>
 ACCESSORIES
 ACCESSORIES
 AERATEUR
 APPLIQUES DE COCKPIT
 APPLIQUES INTERIEURES
 AVERTISSEUR
 ESSUIE-GLACE 1
 ESSUIE-GLACE 2
 ESSUIE-GLACE 3
 FEU DE MOUILLAGE
 FEU DE NAVIGATION
 FRIGO
 GPS
 GROUPE D'EAU
 INSTRUMENTS
 LECTEURS DE CARTES
 PILOTE AUTOMATIQUE
 POMPE CALE <AUTO
 MANUEL>
 POMPE DE CALE
 POMPE DE LAVAGE
 POMPE DE VIDANGE
 PRISES DE COURANT
 RADIO
 SONDEUR
 SPOTS
 VENTILATEUR
 WINCH

900-6WP

NAVIGATION LIGHTS

LBL-WP
 ACCESSORIES
 AERATOR
 ANCHOR LIGHTS
 AUTOPILOT
 BAIT TANK PUMP
 BILGE PUMP
 BLOWER
 CABIN LIGHTS
 COCKPIT LIGHTS
 DC OUTLETS
 DECK WASH
 DEPTH SOUNDER
 FRESHWATER PUMP
 FRIDGE
 GPS
 HORN
 INST. LIGHTS
 INSTRUMENTS
 LOG
 NAVIGATION LIGHTS
 RADAR
 SPARE
 SPOT LIGHTS
 STEREO
 STERN LIGHT
 TRIM TABS
 VHF
 WIPER

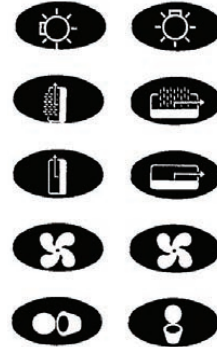
CMP-6WP

FRESHWATER PUMP

LBL-CMP
 ACCESSORIES
 AERATOR
 ANCHOR LIGHTS
 AUTOPILOT
 BAIT TANK PUMP
 BILGE PUMP
 BLOWER
 CABIN LIGHTS
 COCKPIT LIGHTS
 DC OUTLETS
 DECK WASH
 DEPTH SOUNDER
 FRESHWATER PUMP
 FRIDGE
 GPS
 HORN
 INST. LIGHTS
 INSTRUMENTS
 LOG
 NAVIGATION LIGHTS
 RADAR
 SPARE
 SPOT LIGHTS
 STEREO
 STERN LIGHT
 TRIM TABS
 VHF
 WIPER

Interior Series Switch Plates

SET-IN



800-MS1-4

24 HOUR LIGHTS

SET-MSP3
 24 HOUR LIGHTS
 BOW BILGE PUMP
 BOW BILGE OVERRIDE
 BOW THRUSTER
 CATHODIC PROTECTION
 CHARTS/SOUNDER
 COCKPIT MAIN
 CO DETECTOR
 COCKPIT FRIDGE
 ELECTRONICS MAIN
 ELECTRIC CONTROLS
 ELECTRIC HEAD
 GENSET BATTERY CHARGER
 HATCH LIFTER
 HELM MAIN
 HEAD MACERATOR
 PORT BATTERY CHARGER
 PORT ENGINE BLOWER
 PORT CONTROLS
 SALOON MAINS
 STBD CONTROLS
 STEREO
 STEREO AMPLIFIER
 STBD BATTERY CHARGER
 STBD ENGINE BLOWER
 WIPER MID
 WIPER PORT
 WIPER STBD
 ACCESSORIES
 CONTROLS

800-MS1-4

24V HOUSE VOLTMETER FEED

SET-MSP4
 24V HOUSE VOLTMETER FEED
 BILGE ALARM
 BILGE PUMP 24 HR
 BILGE PUMP AFT HIGH WATER
 BILGE PUMP FWD HIGH WATER
 BILGE PUMP MID HIGH WATER
 BILGE PUMPS
 BILGE PUMPS MAIN
 FLYBRIDGE 12V MAINS
 FLYBRIDGE 24V MAINS
 GENSET BLOWER
 HIGH WATER ALARM
 HOUSE BATTERY CHARGER
 HOUSE BATTERY METER
 HOUSE MAIN
 LOWER 12V MAINS
 LOWER 24V MAINS
 PORT AFT BILGE PUMP
 PORT BATTERY METER
 PORT FWD BILGE PUMP
 PORT MID BILGE PUMP
 SHOWER SUMP
 STBD AFT BILGE PUMP
 STBD BATTERY METER
 STBD FWD BILGE PUMP
 STBD MID BILGE PUMP
 TOILET
 TWIN DISK
 TWIN DISK PORT
 TWIN DISK STBD

706 - 707

WINCH

SET-714
 ANCHOR WINCH
 BILGE PUMP AFT
 BILGE PUMP FWD
 BILGE PUMP MID
 BILGE PUMP PORT
 BILGE PUMP STARB
 BOW THRUSTER
 DAVIT WINCH
 DC MAINS 1
 DC MAINS 2
 HALYARD WINCH
 HEAD 1
 HEAD 2
 HOLDING TANK
 INVERTER
 MEMORY CIRCUITS
 SECURITY SYSTEM
 SHEET WINCH
 SPARE
 WASTE TREATMENT 1
 WASTE TREATMENT 2

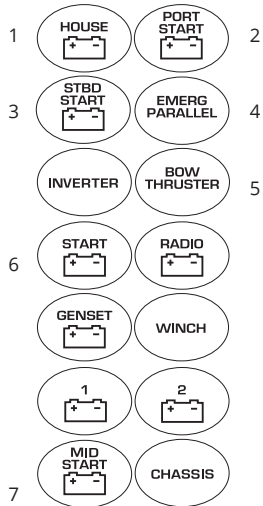
NOTE:

The complete range of BEP labels are listed in a quick reference table on our website.

Labels-Battery Switches, Control Center & Contour Connect

Battery Switches 701-720

713



Some labels can be purchased separately under the following item numbers.

- 1 713-HB
- 2 713-PS
- 3 713-SS
- 4 713-EP
- 5 713-BT
- 6 713-SB
- 7 713-MS

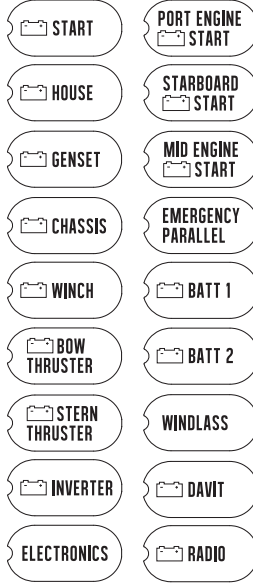
SET-715



SET-715 contains the 3 most commonly requested labels out of set 713 without the need to purchase a full label set.

Battery Switches 770

SET-770



Circuit Breaker Modules

SET-CC-1

SET-CC-1 labels are supplied standard with any 800 series module containing toggle or push reset circuit breakers.

BATTERY CHARGER	BILGE PUMP STBD	ELECTRONICS
BILGE PUMP AFT	CATHODIC PROTECTION	ENGINE CONTROLS
BILGE PUMP ENGINE ROOM	CO DETECTOR	ENGINE CONTROLS PORT
BILGE PUMP FWD	DAVIT	ENGINE CONTROLS STBD
BILGE PUMP MID	DC MAIN	ENGINE ROOM LIGHTS
BILGE PUMP PORT	DC OUTLETS	FIRE SYSTEM
FRESH WATER PUMP	LECTRASAN	STEREO
FRIDGE	LIGHTS	STEREO MEMORY
FUEL TRANSFER PUMP	PORT BATTERY CHARGER	SUMP PUMP
HIGH WATER	SPARE	TOILET
HOLDING TANK	SPARE	TRIM TABS
HOUSE BATTERY CHARGER	STBD BATTERY CHARGER	WINCH

Battery Control Center

SET-CC-BCC-1

RADIO BATTERY	THRUSTER BATTERY	START BATTERY
GENSET	HOUSE	PORT START
GENSET 1	HOUSE 1	MID START
GENSET 2	HOUSE 2	STBD START
BATTERY 1	24 HOUR	STEREO MEMORY
BATTERY 2	ALARM SYSTEM	ACC

Heavy-duty Circuit Breaker Modules

SET-CC-A

SET-CC-A labels are supplied standard with any 800 series module containing the heavy-duty Busman circuit breaker.

ANCHOR WINCH	HELM MAIN
DAVIT	LECTRASAN
DC MAINS	PUMPS
DECK WINCH	SALOON MAINS
DOCKING WINCH	TOILET
FLYBRIDGE MAINS	WINCH

Labels-Generation 2, Micro & Interior Panels

Spray-Proof Panels Generation II

Label Set
SET-G2-1



- ACCESSORIES
- AERATOR
- ANCHOR LT
- BAIT TANK
- BILGE PUMP
- AUTO B/P MAN
- BLOWER
- CABIN LIGHTS
- COCKPIT LTS
- DC OUTLETS
- DECK WASH
- DN WINCH UP
- ELECTRONICS
- ENGROOM LTS
- FLOOD LIGHTS
- FW PUMP
- FRIDGE
- GPS
- HORN
- INST. LIGHTS



- INSTRUMENTS
- NAV LIGHTS
- RADIO
- SW PUMP
- SPOT LIGHTS
- UP PORT DN
- UP STBD DN
- WIPER

Label Set
SET-G2-2



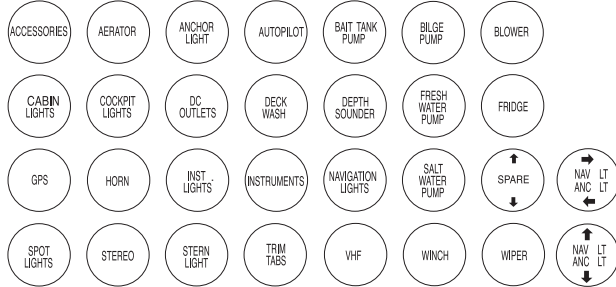
- B/PUMP PORT
- B/PUMP STBD
- B/PUMP FWD
- B/PUMP MID
- B/PUMP AFT
- B/PUMP ENG RM
- COMPASS LT
- DECK LTS
- STEAMING LT
- NAV LTS PT
- NAV LTS STBD
- STEP LTS
- STERN LT
- WIPER PT
- WIPER MID
- WIPER STBD
- WASHERS
- FREEZER
- H/TANK PUMP
- SUMP PUMP



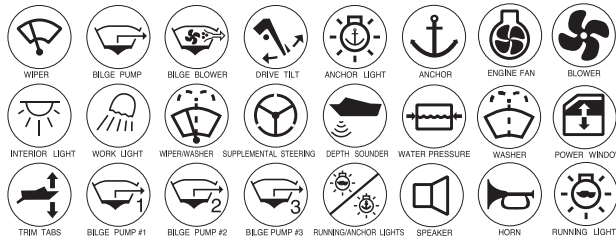
- LOCKER LTS
- PANEL LTS
- TRI LT
- BOW LTS
- SHOWER LT
- SHOWER PUMP
- SPARE
- SPARE

Sprayproof Switch Panels - Micro

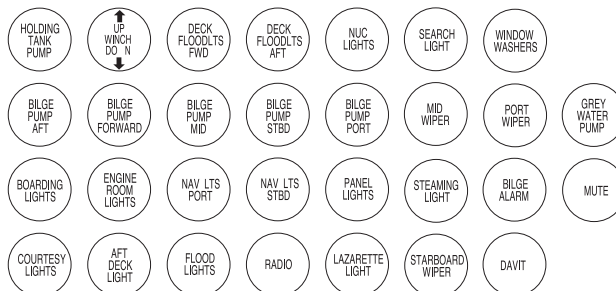
LBL-MIC1



LBL-MIC5YM



LBL-MIC2



Contour Interior Series Monitor Panels

SET-1001



SET-1002



METERS

AC & DC Systems Monitors

88



These state of the art full color monitors are made to meet the systems monitoring requirements of today's modern vessel and recreational vehicle. The DCSM and ACSM displays feature clear, extra large type face allowing for more detailed on-screen information and increased clarity. The screen has backlighting for easy night time viewing.

Tank Senders

90



A range of options for tank sender units plus interfaces for signal conversion for gauges and digital monitoring systems.



METERS

Gas Detectors



The BEP Detectors use microprocessor control to ensure correct sensor sensitivity. The Detectors have the capability to control two sensors which detect both LPG and Petrol, with visual and audible alarms.

Solenoid Valves



Remote control of the gas connection ensures safety while adding user convenience.

Analog & Digital Meters



Comprehensive range of meters offers monitoring solutions for batteries, AC, tanks, and systems in operation.

Boston Whaler uses CZone® digital switching and a full complement of BEP products as standard equipment aboard the Outrage 420.

AC & DC Systems Monitors

These full color monitors are made to meet the systems monitoring requirements of today's modern vessel and recreational vehicle. Complex AC and DC electrical installations onboard are becoming more common place. Additionally the increase in tank monitoring requirements for fuel, fresh, grey and black water, accurate monitoring of these systems is essential.

The DCSM and ACSM displays feature clear, extra large type face. This allows for more detailed on-screen information and increased clarity. The screen has backlighting for easy night time viewing.

DC Systems Monitor (DCSM)

Specifications:

- 2.8" Color QVGA LCD
- Input voltage 8–32V DC
- Dimensions (WxH): 90 x 100 mm
- Backlit keypad

Monitors:

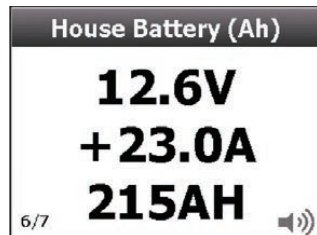
- Charge/discharge amps for two banks
- Capacity remaining in A/h and %
- Battery condition
- Tank fluid level
- Circuit status

Features:

- 8 Generic, user configurable inputs
- Programmable high/low audio/visual alarms for volts, amps and tank levels
- Backlit keypad and dimmable screen
- Can be panel or surface mounted

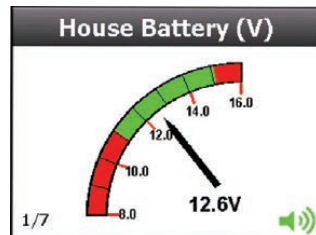


Part #	Description
80-600-0021-00	DCSM including 1x shunt and cable
80-600-0022-00	DCSM excluding shunt
600-DCSM-KIT	Panel Conversion Kit for DCM to DCSM



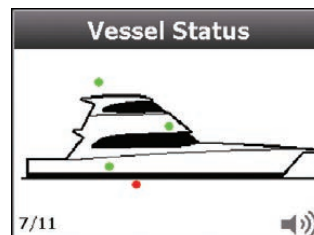
DC Power Meter

- Displays voltages of multiple battery banks (0–32V DC)
- Displays charge and discharge (amps) of 2 battery banks
- Displays battery capacity in amp hours
- High/Low level alarms



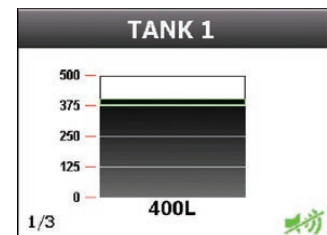
Display Type

- Configure the DCSM to show the data in analog, digital and graphic form



Circuit Status

- View the status of important circuits (on/off)
- In graphic and numeric form



Tank Level

- View tank level information for multiple tanks in numeric and graphic forms
- Resetable when leaving boat



Installation Cable Kit

- 2 core screened cable in 2 lengths pre-terminated

Part # 600-DCM-5M 16.45" (5 m)

Part # 600-DCM-10M 32.9" (10 m)



Ammeter Shunt Enclosure

Provides a protective housing for shunt termination meeting ABYC standards. DC current shunt **Part # LB-450-50M** ordered separately.

- Digital large: 450A - 50mV
- Analog small: 50A - 50mV, 100A - 50mV, 150A - 50mV
- Takes 2 small or one large shunt

Part # 711L



Sprayproof Gasket

When fitted the gasket provides a water ingress protection level of IPX5 (Protection against low pressure jets of water) for the AC and DC systems monitors.

Part # GAS-SM

AC Systems Monitor (ACSM)

Specifications:

- 2.8" Color QVGA LCD
- Input voltage 8-32V DC
- Dimensions (WxH): 90 x 100 mm
- Backlit keypad

Monitors:

- AC volts, amps and frequency

Features:

- 3 user configurable inputs
- Displays data in analog, digital and graphic forms
- Output for load shedding
- Programmable high/low audio/visual alarms for each input



Part #	Description
80-600-0023-00	ACSM including 1x AC-VSEN-4 and 2x CT-10-3
600-ACSM-KIT	Panel Conversion Kit for ACM to ACSM



AC Power Meter

- Displays AC volts, amps frequency and power for two supplies with a third position for monitoring AC volts and frequency of a third supply
- Displays AC power in kW (true RMS)



AC Volts/Frequency

- Displays AC voltage and frequency, 80-264V AC 50 & 60Hz



AC Amps

- Displays Current for 3x AC supplies (0-75A)



Alarms

- High and low alarms for each input
- User selectable alarm levels
- Mutable



AC Transducer

- The AC-VSEN-4 includes 3 voltage transformers for up to 3 voltage inputs.
- Dimensions: 2.75" x 5.5" x 2" (69 x 140 x 50 mm)

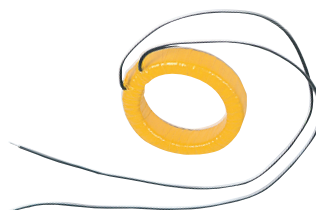
Part # AC-VSEN-4



Current Transformer

- Maximum current 150A AC
- One CT-10-3 current transformer is supplied with ACSM. If a twin line system is in use, a second CT must be ordered.
- Dimensions: 1.5" x 1.55" x .55" (37.5 x 39.2 x 13.7 mm)
- Hole size: 0.5" (12 mm)
- Supplied with 80-600-0023-00

Part # CT-10-3



Heavy-duty Current Transformer

- Maximum current 150A AC
- CT-HD is available for systems with large mains cables, too large for CT-10-3 (ordered separately).
- CT-HD dimensions: Ø 1.85 x 0.4" (Ø 47 x 10.5 mm)
- Hole size: 1.25" (32 mm)

Part # CT-HD



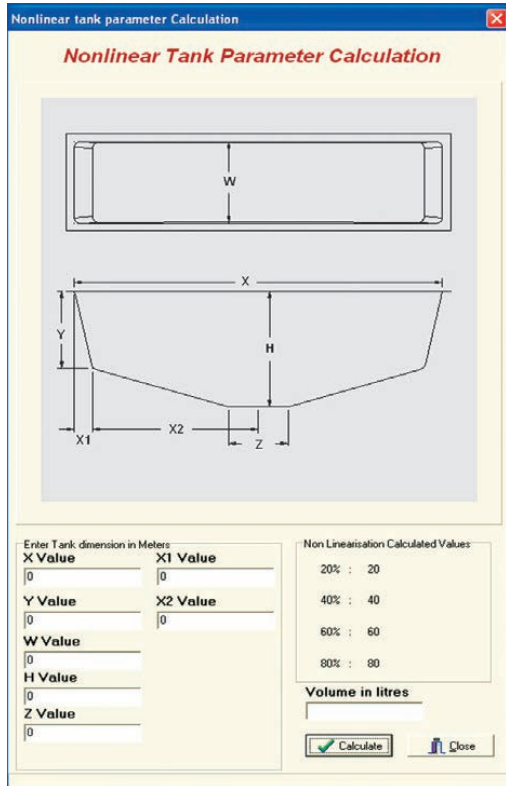
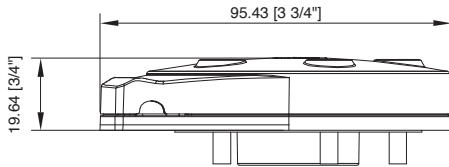
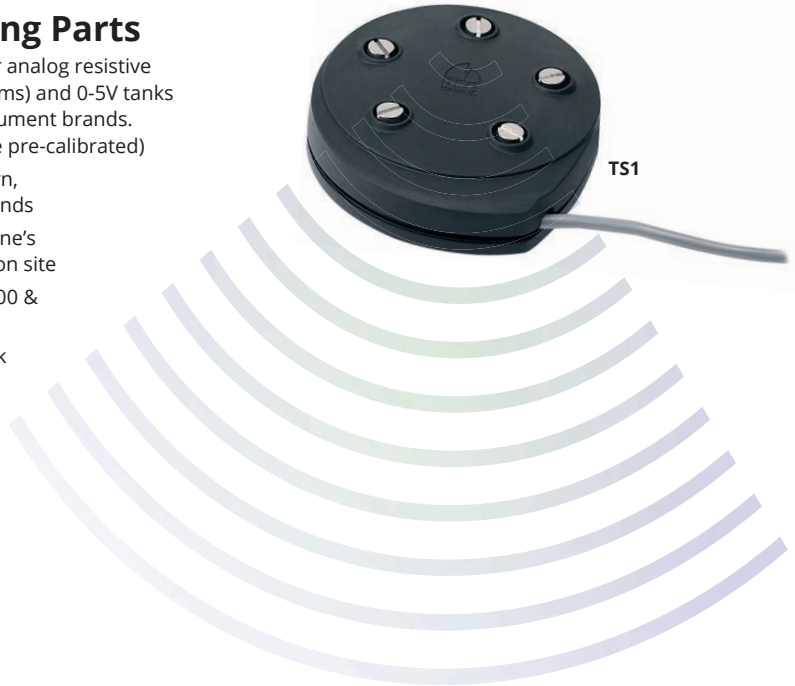
Surge Protection Module

Protect your electronics from becoming damaged by harmful high voltage spikes. When fitted to the battery supply these modules look for sudden increases in voltage then switch into protection mode to absorb and suppress the high energy spike.

Part # 80-707-0004-00 12V DC
Part # 80-707-0005-00 24V DC

Ultrasonic Tank Sender—No Moving Parts

- Handles common outputs – 240-33, 10-180, Vetus 10-300 for analog resistive gauges (not suitable for resistive digital gauges or CAN systems) and 0-5V tanks from BEP, Teleflex, Faria, VDO and many other popular instrument brands. (When connecting to non-adjustable gauges the TS1 must be pre-calibrated)
- Low Profile Design and standard SAE 5 hole mounting pattern, allowing it to be retrofitted to practically all other sender brands
- Can be set for tank dimensions via computer using BEP Marine's proprietary TS1 software, avoiding experimental tank filling on site
- Connects directly to the DC systems monitors (80-600-0021-00 & 80-600-0022-00 page 88) when configured to a 0-5V output
- Is set for 0-2000 mm depth off the shelf (not suitable for tank depths less than 200 mm) 8"
- Operating voltage: 10–32V
- Current draw: 25 mA with 5V gauge output
- Measurement method: Acoustic sonic measurement
- Tank depth: 0–6.5 ft (2000 mm)
- Accuracy Distance: 0–6.5 ft (2000 mm) at 2 mm accuracy
- Environmental temperature: 39.2–149°F (4–65°C)
- Chemical resistance: Petrol, diesel, water, toilet chemicals



BEP's proprietary Window's based software application allows for TS1 senders to be programmed specific to tank shape, size and fluid type via a computer's USB port.

Programming is a simple process and can be carried out by downloading free software from bepmarine and purchasing a programming kit **TS1-PK**.

Once programmed, the specific tank parameters are stored in the non-volatile memory of the TS1.



TS1 Programming Device

Part # TS1-PK



Tank Sender Interface Module

- Only required when using VDO (10-180) or Centroid (10-180) or Teleflex (240-33) senders to produce a 0-5V signal for either the DCSM, or ACSM systems monitors.
- Switchable link for VDO or Teleflex signal. 10-32V supply.
- One unit per sender required.
- Dimensions: 2.4" x 1.3" x .9" (60 x 34 x 22 mm)

Part # 600-TLM-SIF

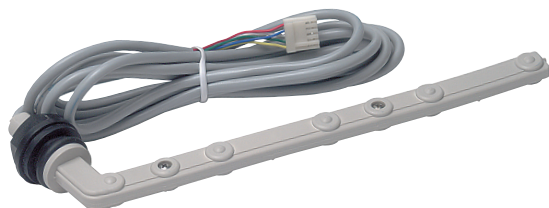


LED Tank Gauge

The 600-TG offers economical monitoring for fresh or grey water tanks (plastic or fiberglass only). Using 600-TGSK strategically mounted well nuts will give 4 tank levels. Supplied with one sender kit. Second sender ordered separately.

Also available is the RV-TS-5M Tank sender. Only one hole is required for installation, the sender is sealed via external lock nuts. Suitable for tanks with maximum depth of 280 mm.

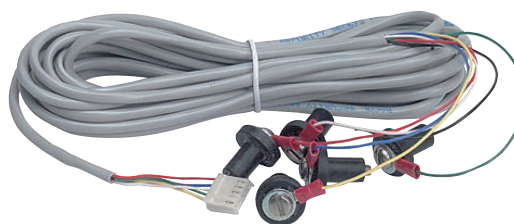
Part # 600-TG



Tank Sender for 600-TG

Suits tanks with maximum depth of 280 mm and a maximum wall thickness of 10 mm, and a maximum hole size of 22 mm. Comes with 5 m cable.

Part # RV-TS-5M



Tank Sender for 600-TG

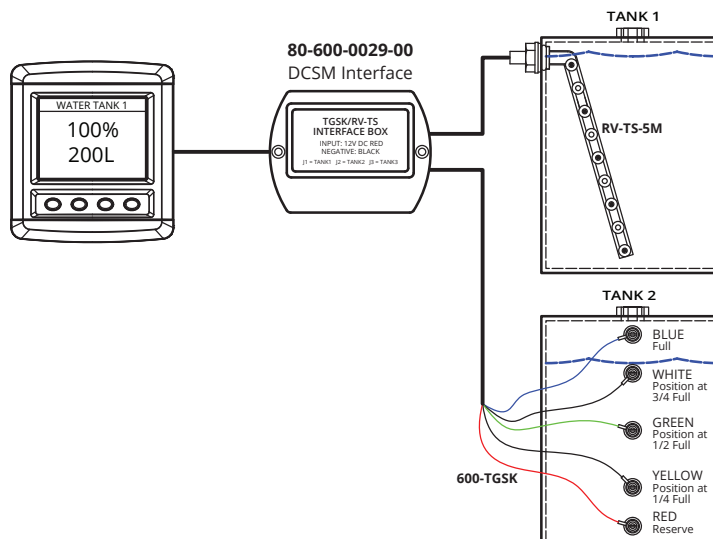
- Well nut hole size 3/8" (9 mm)
- Cable length 5 m
- One kit supplied with 600-TG

Part # 600-TGSK

Tank Sender Interface Module

Converts signals from up to 3 tanks fitted with either RV-TS-5M or 600-TGSK tank sender units, to 0-5V signal to suit ACSM and DCSM systems monitors.

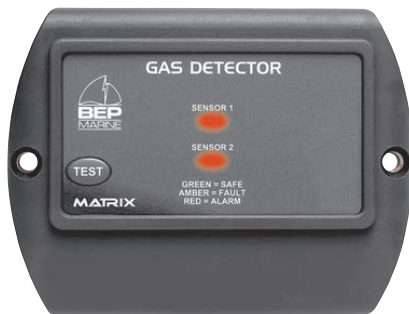
Part # 80-600-0029-00



Gas Detectors

The BEP Detectors use microprocessor control to ensure correct sensor sensitivity. The Detectors have the capability to control two sensors which detect both LPG and Petrol, with visual and audible alarms.

- Dual sensors for LPG and Petrol
- Visual and audible alarms; provision for external alarm
- Automatic shut-off solenoid control with pulse and hold circuit for low power draw (600-GDL only)
- Self-testing
- Provision of bilge blower
- 2.4" x 3.5" x 0.7" (67 x 88 x 17 mm)



600-GD

600-GD will detect LPG, Petrol and CNG fumes. Supplied with one sensor, with an option for a second sensor, Part # BL-SL-L output for remote alarm and blower unit. 600-GD can be used on 12 or 24V systems.



600-GDL

Same features as the 600-GD, with the ability to switch a valve on. It contains a unique "Pulse & Hold" circuit within the detector. This allows the valve to be pulled in at 12V and then once energized it will step down to hold the valve in place. This reduces power consumption and heat while the gas is turned on.



BL-SL-L

One Sensor lead supplied (5 m) with GD & GDL.

Second Sensor lead ordered separately



600-LPG

600-LPG is a stand alone gas shut-off system with no gas detection ability. For 12V systems order VR2.2 separately. For 24V systems order VR2.2-24V.



600-GDRV

600-GDRV has the sensor mounted in the front facia creating a stand alone unit. The unit is designed to be surface mounted at the vessel's lowest point.



FD-2

FD-2 is designed for an economic in-dash installation. Supplied with sensor (5 m cable) which is capable of detecting combustible gases.

600-GD, 600-GDL, & FD-2 Specifications

Voltage (V DC)	10-32
Current (mA)	350 max.
Alarm Sensitivity	20% lower explosive limit
Current@Out (mA)	800 max.
Solenoid (mA)	700 pulse, 250 hold

Solenoid Valve & Regulator Kit

Compatible with 600-GDL Gas Detector or 600-LPG.

Solenoid voltage: 12V or 24V options

Gas outlet: 3/8 BSP

Gas inlet: POL Thread

Current draw: 800 mA

Current draw with GDL or PH-12V: 0.2A

Regulator Flow Rate: 3 kPa.

Note: The VR2.2 may not comply in some countries, and does not comply with USCG requirements. Please check with your local gas installer. Not for sale in the USA.

Part # VR2.2 12V

Part # VR2-24 24V



Solenoid Valve

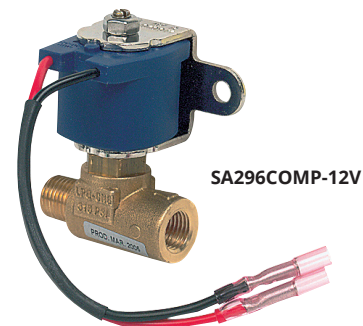
The SA296COMP-12V is suitable for countries where VR2.2 is not approved.

The CE approved SA296COMP-12V can be installed by an approved gas installer using approved components from within specific markets. 12V or 24V options available. Uses 1/4" BSP thread.

Note: A separate regulator will need to be installed with the SA296 valves.

Part # SA296COMP-12V 12V

Part # SA296COMP-24V 24V



Analog & Digital Meters

- Contour panel/front fascia complements contour range
- All Contour Matrix monitors can fit into this style of panel

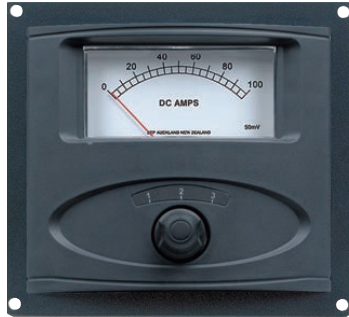


80-601-0020-00

Panel Mounted Analog Battery Condition Meter (expanded scale)

- Panel switchable to show 3 different battery banks
- Available 12V (8–16V) or 24V (16–32V)

Part #	Range	Inputs
80-601-0020-00	8–16V DC	3
80-601-0021-00	16–32V DC	3
80-601-0022-00	0–150V AC	1
80-601-0023-00	0–300V AC	1

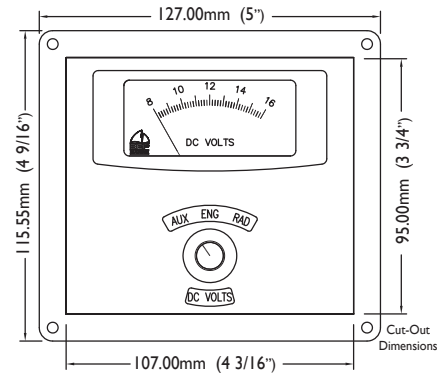


80-601-0025-00

Panel Mounted Analog Ammeter Panel

- Panel switchable for use on up to 3 different ammeter shunts
- Supplied with 1 shunt, meter scales available, 0–50A 0–100A 0–150A

Part #	Range	Inputs
80-601-0024-00	0–50A DC	3
80-601-0025-00	0–100A DC	3
80-601-0026-00	0–150A DC	3



Dimensions for analog and digital panels



Panel Mounted DC Systems Monitor

- See page 88 for DCSM functionality
- Supplied with 450A–50mV shunt

Part # 80-600-0027-00



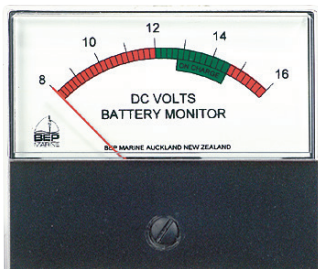
Panel Mounted AC Systems Monitor

- See page 89 for ACSM functionality
- Supplied with voltage and current transducers

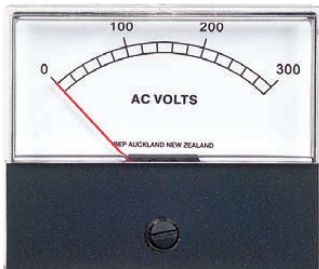
Part # 80-600-0028-00

Analog Meters

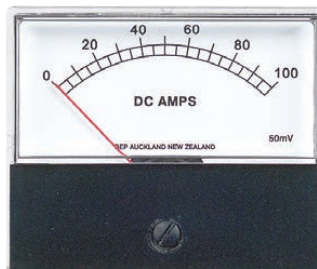
- Analog meters as used in BEP Contour circuit breaker panels.
- All analog meters accurate to within 2.5%



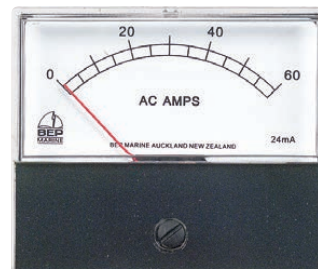
N816DCV



N0300ACV



N0100A



N060ACT

Meters	Part #	Range	Division Marks	Shunt Type
Amp (DC)	N010A	0-10A DC	0.5A	Internal
	N020A	0-20A DC	1A	Internal
	N050A	0-50A DC	2A	50A-50mV
	N0100A	0-100A DC	5A	100A-50mV
	N0150A	0-150A	1A	150A-50mV

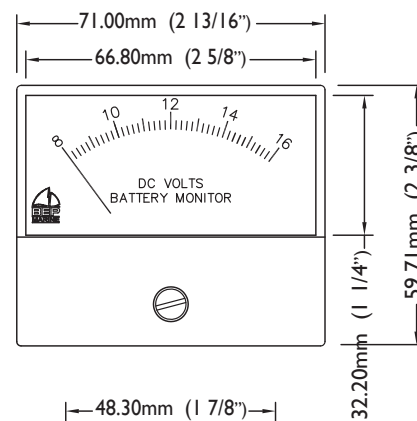


When ordering optional external shunt ammeters, shunts must be ordered separately.

Meters	Part #	Range	Division Marks
Volt (DC)	N816DCV	8-16V DC	0.2V
	N1632DCV	16-32V DC	0.4V
Volt (AC)	N0150ACV	0-150V AC	10V
	N0300ACV	0-300V AC	20V
Amp (AC)	N060ACT	0-60A AC	5A
	N0100ACT	0-100A AC	5A



CT-10-AN must be ordered when using N060ACT or N0100ACT.



Systems in Operation Panels

- 10 mm red LED's giving important systems on information
- Ideal for flybridge or remote dash position. Also available with alarm and mute switch.
- Backlit labels

Part #	in LxWx1.6	mm LxWx40	Label Set #	LEDs	Alarm	Mute switch
SOP1	4.5" x 5"	115 x 127	1	4	No	No
SOP1-AL	4.5" x 5"	115 x 127	1	3+1 switch	Yes	Yes
SOP2	4.5" x 9"	115 x 239	1-2	8	No	No
SOP2-AL	4.5" x 9"	115 x 239	1-2	7+1 switch	Yes	Yes



SOP1



SOP2

Wire & Cable Technical Data

Conductors Sized (AWG) for 3% Voltage Drop

Use 3% voltage drop for any "critical application" affecting the safety of the vessel or its passengers: bilge pumps, navigation lights, electronics, etc....

Important!

Length (feet): Determined by measuring the length of the conductor from the positive (+) power source connection to the electrical device and back to the negative (-) power source connection. Note that the power source connection may be either the battery, panelboard or switchboard.

Current (amps): Determined by adding the total amps on a circuit.

Conductor sizes not covered in Table B or Table C may be calculated by using the following formula:

$$CM = \frac{K \times I \times L}{E}$$

After calculating the Circular Mil Area (CM), use Table E to determine the proper conductor size (National Fire Protection Agency and Coast Guard require that the next larger conductor be used when the calculated CM area falls between the two conductor sizes).

CM = Circular Mil Area of Conductors

K = 10.75 (Constant representing the mil-foot resistance of copper)

I = Current - amps / **L** = Length - feet

E = Voltage drop at load (in voltage drop in a decimal expression)

For Example...

Q: A bilge pump draws 10 amps. The positive run is 11 feet from the power panel, including the float switch. The negative run is only 10 feet. What size is the wire?

A: Use the formula to reach the correct answer:

Table D shows that 12 AWG wire has a CM area of 6,500 and is the correct choice. However, SAE wire has a CM area of only 5,833. Under NFPA and USCG regulations, 10 SAE wire must be used.

3% Voltage Drop at 12 Volts

Length		Current (Amps)												
		5	10	15	20	25	30	40	50	60	70	80	90	100
10'	3 m	18	14	12	10	10	8	6	6	6	6	4	4	4
15'	5 m	16	12	10	10	8	8	6	6	4	4	4	2	2
20'	6 m	14	10	10	8	6	6	6	4	4	2	2	2	2
25'	8 m	12	10	8	6	6	6	4	4	2	2	2	1	1
30'	9 m	12	10	8	6	4	4	4	2	2	2	2	1	1
40'	12 m	10	8	6	6	4	4	2	2	1	1/0	1/0	2/0	2/0
50'	15 m	10	6	6	4	4	2	2	1	1/0	2/0	3/0	4/0	4/0
60'	18 m	10	6	6	4	2	2	1	1/0	2/0	3/0	3/0	4/0	4/0
70'	21 m	8	6	4	2	2	1	1/0	2/0	3/0	3/0	4/0	4/0	4/0
80'	24 m	8	6	4	2	2	1	1/0	2/0	3/0	4/0	4/0		
90'	27 m	8	4	2	2	1	1/0	2/0	3/0	4/0	4/0			
100'	30 m	6	4	2	2	1	1/0	2/0	3/0	4/0				
110'	33 m	6	4	2	2	1	1/0	2/0	3/0	4/0				
120'	36 m	6	4	2	1	1/0	2/0	3/0	4/0					
130'	40 m	6	2	2	1	1/0	2/0	3/0	4/0					
140'	43 m	6	2	2	1/0	2/0	3/0	4/0						
150'	46 m	6	2	1	1/0	2/0	3/0	4/0						
160'	49 m	6	2	1	1/0	2/0	3/0	4/0						
170'	52 m	6	2	1	2/0	3/0	3/0	4/0						

3% Voltage Drop at 24 Volts

Length		Current (Amps)												
		5	10	15	20	25	30	40	50	60	70	80	90	100
10'	3 m	18	18	16	14	12	12	10	10	10	8	8	8	6
15'	5 m	18	16	14	12	12	10	10	8	8	6	6	6	6
20'	6 m	18	14	12	10	10	10	8	6	6	6	6	4	4
25'	8 m	16	12	12	10	10	8	6	6	6	4	4	4	4
30'	9 m	16	12	10	10	8	8	6	6	4	4	4	2	2
40'	12 m	14	10	10	8	6	6	6	4	4	2	2	2	2
50'	15 m	12	10	8	6	6	6	4	4	2	2	2	1	1
60'	18 m	12	10	8	6	6	4	4	2	2	1	1	1/0	1/0
70'	21 m	12	8	6	6	4	4	2	2	1	1	1/0	1/0	2/0
80'	24 m	10	8	6	6	4	4	2	2	1	1/0	1/0	2/0	2/0
90'	27 m	10	8	6	4	4	2	2	1	1/0	1/0	2/0	2/0	3/0
100'	30 m	10	6	6	4	4	2	2	1	1/0	2/0	2/0	3/0	3/0
110'	33 m	10	6	6	4	2	2	1	1/0	1/0	2/0	3/0	3/0	4/0
120'	36 m	10	6	4	4	2	2	1	1/0	2/0	3/0	3/0	4/0	4/0
130'	40 m	8	6	4	2	2	2	1	1/0	2/0	3/0	3/0	4/0	4/0
140'	43 m	8	6	4	2	2	1	1/0	2/0	3/0	3/0	4/0	4/0	4/0
150'	46 m	8	6	4	2	2	1	1/0	2/0	3/0	3/0	4/0	4/0	4/0
160'	49 m	8	6	4	2	2	1	1/0	2/0	3/0	4/0	4/0	4/0	4/0
170'	52 m	8	6	2	2	1	1	2/0	3/0	3/0	4/0	4/0		

3% Voltage Drop at 32 Volts

Length		Current (Amps)												
		5	10	15	20	25	30	40	50	60	70	80	90	100
10'	3 m	18	18	16	16	14	14	12	12	10	10	10	8	8
15'	5 m	18	16	14	14	12	12	10	10	8	8	8	6	6
20'	6 m	18	16	12	12	12	10	10	8	8	6	6	6	6
25'	8 m	18	14	12	12	10	10	8	8	6	6	6	6	4
30'	9 m	16	14	10	10	10	8	8	6	6	6	4	4	4
40'	12 m	16	12	10	10	8	8	6	6	4	4	4	2	2
50'	15 m	14	12	8	8	8	6	6	4	4	2	2	2	2
60'	18 m	14	10	8	8	6	6	4	4	2	2	2	2	1
70'	21 m	12	10	6	6	6	6	4	2	2	2	1	1	0
80'	24 m	12	10	6	6	6	4	4	2	2	1	1	0	0
90'	27 m	12	8	6	6	6	4	2	2	1	1/0	1/0	1/0	2/0
100'	30 m	12	8	6	6	4	4	2	2	1	1/0	1/0	2/0	2/0
110'	33 m	10	8	6	6	4	4	2	2	1	1/0	1/0	2/0	2/0
120'	36 m	10	8	6	4	4	2	2	1	1/0	1/0	2/0	2/0	3/0
130'	40 m	10	8	6	4	4	2	2	1	1/0	2/0	2/0	3/0	3/0
140'	43 m	10	6	6	4	2	2	1	1/0	1/0	2/0	3/0	3/0	3/0
150'	46 m	10	6	6	4	2	1	1	1/0	2/0	2/0	3/0	3/0	4/0
160'	49 m	10	6	4	4	2	1	1	1/0	2/0	3/0	3/0	4/0	4/0
170'	52 m	8	6	4	2	2	1	1	1/0	2/0	3/0	3/0	4/0	4/0

Wire & Cable Technical Data

Conductors Sized (AWG) for 10% Voltage Drop

Use 10% voltage drop for any
“non-critical” applications: windlass,
cabin lights, etc....

10% Voltage Drop at 12 Volts

Length		Current (Amps)												
		5	10	15	20	25	30	40	50	60	70	80	90	100
10'	3 m	18	18	18	16	16	14	14	12	12	10	10	10	10
15'	5 m	18	18	16	14	14	12	12	10	10	8	8	8	8
20'	6 m	18	16	14	14	12	12	10	10	8	8	8	6	6
25'	8 m	18	16	14	12	12	10	10	8	8	6	6	6	6
30'	9 m	18	14	12	12	10	10	8	8	6	6	6	6	4
40'	12 m	16	14	12	10	10	8	8	6	6	6	4	4	4
50'	15 m	16	12	10	10	8	8	6	6	4	4	4	2	2
60'	18 m	14	12	10	8	8	6	6	4	4	2	2	2	2
70'	21 m	14	10	8	8	6	6	6	4	2	2	2	2	1
80'	24 m	14	10	8	8	6	6	4	4	2	2	2	1	1
90'	27 m	12	10	8	6	6	6	4	2	2	2	1	1	1/0
100'	30 m	12	10	8	6	6	4	4	2	2	1	1	1/0	1/0
110'	33 m	12	8	8	6	6	4	2	2	2	1	1/0	1/0	1/0
120'	36 m	12	8	6	6	4	4	2	2	1	1	1/0	1/0	2/0
130'	40 m	12	8	6	6	4	4	2	2	1	1/0	1/0	2/0	2/0
140'	43 m	10	8	6	6	4	2	2	1	1	1/0	2/0	2/0	2/0
150'	46 m	10	8	6	4	4	2	2	1	1/0	1/0	2/0	2/0	3/0
160'	49 m	10	8	6	4	4	2	2	1	1/0	2/0	2/0	3/0	3/0
170'	52 m	10	6	6	4	2	2	2	1	1/0	2/0	2/0	3/0	3/0

10% Voltage Drop at 24 Volts

Length		Current (Amps)												
		5	10	15	20	25	30	40	50	60	70	80	90	100
10'	3 m	18	18	18	18	18	18	16	16	14	14	14	12	12
15'	5 m	18	18	18	18	16	16	14	14	12	12	12	10	10
20'	6 m	18	18	18	16	16	14	14	12	12	10	10	10	10
25'	8 m	18	18	16	16	14	14	12	12	10	10	10	8	8
30'	9 m	18	18	16	14	14	12	12	10	10	8	8	8	8
40'	12 m	18	16	14	14	12	12	10	10	8	8	8	6	6
50'	15 m	18	16	14	12	12	10	10	8	8	6	6	6	6
60'	18 m	18	14	12	12	10	10	8	8	6	6	6	6	4
70'	21 m	16	14	12	10	10	8	8	6	6	6	6	4	4
80'	24 m	16	14	12	10	10	8	8	6	6	6	4	4	4
90'	27 m	16	12	10	10	8	8	6	6	6	4	4	4	2
100'	30 m	16	12	10	10	8	8	6	6	4	4	4	2	2
110'	33 m	14	12	10	8	8	8	6	6	4	4	2	2	2
120'	36 m	14	12	10	8	8	6	6	4	4	2	2	2	2
130'	40 m	14	12	10	8	8	6	6	4	4	2	2	2	2
140'	43 m	14	10	8	8	6	6	6	4	2	2	2	2	1
150'	46 m	14	10	8	8	6	6	4	4	2	2	2	2	1
160'	49 m	14	10	8	8	6	6	4	4	2	2	2	1	1
170'	52 m	12	10	8	6	6	6	4	2	2	2	2	1	1

10% Voltage Drop at 32 Volts

Length		Current (Amps)												
		5	10	15	20	25	30	40	50	60	70	80	90	100
10'	3 m	18	18	18	18	18	18	18	16	16	14	14	14	14
15'	5 m	18	18	18	18	18	18	16	14	14	14	12	12	12
20'	6 m	18	18	18	18	16	16	14	14	12	12	12	10	10
25'	8 m	18	18	18	16	16	14	14	12	12	10	10	10	10
30'	9 m	18	18	18	16	14	14	12	14	10	10	10	10	8
40'	12 m	18	18	16	14	14	12	12	10	10	8	8	8	8
50'	15 m	18	16	14	14	12	12	10	10	8	8	8	6	6
60'	18 m	18	16	14	12	12	10	10	8	8	8	6	6	6
70'	21 m	18	14	14	12	10	10	8	8	8	6	6	6	6
80'	24 m	18	14	12	12	10	10	8	8	6	6	6	6	4
90'	27 m	18	14	12	10	10	10	8	6	6	6	6	4	4
100'	30 m	16	14	12	10	10	8	8	6	6	6	4	4	4
110'	33 m	16	14	12	10	10	8	8	6	6	6	4	4	4
120'	36 m	16	12	10	10	8	8	6	6	6	4	4	4	2
130'	40 m	16	12	10	10	8	8	6	6	6	4	4	2	2
140'	43 m	14	12	10	8	8	8	6	6	4	4	2	2	2
150'	46 m	14	12	10	8	8	6	6	6	4	4	2	2	2
160'	49 m	14	12	10	8	8	6	6	4	4	2	2	2	2
170'	52 m	14	12	10	8	8	6	6	4	4	2	2	2	2

Wire & Cable Technical Data

Conductor Sizes

AWG	mm ²	AWG CM area	SAE CM area	Ampacity Engine Space Outside	Engine Space Inside
18	0.8	1,600	1,537	20	17
16	1	2,600	2,336	25	21
14	2	4,100	3,702	35	30
12	3	6,500	5,833	45	38
10	5	10,500	9,343	60	51
8	8	16,800	14,810	80	68
6	13	26,600	24,538	120	102
4	21	42,000	37,360	160	136
2	34	66,500	62,450	210	178
1	42	83,690	77,790	245	208
1/0	53	105,600	98,980	285	242
2/0	68	133,100	125,100	330	280
3/0	85	167,800	158,600	385	327
4/0	107	211,600	205,500	445	378

PN	Page	PN	Page	PN	Page	PN	Page	PN	Page
1000-6W	69	1001609	61	1002006	58	184060P-01-1	51	185135P-01-1	51
1000-6W-24V	69	1001610	61	1002007	59	184080P-01-1	51	185135P/DSP	51
1000-ACSM	69	1001704	56	1002008	59	184100F-01-1	51	185150F-01-1	51
1000-AM10	69	1001705	56	1002009	59	184100P-01-1	51	185150F/DSP	51
1000-AM20	69	1001706	56	1002010	58	184150F-01-1	51	185150P-01-1	51
1000-AM50	69	1001707	56	1002011	59	184150P-01-1	51	185150P/DSP	51
1000-DCSM	69	1001708	56	1002012	59	185030F-01-1	51	54-27C4	21
1000-VM-12V	69	1001709	56	1002013	58	185030F/DSP	51	54-27C4/DSP	21
1000-VM-24V	69	1001710	56	1002014	59	185030P-01-1	51	54-35C2	21
1001001	62	1001711	56	1002015	58	185030P/DSP	51	54-35C2/DSP	21
1001002	62	1001712	56	1002016	59	185040F-01-1	51	600-ACSM-KIT	89
1001101	63	1001713	56	1002017	59	185040F/DSP	51	600-DCM-10M	88
1001102	63	1001714	56	1002018	59	185040P-01-1	51	600-DCM-5M	88
1001103	63	1001715	56	1002019	59	185040P/DSP	51	600-DCSM-KIT	88
1001104	63	1001716	56	1002020	59	185050F-01-1	51	600-GD	92
1001301	60	1001801	55	1002021	58	185050F/DSP	51	600-GDL	92
1001302	60	1001802	55	1002022	58	185050P-01-1	51	600-GDRV	92
1001303	60	1001803	55	1002023	58	185050P/DSP	51	600-LPG	92
1001304	60	1001804	55	1002024	58	185060F-01-1	51	600-TG	91
1001305	60	1001805	55	1002025	58	185060F/DSP	51	600-TGSK	91
1001306	60	1001806	55	1002026	59	185060P-01-1	51	600-TLM-SIF	91
1001307	60	1001807	55	1002101	62	185060P/DSP	51	700	18
1001308	60	1001808	55	1002102	62	185070F-01-1	51	700B	18
1001401	57	1001809	55	1002201	63	185070F/DSP	51	701	18
1001402	57	1001810	55	1002202	63	185070P-01-1	51	701-KEY	19
1001501	57	1001811	55	1002203	63	185070P/DSP	51	701-KEY-EP	19
1001502	57	1001812	55	1002204	63	185080F-01-1	51	701-MD	20
1001503	57	1001901	58	1002205	63	185080F/DSP	51	701-MD-D	20
1001505	57	1001902	58	1002206	63	185080P-01-1	51	701-MDCZ	20
1001506	57	1001903	58	1002207	63	185080P/DSP	51	701-MDCZ-B	20
1001507	57	1001904	58	1002301	62	185100F-01-1	51	701-MDCZ-D-B	20
1001508	57	1001905	59	100504	57	185100F/DSP	51	701-MDVS	22
1001601	62	1001906	58	1100-BK	69	185100P-01-1	51	701-MDVS-24V	22
1001602	62	1001907	58	1101-BK	69	185100P/DSP	51	701-PM	19
1001603	61	1001908	58	1101-BK-TS	69	185120F-01-1	51	701B	18
1001604	61	1002001	58	121-710-1101/1	53	185120F/DSP	51	701B-PM	19
1001605	61	1002002	58	124001000	52	185120P-01-1	51	701S	18
1001606	61	1002003	59	12VPG	68	185120P/DSP	51	701S-B	18
1001607	61	1002004	58	12VRC	68	185135F-01-1	51	701S-B-PM	19
1001608	61	1002005	59	184050P-01-1	51	185135F/DSP	51	701S-PM	19

PN	Page	PN	Page	PN	Page	PN	Page	PN	Page
702-2S/B	44	713-PS	84	772-DBC-EZ-B	16	80-511-0002-01	70	80-708-0013-00	21
702-2SB	44	713-SB	84	777-BB3S-650	36	80-511-0003-00	70	80-708-0017-00	21
702-2SB/L	44	713-SS	84	777-BB3S-650-B	36	80-511-0003-01	70	80-712-0039-00	49
702-8-10-B	44	714-140A-DVSR	24	777-BB4S-500	36	80-511-0004-00	70	80-712-0039-01	49
702-MFH	49	714-140A-DVSR-B	24	777-BB4S-500-B	36	80-511-0004-01	70	80-716-0014-00	28
702-MFH-B	49	715-H	24	777-BB5S-650	36	80-511-0005-00	70	80-716-0015-00	28
702B	44	715-S	25	777-BB5S-650-B	36	80-511-0005-01	70	80-716-0016-00	28
702SB	44	715-V	24	777-BB8S-650	36	80-511-0006-00	70	80-716-0017-00	27
704-4S/B	44	716-H-140A-DVSR	25	777-BB8S-650-B	36	80-511-0006-01	70	80-716-0018-00	27
705-100A	45	716-SQ-140A-DVSR	25	777-Z10W-200	36	80-511-0007-00	70	80-724-0006-00	21
705-100A/B	45	716-V-140A-DVSR	25	777-Z10W-200-B	36	80-511-0007-01	70	80-724-0007-00	22
705-135A	45	717-140A-DVSR	26	777-Z18W-200	36	80-511-0008-00	70	80-911-0045-00	21
705-135A/B	45	718-140A-DVSR	25	777-Z18W-200-B	36	80-511-0008-01	70	800-MS1	31
705-150A	45	719-140A-DVSR	26	778-ANL	37	80-511-0009-00	70	800-MS2	31
705-150A/B	45	720	18	778-ANL-B	37	80-511-0009-01	70	800-MS3	31
705-50A	45	720-MDO	20	778-ANL2S	37	80-511-0010-00	70	800-MS4	31
705-50A/B	45	720-MDO-EP	22	778-ANL2S-B	37	80-511-0010-01	70	900-2WP	67
705-80A	45	720-MDVSO	22	778-ANLTP	37	80-511-0011-01	70	900-2WP MOM	67
705-80A/B	45	720B	18	778-ANLTP-B	37	80-511-0012-01	70	900-2WPOFO	67
706-2W	45	770	16	778-T2S-400	37	80-511-0031-00	70	900-3WPS	67
706-2W/B	45	770-B	16	778-T2S-400-B	37	80-511-0031-01	70	900-3WPSW	67
706-4W/B	45	770-DP	16	778-T2S-600	37	80-600-0021-00	88	900-4WP	67
706-4WB	45	770-DP-B	16	778-T2S-600-B	37	80-600-0022-00	88	900-4WPW	67
707	45	770-DP-EZ	16	779-LB-1-B	39	80-600-0023-00	89	900-5WP	67
708-107	30	770-DP-EZ-B	16	779-LB-2-B	39	80-600-0027-00	94	900-5WPS	67
708-42.5	30	770-EZ	16	779-LBJ-2	41	80-600-0028-00	94	900-5WPSW	67
708-42.5	44	770-EZ-B	16	779-LBJ-2-B	39	80-600-0029-00	91	900-6WP	67
708-54.5	44	770-KEY-EP	17	779-LBJ-3	41	80-601-0020-00	94	900-6WPW	67
708-62.0	44	77049020	48	779-LBJ-3-B	41	80-601-0021-00	94	900-AC1	78
708-64.5	44	77049160	48	779-LBJ-4	41	80-601-0022-00	94	900-AC1-110V	78
708-68.5	44	77049400	48	779-LBJ-4-B	41	80-601-0023-00	94	900-AC2H-ACSM	79
708-70.0	30	771-S	16	779-LBJ-5	41	80-601-0024-00	94	900-AC2H-ACSM-110	79
710-140A	23	771-S-B	16	779-LBJ-5-B	41	80-601-0025-00	94	900-AC2H-AM	78
710-140A-B	23	771-S-EZ	16	779-LBJ-6	41	80-601-0026-00	94	900-AC2H-AM-110	78
711L	88	771-S-EZ-B	16	779-LBJ-6-B	41	80-700-0050-00	28	900-AC2V-ACSM	79
713	84	771-SFD	16	779-LBZ-1-B	39	80-700-0051-00	28	900-AC2V-ACSM-110	79
713-BT	84	771-SFD-B	16	779-LBZ-2-B	39	80-700-0052-00	28	900-AC2V-AM	79
713-EP	84	772-DBC	16	80-511-0001-00	70	80-701-0018-00	22	900-AC2V-AM-110	79
713-HB	84	772-DBC-B	16	80-511-0001-01	70	80-707-0004-00	89	900-AC3-ACSM	79
713-MS	84	772-DBC-EZ	17	80-511-0002-00	70	80-707-0005-00	89	900-AC3-AM	79

PN	Page	PN	Page	PN	Page	PN	Page	PN	Page
900-AC3-AM-110	79	904NMH	72	BFHD-50A	48	CC-3WS/CH	30	CSP6-PTC	68
900-AC3-ASCM-110	79	904NMV	73	BFHD-50A/DSP	48	CC-5	30	CSP6-PTCW	68
900-AC4-ACSM	79	905-AM	74	BFHD-60A	48	CC-801	29	CSP6W	68
900-AC4-ACSM-110	79	905-DCSM	74	BFHD-60A/DSP	48	CC-802	29	CT-10-3	89
900-ACCH	78	905NM	73	BFHD-70A	48	CC-803N	29	CT-HD	89
900-ACCH-110V	78	905NMV	73	BFHD-70A/DSP	48	CC-804	30	FANL-600-B	48
900-ACM2-AM	78	905V-AM	74	BFHD-80A	48	CC-810	29	FANL-675-B	48
900-ACM2-AM-110	78	905V-DCSM	74	BFHD-80A/DSP	48	CC-BLANK	30	FANL-750-B	48
900-ACM2W	78	906-AM	75	BL-SL-L	92	CC-HDBM	30	FD-2	92
900-ACM2W-110V	78	906-DCSM	75	BSP-1	19	CG2-2W	66	FT-225-B	48
900-ACM6V-AM	78	906NMH	73	CBL-100A-DP	53	CG2-2W-F	66	FT-250-B	48
900-ACM6V-AM-110	78	906NMV	73	CBL-100A-SP	53	CG2-2W-F-W	66	FT-300-B	48
900-ACM6W	78	906V-AM	75	CBL-50A-DP	53	CG2-2W-W	66	FT-350-B	48
900-ACM6W-110V	78	906V-DCSM	75	CBL-50A-SP	53	CG2-4W	66	FT-400-B	48
900-AM	74	907-AM	75	CBL-60A-DP	53	CG2-4W-F	66	FT-450-B	48
900-BA	67	AC-VSEN-4	89	CBL-60A-SP	53	CG2-4W-F-W	66	FT-500-B	48
900-DC	72	ATC-6W	49	CBL-75A-DP	53	CG2-4W-W	66	FT-600-B	48
900-RCD-16A	52	ATC-6W/B	49	CBL-75A-SP	53	CG2-6W	66	GAS-SM	88
900-RCD-1X16-32A	52	ATC-6WQC	49	CBS-10A-DP	53	CG2-6W-F	66	HDBFH	49
900-RCD-2X16A	52	BB-12W-2NC	43	CBS-10A-SP	53	CG2-6W-F-W	66	HDBFH/DSP	49
900-RCD-2X32A	52	BB-12W-2NC/DSP	43	CBS-15A-DP	53	CG2-6W-W	66	IP100	48
900-RCD-32A	52	BB-12W-2S	43	CBS-15A-DP-TC230	53	CG2-JB	66	IP100P/DSP	48
900-SOP	67	BB-12W-2S/DSP	43	CBS-15A-SP	53	CLB-05	52	IP125	48
900V-DCSM	74	BB-24W-2S	43	CBS-20A-DP	53	CLB-10	52	IP150	48
901H	72	BB-24W-2S/DSP	43	CBS-20A-DP-TC230	53	CLB-10/DSP	52	IP150P/DSP	48
901V	72	BB-4S-150	43	CBS-20A-DP-TC230	78	CLB-15	52	IP175	48
901V-AM	74	BB-4S-150A/DSP	43	CBS-20A-SP	53	CLB-15/DSP	52	IP200	48
901V-DCSM	74	BB-6W-2S	43	CBS-25A-DP	53	CLB-20	52	IP200P/DSP	48
902-AM	74	BB-6W-2S/DSP	43	CBS-25A-SP	53	CLB-20/DSP	52	IP250	48
902-DCSM	74	BB-LINK17MM	49	CBS-30A-DP	53	CLB-25	52	IP250P/DSP	48
902NMH	72	BC-FM1	80	CBS-30A-DP-TC230	53	CLB-25/DSP	52	IP300	48
902NMV	72	BC-FM2	80	CBS-30A-SP	53	CLB-30	52	IP300P/DSP	48
902V-AM	74	BC-FM3	80	CBS-40A-DP	53	CLB-30/DSP	52	IP355	48
902V-DCSM	74	BC-FM4	80	CBS-40A-SP	53	CLB-40	52	IP355P/DSP	48
903-AM	74	BC-PM1	80	CBS-50A-DP	53	CLB-40/DSP	52	IP40	48
903-DCSM	74	BC-PM2	80	CBS-50A-DP-TC230	53	CLB-5/DSP	52	IP425	48
904-AM	74	BFHD-30A	48	CBS-50A-SP-IG	53	CLB-BOOT	52	IP425P/DSP	48
904-DCSM	74	BFHD-30A/DSP	48	CBS-50A-TP / 50	53	CSP6	68	IP50	48
904NM	72	BFHD-40A	48	CBS-5A-SP	53	CSP6-F	68	IP500	48
904NM-DP	76	BFHD-40A/DSP	48	CC-1	30	CSP6-FW	68	IP500P/DSP	48

PN	Page	PN	Page	PN	Page	PN	Page
IP50P/DSP	48	J40A	48	N0100A	95	SET-770	84
IP63	48	J7.5A	48	N0100ACT	95	SET-CC-1	84
IP63P/DSP	48	JJ05A	48	N010A	95	SET-CC-A	84
IP80	48	JJ10A	48	N0150A	95	SET-CC-BCC-1	84
IP80P/DSP	48	JJ15A	48	N0150ACV	95	SET-G2-1	85
IS-10MM-1	42	JJ20A	48	N020A	95	SET-G2-2	85
IS-10MM-1R	42	JJ30A	48	N0300ACV	95	SET-IN	83
IS-10MM-2	42	LB-450-50M	88	N050A	95	SOP1	95
IS-10MM-2/L	42	LBL-MIC1	85	N060ACT	95	SOP1-AL	95
IS-6MM-1	42	LBL-MIC2	85	N1632DCV	95	SOP2	95
IS-6MM-1/DSP	42	LBL-MICSYM	85	N816DCV	95	SOP2-AL	95
IS-6MM-1R	42	M28-DCSM	77	NC32Y-AM	76	SW-32111	68
IS-6MM-1R/DSP	42	M32-DCSM	77	NC32Y-DCSM	76	SW-32113	68
IS-6MM-2	42	M44-DCSM	77	NC36L-AM	76	SW-32114	68
IS-6MM-2/DSP	42	M44H-DCSM	77	NC36L-DCSM	76	SW-32115	68
ISC-10BK	42	M56-DCSM	77	NC36NM	73	SW-32120	68
ISC-6-2	42	MCB-3WENC	52	NO100A	95	SW-32123	68
IST-10MM-1S	38	MCB16A	52	NO300ACV	95	SW-6064B3P	69
IST-10MM-1S-B	38	MCB32A	52	NO60ACT	95	SW-6064C3P	69
IST-10MM-1SPT	38	MCB63A	52	PMCC-10	52	SW-6064D3P	69
IST-10MM-1SPT-B	38	MRBF-100A	50	RCD16A30MA	52	SW-CG1	66
IST-10MM-2S	38	MRBF-100A-B	50	RCD32A30MA	52	SW-CG2	66
IST-10MM-2S-B	38	MRBF-125A	50	RCD63A	52	SW-CG3	66
IST-10MM-8MM	38	MRBF-125A-B	50	RES-12WAY	73	SW-CG4	66
IST-10MM-8MM-B	38	MRBF-150A	50	RES-16WAY	73	SW-CG5	66
IST-8MM-1S	38	MRBF-150A-B	50	RES-20WAY	73	SW-M331	68
IST-8MM-1S-B	38	MRBF-200A	50	RES-24WAY	73	SW-RVS2	69
IST-8MM-1SPT	38	MRBF-200A-B	50	RES-28WAY	73	TS1	90
IST-8MM-1SPT-B	38	MRBF-250A	50	RES-32WAY	73	TS1-PK	90
IST-8MM-2S	38	MRBF-250A-B	50	RES-36WAY	73	VR2-24	93
IST-8MM-2S-B	38	MRBF-300A	50	RES-44WAY	73	VR2-24V	93
J01A	48	MRBF-300A-B	50	RES-4WAY	73	VR2.2	93
J02A	48	MRBF-50A	50	RES-56WAY	73	WAFH-14	49
J03A	48	MRBF-50A-B	50	RES-8WAY	73		
J05A	48	MRBF-80A	50	RV-TS-5M	91		
J10A	48	MRBF-80A-B	50	SA296COMP-12V	93		
J15A	48	MRCBF-200A	50	SA296COMP-24V	93		
J20A	48	MRCBF-200A-B	50	SET-1001	85		
J25A	48	MRCBP-200A	50	SET-1002	85		
J30A	48	MRCBP-200A-B	50	SET-715	84		

Ingress Protection (IP) Ratings Guide



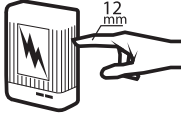

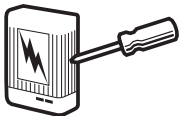









Example:

An IP65 rating can be determined using the adjacent table and example:

- The first number of the rating example, 6, in the gray column means the enclosure is dust tight
- The second number of the rating example, 5, in the blue column means the enclosure is protected against jets of water

The IP rating system was established by the International Electrotechnical Commission (IEC), an organization for international standards and conformity assessment. The IEC collaborates closely with the International Organization for Standardization (ISO). A complete description of the IP ratings and associated tests is found in IEC Publication 529. Although these ratings were initially developed as a way to classify enclosures, they now provide a convenient, practical way to compare levels of sealing. Many electrical products have an Ingress Protection (IP) rating which identifies the environmental factors needing consideration prior to the product's installation.

This is important when deciding when to mount products in a dry and clean environment versus a wet and/or dusty environment. The IP rating indicates the degree of protection provided. The numbers following IP represent levels of sealing and can range from no protection to full protection against dust and water. The table provides a description of the protection at each level.

SOLIDS		WATER	
1	 Protected against a solid object greater than 50 mm such as a hand.	1	 Protected against vertically falling drops of water. Limited ingress permitted.
2	 Protected against a solid object greater than 12 mm such as a finger.	2	 Protected against vertically falling drops of water with enclosure tilted up to 15 degrees from the vertical. Limited ingress permitted.
3	 Protected against a solid object greater than 2.5 mm such as a screwdriver.	3	 Protected against sprays of water up to 60 degrees from the vertical. Limited ingress permitted for three minutes.
4	 Protected against a solid object greater than 1 mm such as a wire.	4	 Protected against water splashed from all directions. Limited ingress permitted.
5	 Dust Protected. Limited ingress of dust permitted. Will not interfere with operation of the equipment. Two to eight hours.	5	 Protected against jets of water. Limited ingress permitted.
6	 Dust tight. No Ingress of dust. Two to eight hours.	6	 Water from heavy seas or water projected in powerful jets shall not enter the enclosure in harmful quantities.
		7	 Protection against the effects of immersion in water between 15 cm and 1 m for 30 minutes.
		8	 Protection against the effects of immersion in water under pressure for long periods.

Rating Example:

IP65

INGRESS PROTECTION