



Industry Application Report

October 2021



Military Display Systems.

Military Display Systems are used to show intelligence information in challenging environments. Used with rugged and robust hardware to handle heavy duties. The application of military display systems can be in water, air or land, and they need to succeed in extreme conditions. Therefore they need to be exceptionally reliable and comply with EMC and Military directives.

Due to their robustness and durability, Bulgin's stainless steel Push Button Switches are utilised in Military Display Systems and consoles to perform various functions.

- ⬡ Potential Markets: Automotive / Aerospace / Marine
- ⬡ Bulgin's extensive range of Vandal Resistant security Switches are designed with a high resistance to wear and tear, corrosion and harsh use in potentially hostile environments



Products Related To This Industry:



MP0037

Vandal Resistant Switch

Stainless Steel Low Profile Vandal Resistant Push Button Switches. Choice of switch operations, diameters & IP ratings depending on part code. Solder Tag Termination except for MP0037 (Screw Terminal). Where an IP rating is shown, switch is front panel sealed to IP rating given, microswitch is not sealed.



MPI001 Series

Vandal Resistant Switch

22mm diameter bezel. 19.2mm Panel Cutout
Single pole. Push to make tactile (momentary action).
Choice of Termination depending on part code:
/28 - 2.8mm Tab. /TE or /TERM - Screw Terminal.
/RP - Solder Tag. /FL - 300mm Flying Leads; white - switch, red - LED +, black - LED.



MPB Series

Vandal Resistant Switch

Brass Chrome Plated Low Profile Vandal Resistant Push Button Switches. Choice of switch operations, diameters & IP ratings depending on part code. Solder Tag except for MPB037 (Screw Terminal). Where an IP rating is shown, switch is front panel sealed to IP rating given, microswitch is not sealed.



MP0050 Series

Vandal Resistant Switch

Stainless Steel Large Diameter Vandal Resistant Push Button Switches. Front panel sealed to IP66 (microswitch is not sealed). 32mm diameter. Solder Tag. Choice of Low Profile (MP0050) or Protruding Profile (MP0050/2).



Sealed Diving Cameras.

Sealed Diving Cameras are powerful devices that capture and store or send images and video for marine exploration. These devices can be carried manually or attached to a mobile remote-control machine as a drone to reach deep-sea locations. As required per its electrical structure, the components and equipment demand to be waterproof and resist challenging conditions, salinity, and rugged to handle curious sea life.

Integration of WLAN functionality into a water sealed camera is achieved by using the SMB Buccaneer Antenna for remote surface image transmissions.

- ⬡ Potential Markets: Marine / Subsea
- ⬡ Sealed to IP68 when mated and IP69K, Tested in accordance with DIN 40050/Part 9 IP6k9k. 50Ω Impedance SMB connector with a frequency range of 0-4GHz



Products Related To This Industry:



PX0407 / 408 / 409

400 Series SMB

SMB Antennas. Water and dustproof to IP68 when mated with compatible connector. Secure screw thread locking. Built-in half wavelength omnidirectional sealed antenna 90 degree bend (part codes suffixed /90). Straight (no part code suffix). SMB 50 Ohm interface. Choice of frequency bands depending on part code. Mate with PX0414 Panel Mount SMB Connector.



PX0416

400 Series SMB

Pre-Wired Flex SMB Connectors. Water and dustproof to IP68 when mated with compatible connector. Frequency range 0-4GHz. Overmoulded connector supplied with 50 Ohm impedance SMB plug terminated with RG-174 cable in a choice of lengths depending on part code. Mate with PX0414 Panel Connector.



PX0415/1

400 Series SMB

Rewireable SMB Connector. Water and dustproof to IP68 when mated with compatible connector. Frequency range 0-4GHz. Supplied with 50 Ohm impedance SMB plug. For RG-174 cable. 14319 hand crimp tool available separately. Pre-wired connector also available (PX0416). Mate with Panel connector PX0414.



PX0414

400 Series SMB

Front Panel Mount SMB Connector. Water and dustproof to IP68 when mated with compatible connector. Frequency range 0-4GHz. Supplied with 50 Ohm impedance SMB plug terminated with RG-174 cable in a choice of cable lengths depending on part code (U.FL cable version also available on request). Mate with Flex Connectors PX0415, PX0416.



Instrument Landing System.

ILS or Instrument Landing Systems are used in the aerospace industry to guide aeroplanes and flying devices to navigate safely through harsh conditions. The systems work with radio beams providing the pilots or intelligence software (AI) with vertical and horizontal guidance information during the landing process.

Our Toggle Switches are used to operate Deployable Instrument Landing Systems which provide precision guidance to aircraft approaching airfields in challenging weather conditions.

- ⬡ Potential Markets: Airports / Transport
- ⬡ Bulgin provide a Range of Toggle Switches including Single Pole (3900 Series) & Double Pole (3950 Series) with a Standard or Sealed body (panel seal to IP67)



Products Related To This Industry:



3900 Series

Toggle Switches

ENEC, UL, CSA approved (approvals & ratings vary with function & switch body type - see technical data for details). Choice of: Single Pole (3900 Series), Double Pole (3950 Series) Standard or Sealed body (panel seal to IP67)
Actuator: 10mm, 17.5mm, 38.1mm Metal Toggle or 17.5mm Flatted Nylon Toggle.



1700 / 1750 Series

Toggle Switches

Range of Toggle Switches with Nylon actuators. ENEC, UL, CSA approved (approvals & ratings vary with function & switch body type - see technical data for details). Single Pole (1700 Series), Double Pole (1750 Series).
Actuator: 13.8mm Nylon Toggle, 16.4mm Flatted Nylon Toggle.



Accessories

Toggle Switches

Covers (with internal nylon/metal nuts) & Seals:
A1080MOAAA Actuator Cover for use with 3900 Series & compatible 1700/1750 Series switches. A0539MOAAA Neck Seal (actuator remains visible) for use with 3900 Series & 1700/1750 Series switches. A0331MOAAA Actuator Cover for use with compatible 1700/1750 Series.



5500 Series

Rocker Switches

Range of Single Pole Rocker Switches. Standard (5500 Series) & Illuminated (5503, 5508 Series) versions. ENEC, UL, CSA approved. Approvals & ratings can vary with function - see technical data for details. Choice of Single or Twin units. Termination: 6.3 x 0.8 QC, 4.8 x 0.8 QC, Solder Lug. Body/bezel styles.



Remote Controlled Golf Trolleys.

The technological substitution for the carrying of golf clubs is the electrical remote-control caddies or trolleys. These devices are able to carry across the course the professional or amateur golf player's clubs, golf balls or any other accessory used in the game. 100% electrical, they incorporate reliable components that can support rain, dust and corrosion.

Our Miniature Rocker Switches with protective covers are designed into remote controlled electric golf trolleys to provide extra protection in a variety of environments and weather conditions.

- ⬡ Potential Markets: Commercial / Domestic
- ⬡ Choice of Switching Circuits including 3 position along with choice of Panel Cut Outs
- ⬡ Push-on, Solder & PCB Terminals options available



Products Related To This Industry:



Double Pole Range

Rocker Switches

Range of Double Pole and 3 Position Selective Rocker Switches. Standard (1550 Series), high inrush tolerant (1350 Series), 3 position selective (1484, 1487 Series) and Indicator Only version (0480 Series). Splash resistant rocker versions available.



8800 Series

Rocker Switches

Range of ultra thin Rocker Switches. ENEC, UL, CSA approved (approvals and ratings can vary with function - see technical data for details). Single Pole. Curved rocker. Choice of: Termination: 4.8 x 0.8 QC, Solder Tag, PCB mount. Body colour: Black, Red, White. Plus other options available.



Minature Range

Rocker Switches

Extensive range of miniature Rocker Switches and matching Indicators. ENEC, UL, CSA approved (approvals and ratings can vary with function. Industry standard panel cut-out. Single Pole (8500, 8503 Series), Double Pole (8550, 8553 Series) and matching Indicator Only (8580 Series) versions all in same body size



1250SP / 1250 Series

Rocker Switches

Rocker Switches. ENEC, UL, CSA approved (approvals and ratings can vary with function - see technical data for details). Single Pole (1250SP Series) and Double Pole (1250 Series) in same body size. High inrush tolerance.





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