Deadman Handswitch

Part No DAA11101/DAA11115/DAA11117

fluid transfer international

Applications

"Release - to - close" handswitch that controls the flow of product enabling the operator to react quickly to any incident and terminate fuel flow.

Features

- Stainless Steel Lever.
- Fuel resistant switch housing.
- Operating temperature range minus 40°C to 105°C.
- Max voltage 100 Vdc.
- Max switching current 0.25 Amps.
- Enclosure protection to IP67.
- Shock rating to 100G.

Specification

The FLUID TRANSFER 11101 Deadman Handswitch has been designed specifically to meet the stringent requirements of mobile and fixed aircraft refuelling systems. The handswitch is of rugged and extremely lightweight construction and the design concept has proved to be the industry standard to refuelling personnel in locations worldwide.
The handswitch embodies features which overcome some of the inherent weaknesses of existing designs in order to improve reliability and serviceability.

The Fluid Transfer Deadman Handswitch provides the operator with the means to terminate product flow in an instant, by simply actuating a lever the operator is able to contol refuelling.

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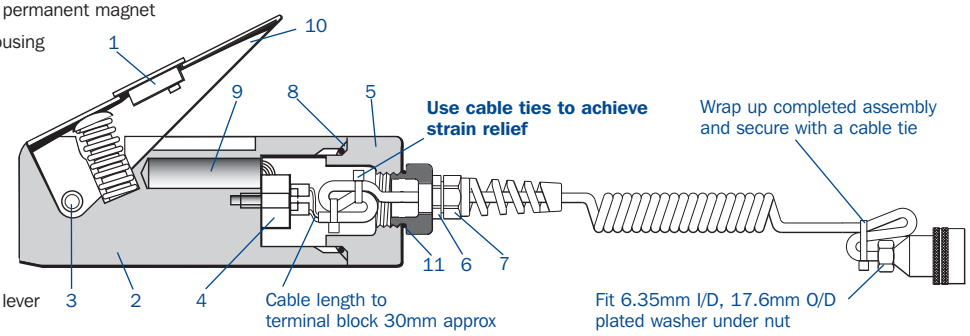
Technical Data

The Deadman Handswitch uses a shock resistant sensor where the switching means is housed in a resiliently mounted compact, easily removable element. The construction of the Handswitch provides for effective water vapour proofing and efficient cable strain relief. Positive retention of the permanent magnet is provided for on the stainless steel actuating lever. The lever is attached to the main switch housing by a stainless steel pivot pin designed to withstand the rigours of a typical operational environment. The lever is gripped to "make" the switch and released to "break" it. Cable termination is via a standard 2-way screw type terminal block located in the rear end of the switch housing.

The Deadman Handswitch incorporates the following features as standard.

- Operating temperature range -40°C to 105°C
- Cable gland accept wire sheaths between 5mm and 10 mm in diameter
- Maximum voltage rating 100Vdc
- **Maximum switching current 0.25A**
- Contacts are normally open, 3 watt rating.
- Switching element is hermetically sealed and potted.
- Enclosure protection to IP67.
- Shock rating to 100G.

1 Low hysteresis'Alcomax' permanent magnet
2 Fuel Resistant switch housing
3 Stainless steel pivot pin
4 Cable terminal block
5 End cap
6 Gland nut
7 Cable gland
8 "O" Ring
9 Shock resistant sensor
10 Stainless steel acuating lever
11 "O" Ring



The Deadman Handswitch assembly is offered in a variety of configurations, giving the customer the flexibility to match the product to individual applications. Below is the range of standard options.
All cables are coiled 'Suzie'® as standard. Straight cables can be offered on request. 3 core cable can be supplied for special applications.

Part No	Cable length	End Plug
DAA11101	Handswitch only	None
DAA11115-1	10 m	N600
DAA11115-2	14 m	N600
DAA11115-3	18 m	N600
DAA11117-1	10 m	Not Fitted
DAA11117-2	14 m	Not Fitted
DAA11117-3	18 m	Not Fitted
DAA11117-5	3 m	Not Fitted

Fitting a cable to the Handswitch:

1. Remove the end cap and cable gland by unscrewing the cap in an anti-clockwise direction.
2. Pass the sheathed cable through the cable gland and end cap but do not tighten the gland nut.
3. Cut the cable sheath back by approx. 40 mm and bare the ends for connection to the terminal block.
4. When used in conjunction with the FLUID TRANSFER type DA1418-2 coiled 'Suzie' cable, use two cable ties to knot the cable thereby providing effective strain relief - see sketch above.
5. Carefully unscrew the terminal block and withdraw the switch/sensor assembly together with the terminal block from the switch housing.
6. Connect the cable to the terminal block and re-fit the switch/sensor and terminal block into the switch housing. Tighten the fixing screw.
7. While preventing the cable from rotating relative to the switch housing, tighten the end cap sufficiently to prevent it being unscrewed by hand (ensure that the 'O' ring is fitted).
8. Tighten the gland nut on to the cable gland.
9. Check the switch for correct operation.

NOTE:On subsequent dismantling, always release the gland nut prior to unscrewing the end cap and ensure that cable does not rotate relative to the switch housing when the end cap is being unscrewed.

As with any electrical switch in a hazardous application it has to offer protection against a possible electrical spark. In this respect the 11101 series handswitch is designed for and must be used in conjunction with a current limiting relay such as the Fluid Transfer 1859 series (12 volt) or 1860 series (24 volt) current limiting relays or the 10826 series (12-28 volt) deadman timer system. These devices limit the switching current to an intrinsically safe level of 50 milli-amps. If it is installed or tested in higher voltage or current applications the reed switch contacts will be welded together and warranty claims will not be accepted.

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