

## COMPACT DEADMAN AND FILTER DIFFERENTIAL PRESSURE PROTECTION SYSTEM

- ◆ **DEADMAN AND FILTER DIFFERENTIAL PRESSURE PROTECTION IN ONE SYSTEM.**
- ◆ **DEADMAN SHUT DOWN WHEN HIGH FILTER DIFFERENTIAL PRESSURE OCCURS.**
- ◆ **SIMPLIFIED DESIGN. INTEGRAL RESET/OVERRIDE KEY SWITCH AND HIGH DP LAMP.**
- ◆ **EASY TO INSTALL AND OPERATE.**
- ◆ **WEATHERPROOF HOUSING.**



### Background

A number of Deadman systems and separate filter Differential Pressure (DP) protection systems are available. However, our system incorporates both functions, so it can either be used as a Deadman System, or a DP Protection System, or a combined Deadman and DP Protection System.

### Compact Deadman and DP Protection System

Our new Deadman and DP Protection System is based on the existing Aljac system which has been successfully fitted to many refuelling vehicles worldwide. However, our new system has been simplified for easier retro-fitting to semi-trailer type tankers, and it minimises the cabling requirements and associated costs. The system incorporates a green Power indicator LED, a large red High DP warning LED and a Reset/Override Switch into the front cover, and it fully meets the requirements of JIG Bulletins 58 and 105. It is contained in a weatherproof box but is **NOT** ATEX approved (so it must be located in a safe area on the vehicle). If the box is not visible from the vehicle control panel then an additional High DP warning lamp can also be connected.

### Deadman System Features

**Full Operational Control.** Remote control of the refuelling operation with a Deadman Handswitch and coiled Suzie Cable.

**Time Out.** Warning every 1.1/2 minutes, times out and closes down the Deadman System unless the Deadman Handswitch is released and immediately reactivated within 30 seconds. This prevents system abuse by jamming the Deadman Handswitch closed.

**Deadman Warning Lamp Output.** Lamp 'On' when the Deadman System is activated. Flashes during the Time Out period when system reactivation is required.

**Sounder Output.** Constant output during the Time Out period to warn the operator of impending system shut down unless reactivation is carried out.

**Remote Override.** Overrides the Deadman System when the trigger nozzle is unstowed (for dual pressure/overwing refuelling systems).

**Remote Emergency Stop.** Engine stop or full system shut down when activated (subject to exact installation details).

### DP Protection System Features

**High Filter DP Protection.** Activated by a signal from the DP Switch. Cuts power to the DP Output terminal which feeds a solenoid actuated valve in the Deadman air system.

**System Lock Out.** If the system has been activated and then the high DP signal is removed (falling DP as flow decreases), the Deadman System remains fully locked closed until the system is reset.

**DP Warning Lamp.** Lamp 'On' to tell the operator that the system has closed down due to high filter differential pressure.

**Reset/Override Switch.** Key operated switch which is used to reset/override the system by applying a 0 Volt signal. Switch On and then Off to reset. If the Switch remains in the On position the DP Protection System is overridden (which is required in order to carry out the DP Gauge full scale movement test). The DP Warning Lamp will flash to warn the operator that the DP Protection System is overridden.

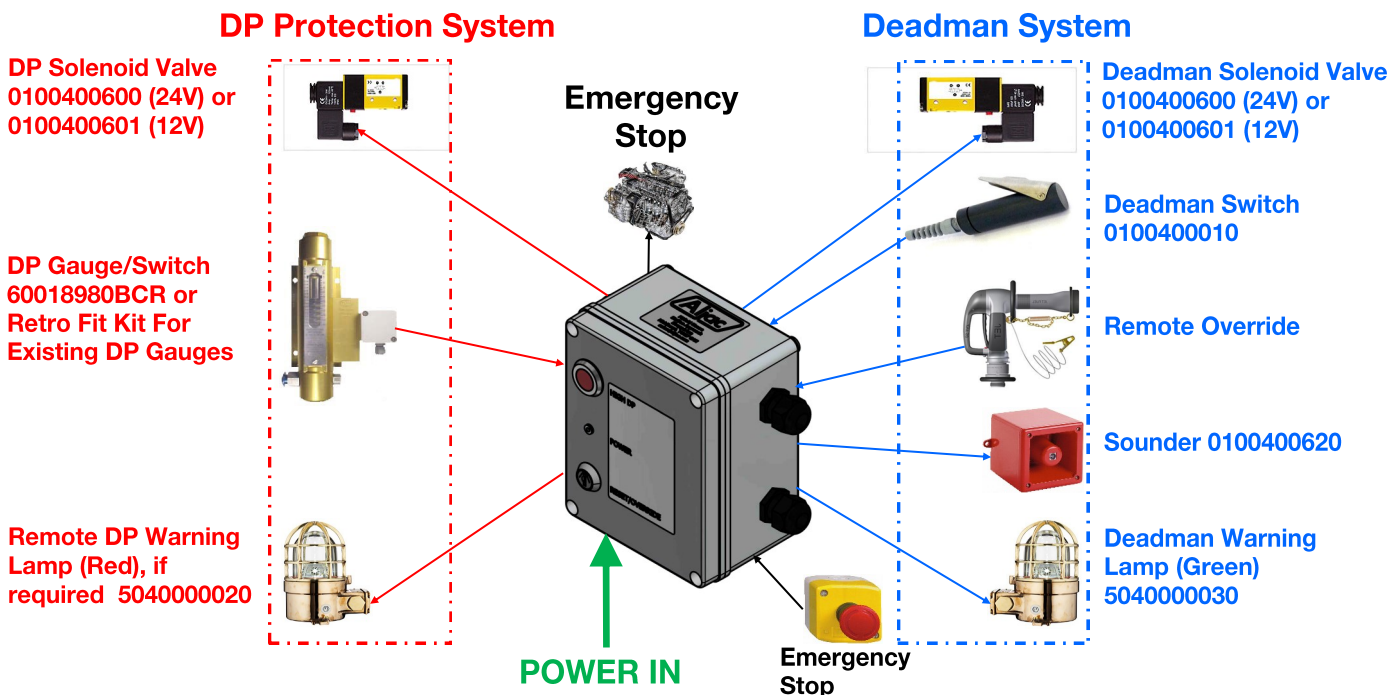
**Operational Security.** The DP Protection System **CANNOT** be overridden by operating the vehicle Deadman Override switch.

**Fail Safe Design.** The DP Protection System automatically closes down if the cable to the DP Switch is broken or disconnected.

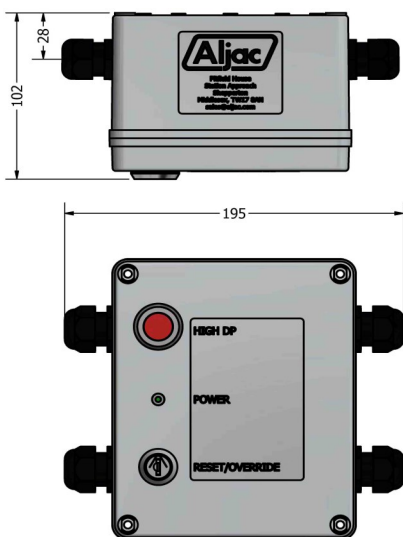
**Combined Deadman and DP Protection System**

When there is a high filter DP the system cuts power to main Deadman Output terminal and also to the DP Protection System Output terminal. All other features are as described above.

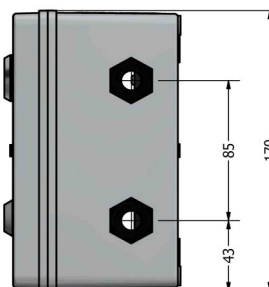
**Schematic Diagram**



**Dimensions**



ALL DIMENSIONS IN MILLIMETRES



**How To Order**

**Part Number.** 0100302358B.

**Specification**

- Box Dimensions:** 170x140x95mm.
- Nett Weight:** 750g.
- Power supply:** Between 11V to 27V DC.
- Output voltage:** As supply voltage.
- Maximum output current:** 3.5A per terminal.
- Maximum total load:** 5A.
- Maximum potential between minus pole and**

- ground:** 50V DC/AC peak.
- Deadman and DP Switch Supply:** 5V DC, current limited to 0.5mA.
- Time Out:** Warning starts at 1.1/2 minutes, system shut down in 30 seconds if not reactivated.
- Enclosure:** Grey Polycarbonate, Polyurethane seal.
- Ingress Protection:** Weatherproof to IP66.
- Cable Glands:** Black Nylon, M20 with Lock Nut, for 6-12mm diameter cable.
- Reset/Override Switch:** 2 position, keyed alike.
- High DP Warning:** Red LED.