
DUAL DIODE, NEGATIVE FIRST

Description



The Dual Diode is a wired single-pin pressure bulkhead installed into a switch sub assembly located between the perforating guns or a setting tool and a perforating gun within a wireline tool string. The Dual Diode is designed such that either explosive device connected to the Dual Diode can be fired without any outside influence. Two diodes are inside of the assembly to differentiate between positive (+) and negative (-) voltage.

Only one Dual Diode can be installed in a gun string and it must be placed between the two bottommost explosive devices to be fired. If more than two explosive devices are used in the gun string, pressure switches must be used between the upper guns in the gun string.

Caution

- The white wire of the Dual Diode must always be connected to the gun through wire. The red wire of the Dual Diode must always be connected to the top perforating device.
- Both detonators will fire simultaneously if the gun through wire and the upper detonator leads are connected in reverse.
- All detonator tests should be in compliance with API RP-67 Recommendations.

Benefits

- Allows the setting tool to be fired below the perforating gun.
- Allows the firing of the second gun in the string in the event of rathole or lower gun issues.
- Implements feedthrough with integrated Dual Diode.
- Provides bi-directional pressure isolation.
- Manufactured with corrosion free materials.

Specifications

Body OD	0.75"
Body Length	2.0"
Temperature Rating	347°F (175°C)
Pressure Rating	15,000 psi
Insulation Resistance (Wireline to Ground)	500MΩ at 500V
Forward Voltage Drop	0.5V to 0.7V
Maximum Voltage	600V
Maximum Current	2A
White Wire (Input)	16" long, 22 gauge stranded wire with PTFE insulation
Turret or Pin (Negative Output)	Brass rod, 0.2" x 0.6" long
Red Wire (Positive Output)	16" long, 22 gauge stranded wire with PTFE insulation