MTL2241 SOLENOID/ ALARM DRIVER

1-channel

The MTL2241 enables a safe-area contact or logic signal to control a low-power hazardous-area device such as a solenoid or alarm (provided it is certified intrinsically safe) or non-energy-storing 'simple apparatus' such as an LED. Applications include the operation of solenoid valves for process control or the initiation of audible or visual alarms to alert the plant operator. The unit can accept a logic input from an open-collector device or from standard TTL or CMOS 5V-operated logic.

SPECIFICATION
See also 'Common specification'

Number of channels
One, fully floating

Location of load
Zone 0, IIC, T4–T6 hazardous area if suitably certified
Div 1, Group A, hazardous location

Input/output characteristics
Turns on if <27kΩ or <1V applied
Turns off if >54kΩ or 2<V<6 applied

Minimum output voltage
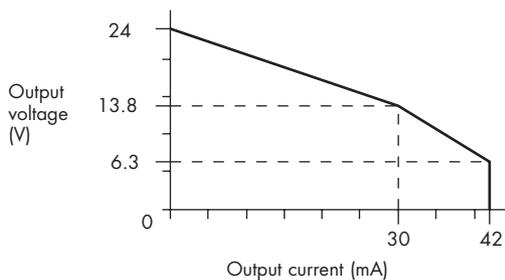
Maximum output voltage
28V from 300Ω, current limited at 46mA

Power supply failure protection
Load de-energised if supply fails

Broken line protection
Load de-energised if the leads go open circuit

'Fail-safe' earth fault protection
Enabled by connecting terminal 8 to earth

'No-fail' earth fault protection
Enabled by connecting terminal 8 to MTL2220
Fault on any line proclaimed: unit continues working

Response time
<10ms

LED indicator
ON when hazardous-area load energised

Consumption
2.4 to 3.6W (ac versions)
160mA (24V dc version)

Ambient temperature limits
–20 to +40°C (ac versions, close packed)
–20 to +30°C (dc version at 26V, close packed)
–20 to +55°C (ac versions, at least 5mm apart)
–20 to +50°C (dc version at 26V, at least 5mm apart)
–40 to +80°C (all versions, storage)

Safety description
28V, 300Ω, 93mA

FM max entity parameters
$V_{OC} = 34.0V$, $I_{SC} = 110.4mA$, $C_a = 0.09\mu F$, $L_a = 3.5mH$
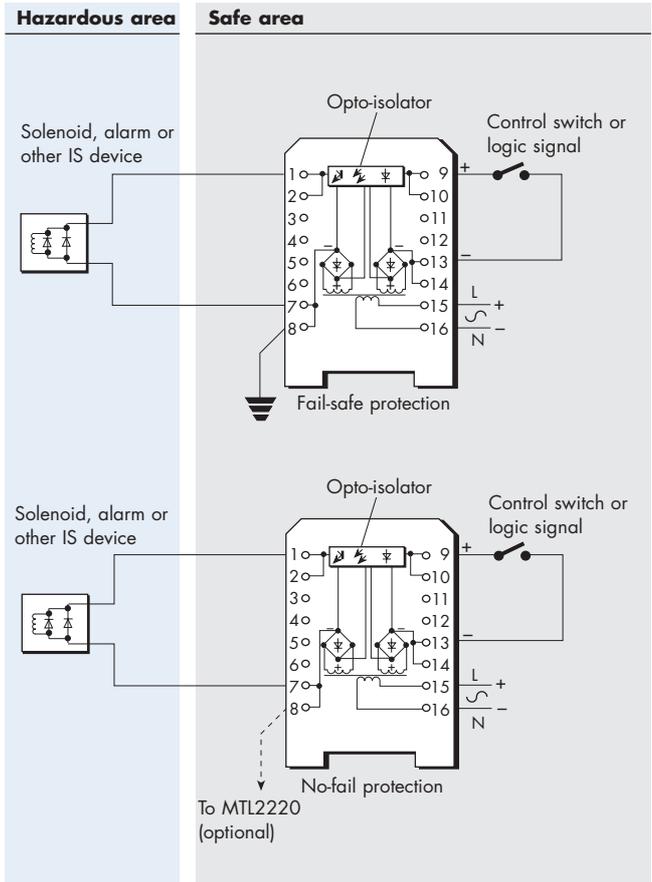
See also MTL2000 approvals, maximum cable parameters, dimensions and ordering information