

2.7 DO571 Digital Output Module

Digital Output 571 (2 groups of 8 channels 24 VDC outputs - High side switch - Full Diagnostics)

2.7.1 Features

- 16 channels for 24 V DC
- Isolated in groups of 8
- Over-current, Over-voltage and over-temperature protection
- EMC protection

2.7.2 Diagnostics

- Internal Bus Warning
- Short Circuit Alarm per Channel
- Wire Break Alarm per Channel
- Missing Field Power
- Board Over Temperature Warning
- Board Over Temperature Alarm (Fatal)
- Internal Hardware Error (Fatal)

2.7.3 LED List

- Power (Green).
- Run (Green),
- Standby (Green)
- Fault (Red)
- Status1 (Blink On Activity) BACKPLANE Bus1 activity
- Status2 (Blink On Activity)BACKPLANE Bus2 activity
- Channel indicator: One LED (Green) per each output state (On = 1 and Off = 0).

2.7.4 Description

This module is designed using high-side-switches which are able to drive all types of resistive, capacitive, and inductive loads up to 0.5A per output. It has 2 optically isolated groups of 8 outputs, with full diagnostics. Every input channel consists of current limiting components, EMC protection components, input state indication LED and optical isolation barrier.

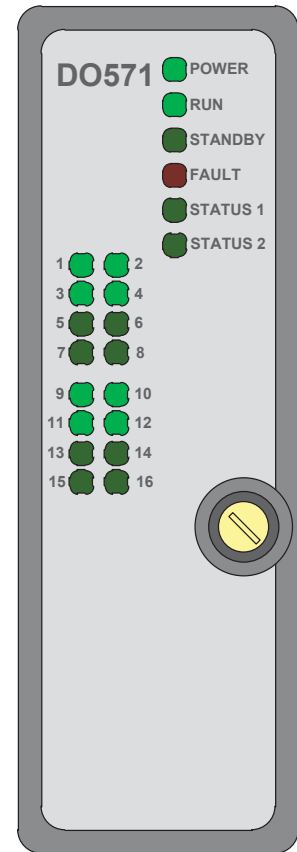


Figure 2-17:
DO571 Front View

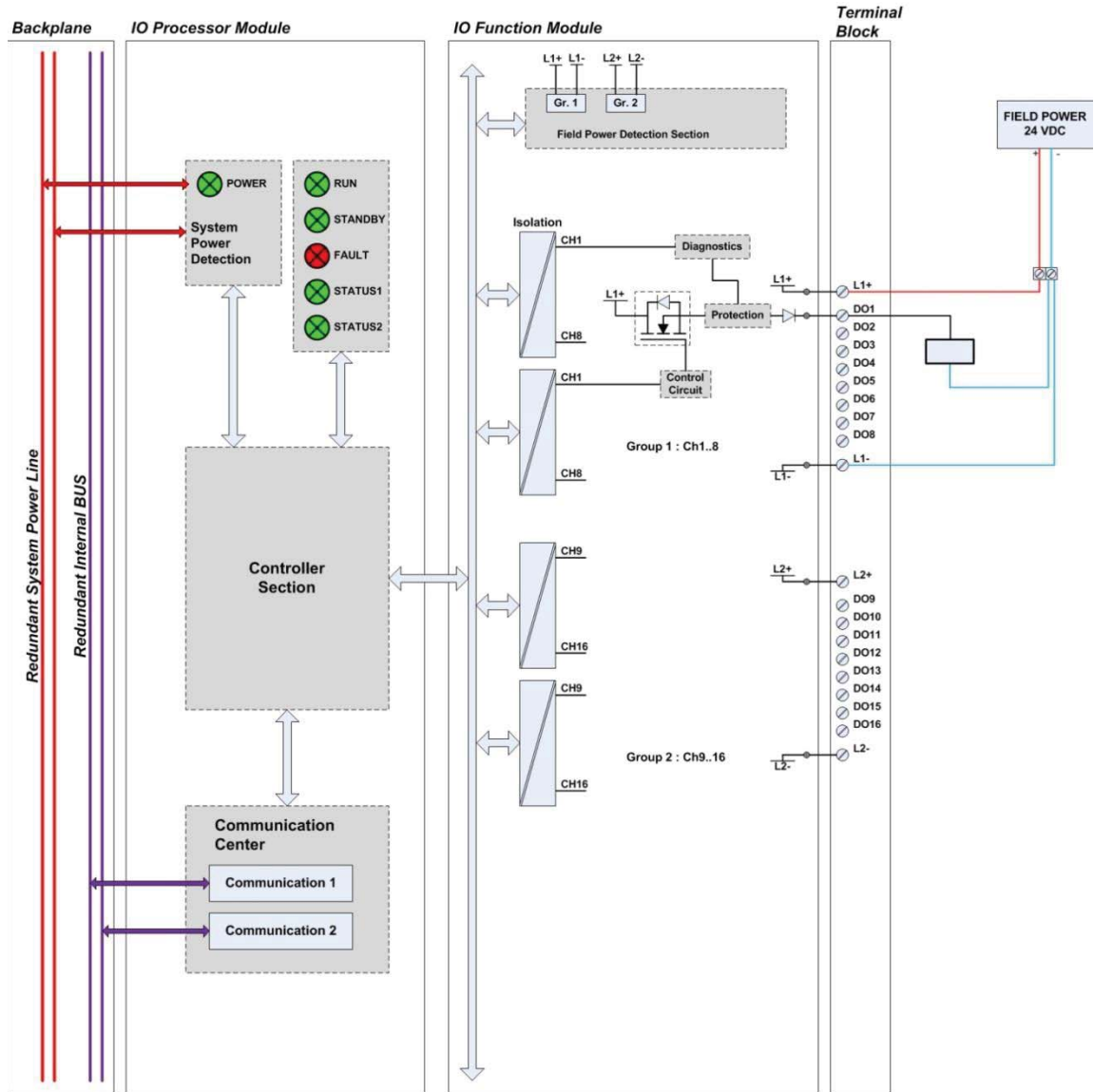


Figure 2-18: Schematic of DO571 Module

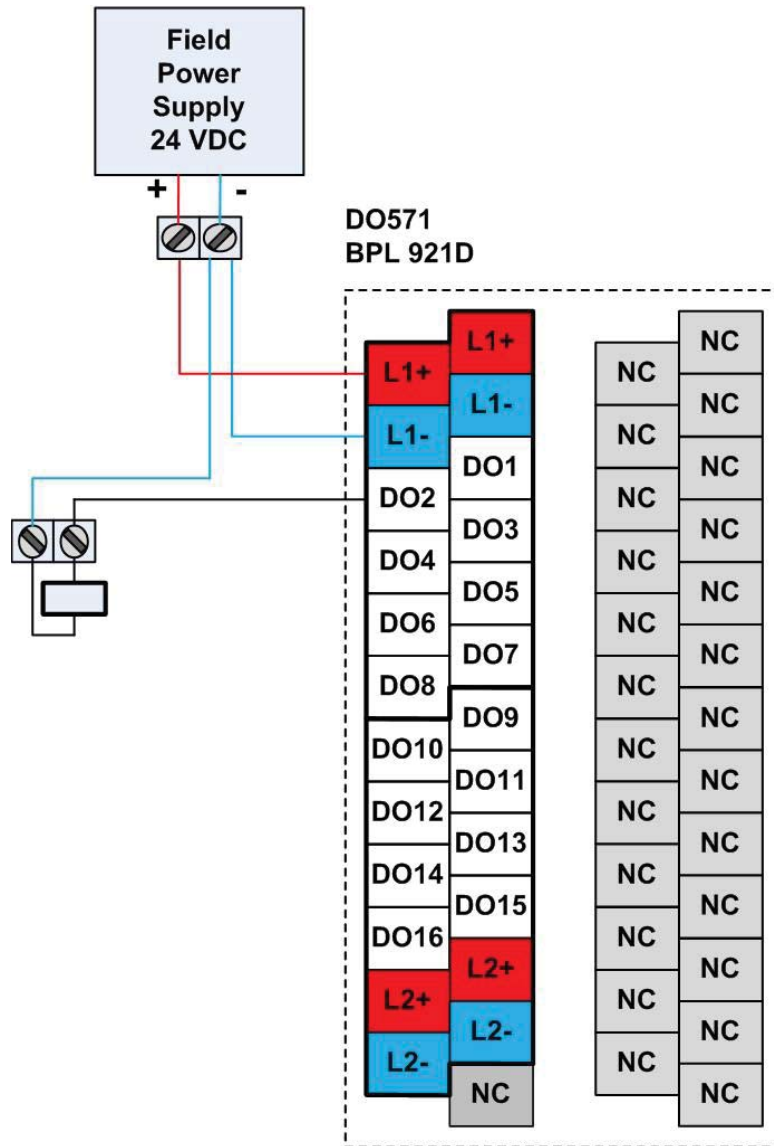


Figure 2-19: DO571 wiring for BPL 921D Terminal

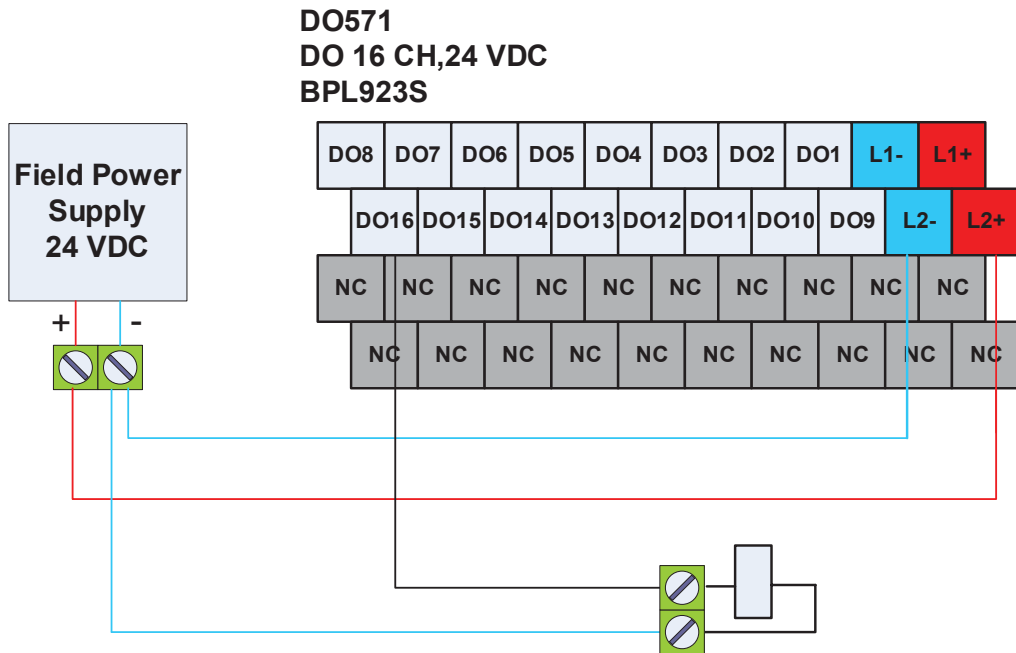


Figure 2-20: DO571 Wiring for BPL 923S Terminal

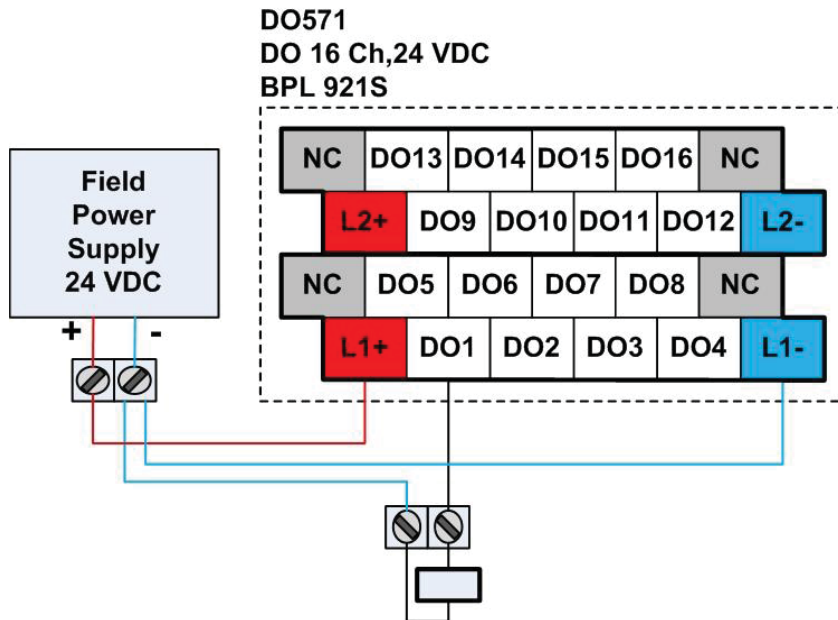


Figure 2-21: DO571 Wiring for BPL 921S Terminal

Table 2-14: D0571 Specifications

Label	D0571
Number of channels	16
Output type	High side switch
Diagnostics	Short-Circuit, Wire Break, Missing Field Power, Internal Hardware Error, Board Temperature
Rated power supply (from backplane)	12V DC \pm 20%
Rated field power (L+/-)	24V DC
Permitted field power range	18V DC to 30V DC
Minimum Output voltage	$> V_s - 0.8V$
Maximum Output current	0.5A
Maximum leakage current	0.5mA @ 30V DC
Maximum Output frequency (Resistive loads)	100Hz
Maximum Output frequency (Inductive loads)	1 Hz
Maximum Output frequency (Lamp loads)	100Hz
Short circuit protection	Yes (Electronic)
Short circuit peak current	1.4A
Voltage induced on current interruption limited to	$V_s \pm 48V$
Isolation type (to backplane bus)	Opto-coupler
Isolated in groups of	8
	2500V DC
Power consumption (from backplane bus)	Maximum : 2W
	Typical : 1.3W
Operating temperature	-20 °C to +60 °C
Storage temperature	-40 °C to +85 °C
Relative humidity	5% to 95%
Reference Standard	IEC 61131-2
Dimensions (H x W x D)	140mm x 116.5mm x 45mm