

2.6 DO580 Digital Output Module

Digital Output 580 (4 groups of 8 channels 24 VDC outputs – High side switch)

2.6.1 Features

- 32 channels for 24 VDC
- Isolated in groups of 8
- Over-current, Over-voltage and over-temperature protection
- EMC protection

2.6.2 Diagnostics

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

2.6.3 LED List

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

2.6.4 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 4 optically isolated groups of 8 outputs and has a diagnostic per group.

Every input channel consists of current limiting components, EMC protection components, input state indication LED and optical isolation barrier.

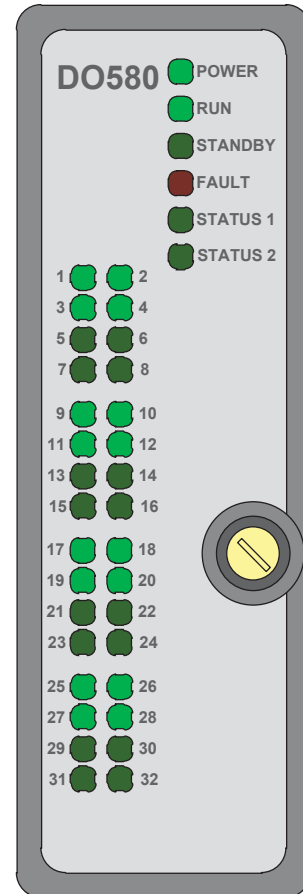


Figure 2-13: DO580 Front View

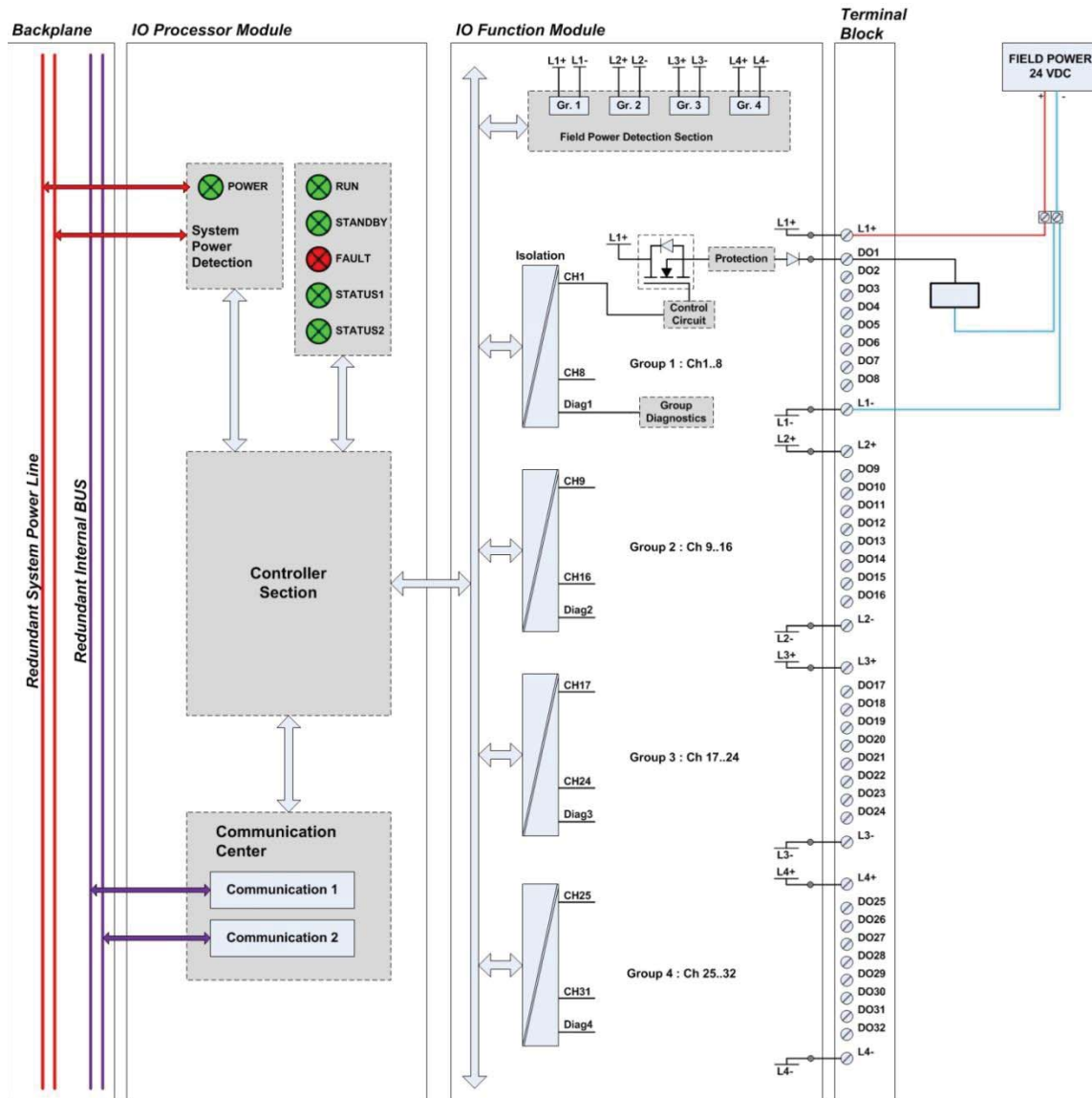


Figure 2-14: Schematic of DO580 Module

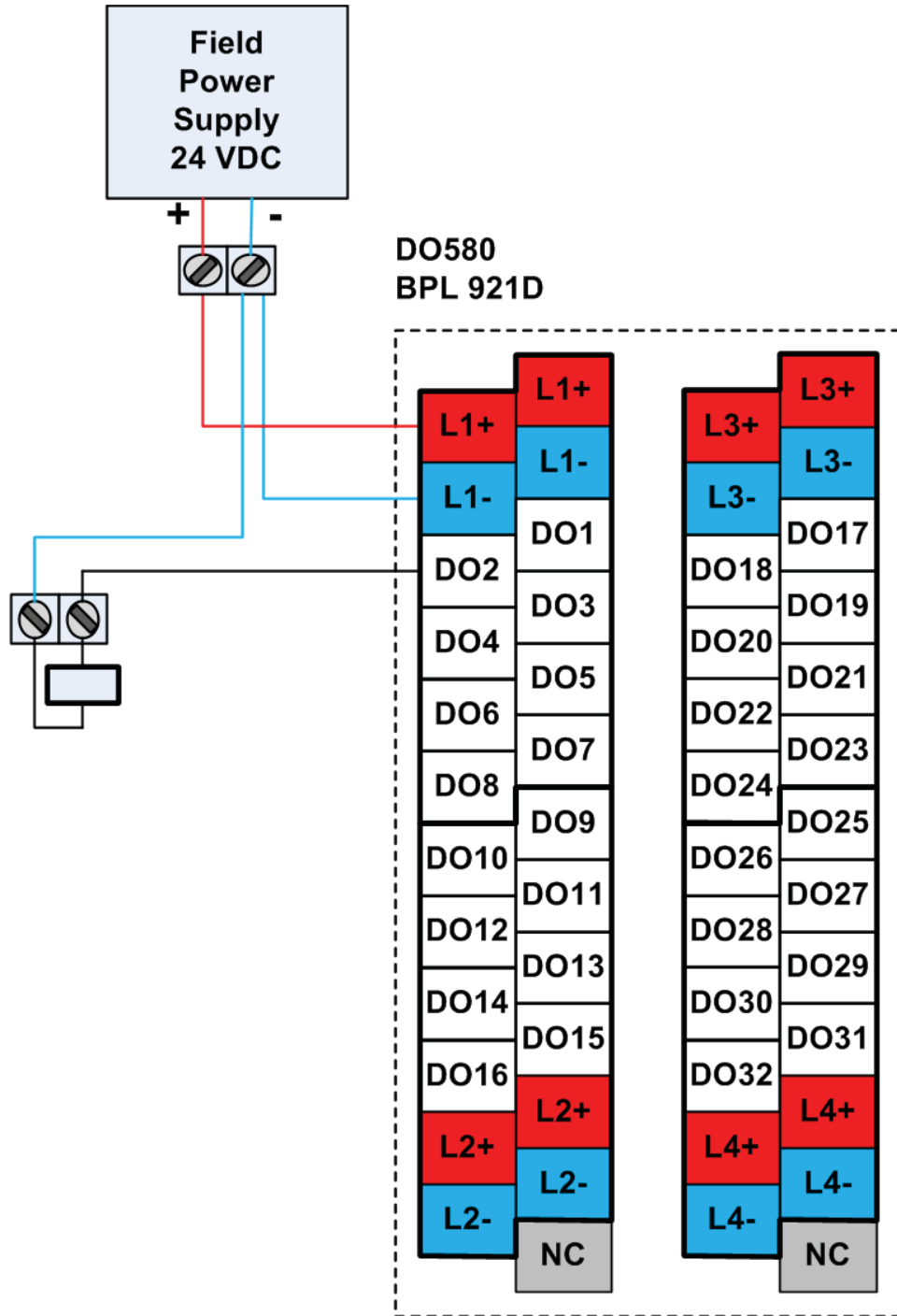


Figure 2-15: DO580 Wiring for BPL 921D Terminals

DO580
DO 32 CH,24 VDC
BPL923S

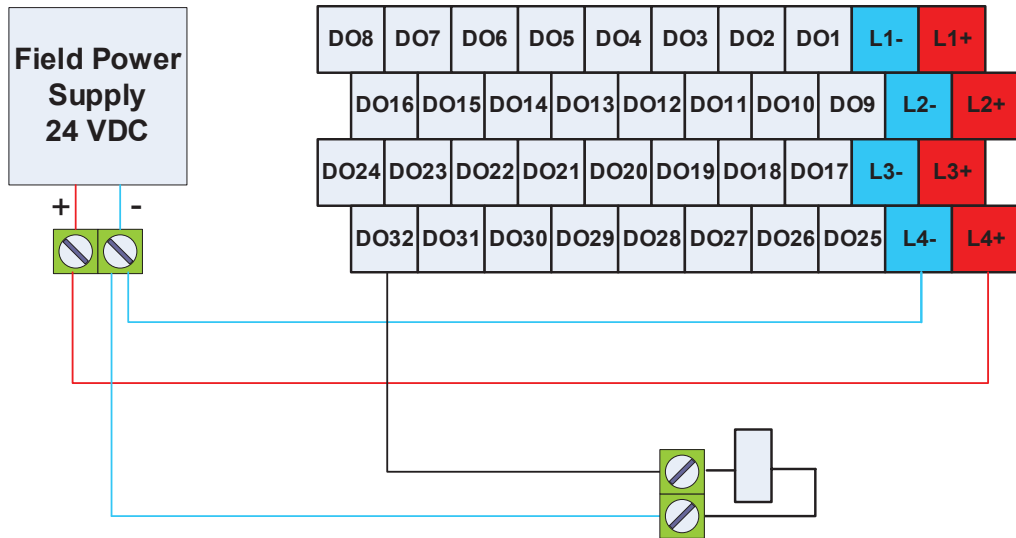


Figure 2-16: DO580 Wiring for BPL 923S Terminal

Table 2-13: DO580 Specifications

Label	DO580
Number of channels	32
Output type	High side switch
Diagnostics	Group Short-Circuit, Missing Field Power, Board Temperature, Internal Hardware Error
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 (at 1 signal)	$> V_s - 0.8V$
Maximum Output current (at 1 signal)	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	1.5A
Voltage induced on current interruption limited to	$V_s \pm 48V$
Isolation type (to backplane bus)	Optocoupler
Isolated in groups of	8
	2500V DC
Power consumption (from backplane bus)	Maximum : 2W
	Typical : 0.6W
Operating temperature	-20 °C to +60 °C
Storage temperature	-40 °C to +85 °C
Relative humidity	5% to 95%
Reference Standard	IEC 61131-2
Terminal	BPL 922S , BPL 921D
Dimensions (H x W x D)	140mm x 116.5mm x 45mm