

2.5 DI530 Digital Input Module

The DI530 is a 24VDC 32 Ch. DC digital input module.

2.5.1 Features

- 32 channels for 24VDC inputs
- Isolated in groups of 8
- Input status indicators
- EMC protection

2.5.2 Diagnostics

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

2.5.3 LED List

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

2.5.4 Description

The module senses the DC input voltage and converts it into a True (ON) or False (OFF) logic signal. It has 4 optically isolated groups of 8 inputs.

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

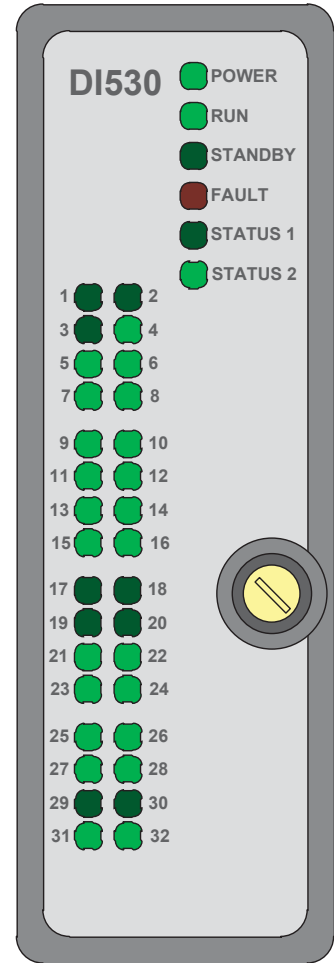


Figure 2-9: DI530 Front View

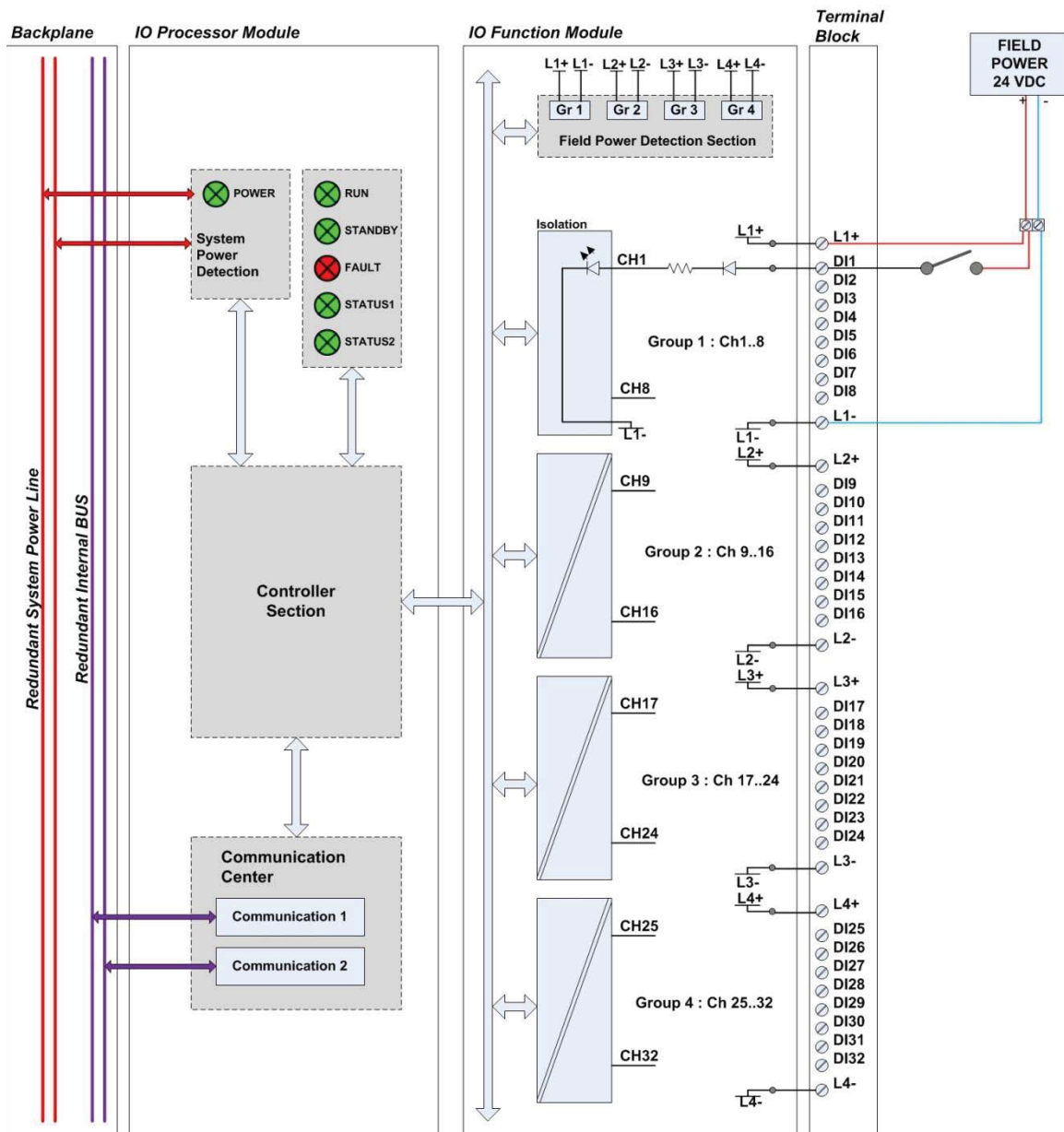


Figure 2-10: Schematic of DI530 Module

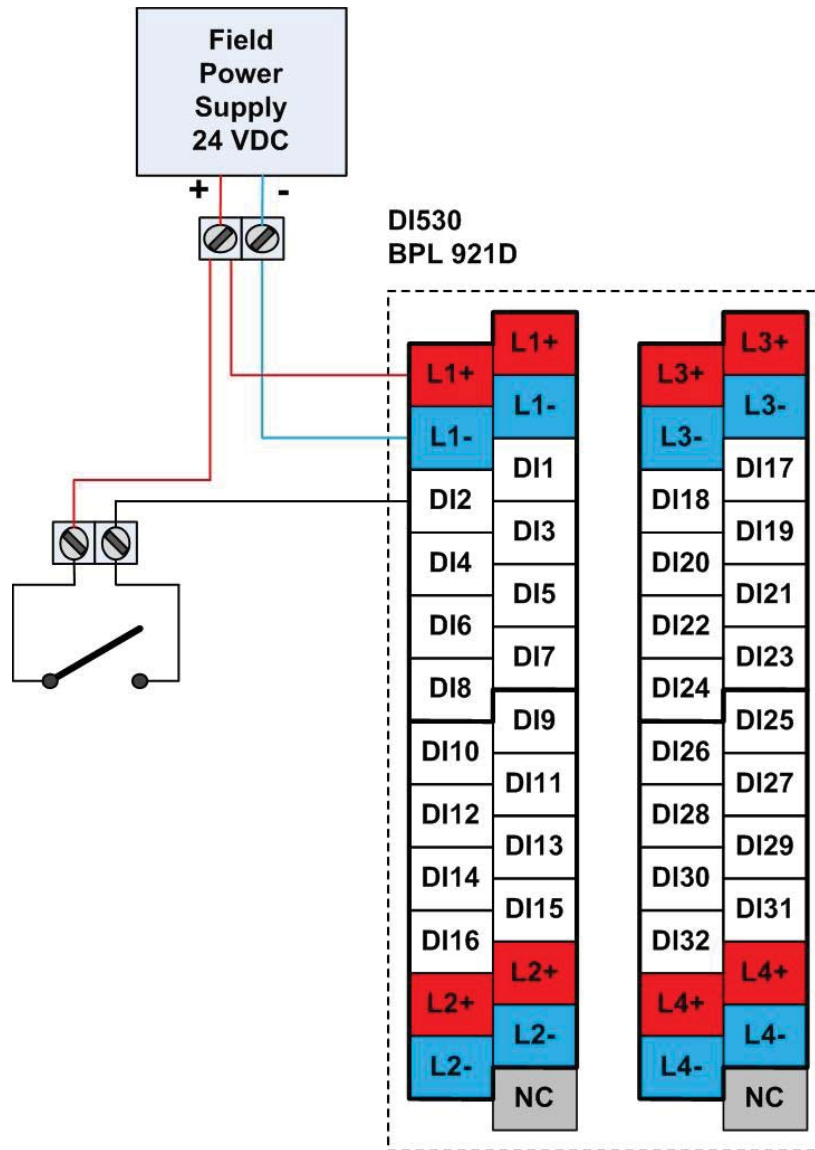


Figure 2-11: DI530 Wiring for BPL 921D Terminals

DI530
DI 32 CH,24 VDC
BPL923S

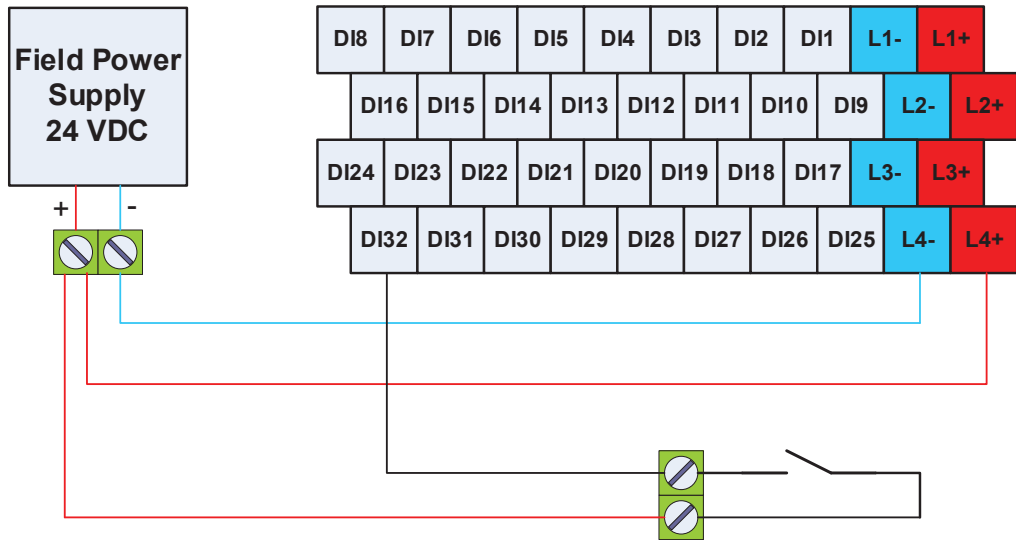


Figure 2-12: DI530 Wiring for BPL 923S Terminal

Table 2-12: DI530 Specification

Label	DI530
Number of channels	32
Input type	Sink
Input Impedance	> 2K Ω
Rated power supply (from backplane)	12V DC \pm 20%
Rated field power (L+/-)	24V DC
Permitted field power range	18V DC to 30V DC
Rated Input value	24V DC
Maximum permissible input	\pm 40V DC
Input high level (1)	13V DC to 30V DC
Input low level (0)	-30V DC to +5V DC
Maximum Input frequency	300Hz
Typical Input current (at 1 signal)	4mA @ 24V DC
Maximum Input Current	12mA @ 40V DC
Maximum permissible quiescent current	1mA
Isolation type (to backplane bus)	Opto coupler
Isolated in groups of	8
Isolation between bus and analog section	2500V DC
Power consumption (from backplane bus)	Maximum : 2W Typical : 0.6W
Operating temperature	-20 $^{\circ}$ C to +60 $^{\circ}$ C
Storage temperature	-40 $^{\circ}$ C to +85 $^{\circ}$ 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