

JPDL Local I/O Pack Dc Power Distribution

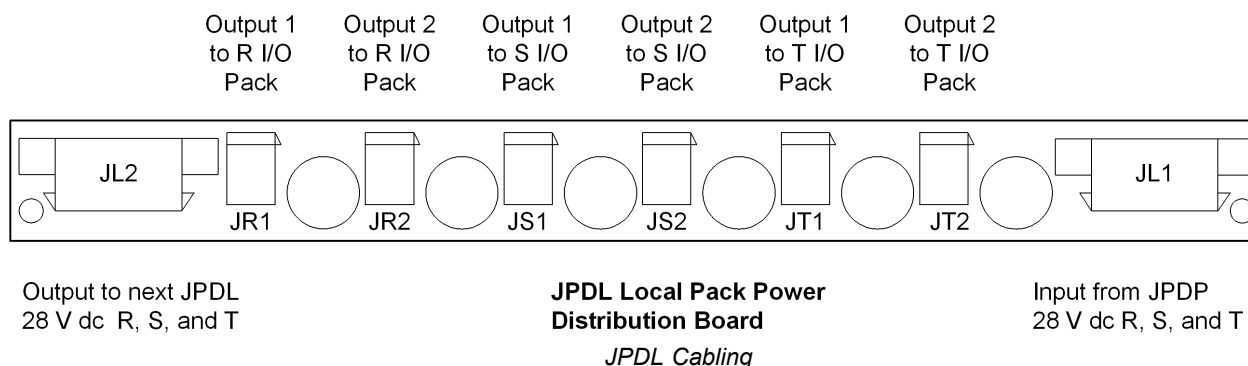
Functional Description

The Local I/O Pack Dc Power Distribution (JPDL) board provides dc power distribution between the source of control power (possibly JPDP or JPDS) and multiple I/O packs, as well as provides daisy chain style connections for multiple downstream JPDL boards. Branch circuit protection is provided for each I/O pack connection with positive temperature coefficient fuse devices.

The board is designed to make it easy to maintain up to three isolated control power distribution circuits to complement control hardware redundancy. In a TMR system, it will be common to have separate control power for R, S, and T hardware. By providing for three separate power circuits on one board JPDL allows organized separation of the control power.

Installation

JDPL mounts vertically on a metal bracket next to the I/O packs. Power input cables come in from the back and the output cables come out of the front. All have Mate-N-Lok connectors. For cable destinations, refer to the circuit diagram.



Mr. Lucian

Sales manager

Joyoung International Trading Co., Ltd

Whatsapp/Wechat: +86 18106906650

Email: Lily@htechplc.com

Mobile: +86 18106906650

Website: www.xm-dcs.com

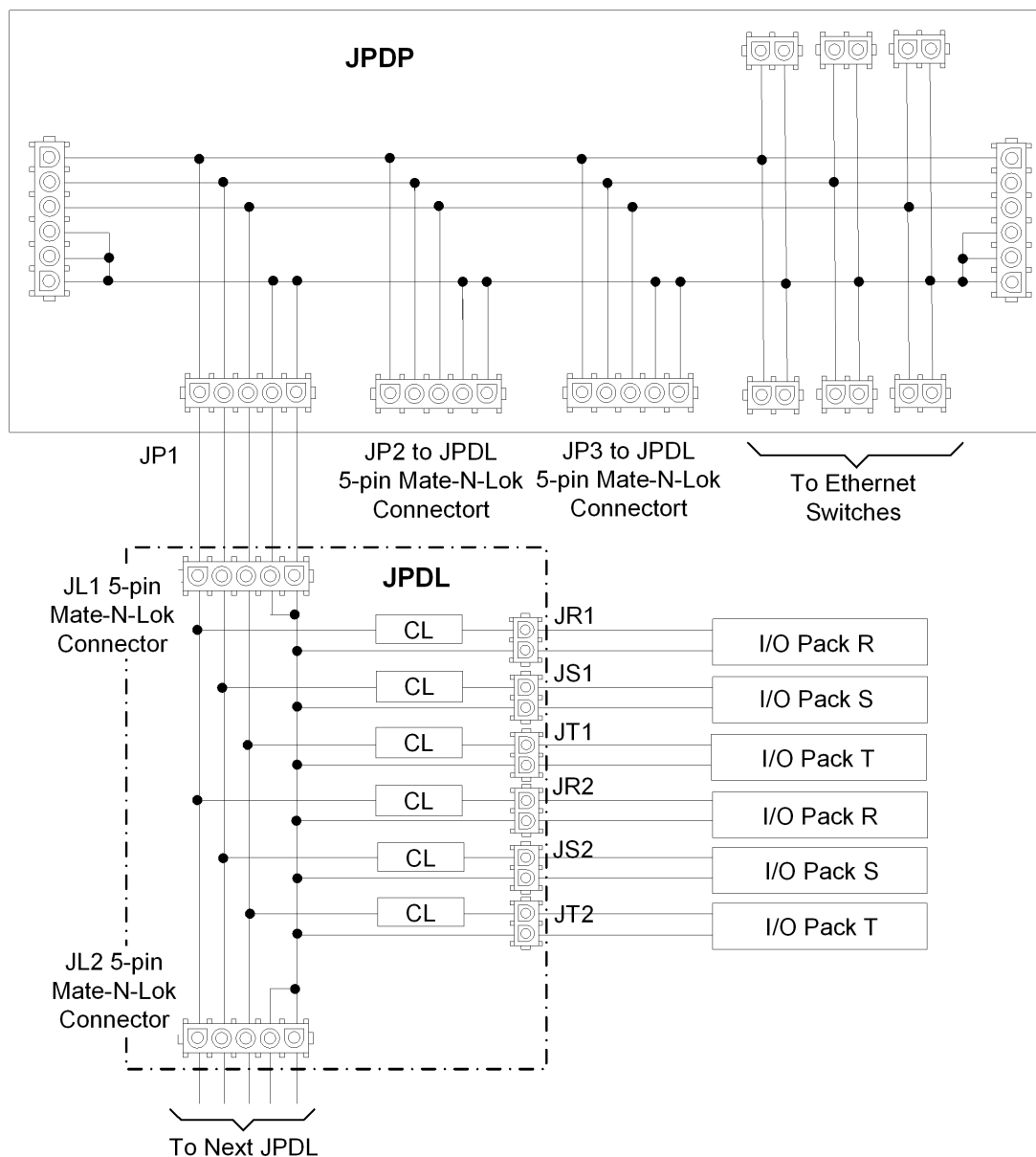
Address: Room 1503, Building B, Diamond Coast,
No. 96 Lujiang Road, Siming District, Xiamen Fujian

Wechat



Operation

The following figure explains how the R, S, and T 28 V dc power is distributed in JPDL, and how it reaches the I/O packs. Connector JL2 is used to daisy chain power to multiple downstream JPDL boards.



JPDL Simplified Circuit Diagram with JPDP

Inputs

Input power is typically 28 V dc, received from JPDP or JPDS as up to three redundant feeds. The 5-pin Mate-N-Lok input connector receives the three separate power feeds on three different pins for triple redundancy. The feeds are designated Red, Blue, and Black. The JP1, 2, and 3 connectors on JPDP provide this connection. Return current is common among the three TMR feeds and is passed on the remaining two pins of the 5-pin Mate-N-Lok connector.

Outputs

Six identical output circuits provide power feeds to individual I/O packs. Two are sourced from each of the R, S, and T feeds (red, blue, and black). Each of the six I/O pack feeds includes a re-setting positive temperature coefficient fuse device, labeled CL (current limit) to provide branch circuit protection that is coordinated with the wire between JPDL and the I/O pack.

Specifications

Item	Description	
Inputs	One 5-pin connection with three separate 28 V dc power feeds	red, blue, black, and return
Current	Three power traces will each take 7.5 A continuous	Each trace will take 15 A max. peak
Outputs	Six 2-pin connections for I/O packs Each one with positive temperature coefficient fuse protection to 2 A One 5-pin connection with three separate 28 V dc power feeds to downstream JPDLs.	2 red, 2 blue, 2 black red, blue, black, and return
Temperature	-30 to 65°C (-22 to 149 °F)	
Safety Standards	UL 1604, for use in Class I, Division 2 potentially hazardous environments.	
Board Size	29.21 cm high x 2.54 cm wide (11.5 in x 1.0 in)	
Mounting	Three mounting holes	

Diagnostics

No diagnostic features are provided on this module.

Configuration

There are no jumpers or hardware settings on the terminal board.