WaveReady™ 3000 Series Path and Equipment Protection Switch

LPR-530DWC1SA



Key Features

- Highly configurable to fit network applications
- Compact, simple to install, rugged, plug-and-play module
- Low power consumption (2 W maximum)
- Convection cooled, no fans
- Automatic switch-back
- User-definable thresholds
- Supports redundant -48 V supplies through the DenseMount™ Shelf

Applications

- SMF fiber link protection
- Equipment protection

Compliance

- NEBS Level 3
- UL 60950 Third Edition

JDSU's Agile Optical Switch family provides the broadest portfolio of ROADM solutions designed to match the requirements of major market segments. They are the building blocks of Agile Optical Networks and provide the flexibility to remotely reconfigure any or all wavelengths, thereby reducing time-to-service, simplifying the network and streamlining planning and management. This results in significant Opex and Capex reductions and faster time to revenue. In addition, they enable the cost effective creation and deployment of more complex network architectures.

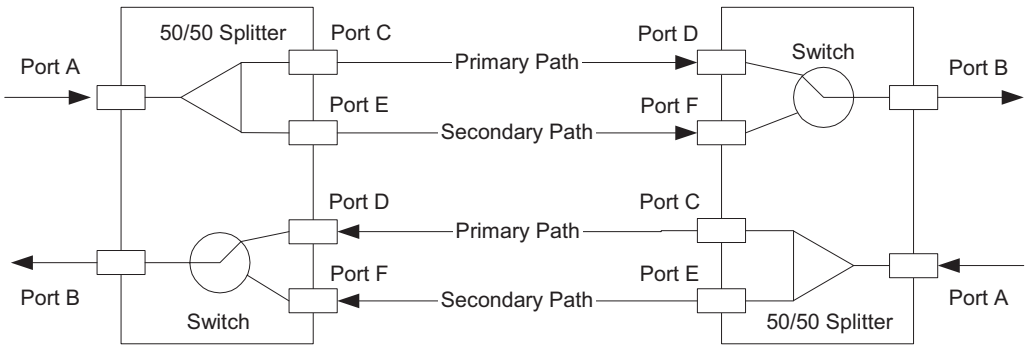
The JDSU WaveReady 3000 series LPR-530DWC1SA path and equipment protection module is a rugged, plug-and-play, bi-directional protection switch for single mode fiber (SMF). It can be used for both equipment or fiber protection. A typical application would be the protection of multi-channel links on SMF.

The LPR-530DWC1SA continuously monitors optical power on both its primary and secondary links. If optical power on the primary link drops below a certain threshold, the module switches traffic to the secondary link in less than 15 ms.

Two switching schemes are available. Manual operation allows for on-site or remote switching from one link to the other. Automatic operation in window switching mode allows users to control both the lower and upper level switch activation points. An automatic switch-back feature resets the module to its original configuration when the primary link power levels return to normal.

LPR-530DWC1SA features are highly configurable to fit most any network application. Remote configuration, using TL1 commands, is available through a WaveReady Communications Module and Ethernet interface on the WaveReady chassis. Local configuration is available through an RS-232 craft interface on a WaveReady Communications Module.

Typical Application



Specifications

Parameter	Minimum	Typical	Maximum
General Optical Characteristics			
Wavelength for all ports		1290 to 1350 nm and 1463 to 1630 nm	
Switch Optical Characteristics			
Insertion loss (including connectors)	-	-	<2 dB
Return loss (including connectors)	>40 dB	-	-
Switching time	-	-	<15 ms
Window switching mode			
Reference power level range (RPLR)	≥-29 dBm	-	≤-6 dBm
RPL accuracy	-	±2 dB	-
Upper window switching range (UWSR) (user programmable, settable in 1 dB increments)	-	≥6 dB	-
Lower window switching range (LWSR) (user programmable, settable in 1 dB increments)	-	≥6 dB	-
Upper window switching limit (UWSL) (UWSL = RPL + UWSR)	-	-	≤0 dBm
Lower window wwitching limit (LWSL) (LWSL = RPL - LWSR)	≥-35 dBm	-	-
Auto-switch-back hysteresis	2 dB	-	-
Switch-back hold time	3 s	-	-
Switch type	Latching	-	-
Received power monitor accuracy (Received power range: -35 to 0 dBm)	-	±2 dB	-
Maximum received power level (no damage to the module)	-	-	<15 dBm
Coupler Optical Characteristics			
Insertion loss (including connectors)	-	-	<4 dB
Return loss (including connectors)	>40 dB	-	-
Electrical Characteristics			
DC supply voltage (Through the DenseMount Shelf. The DC power supply must be certified by a nationally recognizedtest laboratory (NRTL) with -48 V SELV output.)	-	-48 V	-
Power dissipation	-	-	2 W
Alarm relay signals		Dry contact. Relay closed when alarm is active.	

Specifications — Continued

Parameter	Minimum	Typical	Maximum
Physical Dimensions			
Size (H x W x L) DenseMount Shelf compliant (one slot)	-	6.8 x 1.0 x 8.8 inches (17.27 x 2.54 x 22.35 cm)	-
Weight (approximate)	-	1.4 lbs (0.635 kg)	-
Environmental Characteristics			
Operating ambient temperature	-5 °C	-	70 °C
Storage temperature	-40 °C	-	85 °C
Relative humidity (non-condensing)	5 %	-	95 %
Interface			
Optical	Six SC/PC bulkheads, single-mode fiber (SMF)		
Electrical	96-pin connector (power, alarms, craft/remote interface)		
Craft	TL1 interface through a Communications Module 100 and DenseMount Shelf.		
Front Panel	Six LEDs: power (CARD), automatic operation mode (AUTO), primary path (PRI), secondary path (SEC), major alarm (MAJ), minor alarm (MIN). Two pushbutton switches:AUTO/MAN to select automatic or manual operation mode and THR/PRI/SEC to set the switching threshold or select the primary or secondary path in manual mode.		
Alarms	Relay, dry contact, MAJ (major) and MIN (minor). Relay closed when alarm is active.		

Ordering Information

For more information on this or other products and their availability, please contact your local JDSU account manager or JDSU directly at 1-800-498-JDSU (5378) in North America and +800-5378-JDSU worldwide or via e-mail at customer.service@jdsu.com.

Sample: LPR-530DWC1SA

Product Code	Model
LPR-530DWC1SA	LightProtector 530

Associated Parts

Product Code	Description
COM-100ET001Y	Communications Module 100
10129126	DenseMount Shelf

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