

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.

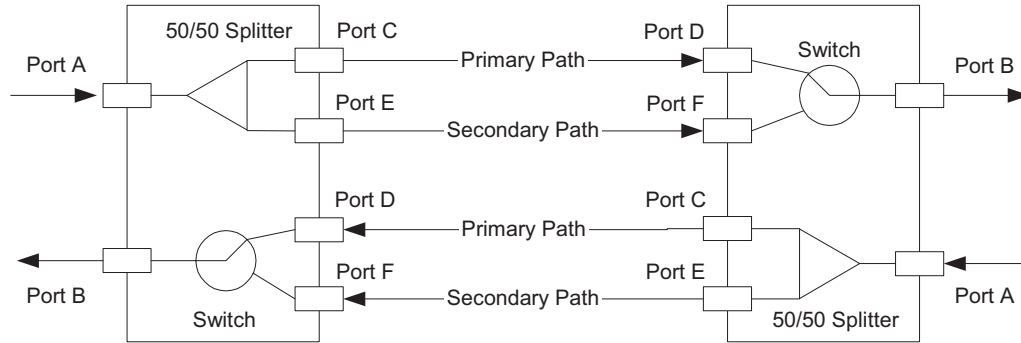
The LPR-530DWC1SA continuously monitors optical power on both its primary and secondary links. If optical power on the primary link drops below a certain threshold, the module switches traffic to the secondary link in less than 15 ms.

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.

2

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 switching 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 recognized test 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)	-	6.8 x 1.0 x 8.8 inches	-
DenseMount Shelf compliant (one slot)	-	(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

All statements, technical information and recommendations related to the products herein are based upon information believed to be reliable or accurate. However, the accuracy or completeness thereof is not guaranteed, and no responsibility is assumed for any inaccuracies. The user assumes all risks and liability whatsoever in connection with the use of a product or its application. JDSU reserves the right to change at any time without notice the design, specifications, function, fit or form of its products described herein, including withdrawal at any time of a product offered for sale herein. JDSU makes no representations that the products herein are free from any intellectual property claims of others. Please contact JDSU for more information. BrightSwitch, FiberShelf, JDSU and the JDSU logo are trademarks of JDS Uniphase Corporation. Other trademarks are the property of their respective holders. ©2006 JDS Uniphase Corporation. All rights reserved. 10143046 Rev. 004 03/06 WAVEREADY3000.DS.CMS.AE