



XH-OLP-M-SA

Light protection module

USER MANUAL



Nanning Xionghua Photoelectric Technology Co., Ltd.

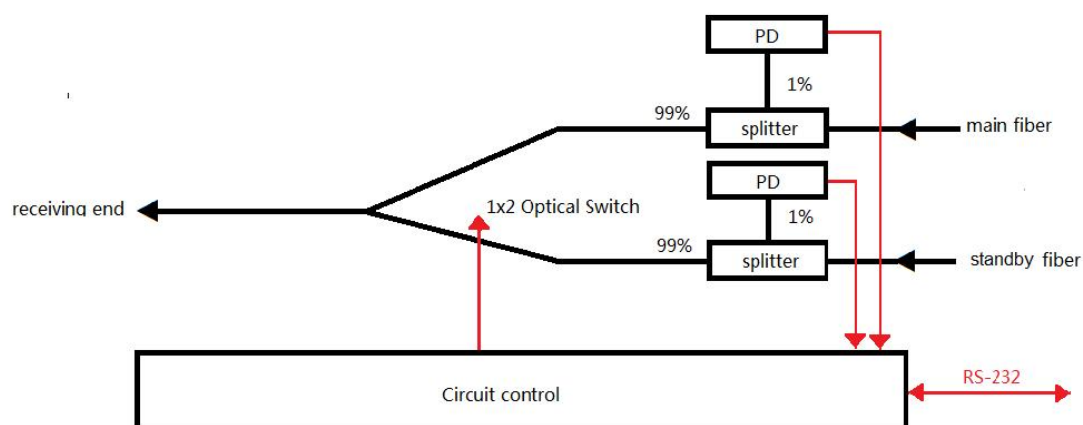
Overview

XH-OLP-M-SA optical fiber protection module is a main fiber and standby optical fiber fault automatic light path switching module, the module monitoring main fiber and standby fiber at the same time, when the main optical fiber power signal is below the set value and standby optical fiber signal is normal, the module automatic switching optical path to standby optical fiber; When for standby optical fiber power signal is below the set value and the main optical fiber signal is normal, the module automatic switching optical path to the main optical fiber; The module supports RS - 232 serial port communication, can be set up by agreement or query module information.

Feratures

- Channel low insertion loss and high stability
- Real-time monitoring of the main optical fiber and standby optical fiber optical power size.
- Optical fiber main/standby switch automatically.
- Supports RS-232 serial port communication

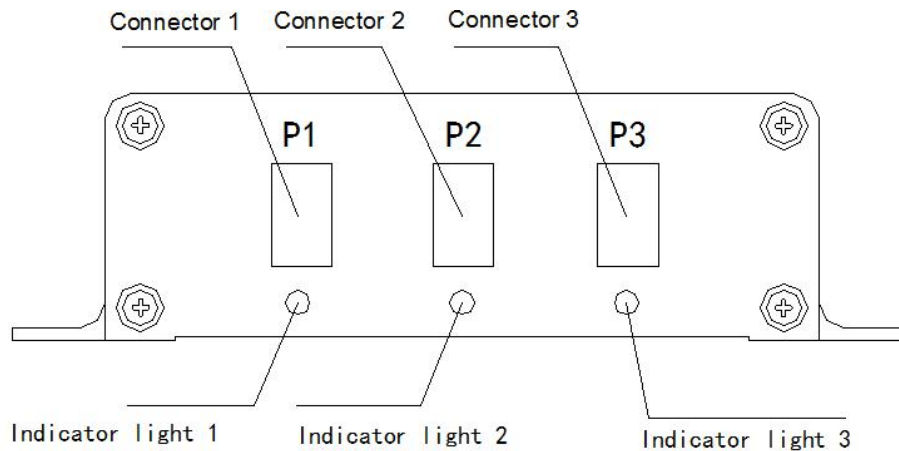
Schematic diagram



Specifications

Parameter	Parameter Values
Model	XH-OLP-M-SA
Insertion Loss	≤1.5 dB
Wavelength Range	1260~1650nm
Optical Power Switching Value	-10dBm、-15dBm、-20dBm、-25dBm、-30dBm、-35dBm (1550nm)
Accuracy	±5%
Lifetime	≥ 10 ⁷
Fiber Type	9/125 um
Connector	SC\APC
Control Mode	RS-232
Power Down State	Latching
Working Power Supply	DC: 5V/500mA
Operating Temperature	0 ~ +50℃
Storage Temperature	-10 ℃ ~ +70 ℃
Product Size	(L)104.0×(W)120×(H)28±0.2mm

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Connector 1: optical fiber Connector (common port)

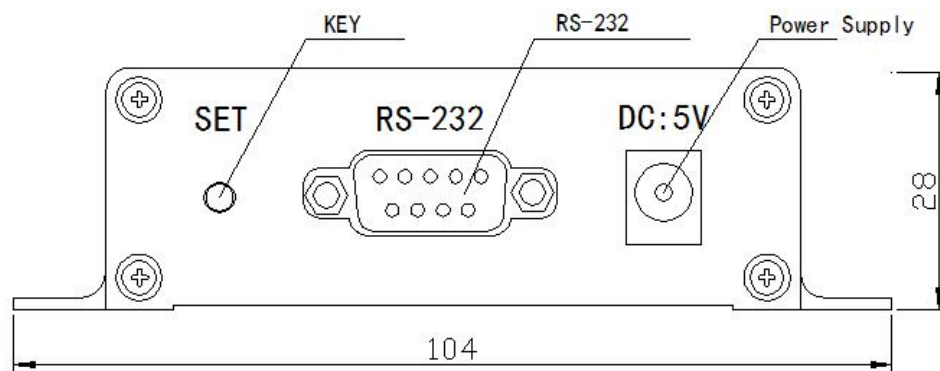
Connector 2: optical fiber Connector (main fiber)

Connector 3: optical fiber Connector (standby fiber)

Indicator light 1: When the indicator light is green, the module works as the main optical fiber; when it is red, the module works as the spare optical fiber.

Indicator light 2: When the indicator light is green, the main fiber signal is normal; when it is red, the main fiber signal is out of order

Indicator light 3: When the indicator light is green, the standby fiber signal is normal; when it is red, the



SET: The key is used to switch between the main fiber and the standby fiber

RS-232: Serial communication interface;

Power: Power interface (5V/500mA)

Default Setting

•**RS-232:** Baud rate:9600; Data bits:8 bit; Stop bit: 1 bit; Parity bit:NONE;

•**Optical Power Switching Value:** -35dBm

SET: Allows setting

Rs-232 pin definition

Pin	Name	Explain
1	NC	NC
2	RXD	receiving terminal
3	TXD	sending end
4	NC	NC
5	GND	GND
6	NC	NC
7	NC	NC
8	NC	NC
9	NC	NC

Communication Protocol

- “_”:A underline;
- Communication protocol all in uppercase characters;
- The device executes an instruction each time;
- "<" As the start instruction; ">" As an end instruction;

Instruction set

Name	Instructions	Describe
Query the current status of main fiber	Send:<OLP_MAIN_?> Return1:<OLP_MAIN_1> or return2:<OLP_MAIN_0>	Query the current status of main fiber, return 1 means normal, return 2 means fault
Query the current status of standby fiber	Send:<OLP_STANDBY_?> Return1:<OLP_STANDBY_1> or return2:<OLP_STANDBY_0>	Query the current status of standby fiber, return 1 means normal, return 2 means fault

Setting the optical power switching value	Send:<OLP_DBM_6>	Setting the optical power switching value,6 is set to -
	Return:<OLP_DBM_OK>	35dBm,returned successfully; 1: -10 dBm 2: -15dBm 3: -20 dBm 4: -25 dBm 5: -30 dBm 6: -35 dBm
Query optical power switching value	Send:<OLP_DBM_?>	Query optical power switching value, returned successfully; 1: -10 dBm
	Return:<OLP_DBM_6>	2: -15dBm 3: -20 dBm 4: -25 dBm 5: -30 dBm 6: -35 dBm
Set the switching main fiber or standby fiber	Send:<OLP_SWITCH_1>	Set the switching main fiber or standby fiber,1 :main fiber ,2:standby fiber,Successfully set return;
	Return:<OLP_SWITCH_OK>	
	Send:<OLP_SWITCH_?>	Query current working status,1 is working in the

Query current working status	Return:<OLP_SWITCH_1>	main fiber,2 is working in the standby fiber Successfully set return;
Set the Baud Rate	Send:<OLP_BAUD_9600>	Set the baud rate to 9600(2400, 4800, 9600, 115200 four baud rates),Successfully set return;
	Return:<OLP_BAUD_OK>	
Query Baud Rate	Send:<OLP_BAUD_?>	Query the baud rate ,returned successfully 9600:baud rate to 9600
	Return:<OLP_BAUD_9600>	
Lock Keys	Send:<OLP_KEY_OFF>	Setup the Lock keys to Lock(OFF),Successfully set return;
	Return:<OLP_KEY_OK>	
Unlocking Keys	Send:<OLP_KEY_ON>	Setup the Unlocking keys to Unlocking(ON) ,Successfully set return;
	Return:<OLP_KEY_OK>	
	Send:<OLP_KEY_?>	Query the keys state ,

Query Keys State	Return:<OLP_KEY_ON> or Return:<OLP_KEY_OFF>	returned successfully ON:Unlocking OFF:Lock
Device Restarts	Send:<OLP_RESET>	Setup the device restarts , Successfully set return;
	Return:<OLP_RESET_OK>	
Query Device Information	Send:<OLP_TYPE_?>	Query the device information ,returned successfully; Model: GZ-OLP-M-LP Fiber Type: 9/125um Connector: LP/PC Working Power Supply: DC:5V
	Return:<OLP_TYPE_XH-OLP-M-SA_9/125_5V>	
Query Version	Send:<OLP_VERSION_?>	Query the version, returned successfully Hardware version: V1.0.1 SOFTWARE: V1.0.1
	Return:<OLP_VERSION_HARDWARE:V1.0.1SOFTWARE:V1.0.1>	

When sending an error command, it returns < OLP_ER>.