**SN 2:2 Latching Optical Switch, Engineering Prototype**

JDS Uniphase

Product Code: SN22+107DUNC

Serial Number: FD224263

JDS Uniphase Corporation
570 West Hunt Club Road
Nepean (Ottawa), Ontario
K2G 5W8 Canada

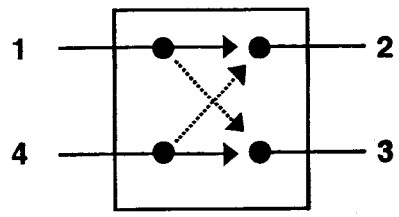
Tel 613 727-1304
Sales 613 727-1303
Fax 613 727-8284
www.jdsunph.com

## Operating Instructions:

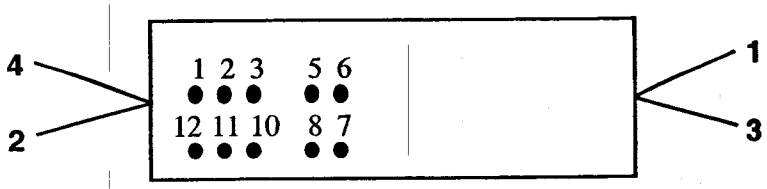
There are two drive coils inside the switch which are used individually to set the switch in each of the two possible optical states. To change the state of the switch, apply a 5 VDC drive pulse of approximately 20 msec or longer on the electrical drive pins as indicated in the table below. Once the switch has been moved to the new position, it will remain there until a drive pulse appears on the drive coil for the other path. Typical operating current is 40 mA during switching.

There are two sets of single pole double throw contacts which are also operated by the switch. These can be used to sense the position of the switch or to operate other circuits based on the switch path chosen.

Optical




Physical View of the Bottom of the Switch
Showing Location of Electrical Pins




| Optics Path | Electrical Drive | | | | | Status Contacts | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Pin # | 1 | 12 | 2 | 11 | 3 - 5 | 3 - 6 | 10 - 7 | 10 - 8 |
| 1-3, 4-2 | Reset | 0 | 0 | Gnd | + 5 VDC | Closed | Open | Open | Closed |
| 1-2, 4-3 | Set | Gnd | + 5 VDC | 0 | 0 | Open | Closed | Closed | Open |

JDS Uniphase

Product Code: SN22+107DUNC

Serial Number: FD2242G3

## Test Results: Insertion Loss @ 5 Vdc

| Optical Path | Insertion Loss[1] (dB) @ 1300 nm | Insertion Loss[1] (dB) @ 1550 nm |
|---|---|---|
| 1 – 3 | 0.41 | 0.26 |
| 1 – 2 | 0.58 | 0.43 |
| 4 – 2 | 0.43 | 0.37 |
| 4 – 3 | 0.54 | 0.51 |

Notes: 1 - Includes the loss of one connector in connectorized versions.

## Test Results: Return Loss @ 5 Vdc

| Optical Path | Return Loss[2] (dB) @1300 nm | Return Loss[2] (dB) @1550 nm |
|---|---|---|
| 1 – 3 | 58.8 | 58.7 |
| 1 – 2 | 63.7 | >65 |
| 4 – 2 | 58.3 | 64.1 |
| 4 – 3 | 63.9 | 61.4 |

Notes: 2 - Excluding connectors

JDS Uniphase

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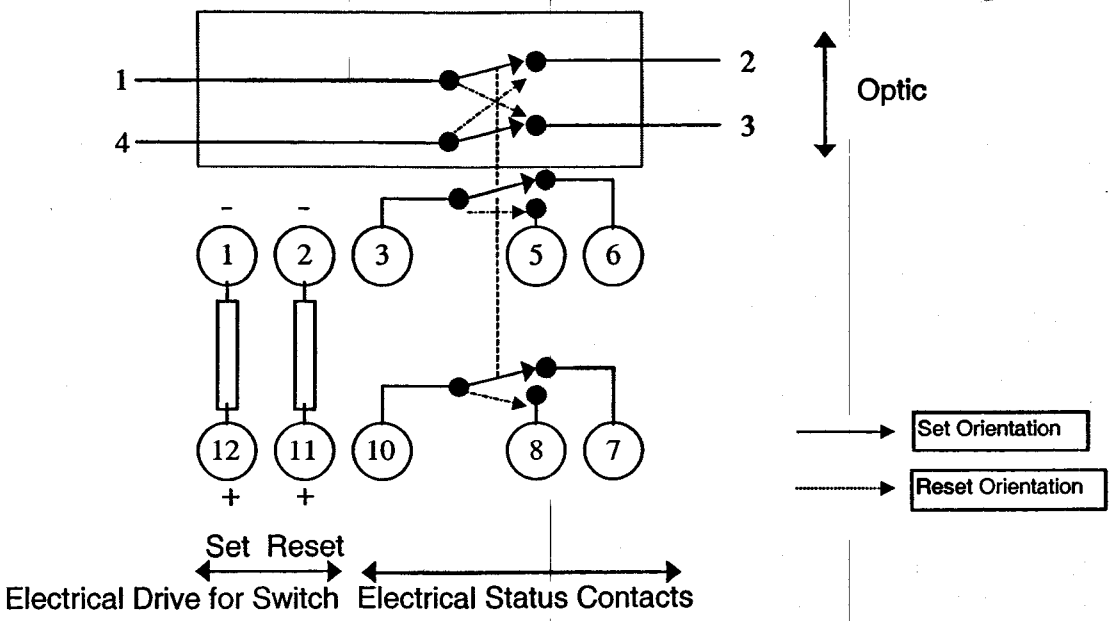
Serial Number: FD2242G3

## Optical and Internal Connections




Inspected by: _____ Date: NOV 24 2000

**SN 2:2 Latching Optical Switch, Engineering Prototype**

JDS Uniphase

Product Code: SN22+107DUNC

Serial Number: ED204513

JDS Uniphase Corporation
570 West Hunt Club Road
Nepean (Ottawa), Ontario
K2G 5W8 Canada

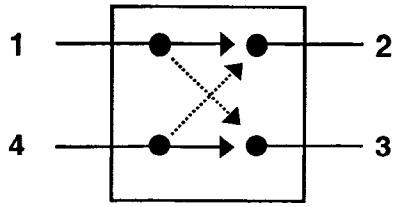
Tel 613 727-1304
Sales 613 727-1303
Fax 613 727-8284
www.jdsunph.com

## Operating Instructions:

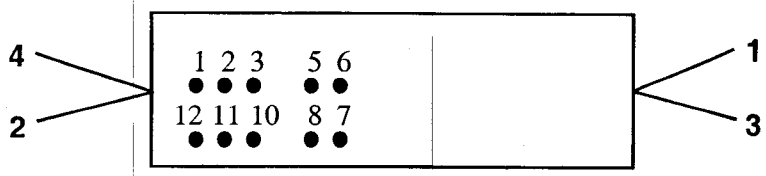
There are two drive coils inside the switch which are used individually to set the switch in each of the two possible optical states. To change the state of the switch, apply a 5 VDC drive pulse of approximately 20 msec or longer on the electrical drive pins as indicated in the table below. Once the switch has been moved to the new position, it will remain there until a drive pulse appears on the drive coil for the other path. Typical operating current is 40 mA during switching.

There are two sets of single pole double throw contacts which are also operated by the switch. These can be used to sense the position of the switch or to operate other circuits based on the switch path chosen.

Optical




Physical View of the Bottom of the Switch
Showing Location of Electrical Pins




| Optics Path | Electrical Drive | | | | | Status Contacts | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Pin # | 1 | 12 | 2 | 11 | 3 - 5 | 3 - 6 | 10 - 7 | 10 - 8 |
| 1-3, 4-2 | Reset | 0 | 0 | Gnd | + 5 VDC | Closed | Open | Open | Closed |
| 1-2, 4-3 | Set | Gnd | + 5 VDC | 0 | 0 | Open | Closed | Closed | Open |

JDS Uniphase

Product Code: SN22+107DUNC

Serial Number: ED204513

## Test Results: Insertion Loss @ 5 Vdc

| Optical Path | Insertion Loss[1] (dB) @ 1300 nm | Insertion Loss[1] (dB) @ 1550 nm |
|---|---|---|
| 1 – 3 | 0.22 | 0.31 |
| 1 – 2 | 0.67 | 0.74 |
| 4 – 2 | 0.31 | 0.26 |
| 4 – 3 | 0.44 | 0.47 |

Notes: 1 - Includes the loss of one connector in connectorized versions.

## Test Results: Return Loss @ 5 Vdc

| Optical Path | Return Loss[2] (dB) @1300 nm | Return Loss[2] (dB) @1550 nm |
|---|---|---|
| 1 – 3 | 60.3 | 61.6 |
| 1 – 2 | 60.0 | 63.9 |
| 4 – 2 | 59.6 | 64.3 |
| 4 – 3 | 62.7 | >65 |

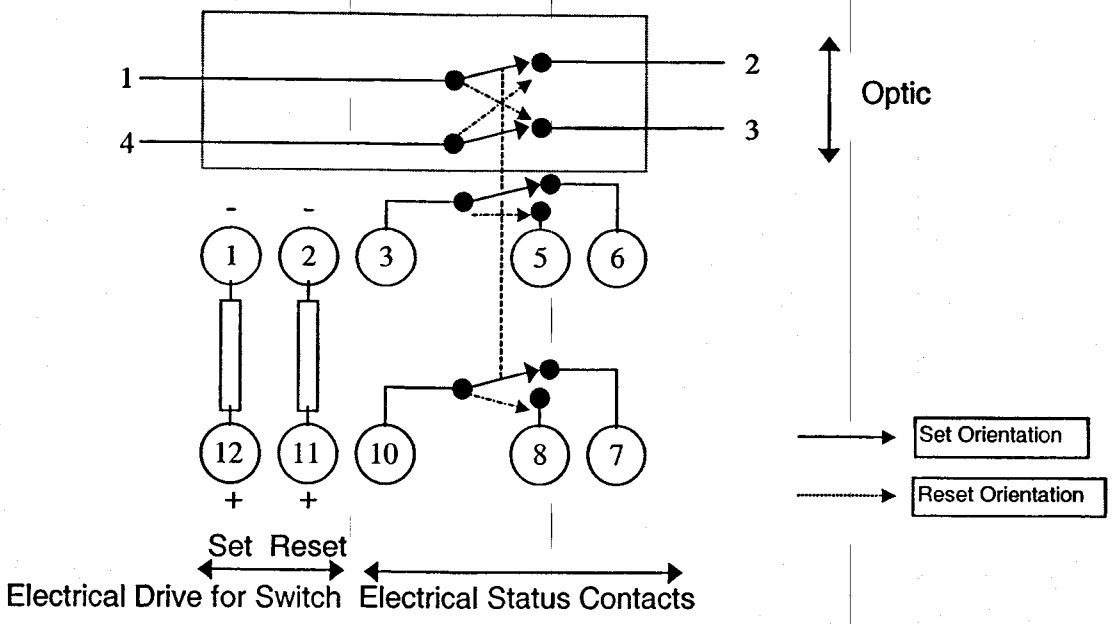
Notes: 2 - Excluding connectors

JDS Uniphase

Product Code: SN22+107DUNC

Serial Number: ED204513

## Optical and Internal Connections




Inspected by: Marjorie Date: NOV 0 8 2000