



### Product Description

The OA1 Optical Attenuator enables precise optical power control featuring high accuracy and superior repeatability. It can be used as a benchtop or rackmount instrument.

The OA1 is ideal for lab and production applications including power level adjustments in automated test systems, Bit Error Rate Testing (BERT) of transmitters and receivers, and channel equalization in WDM systems.

The OA1 attenuator offers  $\pm 0.01$  dB repeatability and a dynamic range of up to 100 dB (depending on the model configuration). The OA1 can be controlled via the front panel touch screen, or remotely via USB & Ethernet.

OA1 series attenuators operate from 1200-1700nm for singlemode and 750- 1700nm for multimode. A power monitoring PD can be added to read the power output of the instrument. The power monitoring option can be used to auto adjust the attenuation for a constant customized power level.

### KEY FEATURES

- Precise optical power
- $\pm 0.1$  dB accuracy
- $\pm 0.01$  dB repeatability
- 100 dB dynamic range
- Available in Flexcore (5/125)

### APPLICATIONS

- Manufacturing production testing
- Bit Error Rate Testing (BERT)
- Channel equalization

### COMPLIANCE

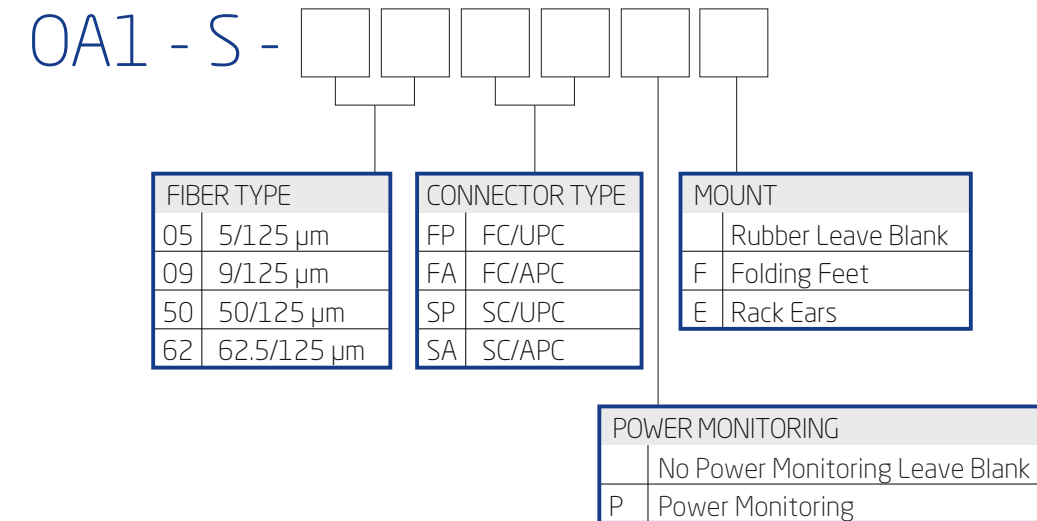
- UL/CSA 61010
- IEC 61010
- FCC Part 15 (Class A)
- EN 61326 (Class A)

### IN THE BOX

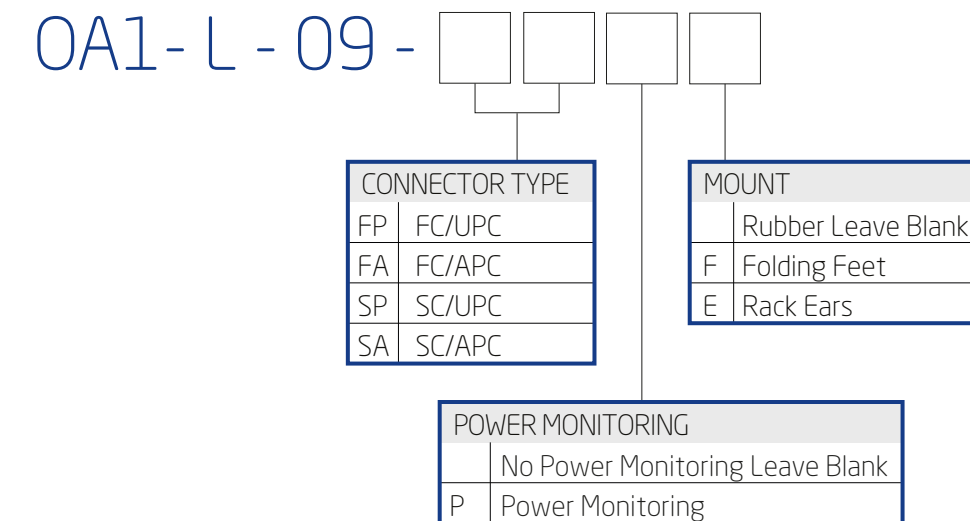
- OA1
- AC power cord
- USB-A to USB-B (1.5m)
- Ethernet cable (1.5m)

### Ordering Scheme

#### Short range version



#### Long range single-mode 9/125 version



Optical/Electrical Specifications

| Parameter                        | Specification                        |           |           |          |
|----------------------------------|--------------------------------------|-----------|-----------|----------|
|                                  | Single-mode                          |           | Multimode | Flexcore |
|                                  | Long                                 | Short     | Short     | Short    |
| Wavelength Range (nm)            | 1200-1700                            | 1200-1700 | 750-1700  | 960-1080 |
| Attenuation Range (dB)           | 100                                  | 60        | 60        | 60       |
| Insertion Loss (dB) <sup>1</sup> | SM (9 / 125µm) <sup>2</sup>          | 1.5       |           |          |
|                                  | MM (50 or 62.5 / 125µm) <sup>3</sup> |           | 1.8       |          |
|                                  | HI1060 (5 / 125µm)                   |           |           | 2.5      |
| Return Loss (dB)                 | SM (9 / 125µm)                       | 60        |           |          |
|                                  | MM (50 or 62.5 / 125µm) <sup>4</sup> |           | 35        |          |
|                                  | HI1060 (5 / 125µm)                   |           |           | 50       |
| PDL (dB)                         | < 0.1                                | < 0.1     | N/A       | < 0.1    |
| Repeatability (dB)               |                                      | ± 0.01    |           |          |
| Resolution (dB)                  |                                      | ± 0.01    |           |          |
| Absolute Accuracy (dB)           |                                      | ± 0.1     |           |          |
| Max. Optical Input Power (dBm)   |                                      | 23        |           |          |
| Beam Block (dB)                  |                                      | > 100     |           |          |
| Input Voltage                    | 110 - 220 V AC, 50 - 60 Hz           |           |           |          |
| Interface                        | Ethernet / USB                       |           |           |          |

Notes:  
<sup>1</sup> Excluding connectors and couplers.  
<sup>2</sup> At 1550nm. 0.3 dB higher at 1310nm.  
<sup>3</sup> At 850nm. 0.3dB lower at 1310nm.  
<sup>4</sup> At 850 and 1300nm.

Mechanical/Environmental Specifications

| Parameter                              | Specification                   |
|--|---------------------------------|
| Unit Dimensions W x H x D (cm)         | 23.5 x 12 x 32.5 (2U half rack) |
| Shipping Box Dimensions W x H x D (cm) | 36.5 x 39 x 53                  |
| Unit Weight (kg)                       | 8                               |
| Total Shipment Weight (kg)             | 9                               |
| Operating Temperature (°C)             | 0 to 55                         |

