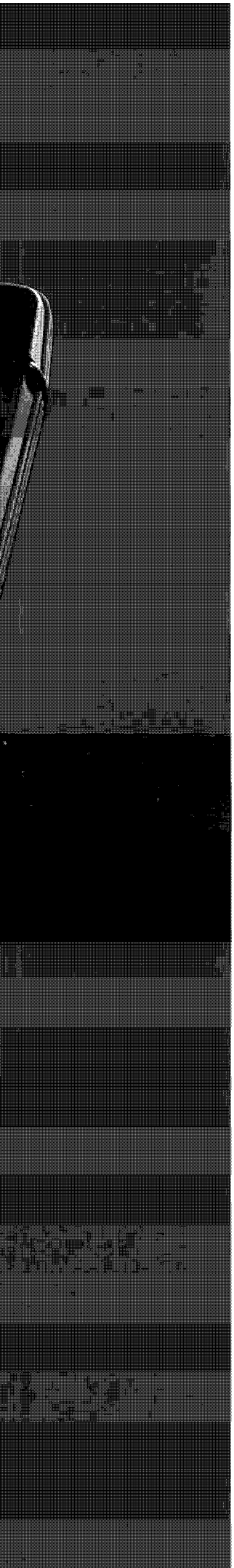

OLP-15A, -16A, -18A

Optical Power Level Meters

- **Power and loss measurements for installation, maintenance and repair of fiber optics networks**
- **Measurement of high power levels in CATV systems, EDFAs and high-power lasers**
- **Simultaneous attenuation measurement at two wavelengths**
- **Built-in result data memory; data recall and remote control via RS 232 interface**
- **Operates from dry or rechargeable batteries or AC line**
- **Universal system of interchangeable adapters**
- **For more optical power meters see OLP-5 and OLP-6**

The OLP-1XA series of Optical Power Meters are especially suitable for applications involving the installation, maintenance or repair of fiber optics networks, as they are both compact and easy to use. They can be used to make power and loss measurements in the wavelength range from 800 to 1700 nm.
The main areas of application for the individual instruments are determined by the required measurement range and accuracy.
The **OLP-15A** and **OLP-18A** are specially suited to measuring high power levels, such as those found in CATV systems, optical amplifiers (e.g. EDFA) and high-power lasers. The upper display limit for the OLP-15A is +20 dBm and for the OLP-18A +26 dBm. The lower limit of below −60 dBm means that the instruments are suitable for practically any application.
The **OLP-16A** is a no-compromise instrument with high accuracy down to very low levels, The display range is from −80 to +15 dBm with minimal measurement uncertainty even at very low levels. This and other characteristics make the instrument suitable for use both in the field and in the laboratory. The InGaAs photodiode in the OLP-16A is most suitable for use in the second and third optical windows at 1310 and 1550 nm.
The **OLP-5** and **OLP-6** are recommended for basic measurements in datacom or telecom networks. These power meters are equipped with a germanium photodiode, making them particularly suitable for the optical windows at 780, 850 and 1300 nm (for details, see OLP-5 and OLP-6).

TWINtest When used with the OLS-15 in **TWINtest** mode, the OLP-1XA automatically detects signals transmitted alternately at 1310 and 1550 nm with the correct wavelength and displays the measured attenuation values. This feature avoids measurement errors, saves time and reduces costs by characterizing a fiber link at both wavelengths simultaneously.

AUTO-λ If the attenuation of the link is to be determined at one wavelength only, AUTO-λ mode can be used to set the power level meter to the correct wavelength window automatically.

Audible fiber identification using modulation detection Identification of a particular fiber in a bundle is simplified by an audible signal. The power level meters in the OLP-1XA range detect the modulation signal as soon as the fiber end is brought near to the input and indicate this with an audible tone. Four standard modulation frequencies can be detected and indicated in this way. This saves valuable time otherwise needed for connecting and disconnecting the fibers.

Data storage and recall, remote control It is useful to be able to record the measured level together with the reference level and wavelength as well as modulation frequency for documenting the results of installation and acceptance tests. A special version of the OLP-15A can store up to 150 sets of data and output these to a PC or printer for documentation via the built-in RS 232 interface. The OLP-15A can also be remote controlled via this interface, i.e. instrument settings can be made and results recalled from a distance at the same time.

Rugged casing, universal system of adapters Anti-slip, wear-resistant impact protection is fitted to the optical power level meters to ensure the mechanical ruggedness needed for operation under field conditions. The foil keypad means that the instruments are also splashproof.
A system of interchangeable adapters provides facilities for matching the instruments to all common types of fiber optics connector systems. The optical connector is protected from dirt by means of a dust cap.

Specifications for the Optical Power Level Meters **OLP-15A/OLP-16A/OLP-18A**

	OLP-15A	OLP-16A	OLP-18A
Wavelength range	800 to 1700 nm		
Photodiode	Germanium	InGaAs	
Fiber type	9/125 to 100/140 µm	9/125 to 50/125 µm	
Standard wavelengths, switchable	850, 1300, 1310, 1550 nm	850, 1300, 1310, 1550 nm	850, 980, 1310, 1480, 1550 nm
Display range	−70 to +11 dBm	−80 to +15 dBm	−60 to +26 dBm
Max. permitted level	+20 dBm	+15 dBm	+26 dBm
Intrinsic error[1]	±0.13 dB (corresponds to ±3 %)		
Measurement uncertainty[2] for the level range 850 nm 1300, 1310 nm 1550 nm	 −60 to +18 dBm ±0.25 dB ±0.8 nW ±0.20 dB ±0.2 nW ±0.40 dB ±0.2 nW	 −70 to +11 dBm ±0.3 dB ±0.15 nW ±0.2 dB ±0.02 nW ±0.2 dB ±0.02 nW	 −50 to +23 dBm ±0.33 dB ±10 nW ±0.25 dB ±2 nW ±0.25 dB ±2 nW
Wavelength detection[3] [4]	automatic switching and display of nominal wavelength		
Fiber detection[4]	automatic display of line ID		
HOLD mode	current measured value stored and displayed		
Data memory (BN 2229/21 only) Results data/Remote control	150 results RS 232 interface	— —	— —
Display Modulation detection[4] Result display Presentation of results Resolution[5]	 270 Hz, 330 Hz, 1 kHz, 2 kHz LCD, 4-digit dBm, dB, mW, µW 0.01 dB/0.001 µW		
Reference level	Transfer of measured value or entry of any reference level in the range from −80 to +30 dBm		
Optical connection Interchangeable adapter	Adapter BN 2014/00.XX e.g. DIN (with HRL-10), FC, SC, ST, SMA		
General specifications Power supply Dry batteries/NiCd rechargeable batteries Operating time from dry/rechargeable batteries Discharge protection for dry/rechargeable batteries AC line operation (OLP-1XA) Battery charging Electromagnetic compatibility Ambient temperature Nominal range of use Storage and transport range Dimensions (w × h × d) in mm Weight (incl. batteries)	 2 × Mignon (AA) 1.5 V / 2 × Mignon (AA) 1.2 V 36 h / 12 h (typical values) auto-off after approx. 20 minutes (can be disabled) separate AC adapter, NT-20 Batteries charged externally with charger unit, internally using NT-20 (OLP-1XA) corresponds to EN 50081-1 and 50082-1 (CE conformance) −10 to +55 °C −40 to +70 °C approx. 95 × 49 × 185 approx. 500 g		

1) Under reference conditions: −20 dBm (CW), 1310 nm ±1 nm, 23 °C ±3 °C, 45 to 75 % rel. humidity.
2) Temperature range −5 to +45 °C; after zeroing with ΔT = ±1 K; level range at 850 nm: lower validity limit value increases by 5 dB in each case. OLP-18A: typical values for level > +20 dBm.
3) Together with OLS-15 at 1310 and 1550 nm.
4) OLP-15A: from −45 dBm (820, 850 nm), from −50 dBm (1300, 1310, 1550 nm). OLP-16A: from −55 dBm (850 nm), from −60 dBm (1300, 1310, 1550 nm). OLP-18A: from −35 dBm (850, 980 nm), from −40 dBm (1310, 1480, 1550 nm).
5) For levels < −60 dBm: Display resolution 0.1 dB.

Ordering information

OLP-15A Optical Power Level Meter [1]	**BN 2229/20**
OLP-15A Optical Power Level Meter [1] (with data memory and RS 232)	**BN 2229/21**
OLP-16A Optical Power Level Meter [1]	**BN 2229/30**
OLP-18A Optical Power Level Meter [1]	**BN 2229/40**
Options	
Calibration report	BN 2229/90.04
Accessories	
Additional adapters	BN 2014/00.xx
NiCd battery, Mignon (AA) size [2]	BN 2229/90.02
Battery Charger (for external charging)	
220 V, Euro-style plug	BN 2229/90.03
110 V, US-style plug	BN 2229/90.09

1) One BN 2014/00.xx-series adapter is included with each instrument (does not apply to bare fiber adapter BN 2014/00.08). Please specify type required when ordering.
2) 2 required

NT-20 AC Adapter	
Euro version	BN 2238/90.02
UK version	BN 2238/90.03
US version	BN 2238/90.04
Australian version	BN 2238/90.05
Shoulder strap	BN 820/00.52
Cleaning tape for optical connectors	BN 2229/90.07
MK-1 Case (rigid shell case for 2 instruments and accessories)	BN 2090/13
MT-2 Instrument Bag (Nylon bag for 2 instruments and accessories)	BN 2126/01
ABK-30 Storage Box (for storing adapters, cables and other accessories)	BN 2126/30

Detailed information on adapters, cables and optical couplings can be found in the separate data sheet "Optical adapters and adapter cables".