

# Fixed gain optical transmission link



Montena MOL3000 optical link is designed for the transmission of analogue electric signals (CW and pulses) from 80 Hz to 3.5 GHz over long distance in harsh electromagnetic environment.

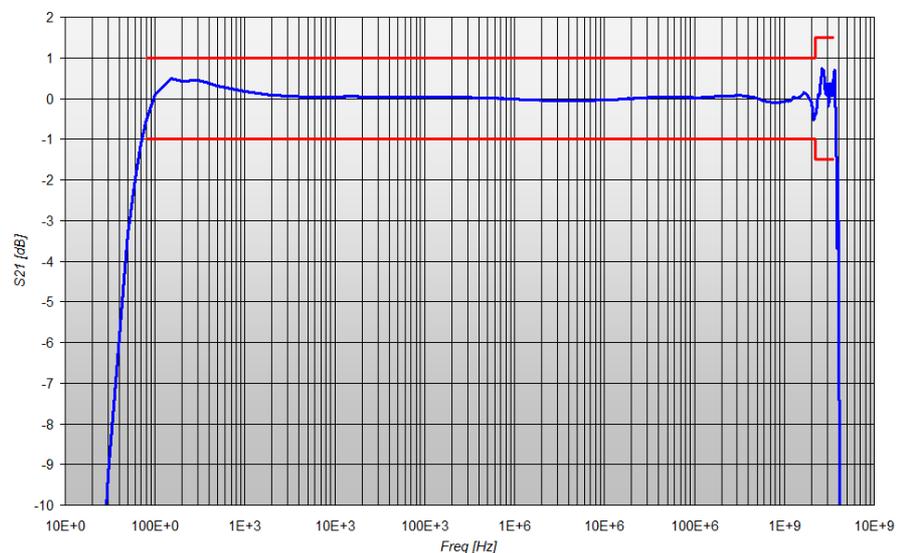
The input electric signal is conditioned and converted into an analogue optical signal in the transmitter module and sent to the receiver module through a fibre optic cable. The receiver module converts back the optical signal into an electrical signal. Both transmitter and receiver modules are shielded and are powered with embedded batteries. The optical signal transmission is regulated with an automatic level control that maintains precise and constant performance independently of the optical losses.

## SPECIFICATIONS

Type	MOL3000
Bandwidth ( $\pm 1.5$ dB)	80 Hz to 3.5 GHz
System gain	0 dB $\pm 1.5$ dB ( $\pm 1.0$ dB < 2.2 GHz)
Full scale transmitter input for 1 dB gain compression	< 1 GHz : +6 dBm (1.2 Vp-p) 2.0 GHz : +3 dBm (0.9 Vp-p) 3.5 GHz : -7 dBm (0.3 Vp-p)
Absolute maximum input voltage	10 Vp-p
Maximum continuous input power	24 dBm (250 mW)
Receiver output noise floor / Transmitter equivalent input noise	< -137 dBm/Hz typ.
Optical losses compensation	automatic (variable optical attenuator)
Immunity to external electric fields	> 500 kV/m (pulse according to MIL-Std 461 RS105)
Power supply	by internal LiPo batteries or by the power supply adapter
Battery autonomy	> 40 hours. Standby, about 10 days
Operating temperature	+5°C to +55°C
RF input / output connectors	SMA female / 50 $\Omega$
Optical connectors	FC / APC
Dimensions	99 x 64 x 41 mm (L x W x H), excluding the connectors
Weight (transmitter / receiver)	350 gr / 350 gr

## Typical frequency response

Bandwidth 80 Hz to 3.5 GHz





## Ordering information

TYPE	DESCRIPTION
<b>MOL3000</b>	Point-to-point optical link, 80 Hz –3.5 GHz, 0 dB gain, including one optical transmitter MOL3000-TX on battery, one optical receiver MOL3000-RX on battery, two battery chargers and one carrying case

## Fibre optic cables

TYPE	DESCRIPTION
<b>FCLBxxx</b>	Fibre optic cable, diameter: 3 mm xxx = the cable length Available lengths are 10, 20, 50, 100, 200, 500, 1000 m
<b>FCLBxxx-RU</b>	Rugged fibre optic cable, diameter: 7.5 mm xxx = the cable length Available lengths are 10, 20, 50, 100, 200, 500, 1000 m

## Related products / accessories

TYPE	DESCRIPTION
<b>PULSELab</b>	Pulse measurement and processing software application, life time license for installation on one PC
<b>ATP10-18G</b>	Coaxial attenuator 50 ohm, 10 dB, 1 W, 0..>18 GHz, SMA connectors
<b>ATP20-18G</b>	Coaxial attenuator 50 ohm, 20 dB, 1 W, 0..>18 GHz, SMA connectors
<b>ATP30-18G</b>	Coaxial attenuator 50 ohm, 30 dB, 1 W, 0..>18 GHz, SMA connectors