OPTICAL CATALOGUE 2015

OPTICAL DIVISION:

Optical Transmitters & Receivers for "SMATV" & "FTTH" distributions

ROVER LABORATORIES S.p.A.
Via Parini 2, 25019 Sirmione (BS) Italy

Tel. +39 030 9198 1 • Fax +39 030 990 6894

info@roverinstruments.com • www.roverinstruments.com

ROVER
OPTICAL – FTTH – IRS

DUAL LASER OPTICAL TRANSMITTER FOR "FTTH" AND "SMATV" INSTALLATIONS

MOD. "DLT-0 OR 5"

- Converts RF (RD-TV and SAT) into OPTIC,
- 2 Optical powers available: 1 mW (0 dBm) or 3 mW (5 dBm),
- Dual laser 1310 nm and 1550 nm (single mode),
- AGC at all RF inputs for constant LASER drive,
- Optional dual PSU, that can also be connected to 2 different electric lines,
- Uses standard OPTICAL connector "SC-APC" (with 8° angled fiber),
- Optical connector with automatic anti-dust closure (shutter),
- Internal compact metal housing,
- Housing with tabs, can be fixed to the wall or on the sealed box,
- Plastic cover to protect the connector and fiber,
- Plastic lid with tabs for wrap strap fiber.

The "DLT" transmitter converts RF signals (FM Radio and DAB, TV and 4 SAT polarities) into OPTIC, it has an AGC on the RF signals input for constant LASER drive. A special circuit based on a double LASER preserves the quality of the SAT signals in high Bands (VH, HH) that sometime can be weaker and therefore more susceptible to various quality losses.

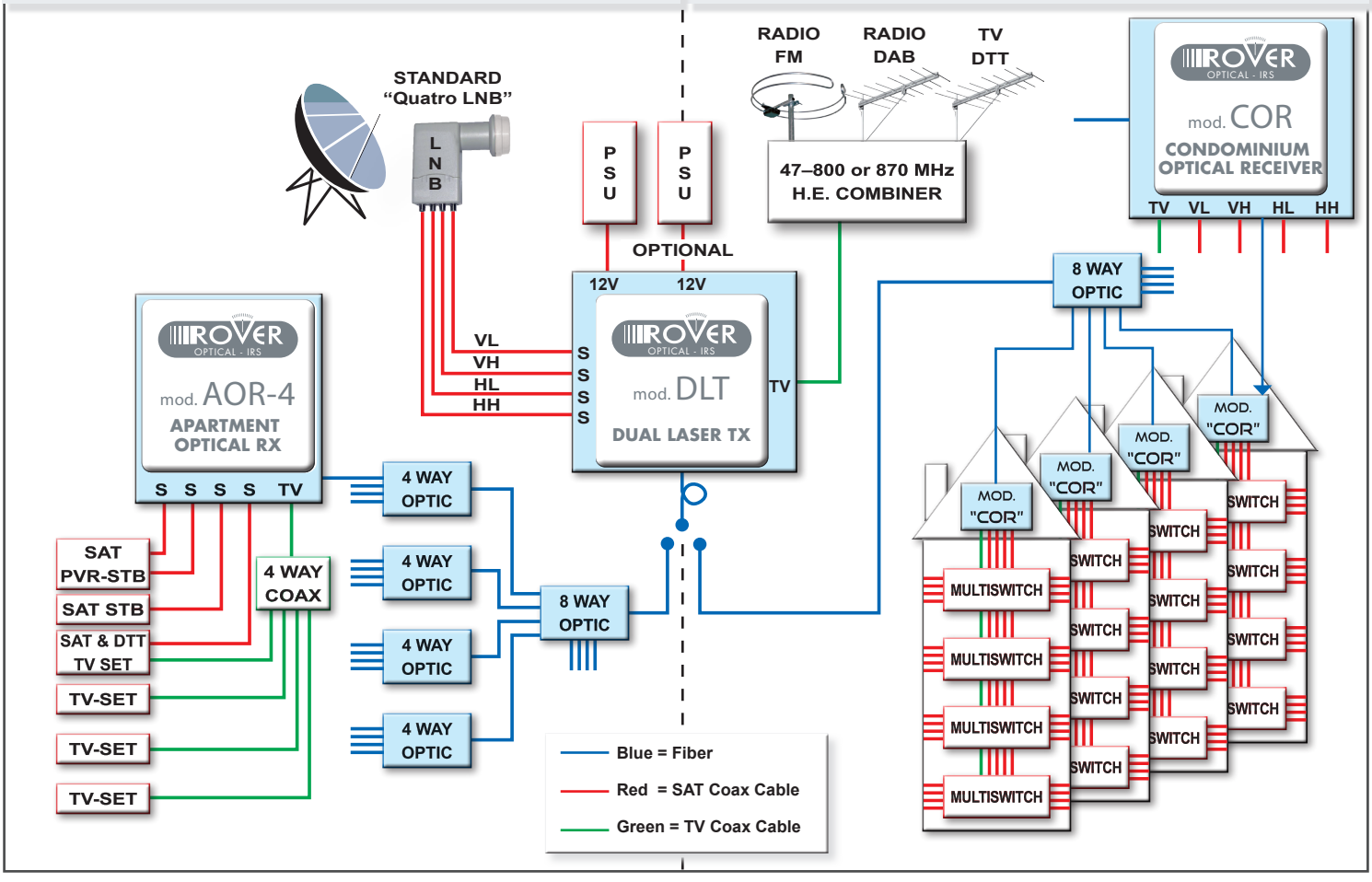
Basically the high SAT bands (VH, HH) do not undergo any frequency conversion, neither in the Optical TX, nor in the Optical RX; the frequency conversions normally introduce significant interferences and reduction of the MER and consequently may reduce the number of subscribers by up to 20%.

Two TX models are available:

- "DLT-0" low-power, recommended with RX mod. "COR" (see leaflet) for "SMATV" mixed distributions OPTICAL and COAX.
- "DLT-5" medium-power, recommended with RX mod. "AOR" (see leaflet) for "FTTH" distributions up to 32 apartments.

"FTTH" (FIBER TO THE HOME) DISTRIBUTION UP TO 32 APARTMENTS

MIXED OPTICAL FIBER & COAX CABLE DISTRIBUTION UP TO 8 CONDOMINIUMS



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"DLT" TX
TECHNICAL SPECIFICATIONS

PARAMETERS	MIN	MAX	NOTES
OPTIC			
TX Optical power	0 dBm (1mW)	+ 5 dBm (3mW)	
OPTICAL wavelength	1310 nm & 1550 nm		N. 2 separates Laser
Optical connector	SC–APC with 8° angled fiber		Green, with automatic anti-dust closure (shutter)
Optical Return Loss	> 60 dB		
RF SAT			
Frequency Range	950 MHz	2150 MHz	
Impedance	75 ohm		
Connectors	F		N.4 female
Input level	60 dBuV	85 dBuV	30 transponders
AGC SAT Range	15 dB		
N. inputs	4		4 polarity (VL - VH - HL - HH) with AGC
Terrestrial band rejection	25 dB	30 dB	
RF RADIO & TV			
Frequency Range	40 MHz	870 MHz	
Impedance	75 ohm		
Connectors	F		N.1 female
Input level	60 dBmV	85 dBmV	
N. inputs	1		(only one for FM-DAB-TV) with AGC
SAT band rejection	20 dB		
RF FM & DAB Radio			
Frequency Range	88-108 MHz	230 MHz	
Impedance	75 ohm		
Connectors	F		N.1 female
Input level	60 dBmV	85 dBuV	
AGC TV Range	15 dB		
N. inputs	1		(only one for FM-DAB-TV) with AGC
SAT band rejection	20 dB		
DC & PSU			
Power Supply voltage	12 Vdc		
Power Supply current	300 mA	350 mA	
Power supply connectors	2.5 x 5.5		N. 2 (one redundant)
GENERAL			
Metal housing dimensions	12 x 15 x 5 cm		plus plastic protective cover
Weight	500 g		
Fixing	wall		with 2 screws

TV & SAT CONDOMINIUM
OPTICAL RECEIVER

MOD. "COR"

- Converts Optic into RF (RD-TV and SAT),
- With 4 SAT polarity (VL - VH - HL - HH) plus 1 RD-TV output,
- Dual photodiodes 1310 nm and 1550 nm,
- AGC on the OPTICAL power, to avoid saturations,
- OPTICAL power indicator (green, yellow, red),
- Can be powered directly by multiswitch or by external PSU,
- Optional dual PSU, that can also be connected to 2 different electric lines,
- Uses standard OPTICAL connector "SC-APC" (with 8° angled fiber),
- Optical connector with automatic anti-dust closure (shutter),
- Inspectable compact metal housing,
- Housing with tabs, can be fixed to the wall or on the sealed box,
- Plastic cover to protect the connector and fiber,
- Plastic lid with tabs for wrap strap fiber.

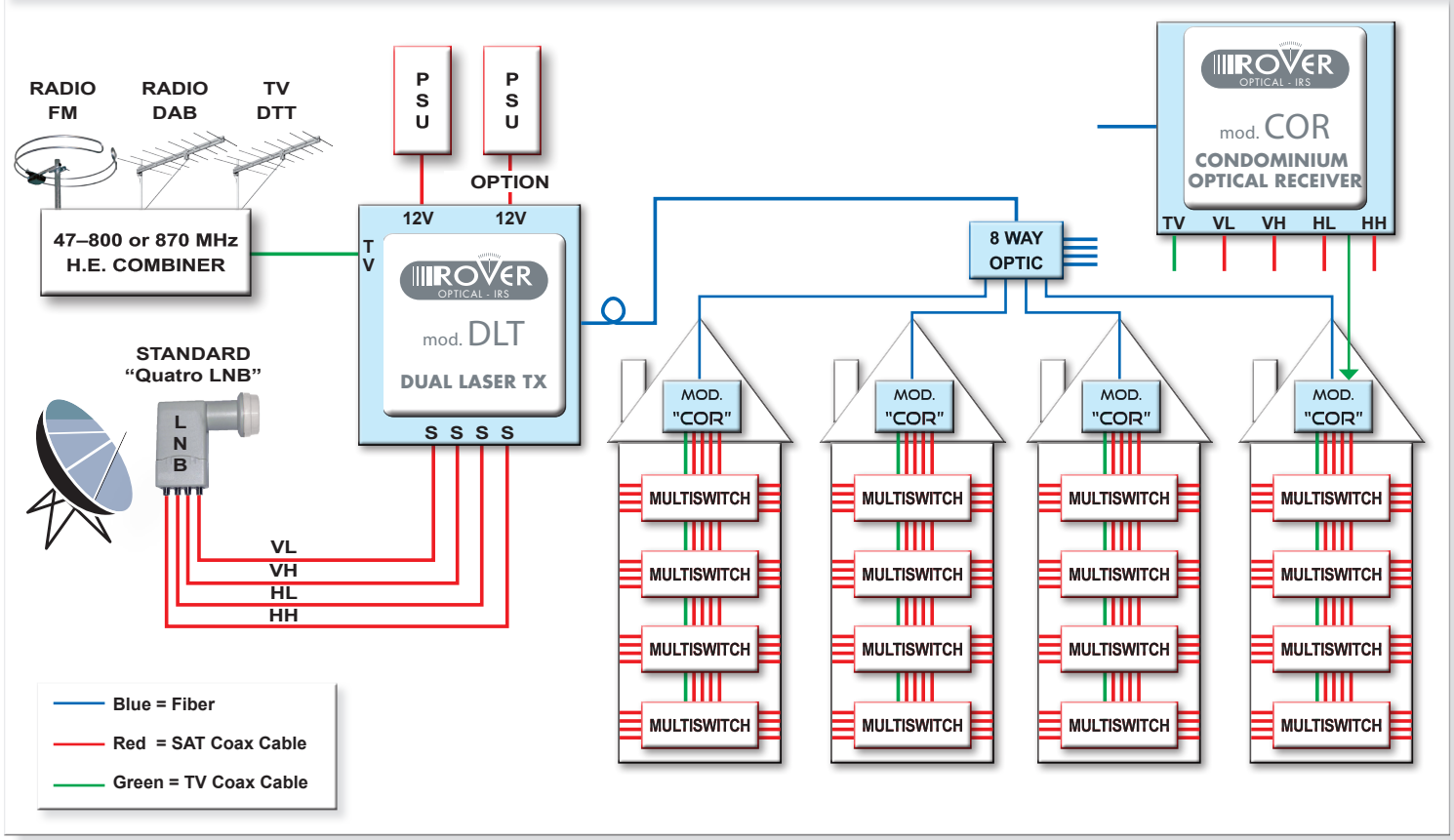
The "COR" receiver converts Optical signals into RF (FM Radio and DAB, TV and 4 SAT polarities), it has an AGC on the Optical Power to avoid saturations. A special circuit based on a double photodiode preserves the quality of the SAT signals in high Bands (VH, HH) that sometime can be weaker and therefore more susceptible to various quality losses.

Basically the high SAT bands (VH, HH) do not undergo any frequency conversion, neither in the optical TX, nor in the optical RX; the frequency conversions normally introduce significant interferences and reduction of the MER and consequently may reduce the number of subscribers by up to 20%.

Other models are also available for apartments (FTTH): (see relative leaflet)

- "AOR-2" (Apartment Optical Receiver) with 2 (TWIN) universal SAT outputs plus 1 independent RD-TV output that can connect up to 4 TV's.
- "AOR-4" (Apartment Optical Receiver) with 4 (QUAD) universal SAT outputs plus 1 independent RD-TV output that can connect up to 4 TV's.

MIXED FIBER OPTIC & COAX CABLE "SMATV" INSTALLATION UP TO 8 CONDOMINIUMS



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"COR" RX
TECHNICAL SPECIFICATIONS

PARAMETERS	MIN	MAX	NOTES
OPTIC			
Optical power at RX input	-15 dBm	0 dBm	
OPTICAL wavelength	1290 nm & 1600 nm		N. 2 separate photodiodes
Optical connector	SC–APC with 8° angled fiber		Green, with automatic anti-dust closure (shutter)
Optical power indication	Green, Yellow, Red		Pass - Marginal - Fail
Optical Return Loss	> 60 dB		
Optical Range AGC	15 dB		
RF SAT			
Frequency Range	950 MHz	2150 MHz	
Impedance	75 ohm		
Connectors	F		N. 4 female
Output level (can vary with large input power variations)	70 dBuV	75 dBuV	30 transponder
N. SAT outputs	4		4 polarity (VL - VH - HL - HH)
Terrestrial band rejection	25 dB	30 dB	
RF TV			
Frequency Range	40 MHz	870 MHz	
Impedance	75 ohm		
Connectors	F		N.1 female
Output level (can vary with large input power variations)	65 dBmV	70 dBmV	(90 dBµV with opt. Amplifier)
N. outputs	1		(one for FM-DAB-TV)
SAT band rejection	20 dB		
RF FM & DAB Radio			
Frequency Range	88-108 MHz	230 MHz	
Impedance	75 ohm		
Connectors	F		N.1 female
Output level (can vary with large input power variations)	65 dBmV	70 dBuV	(90 dBµV with opt. Amplifier)
N. radio outputs	1		(one for FM-DAB-TV)
SAT band rejection	20 dB		
DC & PSU			
Power Supply voltage	12 Vdc		
Power Supply current	200 mA	250 mA	
Power supply connectors	2.5 / 5.5		N. 2 (one spare, can also be powered directly from the Multiswitch)
GENERAL			
Metal housing dimensions	12 x 15 x 5 cm		plus plastic protective cover
Weight	500 g		
Fixing	wall		with 2 screws

"FTTH" TV & SAT APARTMENT OPTICAL RECEIVER

MOD. "AOR-2 OR 4"

- Converts Optic into RF (RD-TV and SAT),
- Available with 2 or 4 universal SAT outputs (13-18 V & 22 KHz) plus 1 RD-TV,
- Separate output for FM, DAB and TV con power up to 4 TVs,
- Dual photodiodes 1310 nm and 1550 nm,
- AGC on the OPTICAL power, to avoid saturations,
- OPTICAL power indicator (green, yellow, red),
- Can be powered directly by the STB or by external PSU,
- Optional dual PSU, that can also be connected to 2 different electric lines,
- Uses standard OPTICAL connector "SC-APC" (with 8° angled fiber),
- Optical connector with automatic anti-dust closure (shutter),
- Inspectable compact metal housing,
- Can be installed behind the TV (FTTH) or on stairs,
- Housing with tabs, can be fixed to the wall or on top of electrical box,
- Plastic cover to protect the connector and fiber,
- Plastic lid with tabs for wrap strap fiber.

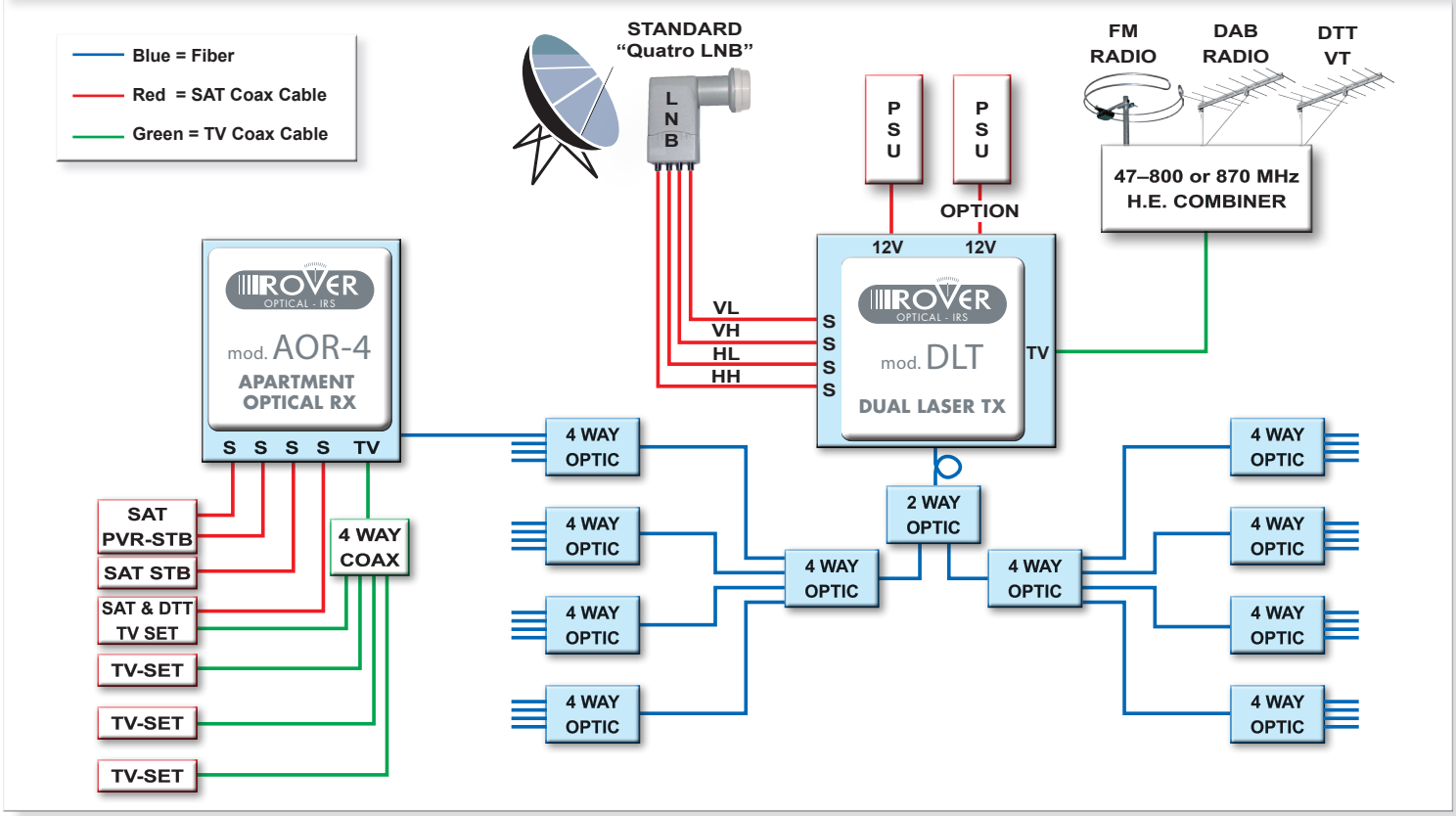
The "AOR–2 or 4" receiver converts Optical signals into RF (FM Radio and DAB, TV and 4 SAT polarities), it has an AGC on the Optical Power to avoid saturations. A special circuit based on a double photodiode preserves the quality of the SAT signals in high Bands (VH, HH) that sometimes can be weaker and therefore more susceptible to various quality losses.

Basically the high SAT bands (VH, HH) do not undergo any frequency conversion, neither in the optical TX, nor in the optical RX; the frequency conversions normally introduce significant interferences and reduction of the MER and consequently may reduce the number of subscribers by up to 20%.

Various models are available:

- "AOR-2" (Apartment Optical Receiver) with 2 (TWIN) universal SAT outputs plus an independent RD-TV output that can connect up to 4 TV's.
- "AOR-4" (Apartment Optical Receiver) with 4 (QUAD) universal SAT outputs plus an independent RD-TV output that can connect up to 4 TV's.
- A "COR" (Condominium Optical Receiver) model is also available with 4 SAT polarities, plus 1 independent TV output; this model is used in condominiums for normal SAT distributions with RF MULTISWITCH and coax cables (see relative leaflets).

"FTTH" (FIBER TO THE HOME) SMATV INSTALLATION UP TO 32 APARTMENTS



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OPTICAL – FTTH – IRS

"AOR" RX
TECHNICAL SPECIFICATIONS

PARAMETERS	MIN	MAX	NOTES
OPTIC			
Optical power at RX input	-15 dBm	0 dBm	Max + 10 dBm
OPTICAL wavelength	1290 nm and 1600 nm		N. 2 separates photodiodes
Optical connector	SC–APC with 8° angled fiber		Green, with automatic anti-dust closure (shutter)
Optical power indication	Green, Yellow, Red		Pass - Marginal - Fail
Optical Return Loss	> 60 dB		
Optical AGC Range	15 dB		
RF SAT			
Frequency Range	950 MHz	2150 MHz	
Impedance	75 ohm		
Connectors	F		
Output level (can vary with large input power variations)	70 dBuV	75 dBuV	30 transponders
N. Universal SAT outputs	2 (TWIN) or 4 (QUAD)		(2 or 4 universal outputs 13-18 & 22 KHz)
Terrestrial band rejection	25 dB	30 dB	
RF TV			
Frequency Range	40 MHz	870 MHz	
Impedance	75 ohm		
Connectors	F		N. 1 female
Output level (can vary with large input power variations)	65 dBmV	70 dBmV	
N. outputs	1		(only one for FM-DAB-TV)
SAT band rejection	20 dB		
RF FM & DAB Radio			
Frequency Range	88-108 MHz	230 MHz	
Impedance	75 ohm		
Connectors	F		N. 1 female
Output level (can vary with large input power variations)	65 dBmV	70 dBuV	
N. radio outputs	1		(only one for FM-DAB-TV)
SAT band rejection	20 dB		
DC & PSU			
Power Supply voltage	12 Vdc		
Power Supply current	200 mA	250 mA	
Power supply connectors	0 2.5 / 5.5		N.2 (one spare) also powered by STB
GENERAL			
Metal housing dimensions	12 x 15 x 5 cm		plus plastic protective cover
Weight	500 g		
Fixing	wall		with 2 screws

HOW TO FIND US:
in Sirmione, Lake Garda, Italy.

Situated in one of the most beautiful tourist locations in Italy, on Lake Garda, ROVER can be easily reached from Milan, Bergamo, Verona and Venice airports.

Lake Garda is in the north of Italy, near the borders of Austria, Switzerland and Germany and is in the foothills of the Alps.

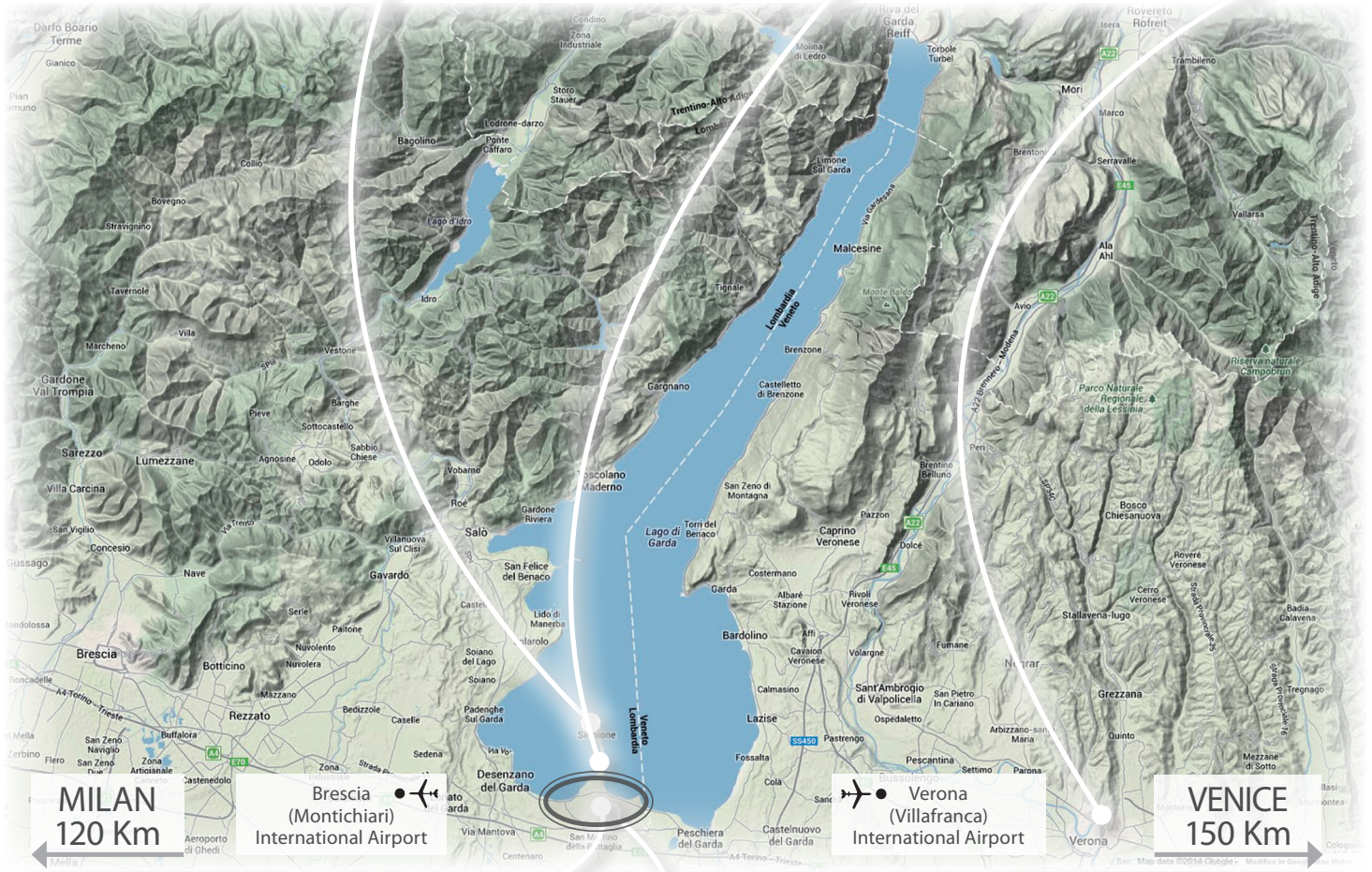
Lake Garda has a micro-climate, tropical in summer and temperate in winter, and where palms, olives, lemons, oranges, bouganville and even banana trees can grow.

Exploited by the Romans as long ago as 350 a.C., it is now one of the most important lakeside, spa and tourist resorts in Europe. Please find below photographs of some of the most important tourist attractions in the area.

Catullus roman ruins, 350 b.C.

Sirmione Castle, 1.500 a.C.

Verona, roman Arena 120 b.C.



GPS COORDINATES:
45° 27' 47"N, 10° 36' 24" E

ROVER Goods entrance & production

ROVER Laboratories and offices

CERTIFICATES N°
1263 ISO 9001
1264 ISO 14001
1265 BS OHSAS 18001

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