

Product description

Optical receivers OD005, OD005P (in text – receiver) are intended to convert signals from optical to electrical. Devices are equipped with Optical Level Control and optical input power indicator as well as bidirectional output test point to simplify measurement, adjustment and troubleshooting.

OD005P receiver is powered from the mains 230 V~. OD005 receiver is powered from external +6 V DC power supply unit (PSU) through F-type connector.

Devices are intended for indoor use only.

Safety instructions

Installation of the receiver must be done according IEC60728-11 and national safety standards.

Any repairs must be done by a skilled personnel.

The OD005P is powered from mains 230 V~. The voltage is dangerous to life.

The OD005 is powered from external +6 V DC power supply unit (PSU) through F-type connector. Output of PSU +6 V must have a short circuit protection. Follow external PSU safety instructions during installation.

To ensure safe operation of the receivers follow these instructions:

- do not remove the cover of the power supply section of OD005P, without disconnecting the unit from the mains supply;
 - do not plug the receiver into the mains supply if the power cord or plug are damaged;
 - do not plug the receiver OD005P and the PSU of OD005 into the mains supply until all cables have been connected correctly;
 - to disconnect the OD005P from the mains completely, disconnect plug from the mains socket;
 - to disconnect the OD005, disconnect the PSU from mains;
 - the mains socket must be easily accessible;
 - receiver shall not be exposed to dripping or splashing water and no objects filled with liquids, such as vases, shall be placed on it;
 - avoid placing the receiver next to central heating components and in areas of high humidity;
 - no naked flame sources, such as lighted candles, should be placed on receiver;
 - if the receiver has been kept in cold conditions for a long time, keep it in a warm room no less than 2 hours before plugging into the mains;
 - do not insert any objects into ventilation openings;
 - the ventilation should not be impeded by covering the ventilation openings with items, such as newspapers, table-cloths, curtains;
 - mount the receiver in vertical position with RF connections underneath;
 - from top, front and bottom of installed receiver must be at least 10 cm free space.
- An optical connector after disconnection emits optical radiation.
Avoid looking directly into beam, laser light can cause eye injuries and result in permanent loss of vision.



This product complies with the relevant clauses of the European Directive 2002/96/EC. The unit must be recycled or discarded according to applicable local and national regulations.



Equipment intended for indoor usage only.



Equipment is double insulated from the mains, with functional earthing.



Functional earthing. Connect to the main potential equalization.



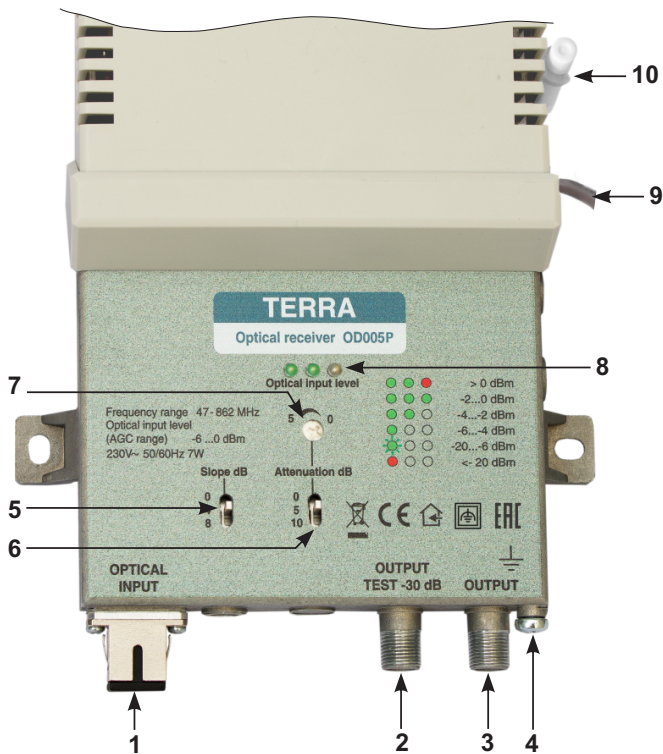
This product is in accordance to following norms of EU: EMC norm EN50083-2, safety norm EN62368-1 and RoHS norm EN50581.



This product is in accordance with Custom Union Technical Regulations: "Electromagnetic compatibility of technical equipment" CU TR 020/2011, "On safety of low-voltage equipment" CU TR 004/2011.

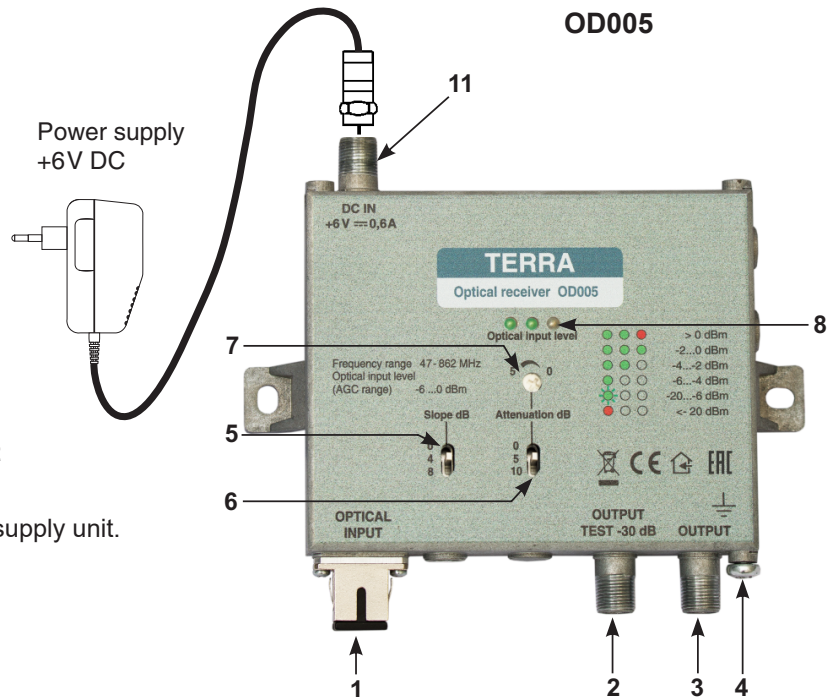
External view

OD005P



1. Optical input SC/APC
2. **OUTPUT TEST-30 dB** - RF output signal test point (F socket)
3. **OUTPUT** - RF signal output connector (F socket)
4. Functional grounding clamp
5. 0 / 4 / 8 dB slope switch
6. 0 / 5 / 10 dB gain switch
7. 5 dB fine tuning gain regulator
8. 3 LED optical input power indicator
9. Power cord
10. Screwdriver
11. DC IN


OD005



Requirements for external power supply unit (PSU) for OD005

OD005 is powered from external 6V DC power supply unit.

Requirements:

- Output voltage: 6 V \pm 5%
- Output current: > 0.7 A
- Output connector: type F, (+) inside
- Short circuit protection
- Double insulated (marked )
- Meet EN 55022 class B conducted emissions requirements, measuring with grounded load

INSTALLATION INSTRUCTIONS

Read the product description and safety instruction first.

The receiver should be mounted vertically with cable RF output underneath in order to ensure good ventilation conditions.

The receiver must be fixed with steel screws Ø 4-5 mm. The screws are not included in a package.

Fiber installation should be done very carefully. Bending radius of fibers must be not less 25 mm. All optical connectors and adaptors should be cleaned before connecting them.

Plug the receiver into the mains after all cables have been connected correctly.

Technical characteristics

| Type | | OD005P | OD005 |
|-----------------------------|---|---------------------------------|-----------------------|
| Optical input | optical wave length | 1100-1600 nm | |
| | optical input level (AGC range) | -6 ...0 dBm | |
| | optical return loss | > 40 dB | |
| | noise current density | ≤ 6.5 pA/√Hz | |
| RF output | frequency range | 47-862 MHz | |
| | impedance | 75 Ω | |
| | return loss | ≥ 14 dB at 40 MHz-1.5 dB/octave | |
| | frequency response | ± 0.75 dB | |
| | output level (AGC controlled, 4.9% OMI) | 106 dBμV | |
| | output level (CTB, EN50083-3)* | 107 dBμV (42 ch.) | |
| | output level (CSO , EN50083-3)* | 107 dBμV (42 ch.) | |
| | interstage attenuator | 0-15 dB | |
| | interstage equalizer | 0/4/8 dB | |
| | loss in test point | -30 ± 0.7 dB | |
| Supply voltage limit values | | 198-250 V~ 50/60 Hz | DC 6 V |
| Consumption | | 7 W | 0.6 A |
| Operating temperature range | | -20° ÷ + 50° C | |
| Dimensions/Weight (packed) | | 135x180x52 mm/0.7 kg | 135x120x32 mm/0.34 kg |

* output level (CTB, CSO) is measured with 8 dB interstage equalizer

Operating and adjusting

Optical level control (OLC) is active at optical input power -6 .. 0 dBm. The output level remains constant (adjusted by user using discrete 0/5/10 dB switch and fine tuned with 0 .. 5 dB regulator) while optical input power fluctuates in range of -6 .. 0 dBm.

The receiver owns optical input power indicator formed from 3 LED. Note the table below for detailed description.

| Indication | | | OLC | Optical input power |
|-----------------------|----------------------|----------------------|-----|---------------------------------------|
| Left LED | Middle LED | Right LED | | |
| Glowing red | Not glowing | Not glowing | OFF | < 20 dBm or optical signal is missing |
| Blinking green | Not glowing | Not glowing | OFF | - 20 .. - 6 dBm |
| Glowing green | Not glowing | Not glowing | ON | - 6 .. - 4 dBm |
| Glowing green | Glowing green | Not glowing | ON | - 4 .. - 2 dBm |
| Glowing green | Glowing green | Glowing green | ON | - 2 .. 0 dBm |
| Glowing green | Glowing green | Glowing red | OFF | > 0 dBm |

Structure diagram

