



OP-500

TTL Optical Probe (without connector)

Overview

The OP-500 Optical Probe with TTL output is an interface that communicates via infrared waves with a peripheral device such as an electricity meter, water meter, heat meter or gas meter or any other device that has an optical port on it. It incorporates a small housing design that makes it even lighter in weight but still rugged with its ABS and Polycarbonate filter material. All devices that support the European standard IEC 62056-21 (IEC 1107) will work with this product.

OP-500 does not have a connector, which is suitable when the consumption data is supposed to be read out by any device, such as a handheld device, that supports the TTL output port. It derives power from the TTL port, so there is no need for external battery pack or AC adapter. OP-500 benefits from a very strong magnet that firmly attaches the optical probe to the meter and also has resistance to external light influences other than the infrared wavelength. Installation and configuration instructions are included with the probe.

Advantages

- Ergonomic & User-friendly Housing Design
- Powerful Magnet
- Optical Filter
- High Quality Cable
- IEC 62056-21 (1107) Standard Compliant
- Powered by TTL Port

Ergonomic & User-friendly Housing Design

The housing is designed to be fit in the hand of the user easily and the material used makes it strong and also light weight. It is resistant against surface wear off in long term usages that is caused by using the optical head on the meters and devices with optical port installed on them.

Good material not always brings good hardness. The housing shape can have tremendous effect on the hardness of the probe. We have designed the optical probes to withstand falling from one meter height, in case it slips from user's hand.

Powerful Magnet

The head contains a powerful magnet on under the surface in which the probe is attached to the optical port, that causes the probe to stick to the optical port and not easily removed, in order to secure connection to the device and let the user work without needing to hold the probe in position with one hand.

⚠ Warning: due to strong magnetic force of the magnet used in the probe, please do not store it beside electronic equipment, because it can damage these devices in long time storage. It also causes malfunction in any storage device like hard drives, solid-state memories (flash memories, SSD drives and etc.), RAM storages and etc.

Optical Filter

In order to be able to communicate between the two devices through optical port, certain wavelength must be used. The wavelength used must be in the range of 880 nm infrared light that is not visible to the human eye. The light filter used in this optical probe filters all ambient light, preventing any disruption to probe communication, thus providing stable and efficient communication between two devices.

High Quality Cable

Using a product that utilizes a wired connection, the wire is always prone to disconnection due to lots of bending and stretches. The strong and high-quality cable used in our wired optical probes provides long term and efficient usage.

Mechanical specifications

- Dimensions: Diameter 32mm, Height 26mm
- Cable: Length 2m, Diameter 4.5mm, four-wire cable LAPP GERMANY
- Connector: without connector
- Infrared filter: Against external light influences
- Weight: Complete assembly weighs a maximum of 90gr
- Casing material: Probe Head ABS, Infrared filter Polycarbonate

Electrical Specifications

- Signal Specifications: Signals are in the range of 0 to +3.3V
- Compatibility: IEC 62056-21 (1107) standard
- Signal level: Compatible with TTL output
- Power Requirements: Powered by TTL port (3.5 to 5.5V)
- Power consumption: approx. 10 mA (Maximum)
- Data Rate: from 300 to 19200 bit/s
- Communication: Half duplex
- Optical: 880nm bi-directional IR interface
- Echo filter: Yes

Environmental Specifications

- Operating Temperature: -30°C to +60°C
- Storage Temperature: -40°C to +85°C
- Rugged: Meets the requirements of a numbers of tests including those for Thermal Shock, Humidity, Water Resistance, RF Susceptibility, ESD, Drop, Random Vibration, Solar Radiation, Salt, Fog and Low Pressure.

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