PC-100

Scanning Head (TTL output without connector)

Overview

The PC-100 is a portable sensing head with TTL output. It is designed to detect LED flashes in meters, such as electricity meters. The device features a small, lightweight housing made of rugged ABS and Polycarbonate filter material. It is compatible with all devices that have an LED flash pulser.

The PC-100 can detect typical LED colors, including Red, Orange, Yellow, Green, and Infrared. The user can divide the output pulse rate into 10 or 100 by using a push button. Additionally, a 3-color LED indicates the status of the output pulse division: Green for 1:1, Red for 10:1, and Orange for 100:1.

The PC-100 does not have a connector, making it suitable for reading consumption data with any device that supports the TTL output port. The PC-100 derives power from the TTL port, eliminating the need for an external battery pack or AC adapter. Additionally, it benefits from a strong magnet that firmly attaches the optical probe to the meter and is resistant to external light influences. The installation and configuration instructions are included with the probe.

Advantages

- Ergonomic & User-friendly Housing Design
- Powerful Magnet
- Optical Filter
- High-quality Cable
- Various LED Flash Pulser Color Detection
- Powered by TTL Port

* Installation and configuration instructions are provided with the probe.

Ergonomic & User-friendly Housing Design

The housing is designed with ergonomics in mind for comfortable handling. The material of construction ensures both robustness and lightness. It provides substantial resistance against surface wear due to its prolonged usage with optical port devices and meters.
It's worth noting that good material alone doesn't guarantee high hardness. The housing shape significantly impacts probe hardness. We have developed optical probes to endure a drop from a distance of one meter in case it slips from the user's grip.

Powerful Magnet

The head of the device boasts a powerful magnet hidden below the surface, allowing the probe to attach securely to the optical port. This eliminates the need for constant manual checking and ensures a secure connection to the device.

⚠ *Caution: Due to the strong magnetic force of the probe's magnet, please do not store it near electronic equipment as it may cause damage if stored for long periods. It can also result in malfunctions in any storage device, including hard drives, solid-state memories (such as flash memory and SSDs), RAM storage, and similar.*

Optical Filter

To detect LED flash pulse light, a specific wavelength within the range of red, orange, yellow, green, and infrared light (500 to 1000 nm) must be used. The scanning head's light filter eliminates any interfering lights, ensuring stable and efficient sensing of the device's LED flash pulser.

High Quality Cable

When using wired products, the cable is susceptible to detachment due to bending and stretching. Nonetheless, our wired optical probes are equipped with a robust and superior quality cable, ensuring prolonged and effective use.

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 72gr
- Casing material: Probe Head ABS, Infrared filter Polycarbonate

Electrical Specifications

- Signal Specifications: Signals are in the range of 0 to +3.3V
- Compatibility: Meters with LED flash pulser
- Signal level: Compatible with TTL output
- Power Requirements: Powered by TTL port (5V)
- Power consumption: approx. 13 mA (100:1 mode)
- Data Rate: from 300 to 19200 bit/s
- Communication: Half duplex
- Optical sensor: 500 to 1000 nm
- Echo filter: Yes
- LED status colors:
  - Green 1:1 (max input pulse speed: 10 Hz)
  - Red 10:1 (max input pulse speed: 100 Hz)
  - Orange 100:1 (max input pulse speed: 1000 Hz)

Environmental Specifications

- Operating Temperature: -30°C to +60°C
- Storage Temperature: -40°C to +85°C
- Rugged: Meets the requirements of several 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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