ETHERLINE® GUARD PM03T / ETHERLINE® GUARD PM02TWA

Revision 1 from HW 1 / 18.11.2021

Area of application

The ETHERLINE® GUARD can be used to monitor Ethernet-based data cables with a transmission speed of 100 Mbit/s (100Base-TX). The ETHERLINE® GUARD is inserted into the cable harness and can provide information about the quality of the cable connection via a separate network connection (LAN or Wi-Fi) or via a digital output.

The **current product documentation** with the safety information and for the complete device setup, as well as the applicable EU **conformity declaration**, can be found on the product website or by following the QR code: www.lappkabel.com/etherlineguard

Connections

The ETHERLINE® GUARD has 2 RJ45 connections (DATA) for the cable to be monitored and a LAN connection (PM03T) or an antenna connection for Wi-Fi (PM02TWA).

The ETHERLINE® GUARD must be supplied at the 18 to 30 V DC wide range input via the supplied 24 V DC connector. Pins 1 (GND) & 2 (VCC) (- / +) must be correctly connected.
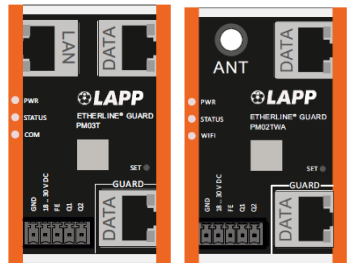
The ETHERLINE® GUARD housing is not earthed. It is vital that you connect the device's functional earthing connection (FE) to the reference potential of your control cabinet or system design to ensure correct ESD discharge of the antenna and network sockets.

The device should be installed and operated at a distance of at least 20 cm between the emitter/antenna and your body.

The device must not be used as the sole means of avoiding hazardous conditions at machines and systems.

If the device is used in a way not specified by the manufacturer, the protection offered by the device may be impaired. Please pay particular attention to correct contacting when assembling cables. Should you have any issues, always read the latest documentation first. Connected circuits must meet the requirements for circuits with limited energy according to UL61010-1.

Initial setup

Please connect the device to the power supply. You must also observe the information above about using functional earth (FE). As soon as the DATA connections are connected via Ethernet-based cables and the links are established (see ports of the RJ45 connections), a teach-in must be performed to ensure that the device works correctly (this also applies during every cable replacement). To do this, please press the Set button for 20 seconds. As soon as the PWR and STATUS LED light up red, the teach-in is carried out.
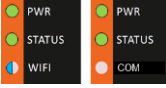
 Press and hold SET *(release for selection)*

	Set Wi-Fi		Teach-in
	Set Wi-Fi *(available for PM02TWA)* PWR emits a steady red light. Wi-Fi lights up blue according to the function.		**Teach-in** *PWR and STATUS emit a steady red light.*
After 3 seconds		*After 20 seconds*	

U.I. Lapp GmbH • Schulze Delitzsch Str. 25 • 70565 Stuttgart
Phone +0711 7838 01 • info@lappgroup.com | www.lappgroup.com

BT-accessories-xxx

After 10 seconds	**Soft reset** *PWR emits a steady green light.* *STATUS emits a steady red light*	*After 25 seconds*	**Cancel** *PWR emits a steady green light.*

If a teach-in could not be performed properly, although the device is ready for use and the STATUS value is calculated and predicted, it is not actually correct.

LEDs for operating modes

	Ready to use PWR and STATUS emit a steady green light. Wi-Fi is blue according to the operating state.	**Teach-in / initialisation** PWR emits a steady green light, STATUS flashes green (approx. 1 Hz, duration approx. 1 min).
	Cable maintenance required PWR emits a steady red light, STATUS flashes red (approx. 1 Hz).	**Incorrect teach-in** PWR flashes alternately in red/green (approx. 1 Hz, unlimited duration until a HARD RESET or TEACH-IN is carried out).
	Cable defective PWR emits a steady green light, STATUS emits a steady red light.	**No teach-in carried out** PWR emits a steady green light.

Short version of technical data[1]

Wi-Fi interface *(PM02TWA only)*	
Type	IEEE802.11b/g/n
Frequency bands	EU 2.412 GHz - 2.472 GHz; channels 1-13
Maximum output power	max. 20.5 dBm
Transmission speed	802.11b: max. 11 Mbit/s 802.11g: max. 54 Mbit/s 802.11n: max. 150 Mbit/s (HT20,MCS0, MCS7)

Note:

We have checked the content of this document for consistency with the hardware and software described. However, deviations cannot be ruled out, so we cannot guarantee complete consistency. That being said, the information contained in this document is regularly updated. When using the purchased products, please refer to the latest version of the document, which can be viewed and downloaded online at www.lappkabel.com.

---

[1] See long version of data sheet available for download at http://www.lappkabel.de/etherlineguard