



XENIT
by ATEX

MADE IN ITALY

HELP-LT

Detection system for the presence of cables and degradation of power lines.

Energy efficiency monitoring of single-phase, three-phase lines in AC.

Integrated connectivity.



XENIT.IT

Xenit is a division of ATEX INDUSTRIES for Photovoltaic and Security systems.

Made in Italy technology



for an efficient monitoring

Cable presence detection system, load monitoring, energy efficiency on single-phase or three-phase electrified lines in AC or without voltage, with integrated connectivity.

The HELP-LT system allows you to directly check the presence and electrical quantities of a system, up to a maximum of 24 single-phase lines.

It's possible to monitor up to a maximum of 8 three-phase lines, thanks to the use of 3 LINE devices for each phase.



HELP-LT-LINE
(cod.13064.2081.0)

HELP-LT-CPU
(cod.13064.2080.0)

Modular system made up of:



HELP-LT-CPU
a master device.



Display LCD
dedicated to general control and interfacing with the outside world, through various communication ports.



HELP-LT-LINE
a maximum of 24 slave devices, called HELP-LT-LINE, each used to control one single-phase line.



Bus RS485
it connects all devices.

Areas of application

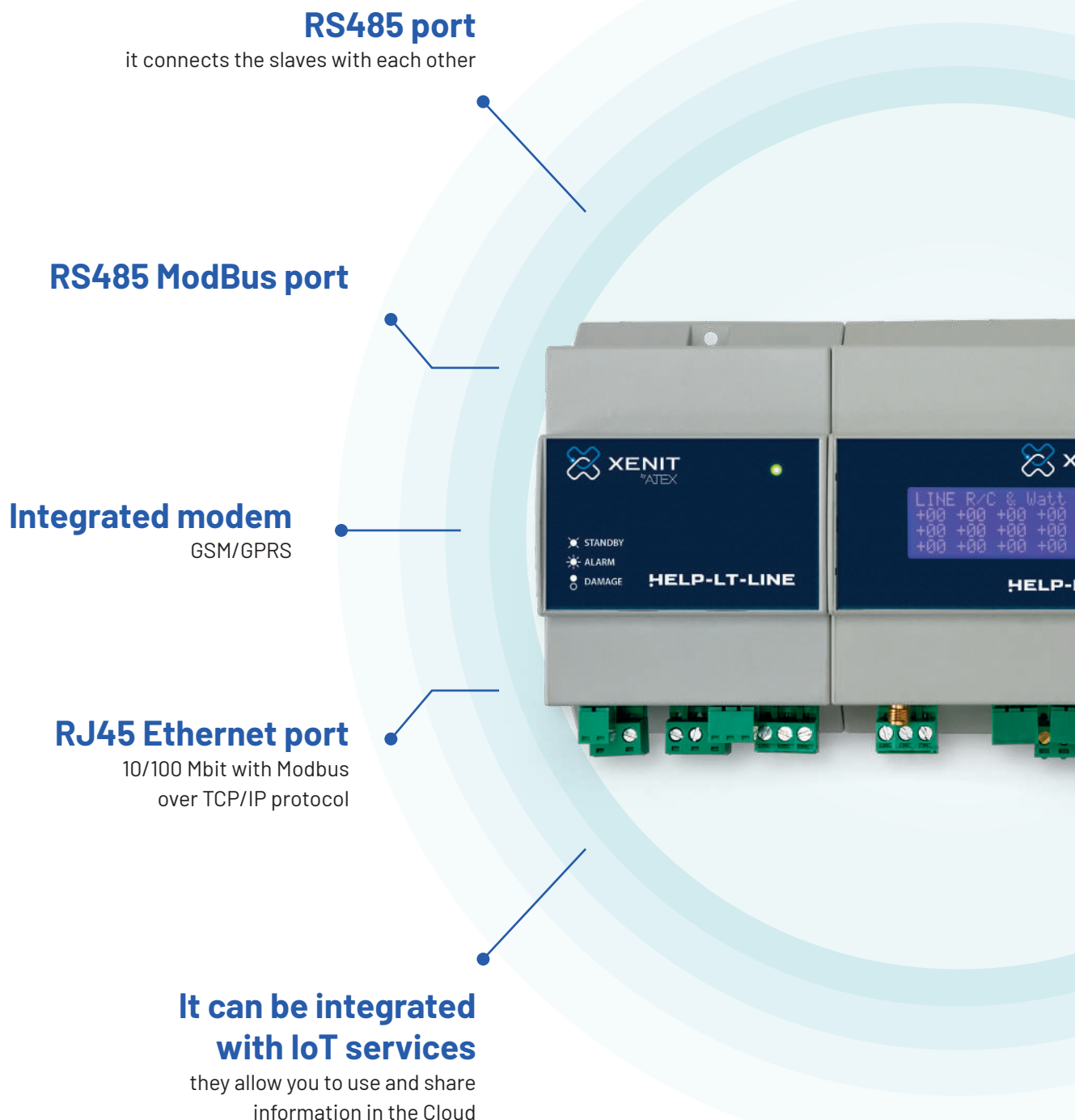
Protect power lines from theft and anomalies



Connectivity

for remote control and predictive maintenance

The hardware predispositions on board HELP-LT guarantee remote control of the correct operation of the systems. It will be possible to activate deterrent actions and predictive maintenance, thanks to the instantaneous publication of data.

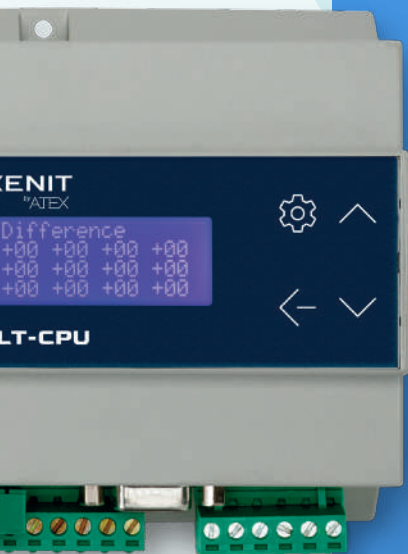


Flexible and customizable

HELP-LT is an easy-to-install tool that can be used on a wide range of existing and new systems.

It can be connected and integrated with other devices or supervision platforms already present. In addition to the inputs/outputs for connecting and controlling the power lines, 4 analog inputs are available for the connection to any external sensors/dry contacts and 3 relay outputs.

ATEX develops, in its XENIT division, custom hardware & software versions of this product, for special applications.



4 analog inputs

for connection to any external sensors/dry contacts

3 relay outputs

for custom functions

Connection diagrams

examples on single-phase and three-phase lines

HELP-LT

Example of monitoring 3 single-phase lines:
lighting, ventilation, pumping.



Customizable
solution

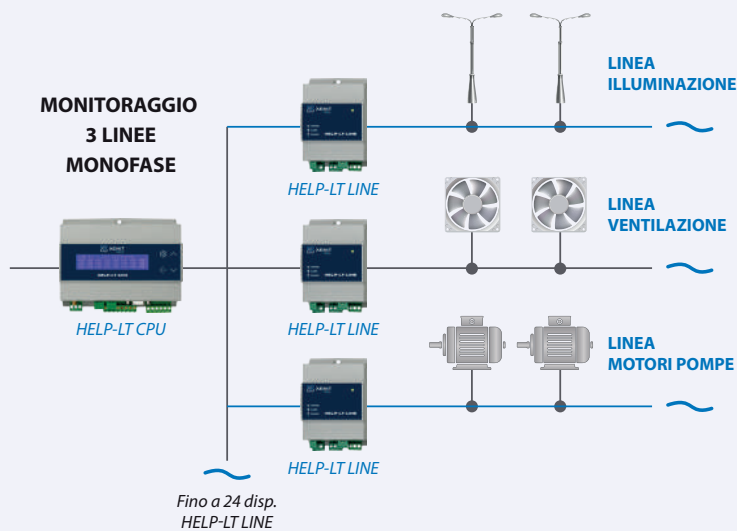


TABELLA VALORI
RILEVABILI
SU OGNI FASE:

- VRMS
- IRMS
- VA
- Watt
- Power Factor
- Resistance (OHM)
- Capacity (MF)

HELP-LT

Example of monitoring on lighting lines
connected on a three-phase line.



Customizable
solution

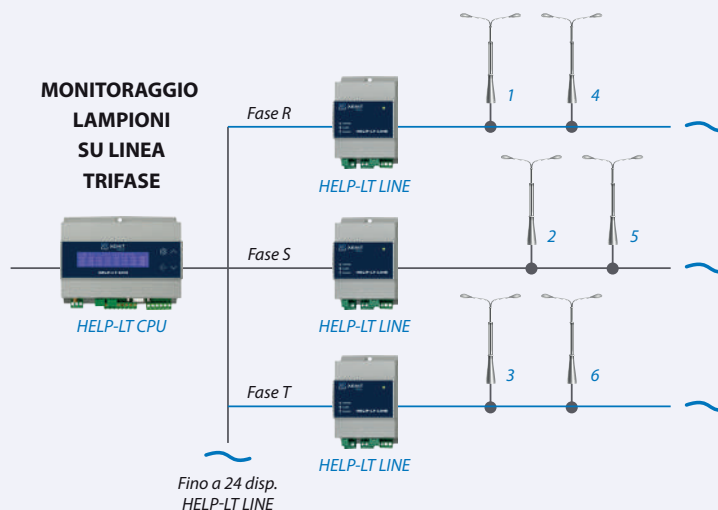


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Functionality and advantages



Measuring energy efficiency

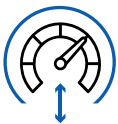
Knowing the absorption on the line allows you to:

- **check efficiency**, signalling Cos-phi values lower than the nominal ones
- **keep the connected loads under control**
- **report anomalous absorptions** other than the stored value



Reporting damaged loads

By correlating the energy absorbed by the line with the number of loads present, in the event of a fault or cut of the line itself, an alarm is received and the **exact number of non-functioning loads is known**.



Measuring the line resistance

In the absence of voltage, the resistance of the line up to 100 ohm can be measured, with a resolution of 0.1 ohm, with the following advantages:

- checking the **presence of heating devices**
- checking the **presence of the transformer primary**
- **receiving an alarm** in case of values different from those stored



Measuring line degradation

- in the absence of voltage, it is possible to measure the **resistance between Neutral and Earth** up to 100 ohm, receiving an **alarm if the value read** is higher than the set guard value
- measuring the **insulation resistance between Phase and Earth** (only in the absence of resistive loads on the line) and giving an alarm signal if the value read is lower than the set value



Measuring the line capacity

Measuring the line capacity up to approximately 6500 uF. Checking for the **presence of capacitive loads** (for example the power factor correction capacitors of fluorescent lamps) and sending an alarm if the value read deviates from the stored one.



Identifying the cut point

Thanks to the measurement of the capacity detected during installation with the number of loads, it is possible, even in the event of attempted theft with **partial cutting of the line**, to understand approximately **where the break-in took place**.



Monitoring in the absence of power

If there are no resistive or capacitive loads in the line (for example in lines with led lighting), it can be **monitored even in the absence of power**.

	HELP-LT-CPU	HELP-LT-LINE
POWER SUPPLY	85..265 Vac 50/60Hz	85..265 Vac 50/60Hz
POWER SUPPLY	< 2w	< 3w
ISOLATION VOLTAGE TOWARDS THE INPUT	-	4250Vpk for 60s
PROPRIETARY CONNECTION	-	1 for LCD-AM08 type external Display (code 13064.2013.0)
DISPLAY	192x32 monochrome graphic LCD DISPLAY (32 characters on 4 lines) blue backlight.	-
BUTTONS	4 programming buttons	-
CLOCK/CALENDAR	Ultracap pad	
MEMORY	512Kbyte E2prom for various memorisations (for example Alarm History)	-
HISTORY	last 256 messages	-
PORTS	1 RS485 local Bus for control of up to 24 HELP-LT-LINE devices 1 RS232 and RS485 ModBus slave for remote management and SW updates	1 Bus RS485 slave with ModBus protocol for connection to HELP-LT-CPU.
INTERNAL GSM/GPRS MODEM	with external port for Micro SIM for sending status and alarm SMS*	-
SDCARD CONNECTOR	for software updates	-
RELAY OUTPUTS	1 with NO/NC contact max. 5A (general alarm signalling - R1) 2 with NO/NC contact max. 5A (customized functions)	1 with NO/NC contacts (for local alarm signalling)
INPUTS	4 analogical at 12bit 0..5v (customized functions)	1 Analog input for toroidal CT for AC current reading up to 32A 1 Opto-isolated analog input for live and voltage-free line measurement: with Live line: <ul style="list-style-type: none"> • RMS voltage up to 400 Vac +/-5%. • RMS current up to 32A +/-5%. • Active power (watt) and apparent power (VA) up to 13Kw. • Power Factor with voltage-free line: <ul style="list-style-type: none"> • Resistance between Phase and Neutral up to 150 ohm precision +/- 5% full scale • Resistance between Neutral and Earth up to 150 ohm precision +/- 5% full scale • Insulation resistance between Phase
ETHERNET	1 RJ45 10/100 Mbit port (custom functions)	-
OPERATING TEMPERATURE	-20C° + 60C°	-20C° + 60C°
WEIGHT	380 g	223 g
RAIL CONTAINER	DIN 8U	DIN 4U
DIMENSIONS (L X H X D)	71 x 115x 62 mm	71 x 115x 62 mm

* A Micro SIM with SMS traffic is required (preferably the FLAT type and non-rechargeable). You don't need a SIM with Internet traffic.

Atex Industries Srl

Via Forgarìa, 7
Zona Industriale Ponterosso
33078 San Vito al Tagliamento (PN) - Italia

VAT/no./Fiscal code 01633400930

Tel: +39 0434 85183
Fax: +39 0434 85338

XENIT.IT