Quick Start Guide

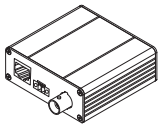
ITS-100

Cable & Power Budget Tester

Please read carefully the instruction manual before use.
Contents of this manual are subject to change without prior notice for reasons such as functionality enhancements.

Rev.2.0

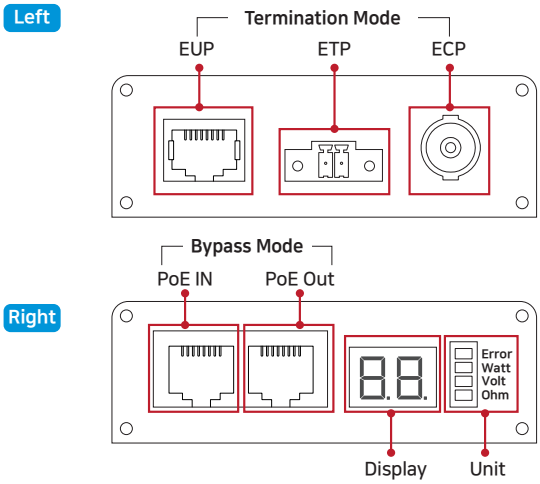
Package



ITS-100

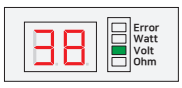
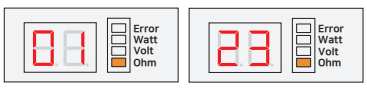
Quick Start Guide

Hardware Overview



Measurement Display

- The measurement value and the unit of measurement appear sequentially (Integer only).
- While the measure is being calculated, a small dot LED will be "On" at the bottom of the FND.
- Measurements above 100 will be displayed in two times (the first time shows the hundreds, the second time shows digits from 00~99. The unit LED stays on while the measure is displayed).

Voltage (ex.: 38V display)	Resistance (ex.: 123 Ohm display)
"38" + "Volt LED"	"01" + "23" + "Ohm LED"
	

Fault Indication

- There will be an error message if the measure is out of the product specification range.
- Error display: Display (FND) + Error LED + Unit LED

Failure	Display	LED
Over Load (99W and over)	Ou	+
Low voltage (38V and under)	Lo	+
Over voltage (58V and over)	Ou	+
Over current (1.2A and over)	Oc	+

Overview

This product is a device used to check the power consumption available at the place where a camera is installed. The ITS-100 measures and displays the cable resistance from the receiver to the location of the tester, and the power consumption of the transmitter that can be used there.
As the tester can check the power supply and the cable status where the camera is placed, it is also possible to use the ITS-100 for installation and maintenance.

Features

■ Termination Mode (B-Linx Termination Mode, ECP/EUP/ETP products)

- Provides information about the cables used where the camera will be installed.
- Shows the power consumption (Watt) available for the measured cable (Review of the PoE cameras that can be installed is possible).
- Cable resistance (Ohm) from the receiver (Rx) to the tester.
- Voltage supplied from the receiver (Rx) to the tester (The tester measures overvoltage and undervoltage, not the supply voltage).
- Shows an Error when an operation failure is likely to happen on a PoE product (based on the cable voltage drop).
- Shows the measurement information (periodic measure, shown on the Display window).

➔ The tester does not work if it is not connected to a receiver (Rx). The tester does not have a battery, and operates with the output voltage of the receiver (Rx).

■ Bypass Mode (cable connection mode, PoE)

- The tester is set in the middle of the PoE cable and measures the cable performance while the camera is in operation.
- Measures the power consumption (Watt) while the camera is in operation.
- Measures the cable voltage (Volt) while the camera is in operation.
- Measures the power consumption of the camera when the tester is installed on the camera side.
- Shows real-time measurements (periodic measure, shown on the Display window).
- Operates when a PoE camera (PD device) is connected to the PoE Output terminal.

➔ The tester might not work if it is not used with a PD device. (The tester does not have a battery, and operates with the output voltage from the PSE).

Specifications

		Termination Mode	Bypass Mode (PoE)	Remarks
Operating Voltage (VDC)		12~60V	38~60V	Bypass Mode is limited to the PoE operating range (af/at)
Display	FND	2 digits, Red	2 digits, Red	7-segment display, 2 digits
	LED	Red: Error Yellow: Wattage (W) Green: Voltage (V) Orange: Resistance (Ω)	Red: Error Yellow: Wattage (W) Green: Voltage (V) Orange: Resistance (Ω)	The LED shows the unit corresponding to the FND value displayed. Error: If the tester is out of the operating range, the LEDs for the measurement units will flash in sequence repeatedly.
Display range		PoE Budget: 1-99W Voltage: 38-58V Resistance: 1-200 Ω Error: 2 digits	PoE Budget: 1-60W Voltage: 38-58V Resistance: 1-200 Ω Error: 2 digits	
Input terminal		ECP: BNC EUP: RJ45 (red) ETP: 2P Terminal model	PoE IN: RJ45 (metal) PoE model	
Output terminal		None	PoE OUT: RJ45 (metal) connection to PoE camera	
Repetition of the Measurement		5s interval	3~5s interval	Information displayed sequentially
Detection function		No Smart detection No PD function	None The PSE recognizes the connected PD camera	The bypass Mode bypasses the PoE signal to the output, so it only measures power, not speed

Installation Guide

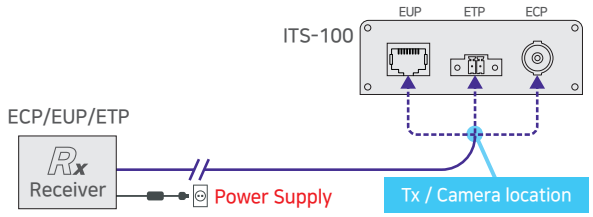
➔ Do not use the Termination Mode and Bypass Mode at the same time. The measurements will not be accurate.

■ Termination Mode

The termination mode is used to check the cable status where the camera and transmitter (Tx) are connected. The measurement is possible when connected to an Intercoax ECP, ETP, EUP product while in normal operation.

1. Connect the ITS-100 to the transmitter (Tx) using the correct terminal.

➔ Do not connect ECP, ETC and EUP terminals at the same time. Connect and measure one by one.



2. Once the ITS-100 is connected and running, the measurement will appear.
3. Categories

Type of measurement	Content	Unit	LED
Power available at installation place	Shows the standard voltage range of the PoE product when operating normally. The value for the "Available Power Consumption" where the tester (ITS-100) is installed must be greater than the total power consumption of the transmitter (Tx) and the camera to avoid problems when installing the product	Watt	
Voltage at Installation place	Shows the Voltage where the tester is installed Shows the Voltage drop when the tester (ITS-100) is on "Load", not the Voltage at the Rx output, nor the voltage at the maximum load	Volt	
Cable Resistance	Shows the cable resistance, measures from the receiver (Rx) to the tester (ITS-100)	Ohm	

■ Bypass Mode

It is used to check the cable connection to a PoE camera (PoE product). The measurement is possible when PoE equipment (product with PSE function such as a PoE switch for example) is connected to a PoE camera and operating normally.

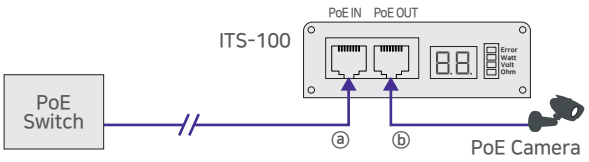
⚠ Do not connect products from the EUP series in this mode, as it may cause damages to the device.

1. Connection

[CASE 1]: The ITS-100 tester is connected at the end of the LAN cable, on the side of the PoE (PD) camera

ⓐ Connect the long-distance LAN cable to the ITS-100 Tester's PoE IN where the camera will be installed.

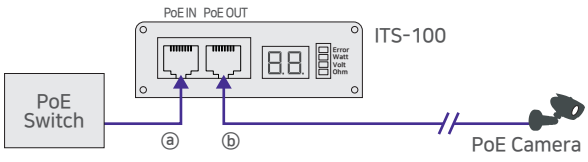
ⓑ Connect the PoE camera to the ITS-100 Tester's PoE OUT.



[CASE 2]: The ITS-100 tester is connected to the PoE [PSE]

ⓐ Connect the PSE product or the output terminal of the PoE switch to the ITS-100 Tester's PoE IN.

ⓑ Connect the long-distance LAN cable to the ITS-100 Tester's PoE OUT, then connect the PoE camera at the end of the cable.



2. Once the ITS-100 tester is connected, wait a few moments before the measurement appears.
3. Categories

Type of Measurement	Content	Unit	LED
Power consumption while in operation	CASE 1: Shows the power consumption of the camera (cable loss value not included). CASE 2: Shows the cable specifications and total power consumption, including the camera.	Watt	
Voltage at installation place	Measures the voltage where the ITS-100 tester is installed. CASE 1: Shows the cable's voltage drop when the PoE camera is in operation. CASE 2: Shows the output voltage of the PSE or the PoE Switch.	Volt	
Cable resistance	Measures the cable resistance from the PSE or PoE switch to the ITS-100 tester. If the LAN cable is removed from the PoE OUT while the ITS-100 tester is in operation, the resistance of the cable connected to the PoE IN will be displayed (The resistance of the cable connected to the PoE OUT is not measured).	Ohm	
Display Information	If the camera LAN cable is connected to the PoE OUT, the display voltage drop and power consumption supplied to the camera is displayed. If the camera LAN cable is disconnected from the PoE OUT, the PoE Output voltage and the cable resistance up to the ITS-100 Tester's PoE IN are displayed.	-	-

Remarks

- Because of the cable voltage drop, the measurement in wattage/voltage decreases compared to the power supplied to the cable by the receiver (Rx).
- This product is not a precision measuring device. The measurements have a tolerance and are not guaranteed values.
- The tester should be used during short periods of time, especially when using the Termination Mode. The possibility of measurement differences is greater if the tester is connected for a long time in Termination Mode, because of heat generation.

Caution

- Make sure to follow the instructions of the user manual when installing and using the device.
- Do not use the product for projects requiring guaranteed measurements as this is not a precision measuring device.
- Do not use the product for long periods of time.
- Do not touch or handle the product and cables with wet hands, as there are risks of electrocution.
- Keep away from moisture and shocks.
- This product is designed for indoor use. Do no use outdoors.
- Do not use the product for any other purpose than that for which it is designed.
- Do not disassemble or modify this device.
- Do not put any sticker or paint on the device.
- If the device shows signs of defects or malfunctions, contact the dealer where your purchased it or the service center.

Warranty

- This device has passed the quality control and product inspection.
- Please install and use according to the installation guide.
- The warranty period for this product is 24 months from the date of purchase.
- If this device is defective or malfunctioning, please unplug the power adapter immediately and contact dealer or service center.
- Any damages or breakage from user's abuse, accident, modification or natural disasters will not be covered manufacturer's warranty.

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