

15 W POWER OVER ETHERNET INJECTOR

DIN rail mounting

AL53PoE

LOREME

- **Direct integrated on Ethernet network**

between switch and PoE device
Allows upgrade existing network to PoE
Supply over Ethernet cable

- **Fully protected**

short circuit, overload, thermal

- **48V output, 15 Watts on RJ45**

IEEE 802.3af compliant, class 0,1,2,3

- **Universal supply : 85...265 Vac and 120...370 Vdc**

- **Applications**

Integration of POE products on networks without POE Switch



AL53PoE/C
with angled
RJ45 socket



AL53PoE
with straight
RJ45 socket

The Power Over Ethernet injector AL53poe is designed to add the PoE functionality to a switch who don't have this function. This power supply is inserted directly on Ethernet network (between a switch and the PoE device) without any configuration.

Detail of Poe system:

The Power over Ethernet system provide the supply through the RJ45 cable to any device compliant with 802.3af POE standard.

Principe:

- A RJ45 Ethernet cable have 8 wires inside. Only 4 wires are used for data transmission.
- The idea of PoE system is to use the 4 remaining wires for powered a remote device.
- In order to implement this functionality in all equipment manufacturers, standardization has been established (IEEE 802.3af) to ensure compatibility between products.

A injector (PSE : Power Source Equipment) provide a voltage (48V) on the RJ45 cable at the same time as the network signal.

The POE injector has 2 RJ45 sockets:

- 1 "LAN" RJ45 for the Ethernet signal alone.
- 1 "POE" RJ45 for Ethernet + POE power supply

Characteristics AL53POE:

- 48Vdc nominal output voltage,
- continuous short circuit protected,
- overload protected,
- thermal protected (output power limiting)
- natural convection cooling,
- Embedded EMI filter(EN55022 class A)
- Regulated output voltage. Ripple < 200mV.
- Limiter (48V) for the output transient protection
- Power limitation to protect the remote device.

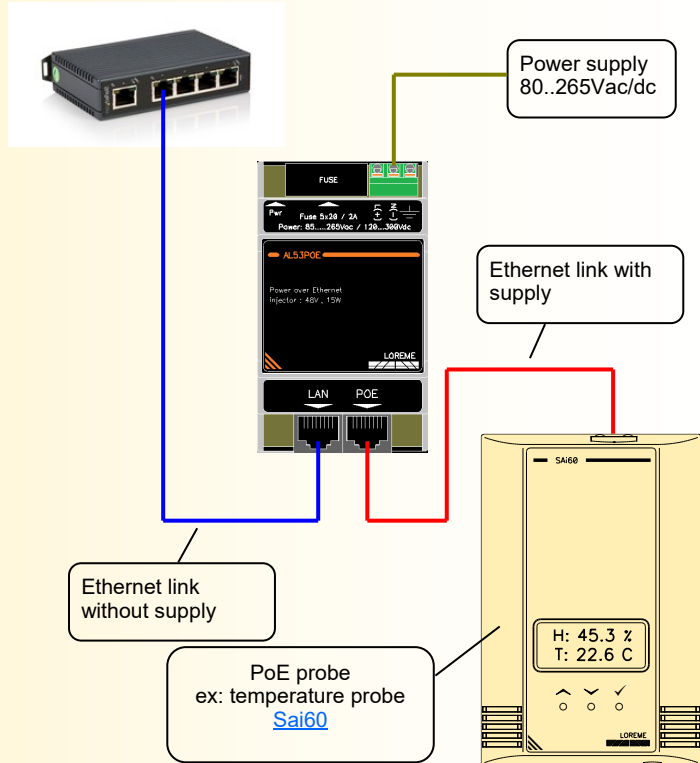
Feature:

- DIN rail mounting, IP20 protection rating
- Conformal coating for electronics
- green LED for main power indication
- connection on spring terminal blocks for power supply
- RJ45 socket wiring for network

Prescription of implementation and installation:

- primary protection fuse recommended (2A slow blow included)

Synoptic (integration to Ethernet network)



Version and order code:

AL53PoE : Rail DIN mounting. Straight RJ45 socket
15 Watts output power
(Not compatible with 1Gbit network)

AL53PoE/C : model with angled RJ45 socket

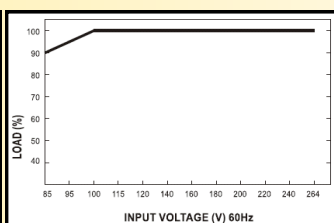
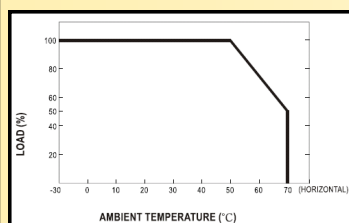
POWER SUPPLY

Input voltage 85....265VAC / 120...370VDC
 Input frequency DC or 47....440Hz
 Typical efficiency 87%
 Inrush current 2A typical

OUTPUT

IEEE 802.3af compliant
 Nominal output voltage 48Vdc
 Output current nominal : 300mA
 Output power 15W
 Output accuracy +/- 2% max. (no load)
 Load regulation -5% max. (full loaded)
 Output ripple < 1% Vout max (20MHz bandwidth)
 Continuous short circuit protection, auto restart
 Overload protection 110% typ.
 Switching frequency 100kHz typ.
 Hold-up time 50mS typ.

Graph of output power vs input voltage and temperature.

**ENVIRONMENT**

Temperature
 - Operating -20 °C to 60 °C (natural convection)
 - Thermal protection 100°C internal
 - Storage temperature -40 °C to 85 °C
 Humidity 85 % (not condensing)

drift +/- 0.02%/°C typical

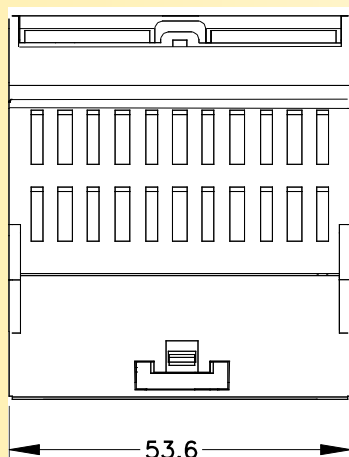
Isolation resistance 100 MΩ min.
 Isolation voltage 2500VAC (input / output)

weight 200g
 Protection rating IP20

MTBF (MIL HDBK 217F) > 500 000 Hrs @ 25°C
 Life time > 130 000 Hrs @ 30°C

Electromagnetic compatibility 2014/30/UE / Low Voltage Directive 2014/35/UE

Immunity standard for industrial environments EN 61000-6-2		Emission standard for industrial environments EN 61000-6-4
EN 61000-4-2 ESD	EN 61000-4-8 AC MF	EN 55011 group 1 class A
EN 61000-4-3 RF	EN 61000-4-9 pulse MF	
EN 61000-4-4 EFT	EN 61000-4-11 AC dips	
EN 61000-4-5 CWG	EN 61000-4-12 ring wave	
EN 61000-4-6 RF	EN 61000-4-29 DC dips	

**WIRING AND OUTLINE DIMENSIONS:**

Angled
RJ45
(/C version)

Straight
RJ45
(standard)

