

I(P)ES-0016C

16 FE (PoE) at/af Industrial Ethernet Unmanaged Switch; 24V/48V input models

- Support IEEE802.3at/af up to 30W per port
- Dual power input: 12~56VDC (IES-0016C); 9~36VDC (24V model); 45V~56VDC input (PoE 48V model)
- Galvanic isolation between power input and Ethernet power system
- Max PoE budget 240W at 48V, 80W at 24V
- Power-saving PoE configuration when ignition is enabled
- E-marking* certificate for vehicle application (24V model)
- w/ignition function (24V-IGN model)



OVERVIEW

Lantech I(P)ES-0016C is a high-performance all 16 10/100TX industrial Ethernet switch with w/8 PoE 802.3af/at ports.

Dual 48V, 24V input with max PoE budget

The IPES-0016C supports IEEE802.3at/af standard which can feed HI-power up to 30W at each PoE port for big power consumption devices like PTZ IP camera, High power wireless AP etc.

The IPES-0016C-24V accepts power input 9~36VDC with IEEE802.3at/af standard and feeds up to 30W per PoE port with a maximum 80W@24V and 240W@48V output (at dual input).

PoE 48V model accepts 45~56VDC power input and can feed 48V output for PoE feeding in the vehicle at max 240W @48V input.

Power-saving PoE configurable (-IGN model)

It supports optional PoE feeding OFF timer (1/5/10mins or others) when vehicle main key is off to prevent car battery

drain-out. (-IGN model)

E-marking* certificate, ISO 7637-2 compliant High reliability and extended working temperature

Lantech I(P)ES-0016C can reduce unstable situations caused by power line and Ethernet. It has high reliability and robustness coping with extensive EMI/RFI phenomenon, environmental vibration and shocks usually found in Automation, transportation, surveillance, Wireless backhaul, Semi-conductor factory and assembly lines.

The -E model can be used in extreme environments with an operating temperature range of -40°C to 75°C.

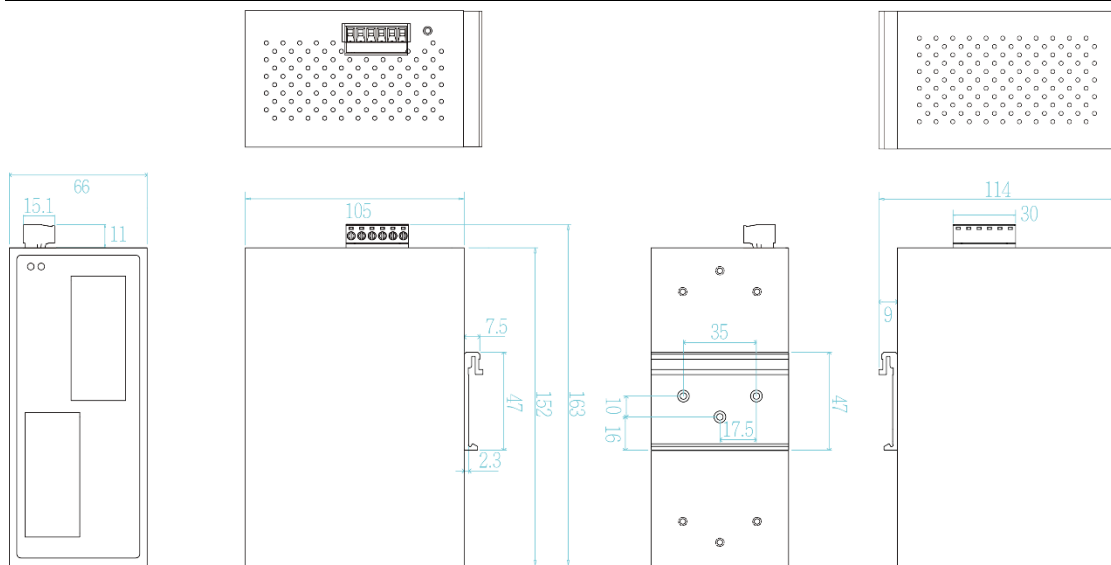
The E-marking certificate makes it the most suitable for bus, carriage, other vehicle applications as well as for industrial areas.

The 24V model is also compliant with ISO 7637-2 (pulse 5A) which protects switch from being damaged by high voltage that could be found at vehicle cranky start.

FEATURES & BENEFITS

- 16 10/100TX industrial switch w/16 PoE 802.3af/at ports (Total 16 Ports Switch)
- Embedded 16 PoE ports IEEE802.3af/at function to feed power up to 30W@54V per port for active operation (PoE model)
- Dual 9V~36VDC power input for 24V model with ISO7637-2/pulse 5A compliance; PoE budget 80W at 24V input, dual 45V~56VDC power input for 48V model with PoE budget 240W
- Back-plane (Switching Fabric): 3.2Gbps
- w/ignition function (24V-IGN model)
- IP30 metal housing with DIN rail and Wall-mount** design

DIMENSIONS (unit=mm)



SPECIFICATION

Hardware Specification		
Standards	IEEE802.3 10Base-T Ethernet IEEE802.3u 100Base-TX IEEE802.3x Flow Control and Back Pressure IEEE802.3at/af Power over Ethernet	Negative (VCC-): RJ-45 pin 3,6
Switch Architecture	Back-plane (Switching Fabric): 3.2Gbps	Power Consumption
Transfer Rate	14,880pps for Ethernet port 148,800pps for Fast Ethernet port	4.8W (full load without PoE)
Mac Address	2K MAC address table	Galvanic Isolation
Connectors	10/100TX: 16 x ports RJ-45 with Auto MDI/MDI-X function Power & P-Fail connector: 1 x 6-pole terminal block	Between power input and case ground Between the Ethernet port and case ground Between power input and Ethernet port
Network Cable	10Base-T: 2-pair UTP/STP Cat. 3, 4, 5/ 5E/ 6 cable EIA/TIA-568 100-ohm (100m) 100Base-TX: 2-pair UTP/STP Cat. 5/ 5E/ 6 cable EIA/TIA-568 100-ohm (100m)	Case Dimension
LED	Per unit: Power 1 (Green), Power 2 (Green); Ethernet port: Link/Activity (Green) PoE: Active (Green)	Metal case. IP-30 66 (W) x 105 (D) x 152 (H) mm
Operating Humidity	5% ~ 95% (Non-condensing)	Weight
Operating Temperature	-20°C~60°C / -4°F~140°F (Standard model) -40°C~75°C / -40°F~167°F(-E model)	950g
Storage Temperature	-40°C~85°C / -40°F~185°F	Installation
Power Supply	9~36VDC (24V model); 45~56VDC (48V model)	DIN Rail and Wall Mount** Design
PoE Budget	240W for 45~56V input (48V model) (50-57VDC input is recommended for 802.3at 30W applications) 80W at 24V input A higher PoE budget can be applied upon request. **	EMI & EMS
PoE pin assignment	RJ-45 port # 1~#8 supports IEEE 802.3at/af End-point, Alternative A mode. Per port provides up to 30W Positive (VCC+): RJ-45 pin 1,2	FCC Part 15 Subpart B, EN 55035:2017/A11:2020, EN 55032:2015/A11:2020, IEC 61000-4-2:2008, IEC 61000-4-3:2020, IEC 61000-4-4:2012, IEC 61000-4-5:2014+AMD1:2017 CSV, IEC 61000-4-6:2023, IEC 61000-4-8:2009, IEC 61000-6-2:2016, IEC 61000-6-4:2018, EN IEC 61000-6-2:2019, EN IEC 61000-6-4:2019, BS EN 55035:2017/A11:2020, BS EN 55032:2015/A11:2020,
		Safety
		EN 62368 (LVD)
		Stability Testing
		IEC 60068-2-27 (Shock), IEC 60068-2-31 (Shock), IEC 60068-2-64 (Vibration), IEC 60068-2-80 (Vibration)
		Vehicle certificate
		E24* marking (24V model)
		MTBF
		483,162 hrs (IEC62830 standards)
		Warranty
		5 years

*Future Release

**Optional

ORDERING INFORMATION

Ignition models with PoE off timer 1min/5min/10min are with -IGN1/-IGN5/-IGN10 model name. (-IGN default: 60min.)

- **IPES-0016C-48V.....P/N: 8351-14961**
16 10/100TX w/16 PoE Mode A 802.3at/af 30W Industrial Ethernet Switch; dual 45~56VDC input; -20°C to 60°C
- **IPES-0016C-48V-E.....P/N: 8351-14962**
16 10/100TX w/16 PoE Mode A 802.3at/af 30W Industrial Ethernet Switch; dual 45~56VDC input; -40°C to 75°C
- **IPES-0016C-24V.....P/N: 8351-14963**
16 10/100TX w/16 PoE Mode A 802.3at/af 30W Industrial Ethernet Switch, dual 9V~36VDC input; compliant with ISO7637; -20°C to 60°C
- **IPES-0016C-24V-E.....P/N: 8351-14964**
16 10/100TX w/16 PoE Mode A 802.3at/af 30W Industrial Ethernet Switch, dual 9V~36VDC input, compliant with ISO7637; -40°C to 75°C
- **IPES-0016C-24V-IGN.....P/N: 8351-14965**
16 10/100TX w/16 PoE Mode A 802.3at/af 30W Industrial Ethernet Switch, dual 9V~36VDC input; compliant with ISO7637; -20°C to 60°C w/ignition default PoE OFF 60min.
- **IPES-0016C-24V-IGN-E.....P/N: 8351-14966**
16 10/100TX w/16 PoE Mode A 802.3at/af 30W Industrial Ethernet Switch, dual 9V~36VDC input, compliant with ISO7637; -40°C to 75°C w/ignition default PoE OFF 60min.
- **IES-0016C.....P/N: 8351-14974**
16 10/100TX Industrial Ethernet Switch, dual 12V~56VDC input; compliant with ISO7637-2; -20°C to 60°C
- **IES-0016C-E.....P/N: 8351-14975**
16 10/100TX Industrial Ethernet Switch, dual 12V~56VDC input, compliant with ISO7637-2; -40°C to 75°C
- **IES-0016C-24V.....P/N: 8351-14976**
16 10/100TX Industrial Ethernet Switch, dual 9V~36VDC input; compliant with ISO7637-2; -20°C to 60°C
- **IES-0016C-24V-E.....P/N: 8351-14977**
16 10/100TX Industrial Ethernet Switch, dual 9V~36VDC input, compliant with ISO7637-2; -40°C to 75°C
- **IES-0016C-24V-IGN.....P/N: 8351-14978**
16 10/100TX Industrial Ethernet Switch, dual 9V~36VDC input; compliant with ISO7637-2; -20°C to 60°C w/ignition default PoE OFF 60min.
- **IES-0016C-24V-IGN-E.....P/N: 8351-14979**
16 10/100TX Industrial Ethernet Switch, dual 9V~36VDC input, compliant with ISO7637-2; -40°C to 75°C w/ignition default PoE OFF 60min.

OPTIONAL ACCESSORIES

DIN Rail Power

- **NDR-480 Series** 480W Single Output Industrial Din Rail Power; 90-264VAC / 127-370VDC Input Range; Cooling by free air convection; RoHS2 ; Operating Temp. -20°C~70°C (ambient, derating each output at 2.5% per degree from 50°C ~ 70°C)
- **NDR-240 Series** 240W Single Output Industrial Din Rail Power; 90-264VAC / 127-370VDC Input Range; Cooling by free air convection; RoHS2 ; Operating Temp. -20°C~70°C (ambient, derating each output at 2.5% per degree from 50°C ~ 70°C)
- **NDR-120 Series** 120W Single Output Industrial Din Rail Power; 90-264VAC / 127-370VDC Input Range; Cooling by free air convection; RoHS2 ; Operating Temp. -20°C~70°C (ambient, derating each output at 2.5% per degree from 50°C ~ 70°C; For 115VAC, please refer to derating curve on NDR-120 Series datasheet)
- **NDR-75 Series** 75W Single Output Industrial Din Rail Power; 90-264VAC / 127-370VDC Input Range; Cooling by free air convection; RoHS2 ; Operating Temp. -20°C~70°C (ambient, derating each output at 2.5% per degree from 50°C ~ 70°C; For 115VAC, please refer to derating curve on NDR-120 Series datasheet)

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