IPES-0016

16 10/100TX PoE at/af Industrial Unmanaged Ethernet Switch

- *Support IEEE802.3at/af up to 30W per port*
- *Dual 9V~36VDC input compliant with ISO 7637-2 (24V model)*
- *Dual 44~56VDC input (48V model)*
- *Galvanic isolation protection (power input /Ethernet port to system/case ground; power input to Ethernet port)*
- *Max PoE budget 100W at 24V input; 240W at 48V input*
- *Relay alarm output for power fail and alarm*
- *E-marking certificate for vehicle application (-24V model)*

OVERVIEW

Lantech IPES-0016 is a high performance 16 10/100TX industrial Ethernet switch w/16 PoE 802.3af/at ports.

Galvanic isolation for dual 24V/48V wide input range

The IPES-0016 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. Maximal PoE budget supports up to 100W at 24V input.

The IPES-0016-24V accepts power input 9~36VDC and is compliant with ISO 7637-2 which protects switch from being damaged by high voltage that could be found at vehicle cranky start.

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

E-marking certificate, High reliability and extended working temperature

Lantech IPES-0016 provides ±2000V EFT and ±6000V ESD protection, which can reduce unstable situation 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, Wireless backhaul, Semi-conductor factory and assembly lines.
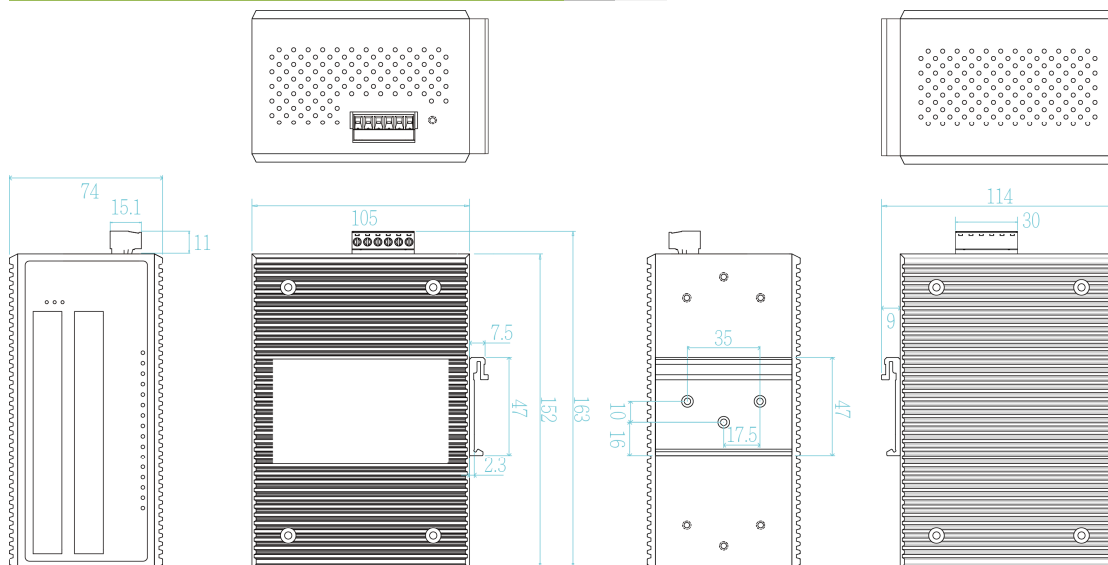
The -E model can be used in extreme environments with an operating temperature range of -40°C to 75°C.

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

FEATURES & BENEFITS

- **16 10/100TX industrial Ethernet switch w/16 PoE 802.3af/at ports (Total 16 Ports Switch)**
- **PoE budget 100W at 24V input; 240W at 48V input**
- **Dual 9V~36VDC with ISO7637-2 compliance (24V model)**
- **Dual 44~56VDC input (48V model)**
- **Back-plane (Switching Fabric): 3.2Gbps**
- **Provides EFT protection ±2000 VDC for power line**
- **Supports ±6000 VDC Ethernet ESD protection**
- **Galvanic isolation between power input and system/case ground; between Ethernet port and system/case ground; between power input and Ethernet port**
- **E-marking certificate for vehicle application (-24V model)**
- **Relay alarm output for power fail and alarm**
- **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		30W (-14 Model: RJ-45 port # 1~#14 support IEEE 802.3at/af End-point, Alternative A mode. Per port provides up to 30W) Positive (VCC+): RJ-45 pin 1,2 Negative (VCC-): RJ-45 pin 3,6
Switch Architecture	Back-plane (Switching Fabric): 3.2Gbps	Power Consumption	13W exclude PoE loads
Transfer Rate	14,880pps for Ethernet port 148,800pps for Fast Ethernet port	Galvanic Isolation	Between power input and system/case ground Between Ethernet port and system/case ground Between power input and Ethernet port
Mac Address	16K MAC address table	Case Dimension	Metal case IP-30 74 (W) x 105 (D) x 152 (H) mm
Connectors	10/100TX: 16 x ports RJ-45 with Auto MDI/MDI-X function Power & P-Fail connector: 1 x 6-pole terminal block	Weight	900 g
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)	Installation	DIN Rail and Wall Mount** Design
		Relay Alarm	Provides one relay output for power fail and alarm. Alarm Relay current carry ability: 1A @ DC24V
LED	Per unit: Power 1 (Green), Power 2 (Green), P-Fail (Red); Ethernet port: Link/Activity (Green)	EMI & EMS	FCC Class A, CE EN55011, CE EN55032, CE EN55024, CE EN61000-4-2, CE EN61000-4-3, CE EN61000-4-4, CE EN61000-4-5, CE EN61000-4-6, CE EN61000-4-8, CE EN61000-6-2, CE EN61000-6-4
Operating Humidity	5% ~ 95% (Non-condensing)		
Operating Temperature	-20°C~60°C / -4°F~140°F (Standard model) -40°C~75°C / -40°F~167°F(-E model)		
Storage Temperature	-40°C~85°C / -40°F~185°F	Safety	IEC/BS EN IEC 62368-1 2020/A11:2020
Power Supply	Dual 9~36VDC (24V model) Dual 44~56VDC (48V model)	Vehicle certificate	E-Marking with E24 granted approval (-24V model) Power input range 16.8~36VDC
PoE Budget	240W at 48V input (50-57VDC input is recommended for 802.3at 30W applications); 100W at 24V input; 80W at 12V input Higher PoE budget can be applied upon request. **	MTBF	927,784 hrs (standards: IEC 62380)
		Warranty	5 years
PoE pin assignment	RJ-45 port # 1~#16 support IEEE 802.3at/af End-point, Alternative A mode. Per port provides up to		

*Future Release
**Optional

ORDERING INFORMATION

- **IPES-0016-24V………......………P/N: 8351-128**
  16 10/100TX Industrial Ethernet Switch w/16 PoE at/af up to 30W, dual 9V~36VDC input; compliant with ISO7637-2; -20°C to 60°C

- **IPES-0016-14-24V………......……P/N: 8351-1281**
  16 10/100TX Industrial Ethernet Switch w/14 PoE at/af up to 30W, dual 9V~36VDC input; compliant with ISO7637-2; -20°C to 60°C

- **IPES-0016-48V………......……......P/N: 8351-1282**

16 10/100TX Industrial Ethernet Switch w/16 PoE at/af up to 30W, dual 44V~56VDC input; -20°C to 60°C
■ **IPES-0016-14-48V…………....…....P/N: 8351-1283**
16 10/100TX Industrial Ethernet Switch w/14 PoE at/af up to 30W, dual 44V~56VDC input; -20°C to 60°C
■ **IPES-0016-24V-E………….…....P/N: 8351-129**
16 10/100TX Industrial Ethernet Switch w/16 PoE at/af up to 30W, dual 9V~36VDC input, compliant with ISO7637-2; -40°C to 75°C
■ **IPES-0016-14-24V-E……….……P/N: 8351-1291**
16 10/100TX Industrial Ethernet Switch w/14 PoE at/af up to 30W, dual 9V~36VDC input, compliant with ISO7637-2; -40°C to 75°C
■ **IPES-0016-48V-E………….…......P/N: 8351-1292**
16 10/100TX Industrial Ethernet Switch w/16 PoE at/af up to 30W, dual 44V~56VDC input; -40°C to 75°C
■ **IPES-0016-14-48V-E……….……P/N: 8351-1293**
16 10/100TX Industrial Ethernet Switch w/14 PoE at/af up to 30W, dual 44V~56VDC input; -40°C to 75°C
All part no. with WALL are models with wall mount kit instead of DIN Rail

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)