# T(P)ES-0208TD

## 8 FE + 2 GE M12 (PoE) Unmanaged Ethernet Switch


## OVERVIEW

Lantech T(P)ES-0208TD is a 8 10/100TX + 2 10/100/1000T with M12 Push-Pull connectors unmanaged Ethernet switch with IP67/IP54 rated protection which meets the high-reliability requirements demanded by industrial rolling stock applications. EN50155, ITxPT* and Emarking* certificates ensure the design to be met with world-class criteria.

***Embedded Inner-lock push-pull connectors ensure fast installation and connection reliability***

The built-in inner-lock push-pull connectors give the switch small-footprint design and for space-saving cabling installation. They ensure quick, tool-free installation with a simple push. Most importantly, their secure locking mechanism provides unwavering reliability, preventing accidental disconnections crucial for network uptime.

***Redundant dual 24VI/24TVI input with inrush current prevention and EN50155 verification with high ESD and polarity reverse protection***

The T(P)ES-0208TD 24VI model accepts 9~36VDC dual power inputs (24VI model) and 16.8~56VDC dual power inputs (24TVI model) with (PoE) & Ethernet galvanic isolation and PoE model can feed 54V output for PoE feeding with 80W budget. The redundant power input design prevents inrush current and safeguards against polarity reversal.

***TPES-0208TD supports up to 8 PoE at/af ports and PoE galvanic isolation (PoE model)***

TPES-0208TD compliance with 802.3af/at standard, the PoE model is able to feed each PoE port up to 30 Watt at each PoE port for various IP PD devices. It supplies 80W PoE budget.
PoE galvanic isolation up to 1.5KVDC to provide power input to PoE Ethernet ports insulation prevents cabling and grounding incidents from damaging the Ethernet switch itself.

***Optional Sleep Mode & efficient PoE timer under Ignition-Off State***

Compliant with ITxPT standards, the -IGN model features a 60-minute standby mode after ignition-off, maintaining network operation before entering sleep mode(0.048W)—preventing unnecessary reboots when power is restored.

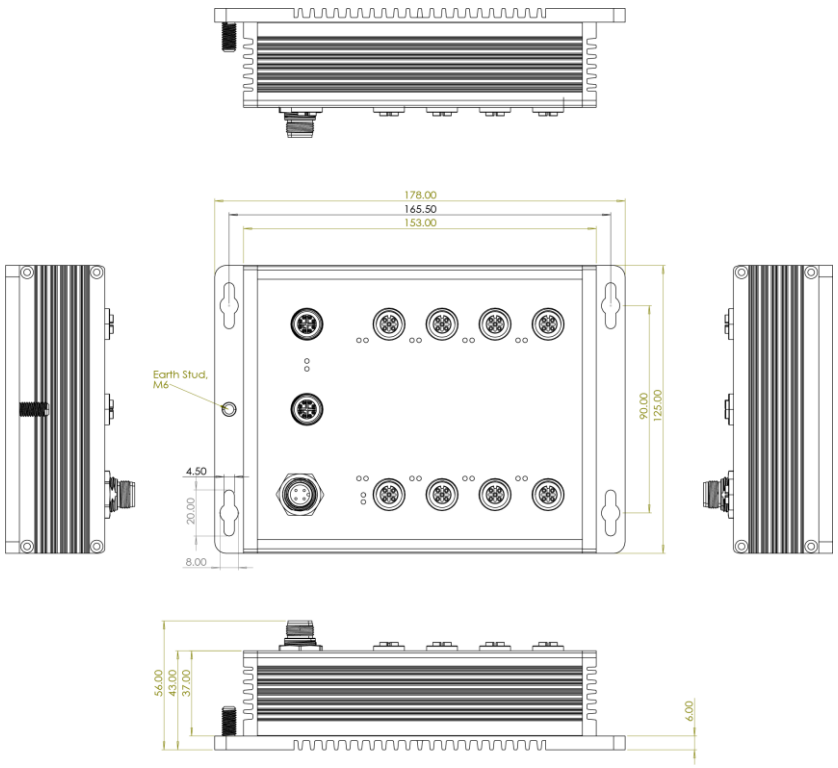
The PoE ignition model also supports a configurable PoE timer, with a default delay of 10 minutes after ignition-off.

***E-marking certificate*; ISO 16750-2 compliant***

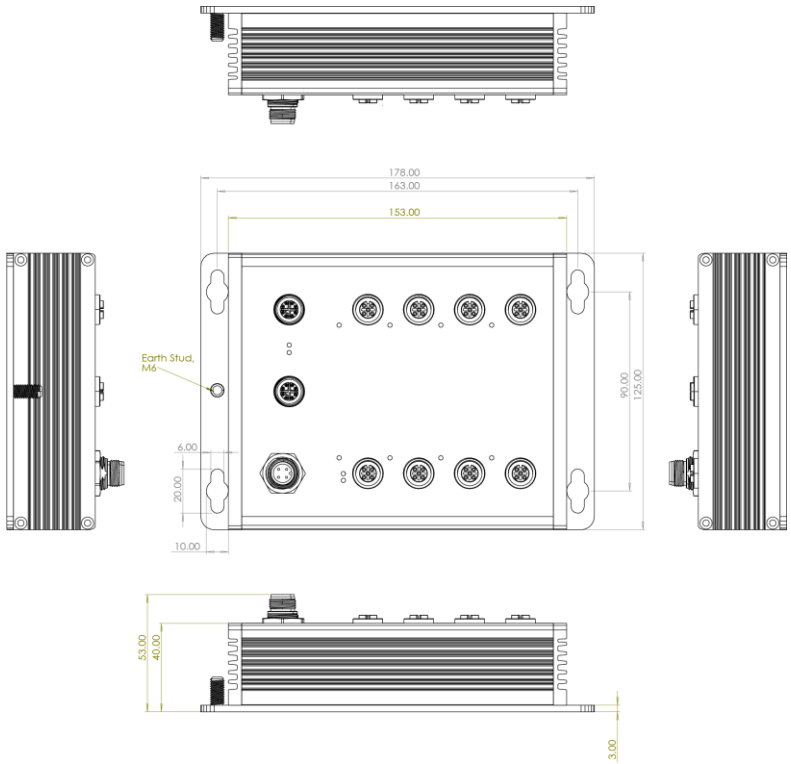
The T(P)ES-0208TD is designed to meet with critical network environment with IP54 enclosure and M12 connectors for protection against dust and water. It has passed harsh environmental testing to comply with Industrial EMI and Safety standards as well as stability testing such as Free fall, Shock, and vibration. It also meets the requirements of ISO 16750-2 P5A (24V system DC 174V/8Ω/350ms), reducing the impact of high-frequency pulse voltage that could be incurred by motor applications.

## DIMENSIONS (unit=mm)

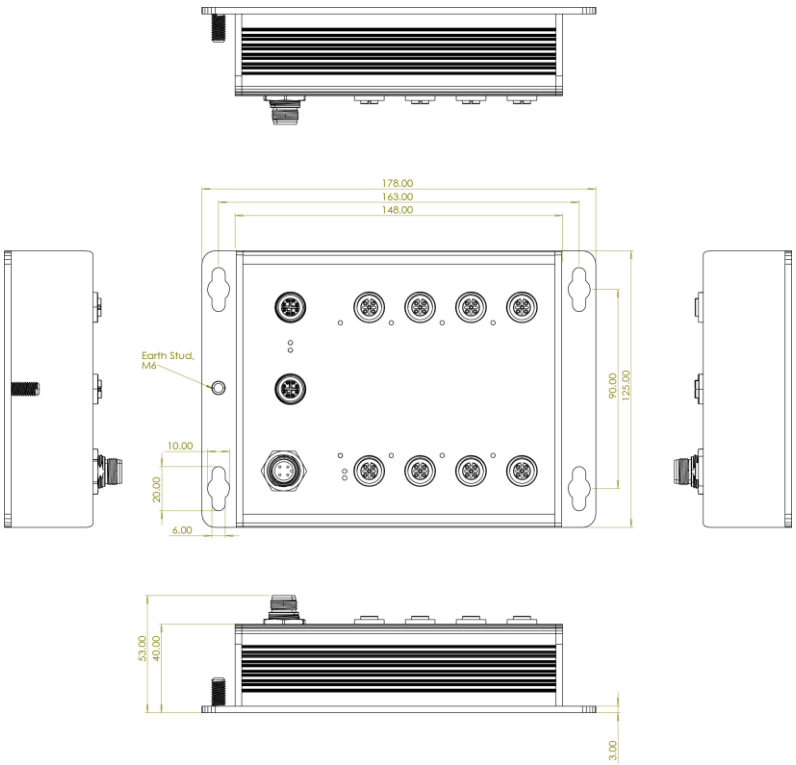
**PoE models**




**Non-PoE models (IP67)**




**Non-PoE models (IP54)**



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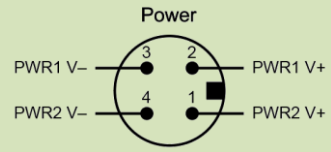
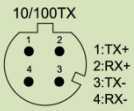
# SPECIFICATIONS

## Hardware Specification

| | |
|---|---|
| IEEE Standard | IEEE802.3 10BASE-T Ethernet<br>IEEE802.3u 100BASE-T Ethernet<br>IEEE802.3ab 1000Base-T<br>IEEE802.3x Flow Control and Back Pressure<br>IEEE802.3at/af Power over Ethernet (PoE model) |
| Transfer Rate | 14,880pps for Ethernet port<br>148,800pps for Fast Ethernet port<br>1,488,000pps for Gigabit Ethernet por |
| Mac Address | 16K MAC address table |
| Connector | 10/100TX: 8 x ports M12 4-pole D-coded Push-Pull connector with Auto MDI/MDI-X function<br>10/100/1000T: 2 x M12, 8-pole X-coded Push-Pull connector with auto MDI/MDI-X function<br>Power connector: 1 x M12, 4-pole A-coded Push-Pull connector<br>  |
| LED | Per unit: Power 1 (Green), Power 2 (Green),<br>Ethernet: Link/Activity (Green)<br>PoE: Active (Green) |
| PoE pin assignment (PoE model) | M12 port # 1~ # 8 support IEEE 802.3at/af End-point. Per port provides up to 30W<br>  <br>PoE pin assignment:<br>P1,3: V+<br>P2,4: V- |

| | |
|---|---|
| Power Supply | Dual input<br>9~36VDC (24VI model)<br>16.8~56VDC (24TVI model) |
| Power Consumption | TBC |
| Power Budget | Total 80W @ 24VDC and above |
| Operating Humidity | 5% to 95% (Non-condensing) |
| Operating Temperature | -40°C ~ 75°C (-40°F ~ 167°F) |
| Storage Temperature | -40°C ~ 85°C (-40°F ~ 185°F) |
| Case Dimension | Aluminum case, IP67/IP54 rated<br>178mm(W)x125mm(H)x53mm(D) |
| Weight | 850g |
| Installation | Wall Mount Design |
| EMC | FCC Part 15, Subpart B ICES-003 Issue 7,<br>EN 55035:2017/A11:2020,<br>EN 55032:2015/A11:2020,<br>IEC 61000-4-2:2008,<br>IEC 61000-4-3:2020,<br>IEC 61000-4-4:2012,<br>IEC 61000-4-5:2014+AMD1:2017 CSV,<br>IEC 61000-4-6:2023,<br>IEC 61000-4-8:2009,<br>IEC 61000-6-2:2016,<br>IEC 61000-6-4:2018,<br>EN IEC 61000-6-2:2019,<br>EN IEC 61000-6-4:2019,<br>BS EN 55035:2017+A11:2020,<br>BS EN 55032:2015+A11:2020 |
| Verification | EN 50155: 2021<br>EN 50121-4: 2016/ A1: 2019<br>EN 50121-3-2: 2016/ A1: 2019<br>EN45545-1, EN 45545-2 Fire & Smoke |
| Vehicle Certificate | E24 marking* (UN ECE R10)<br>ITxPT labeled* |
| MTBF | TBC |

# ORDERING INFORMATION

All model packages include M12 caps and wall mount brackets. All standard models are non-coating, optional coating models are available with –C model name.

- **TPES-0208TD-8-54-24VI-IGN-E-PP…….....P/N:8351-178**
  8 10/100TX w/8 PoE at/af + 2 10/100/1000T M12 Push-Pull IP54 rated EN50155 Unmanaged Ethernet Switch; -40°C to 75°C; 9~36VDC dual input w/ PoE & Ethernet galvanic isolation; w/ignition
- **TPES-0208TD-8-54-24TVI-PP…….....P/N:8351-1781**
  8 10/100TX w/8 PoE at/af + 2 10/100/1000T M12 Push-Pull IP54 rated EN50155 Unmanaged Ethernet Switch; -40°C to 75°C; 16.8~56VDC dual input w/ PoE & Ethernet galvanic isolation
- **TES-0208TD-54-24VI-IGN-E-PP…….....P/N:8351-1782**
  8 10/100TX + 2 10/100/1000T M12 Push-Pull IP54 rated EN50155 Unmanaged Ethernet Switch; -40°C to 75°C; 9~36VDC dual input w/Ethernet galvanic isolation; w/ignition
- **TES-0208TD-54-24TVI-PP…….....P/N:8351-1783**
  8 10/100TX + 2 10/100/1000T M12 Push-Pull IP54 rated EN50155 Unmanaged Ethernet Switch; -40°C to 75°C; 16.8~56VDC dual input w/Ethernet galvanic isolation

# OPTIONAL ACCESSORIES

## M12 Connector & Cable

**Connector**

| | |
|---|---|
| **ECON120005PF** | 5 pin M12 (Female) A-coded 180 degree crimp type connector for power supply |
| **ECONM12-04A(F)-C-180** | 4 pin M12 (Female) A-coded 180 degree crimp type connector for power supply |
| **ECONM12-04D(M)-C-180** | 4 pin M12 (Male) D-coded 180 degree crimp type connector for data |

**Cable**

| | |
|---|---|
| **ECONM12-5P(F)70CM CABLE** | 5 pin M12 (Female) A-coded 90 degree cable for power supply, 70cm |
| **ECONM12-4P(F)1.5M CABLE** | 4 pin M12 (Female) A-coded 90 degree cable for power supply, 150cm |
| **ECAB124030MJS** | 4 pin M12 (Male) D-coded 180 degree RJ45 STP cable for data, 300cm |
| **ECONM12-05A(F) to MCP 6P-20CM CABLE** | 5 pin M12 (Female) A-coded 180 degree to 6 pin MCP power cable, 20cm (For ignition models) |

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