

T(P)ES-0208T

8 FE + 2 GT M12 (PoE) Unmanaged Ethernet Switch



OVERVIEW

Lantech T(P)ES-0208T (IP54) is a 8 10/100TX + 2 10/100/1000T with M12 connector EN50155 (PoE) unmanaged Ethernet switch for IP54 rated protection, which meets the high-reliability requirements demanded by industrial rolling stock applications.

Dual 24V/24TV/24WV input with inrush current prevention and polarity reverse protection ; PoE model supports up to 8 PoE at/af ports and PoE galvanic isolation

Complying with IEEE 802.3af/at standards, the PoE model to supply up to 30W per port with a total PoE budget of 80W for various IP PD devices. PoE galvanic isolation up to 1.5KVDC ensures insulation between the power input and PoE Ethernet ports, preventing cabling or grounding incidents from damaging the switch.

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.

EN50155, EN50121-4, EN45545 verification; High reliability and extended working temperature

T(P)ES-0208T (IP54) 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 Rolling stock EMI and EMC, environmental shock & vibration and fire & smoke test with EN50155/EN50121-4 and EN45545-2 verification.

For a greater flexibility in application, the T(P)ES-0208T (IP54) supports an extended operating temperature range from -40°C to 75°C.

E-marking certificate; ISO 16750-2 P5A compliant

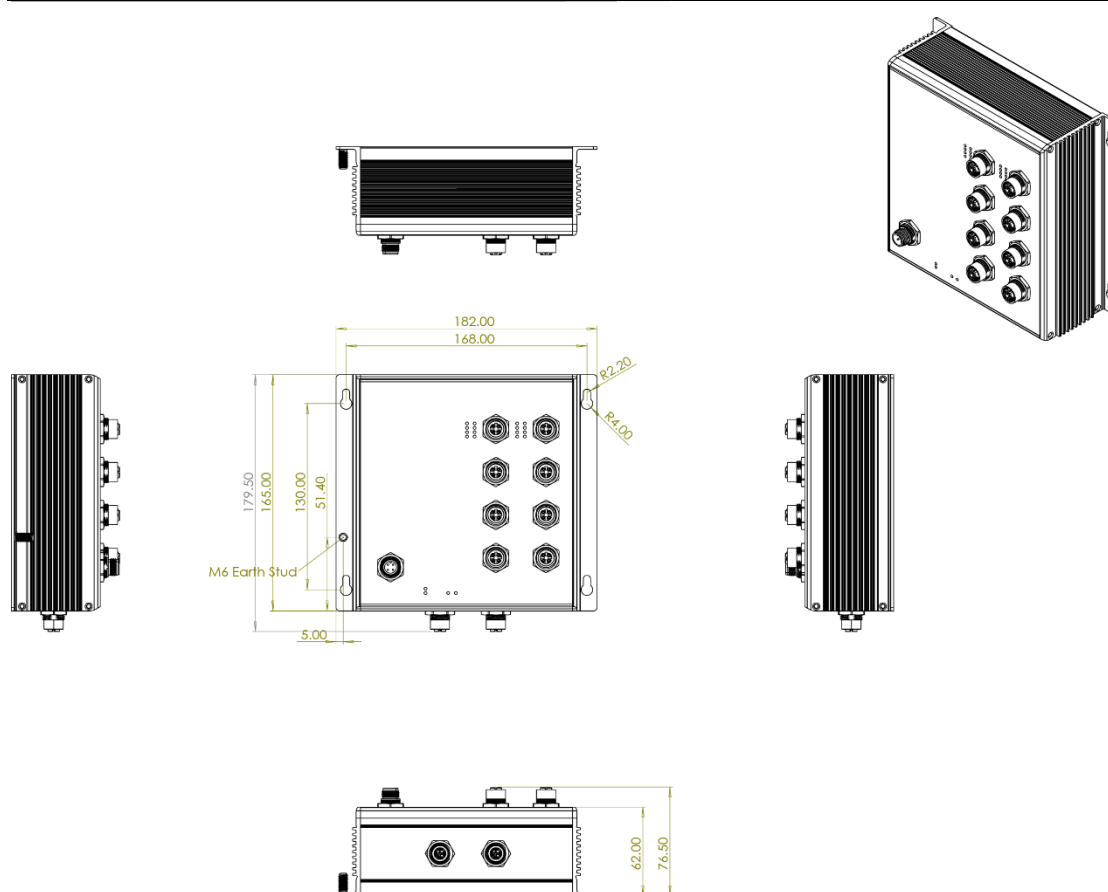
T(P)ES-0208T features IP54 enclosure with M12 connectors for dust/water protection, compliant with EMI, safety, free fall, shock, vibration tests, and ISO 16750-2 P5A to resist motor pulse voltages, effectively minimizing the impact of high-frequency pulse voltages commonly generated by motor applications.

OPTIONAL FEATURE

Optional GigaT bypass

The optional bypass relay is set to bypass the switch to the next one when power is off in order to protect the network from crashing. Lantech bypass caters to remain in bypass mode until the switch is completely booting up when power is back to avoid another network lost. (-BT model)

DIMENSIONS (unit=mm)



SPECIFICATIONS

Hardware Specification

IEEE Standard	IEEE802.3 10BASE-T Ethernet	148,800pps for Fast Ethernet port
	IEEE802.3u 100BASE-T Ethernet	1,488,000pps for Gigabit Ethernet port
	IEEE802.3ab 1000Base-T	
	IEEE802.3x Flow Control and Back Pressure	
	IEEE802.3at/af Power over Ethernet	
Transfer Rate	14,880pps for Ethernet port	
		Mac Address
		16K MAC address table
		Connector
		10/100TX: 8 x ports M12 4-pole D-coded with Auto MDI/MDI-X function
		10/100/1000T: 2 x M12, 8-pole X-coded, Female with auto MDI/MDI-X function
		Power connector: 1 x M12, 4-pole A-coded,

	Male	Weight	700g
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) 1000Base-TX: 2-pair UTP/STP Cat. 5/ 5E/ 6 cable EIA/TIA-568 100-ohm (100m)	Installation	Wall Mount Design
LED	Per unit: Power 1 (Green), Power 2 (Green), Ethernet: Link/Activity (Green) PoE: Active (Green)	EMC	FCC Part 15, Subpart B ICES-003 Issue 7, 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
PoE pin assignment	-8 model: M12 port # 1~ # 8 support IEEE 802.3at/af End-point. Per port provides up to 30W (-8 model)	Stability Testing	EN 61373:2010 (Shock and Vibration)
Power Supply	WVI: Dual input 16.8V~137.5VDC 24VI: Dual input 9~36VDC 24TVI: Dual input 16.8~56VDC	Verifications & Report	EN 50155:2021, EN 50121-4:2016/A1:2019, EN 50121-3-2:2016/A1:2019, EN 45545-1, EN 45545-2 Fire & Smoke verification
Power Consumption	10W without PoE load	Vehicle Certificate	E24 marking (UN ECE R10) (24VI model), R118
Power Budget	Total 80W @ 24VDC and above A higher PoE budget can be applied upon request. **	MTBF	496,036 hrs (IEEE 62830 standards)
Operating Humidity	5% to 95% (Non-condensing)	Bypass**	One pair bypass module on GT Copper ports (P9 & P10) to pass to the next switch in case of power failure
Operating Temperature	-40°C ~ 75°C (-40°F ~ 167°F)		
Storage Temperature	-40°C ~ 85°C (-40°F ~ 185°F)		
Case Dimension	Aluminum case, IP54 182mm(W)x179.5mm(H)x76.5mm(D)		

**Optional

ORDERING INFORMATION

All model packages include M12 caps and wall mount bracket. All standard models are non-coating, optional coating models are available with -C model name. Optional bypass models are available with -BT model name.

- **TPES-0208T-8-54-24VI.....P/N: 8360-579**
8 10/100TX + 2 10/100/1000T M12 IP54 rated EN50155 Unmanaged Ethernet Switch w/8 PoE at/af; -40°C to 75°C; 9~36VDC dual input w/ PoE galvanic isolation
- **TPES-0208T-8-54-24VI-IGNP/N: 8360-5796**
8 10/100TX + 2 10/100/1000T M12 IP54 rated EN50155 Unmanaged Ethernet Switch w/8 PoE at/af; -40°C to 75°C; 9~36VDC dual input w/ PoE galvanic isolation; w/ignition
- **TPES-0208T-8-54-24TVI.....P/N: 8360-5791**
8 10/100TX + 2 10/100/1000T M12 IP54 rated EN50155 Unmanaged Ethernet Switch w/8 PoE at/af; -40°C to 75°C; 16.8~56VDC dual input w/ PoE galvanic isolation
- **TPES-0208T-8-54-WVI.....P/N: 8360-5792**
8 10/100TX + 2 10/100/1000T M12 IP54 rated EN50155 Unmanaged Ethernet Switch w/8 PoE at/af; -40°C to 75°C; 16.8~137.5VDC dual input w/ PoE galvanic isolation
- **TES-0208T-54-24VI.....P/N: 8360-5793**
8 10/100TX + 2 10/100/1000T M12 IP54 rated EN50155 Unmanaged Ethernet Switch; -40°C to 75°C; 9~36VDC dual input w/ galvanic isolation
- **TES-0208T-54-24VI-IGN.....P/N: 8360-5797**
8 10/100TX + 2 10/100/1000T M12 IP54 rated EN50155 Unmanaged Ethernet Switch; -40°C to 75°C; 9~36VDC dual input w/ galvanic isolation; w/ignition
- **TES-0208T-54-24TVI.....P/N: 8360-5794**
8 10/100TX + 2 10/100/1000T M12 IP54 rated EN50155 Unmanaged Ethernet Switch; -40°C to 75°C; 16.8~56VDC dual input w/ galvanic isolation
- **TES-0208T-54-WVI.....P/N: 8360-5795**
8 10/100TX + 2 10/100/1000T M12 IP54 rated EN50155 Unmanaged Ethernet Switch; -40°C to 75°C; 16.8~137.5VDC dual input w/ galvanic isolation

OPTIONAL ACCESSORIES

M12 Connector & Cable**Connector**

- **ECONM12-04A(F)-C-180** 4 pin M12 (Female) A-coded 180 degree crimp type connector for power supply
- **ECONM12-08X(M)-SPEEDCON** 8 pin M12 (Male) X-coded 180 degree crimp type connector for data, Ethernet CAT6A (10G), shielded, SPEEDCON

Cable

- **ECONM12-4P(F)1.5M CABLE** 4 pin M12 (Female) A-coded 90 degree cable for power supply, 150cm
- **ECABM12X83MSTP** 8 pin M12 (Male) X-coded 180 degree RJ45 STP cable for data, shielded, 300cm

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