

T(P)GS-0208T

10 GT M12 (PoE) Unmanaged Ethernet Switch;

24VI / 24TVI / WVI model inputs

- EN50155/50121-4/EN61373 and EN45545-2 Fire & Smoke verification
- E-marking certificate for vehicle application (24VI model)
- Provides M12 connector with IP54-rated protection
- Galvanic PoE isolation; Support IEEE802.3at/af up to 30W per port; PoE budget 80W
- Dual 16.8~137.5VDC (WVI model) or 9~36VDC (24VI model) or 16.8~56VDC (24TVI model) input selection
- ISO16750-2 P5A compliant
- Power-saving PoE configuration when ignition is enabled (IGN model)
- Inrush current prevention; polarity reverse protection
- Optional copper bypass in case of power failure (one pair)
- Wide Operating Temperature from -40 °C to 75 °C



OVERVIEW

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

**Up to @30W PoE+ output with 8 PoE ports (-8 model);
Dual 24VI/24TVI/WVI input with max PoE budget; inrush current prevention and polarity reverse protection**

The TPGS-0208T-8 (IP54) supports IEEE802.3at/af standard which can feed HI-power up to 30W at each PoE port (8 ports in total) for various IP PD devices. The total PoE budget is up to 80W. The redundant power input design prevents inrush current and safeguards against polarity reversal.

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.

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)

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

The T(P)GS-0208T (IP54) is designed to meet with a 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 greater flexibility in application, the T(P)GS-0208T (IP54) supports an extended operating temperature range from -40°C to 75°C.

E-marking certificate; ISO 16750-2 compliant

The T(P)GS-0208T is designed to meet a critical network environment with an 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 is compliant with ISO 16750-2 P5A which protects the switch from being damaged by high voltage that could be found at vehicle cranky start.

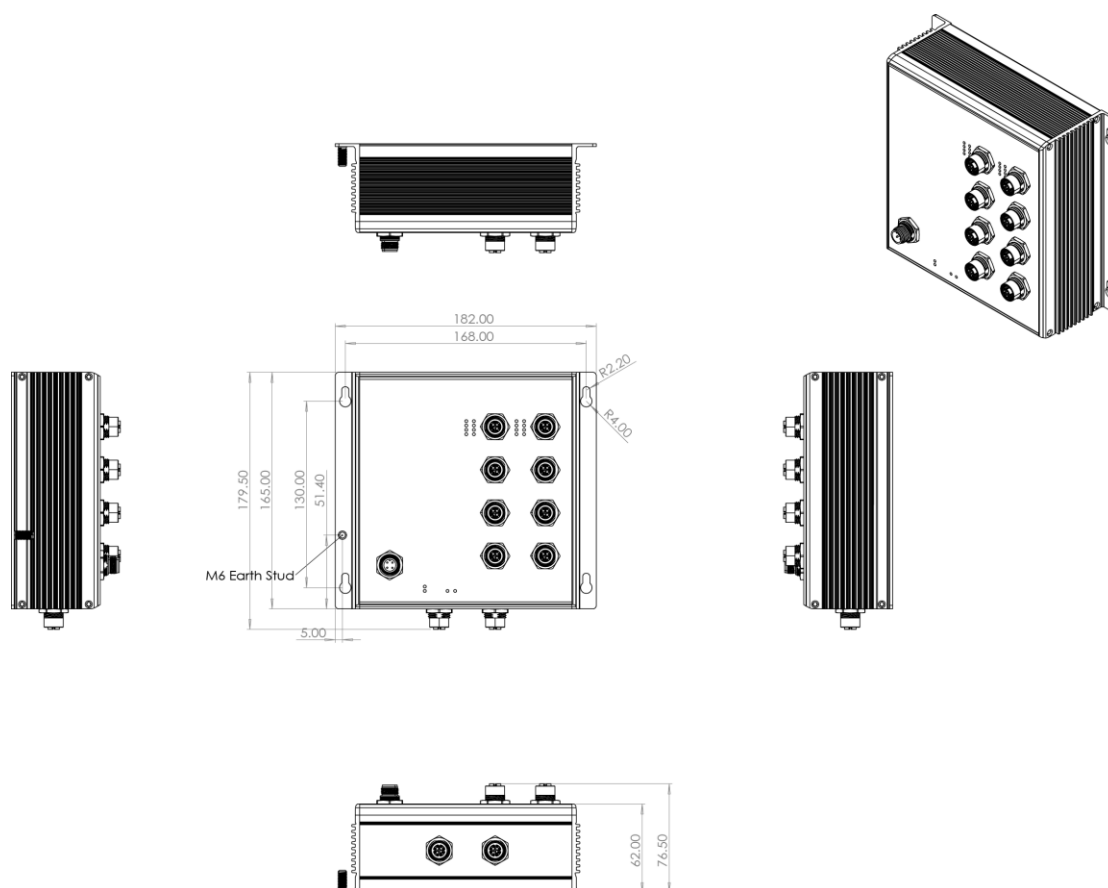
Optional GigaT bypass

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)

FEATURES & BENEFITS

- 10 10/100/1000T X-coded EN50155 PoE Unmanaged Ethernet Switch with M12 connectors and IP54 rated protection
- PoE model: Supports IEEE802.3at/af feeding power up to 30W per PoE port(-8 model)
- Dual power input voltage 9~36VDC for 24VI model and can boost to 54V for PoE 802.3at/af at max 80W budget
- Dual power input voltage 16.8~56VDC for 24TVI model and can boost to 54V for PoE 802.3at/af at max 80W budget
- Dual power input voltage 16.8~137.5VDC for WVI model with PoE budget up to 80W
- Back-plane (Switching Fabric): 20 Gbps
- 16K MAC address table
- Wide Operating Temperature (-40°C ~75°C)
- Inrush current prevention; polarity reverse protection
- Din rail** and wall mount design
- Bypass protection** - Bypass failed switch caused by power failure, hanged or link down of switch to protect network (one pair)
- E-mark certificate for vehicle (24VI model)
- EN50155/50121-4/E-marking and EN45545-2 Fire & Smoke verification

DIMENSIONS (unit=mm)



SPECIFICATIONS

Hardware Specification

IEEE Standard	IEEE802.3 10BASE-T Ethernet IEEE802.3u 100BASE-T Ethernet
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IEEE802.3ab 1000Base-T
IEEE802.3x Flow Control and Back Pressure
IEEE802.3at/af Power over Ethernet

Transfer Rate	14,880pps for Ethernet port
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	148,800pps for Fast Ethernet port 1,488,000pps for Gigabit Ethernet port	Case Dimension	Aluminum case, IP54 182mm(W)x179.5mm(H)x76.5mm(D)
Mac Address	16K MAC address table	Weight	700g
Connector	10/100/1000T: 10 x ports M12 8-pole X-coded with Auto MDI/MDI-X function Power connector: 1 x M12, 4-pole A-coded, Male	Installation	Wall Mount Design
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)	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
LED	Per unit: Power 1 (Green), Power 2 (Green), Ethernet: Link/Activity (Green) PoE: Active (Green)	Stability Testing	EN 61373:2010 (Shock and Vibration)
PoE pin assignment	M12 port # 1~ # 8 support IEEE 802.3at/af End-point. Per port provides up to 30W	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 Supply	WVI: Dual input 16.8V~137.5VDC 24VI: Dual input 9~36VDC 24TVI: Dual input 16.8~56VDC	Vehicle Certificate	E24 marking (UN ECE R10) (24VI model)
Power Consumption	10W without PoE load	MTBF	725,280 hrs (IEEE 62830 standards)
Power Budget	Total 80W @ 24VDC and above Higher PoE budget can be applied upon request. **	Warranty	5 years
Operating Humidity	5% to 95% (Non-condensing)	Bypass**	One pair bypass module on GT Copper ports (P9 & P10) to pass to 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)		

**Optional

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. Optional bypass models are available with –BT model name

- **TPGS-0208T-8-54-24VI.....P/N: 8360-580**
10 10/100/1000T X-coded 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
- **TPGS-0208T-8-54-24VI (IGN).....P/N: 8360-5801**
10 10/100/1000T X-coded 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
- **TPGS-0208T-8-54-24TVI.....P/N: 8360-5802**
10 10/100/1000T X-coded 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
- **TPGS-0208T-8-54-WVI.....P/N: 8360-5804**
10 10/100/1000T X-coded 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
- **TGS-0208T-54-24VI.....P/N: 8360-5806**
10 10/100/1000T X-coded M12 IP54 rated EN50155 Unmanaged Ethernet Switch; -40°C to 75°C; 9~36VDC dual input w/ galvanic isolation
- **TGS-0208T-54-24VI (IGN).....P/N: 8360-5809**
10 10/100/1000T X-coded M12 IP54 rated EN50155 Unmanaged Ethernet Switch; -40°C to 75°C; 9~36VDC dual input w/ galvanic isolation; w/ignition
- **TGS-0208T-54-24TVI.....P/N: 8360-5807**
10 10/100/1000T X-coded M12 IP54 rated EN50155 Unmanaged Ethernet Switch; -40°C to 75°C; 16.8~56VDC dual input w/ galvanic isolation
- **TGS-0208T-54-WVI.....P/N: 8360-5808**
10 10/100/1000T X-coded 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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