

EMS-TL-G10

Telemetry gateway, 10 onboard points

Edge gateway with five universal inputs, two analog outputs and three triac outputs for a loop without its own BMS point list

EMS-TL-G10 is the documented 10-point configuration of the gateway line: five universal inputs, two analog outputs and three triac digital outputs, on 24 VAC/DC with one RS-485 trunk and two 10/100 Ethernet ports. It carries the loop's point list into BACnet/IP, Modbus and SNMP over IP, or BACnet and Modbus over RS-485, and expands to the documented ceiling of 50 points across up to 3 devices. The failure it exists to catch is a loop whose instruments are installed but whose readings never reach the building system that would act on them.

ORDERING INFORMATION

Part number	EMS-TL-G10
Onboard points	10
Universal inputs	5
Analog outputs	2 × 0–10 V DC at 4 mA maximum
Digital outputs	3 × triac, 24 V AC at 0.5 A
Communications	1 × RS-485 and 2 × 10/100 Ethernet
Supply	24 VAC/DC
Expansion	To 50 points across up to 3 devices

POINTS AND IO

Parameter	Value	Notes
Onboard points	10	Documented 10-point configuration of the gateway line
Universal inputs	5, accepting thermistor Type 3 / 10K, 0–100 kΩ, 0–10 V DC, 0–20 mA with an external resistor, and dry contact	One input type per channel, set at commissioning
Analog outputs	2 × 0–10 V DC at 4 mA maximum	For modulating outputs such as a valve or a signal to another controller
Digital outputs	3 × triac, 24 V AC at 0.5 A	For on/off duty such as an alarm contact or a pump enable
Point count composition	5 universal inputs + 2 analog outputs + 3 triac outputs	The whole 10-point budget is accounted for by the IO on the board
Expansion ceiling	50 points across up to 3 devices	The documented ceiling for the controller family
Point dictionary it has to absorb	2 112 pages of register and object definitions in one published CDU protocol reference	Context for the point list the gateway is expected to carry
Point names in that dictionary	Fluid Flow Rate, Inlet Fluid Pressure, Outlet Fluid Pressure, Differential Pressure, and the alarm Fluid Loop High/Low Differential Pressure	Named points carried in the published reference
Engineering units in that dictionary	°C, m³/h, kPa, Pa, bar, % RH, VAC and Hz	Unit handling is part of the point-list setup

COMMUNICATIONS AND PROTOCOLS

Parameter	Value	Notes
Serial	1 × RS-485	Daisy-chain capable
Ethernet	2 × 10/100 Ethernet	Daisy-chain capable, so a second gateway does not always need a second switch port
Protocols over IP	BACnet/IP, Modbus and SNMP	Head-end integration options on the IP side
Protocols over RS-485	BACnet and Modbus	Field-side integration options on the serial trunk
Wiring topology	Daisy-chain on both RS-485 and Ethernet	Cable route and termination follow the site's trunk design

SUPPLY AND ENVIRONMENT

Parameter	Value	Notes
Supply	24 VAC/DC	Same supply as the kit's gateway rail
Operating temperature	–20 to 60 °C	Gateway enclosure envelope
Storage temperature	–40 to 85 °C	Gateway enclosure envelope
Humidity	5–95 % RH non-condensing	Condensing conditions are outside the envelope
MTBF	10 years	Published reliability figure for the controller family
Enclosure mounting	DIN-rail, inside a control panel or enclosure	The panel provides the environmental protection for the device

STANDARDS AND COMPLIANCE

Parameter	Value	Notes
Built to	UL 916, C-UL, CE, FCC Part 15 Class B, RoHS2, REACH, WEEE and CAN/CSA-C22.2 No. 205-12	Ratings the product is built to, stated as standard designations
Approval documents	Shown on request	Certification names are published on the badge cards
RoHS and REACH	Declared for the controller family	Substance declarations travel with the delivery documentation

APPLICATIONS

- A single rack or in-row loop whose instruments have no BMS point list of their own
- Edge concentration of ΔT , flow, differential pressure, level and leak points onto one trunk
- Loops where the head end speaks BACnet/IP and the field trunk speaks Modbus
- Small loops that may expand, using the expansion ceiling rather than a second controller

COMPATIBLE WITH

- EMS-TL-ST and EMS-TL-STC temperature pairs on universal inputs
- EMS-TL-SF and EMS-TL-SFU flow instruments
- EMS-TL-SDP differential-pressure transmitter, 4–20 mA with an external resistor
- EMS-TL-SL level instrument and EMS-TL-SK leak channel input module
- EMS-TL-K100, EMS-TL-K300, EMS-TL-K800 and EMS-TL-K2300 kits

SCOPE

- Edge gateway only: coolant distribution units and cold plates are outside this scope

GATEWAY LADDER BY POINT COUNT

Parameter	Value	Notes
EMS-TL-G10	10 points	5 universal inputs, 2 analog outputs, 3 triac outputs
EMS-TL-G25	25 points	Documented 10-point controller plus one expansion module; our own configuration
EMS-TL-G50	50 points	The documented ceiling, across up to 3 devices

NOTES

- An enclosure IP rating is not stated in the retrieved documentation for this gateway, so no rating row appears on this datasheet.
- The 50-point ceiling is the documented expansion limit of the controller family and is reached across up to 3 devices.
- CAN/CSA-C22.2 No. 205-12, UL 916, C-UL, CE, FCC Part 15 Class B, RoHS2, REACH and WEEE are standard designations the product is built to; they are not approvals held by the company.
- Certification names are published on the badge cards; approval documents are shown on request.
- Scope: no coolant distribution units and no cold plates.

Full specification sheet and current pricing EMS-Trade Cooling · ems-cool.com Typical lead time confirmed on order acknowledgement.	EMS-TL-G10 Rev. A 2026-09-19
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