



5104DTSI

C-Bus® Digital Temperature Sensor Input Unit

The C-Bus Digital Temperature Sensor Input Unit (referred to in this data sheet as 'the input unit') accommodates digital temperature sensors that are capable of measuring temperature and reporting the readings to a C-Bus network.

The input unit supports the connection of up to four sensors (one per input channel). The input unit is rated at 0°C to 65°C ambient operating temperature. This means it can be installed into harsh temperature environments such as in ceiling spaces and wall cavities.

The input unit is housed in a small enclosure that makes it suitable for installation into a wall box or similar enclosure. The input unit includes 4 LED indicators (1 for each input channel) that will be permanently lit to indicate a correctly connected sensor. An LED not lit indicates an open-circuit sensor or sensor not connected. A flashing LED indicates a short-circuit connection, reverse connection or multiple sensors connected to a single channel. Incorrectly connected or missing sensor conditions can also be broadcast onto the C-Bus Error Application, which makes error detection easier after installation is complete.

Temperature broadcast is supported on either the C-Bus Measurement Application or the C-Bus HVAC Application. The input unit is configured using C-Bus Toolkit programming software. The input unit can be configured so that the frequency of the temperature broadcast can be based on time duration, amount of change or a combination of both. Each input unit can also be polled through the C-Bus Trigger Application, should further broadcasts be required.

The input unit can be configured with a temperature offset applied to each channel, if required. The installer can view the current temperature reading for each configured channel through the Toolkit Graphical User Interface (GUI). The GUI also offers the ability for the installer to name each input channel for easier identification of the location of each sensor installed.

Each of the three types of sensors (sold separately) will sense with an accuracy of +/- 0.5°C in a temperature range of -10°C to 80°C. Whilst the sensors will measure temperatures as low as -40°C and as high as 100°C, the accuracy in these extended ranges will be only +/- 2°C. It should also be noted that the temperature rating of the sensor cable is only -10°C to 100°C. If sensors are installed in locations where the temperature falls below -10°C, additional mechanical protection needs to be added to the sensor cables as only the sensor tip is rated to operate down to -40°C.

Each sensor is supplied with 2 metres of cable that can be shortened or can be extended up to 25 metres.

The sensors are powered by the input unit and require only two wires for their connection: a ground (common) wire and a data wire.

C-Bus® Digital Temperature Sensor

Ordering Information

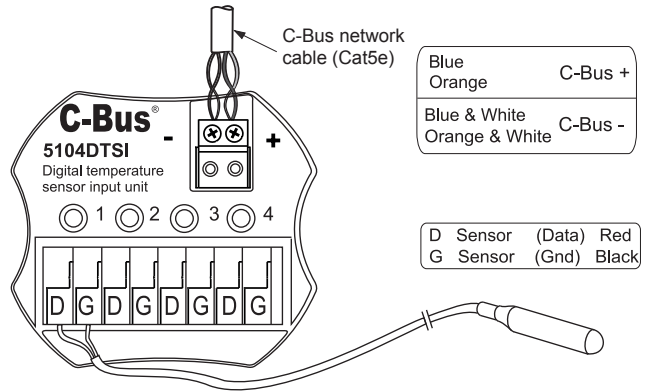
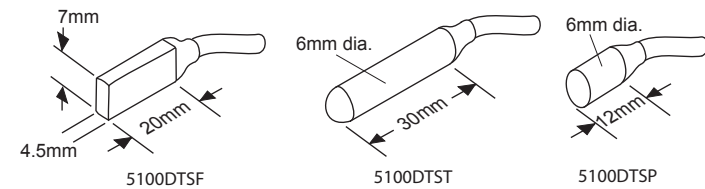
Catalogue Number	Description
5104DTSI	C-Bus Digital Temperature Sensor Input Unit, 4 channel (Sensors must be purchased separately)
5100DTST	Temperature sensor, TUBE, 6mm diameter, 30mm long, Cable length 2m
5100DTSF	Temperature sensor, FLAT, 4.5mm wide, 7mm high, 20mm long, Cable length 2m
5100DTSP	Temperature sensor, POINT, 6mm diameter, 12mm long, Cable length 2m

Digital Temperature Sensor Input Unit Specifications

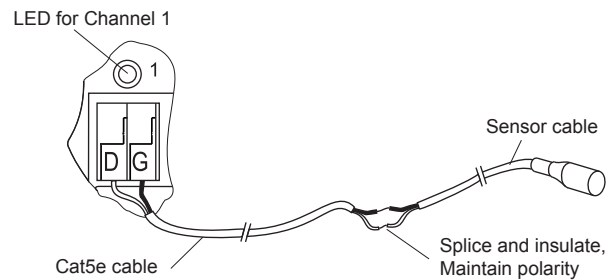
Parameter	Description
C-Bus supply voltage	15 to 36 V d.c. SELV/Class 2
C-Bus current drawn	18 mA. Provides power for the sensors. Does not provide power to the C-Bus network.
C-Bus AC Impedance	60 KΩ at 1 KHz
Mounting location (input unit)	Service enclosure or wall box. Indoor use only.
Wired connections	C-Bus: 2-terminal screw connector Sensors: 4 pairs of push-type connectors
Temperature measurement range	-40°C (-40°F) to 100°C (212°F)
Temperature measurement resolution	0.1°C
Temperature measurement accuracy	-10°C to 80°C: ±0.5°C -40°C to -10°C: ±2°C 80°C to 100°C: ±2°C
Operating temperature	0°C to 65°C
Operating humidity	10-90%, non condensing

Temperature Sensors Specifications (sold separately)

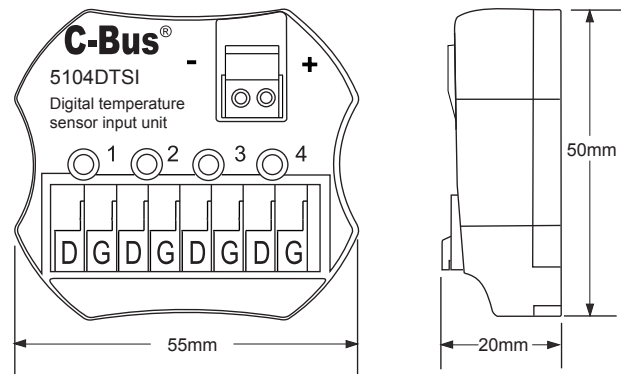
Parameter	Description
Device type	Digital temperature sensor, 3 tip styles, integral cable
Measurement range	-40° C to 100° C
Maximum number per input unit	4, in any combination of types, 1 per channel. Empty channels are permitted.
Application	Indoor or outdoor. Suitable for harsh environments.
Cable	2-conductor, insulated, 2m long Maximum extension length is 25m per sensor.
Weight	Flat tip type 37g Tube tip type 37g Point tip type 36g
Probe tip material	314 grade stainless steel



The input unit can support the connection of 1 to 4 sensors. Only one sensor can be connected per input channel. Unused channels are allowed.



The extended sensor cable for an input channel must not exceed 25m. Use twisted pair cable that is not pink (colour of the C-Bus cable).



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