C-Bus2™

CLIPSAL®
INTEGRATED SYSTEMS

C-Bus General Input Unit

5504GI Series

The General Input Unit is a C-Bus device that allows sensors to be used to measure real-world analogue (voltage, current or resistance) and TTL digital quantities. For example; light level, pressure and temperature. The unit can then cause a response to these measured values when pre-defined conditions are met. The channel input type is software selected and configured through the Windows™-based configuration software.

The unit is designed to filter all input signals to reduce susceptibility to impulse and mains noise. This means that only input signals up to 10Hz can be followed by the unit.

The unit obtains power from a C-Bus Network (to power the C-Bus side of the unit), and a 24Vac input (via an external power pack) is also used to power the measurement processing and to supply power for external sensors.

If required, the unit allows an operator to broadcast the measurement for each Channel on a C-Bus network after scaling and transformation. The unit does not broadcast more frequently than 2 times per second in any case.

If enabled, the unit is able to initiate a message on C-Bus in response to a user-defined change in value of the input. The unit is also able to initiate a message on C-Bus in response to an appropriate received C-Bus message, if enabled by the user.

The unit can be set up to include eight 'Decision Thresholds' per Channel and separate hysteresis values per Channel (one value per channel). The unit then allows an operator to assign an 'Action' to each Decision Threshold in each Channel. The action will apply when the input level exceeds the Decision Threshold plus the set hysteresis value. An 'OFF Action' will apply when the input is less than the Decision Threshold minus the hysteresis value. The unit allows an operator to assign a C-Bus message to each of the defined Decision Threshold.

The unit is also able to pass 'direct level' information from an analogue input to a C-Bus network level command. For example, a variable resistance (eg, a potentiometer) input can be used to control the dimming level of a C-Bus lighting group address.

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CLIPSAL®
IBS Intelligent Building Series™

C-Bus General Input Unit 5504GI Series

- Four software configurable Input Channels per unit.
- Analogue Sensor Input Voltage Ranges:
  0 – 1Vdc, 0 – 5Vdc, 0 – 10Vdc, 0 – 20Vdc.
- Analogue Sensor Input Current Ranges:
  0 – 20mAdc, 4 – 20mAdc.
- Analogue Sensor Input Resistance Ranges:
  0 - 500Ω, 0 - 1000Ω, 0 - 3000Ω, 0 - 10000Ω.
- Digital Sensor Input: TTL, 5V from external supply.
- Maximum allowable input voltage for all ranges:
  +60/-20V.
- Basic Accuracy (after calibration):
  0.5% of Full-Scale.
- Maximum Input Frequency: 10Hz.
- Software selectable input value transformation, for
  each Channel in the following form:
    - $y = ax + b$
    - look-up table with interpolation.
- A maximum of 10 units may be connected on a
  single C-Bus network.
- Configuration information for the unit is created,
  edited and loaded (over C-Bus) by PC-based
  C-Bus Configuration Software.
- The unit allows an operator to switch input filtering
  on and off for each Channel. When active, filtering
  of a Channel attenuates mains frequencies by 20dB.
- The unit includes the facility to define the
  measurement units for each channel and has the
  facility to define a description for each input.
- 24Vac supply voltage for measurement processing
  and to supply (250mA) power for external.
- 15-36Vdc C-Bus supply voltage
  (Current Drawn: 18mA).
- The unit can supply up to 250mA @ 24Vdc ± 10%
  - it is unregulated, hence will supply up to ~35V for
  use by external sensors.
- The unit interfaces to the Clipsal C-Bus using
  twisted pair (Cat 5) wiring, using two RJ45 sockets
  – only needs one socket to connect to C-Bus
  – other is pass-thru.
- The unit includes a software selectable C-Bus
  network burden and clock generator.
- The unit supports communication over multiple
  networks through C-Bus bridges.
- Dimensions: W=144mm, H=85mm, D=65mm.
- Weight: 190g.

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