C-Bus® General Input Unit

C-Bus®

CLIPSAL® LIVING ELECTRICAL

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 C-Bus Control and Management System

5504GI Series C-Bus® General Input Unit

- 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 - 500, 0 - 1000, 0 - 3000, 0 - 10000
- 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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A member of the Schneider Electric Group.

Head Office
12 Park Terrace, Bowden
South Australia 5007
PO Box 103 Hindmarsh
South Australia 5007

Telephone	+61 8 8345 9500
Facsimile	+61 8 8346 0845
Internet	www.clipsal.com/cis
E-Mail	cis@clipsal.com.au

CIS Technical Support Hotline:
1300 722 247

Customer Service Enquiries:
1300 2025 25

National Customer Service Facsimile:
1300 2025 56

International Enquiries

International Sales and Marketing
Telephone +61 8 8269 0587
Facsimile +61 8 8340 7350
E-Mail export@clipsal.com.au

New Zealand
Clipsal Industries (NZ) Ltd
Telephone +64 9 576 3403

Malaysia
Clipsal Integrated Systems (M) Sdn Bhd
Telephone +60 3 7665 3555

Singapore
Clipsal Integrated Systems Pte Ltd
Telephone +65 6415 3232/3233

China
Clipsal China Limited
Telephone +86 755 8237 5959

Greece
Schneider Electric AE
Telephone +30 69 4646 3200

Hong Kong
Clipsal Integrated Systems (HK) Limited
Telephone +852 2487 0261

India
Schneider Electric India Pvt Ltd
Telephone +91 11 5159 0000

Indonesia
PT Clipsal Graha Nusa
Telephone +62 21 630 6430

Korea
Clipsal Korea Co. Ltd
Telephone +82 549 5550

Pakistan
Clipsal Pakistan (Pvt) Ltd
Telephone +92 21 506 7278

Philippines
Clipsal Phillipines Inc.
Telephone +632 683 0275-78

South Africa
Clipsal South Africa (Pty) Ltd
Telephone +27 11 314 5200

Taiwan
Clipsal (Taiwan) Co Ltd
Telephone +886 2 2558 3456

Thailand
Clipsal Thailand Ltd
Telephone +66 2 952 5338-42

United Arab Emirates
Clipsal Middle East
Telephone +971 6 5570 777

United Kingdom
Clipsal Integrated Systems
C/o Schneider Electric
Telephone +44 870 608 8 608

Vietnam
Clipsal - VTEC
Telephone +848 856 3002

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