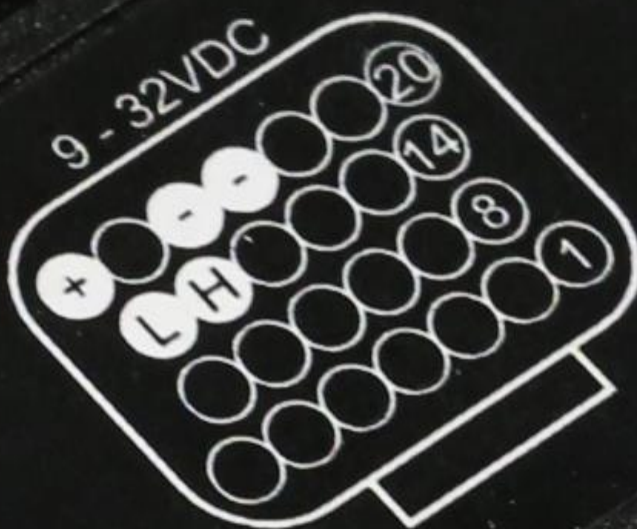




 **HCM3210S**
Made in Finland



HCM3210S

Technical Data Sheet



HCM3210S Hybrid Controller Module



- 20 configurable I/O's
- 1 CANbus
- Programmable via Guitu
- Intelligent CANopen profile
- Designed for operation at both 12V and 24V

HCM3210S Hybrid Controller Module features 20 configurable I/O lines in small cost efficient package. It contains all the features available also in our bigger products. It is targeted for tough environmental conditions for applications where smaller number of I/O lines is sufficient.

HCM3210S can be used as standalone solution or as a part of CAN based control system.

Technical Information

- 9-32V operating voltage range
(Protected against reverse polarity)
- Less than 100mA current consumption at no load
- -40...+85°C operating temperature range
- 32-bit microprocessor
- IP67 aluminium housing
- Weight 0.35kg (to be checked later on)
- Main dimensions 112mm x 102mm x 34mm
- One 26 pin AMP Super Seal connector
- CAN Interface 2.0B, ISO 11898

I/O Interface

- Total of 20 configurable IO-lines
- The I/O interface is protected against short to GND and to supply voltage
- Configurable reference voltage: 5V / 10V, max 250mA

Amount	Configurability	Details
2	Digital input	Low<3.5V, High>5V, max 100Hz
6	Digital input Analog input	Low<3.5V, High>5V, max 100Hz 12-bit AD conv., 0-10.4V/0-22mA
8	Digital input Digital output Current controlled PWM output	Low<3.5V, High>5V, max 100Hz High side switch, max. 3A High side switch, max. 3A
4	Digital input Frequency/pulse input Digital output PWM output	Low<3.5V, High>5V, max 100Hz Low<3.5V, High>5V, max 8kHz High side switch, max. 3A High side switch, max. 3A

Wiring Diagram:

Analog inputs

12-bit resolution
Overload protection
0-10.4V / 0-22mA

or

Digital inputs

or

Node ID selection

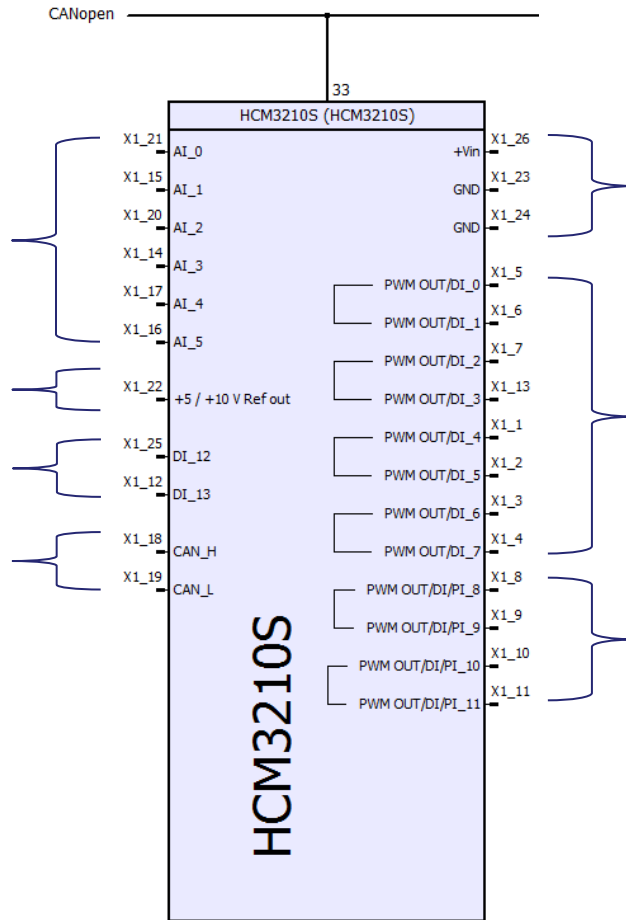
only AI_4

Reference voltage out

250mA

Digital inputs

ISO high speed CAN



Supply

Max 10A fuse

Digital outputs

High side driver, Max 3A

or

PWM outputs

with current measurement

High side driver, Max 3A

or

Digital inputs

Digital outputs

High side driver, Max 3A

or

PWM outputs

High side driver, Max 3A

or

Digital inputs

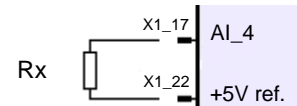
or

Pulse/frequency inputs

Node ID

As default the unit Node address is set by voltage at AI_4.

Voltage at AI_4	Node ID offset	Rx / Ω
0V	1	open
1.7V	3	150k
3.5V	5	33k
5.2V	7	0
6.9V	9	n/a
8.7V	11	n/a
10.4V	13	n/a



Node ID = Base Node ID (32) + Node ID offset

See also product's CANopen profile for further details.

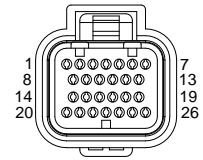
Connector

Tyco Electronics Super Seal Connector

Connector components needed:

Super Seal Connector Plug Housing	AMP 3-1437290-7
Receptacle Contact (0.75 – 1.25mm ²)	AMP 1447221-3
Filler Plug ^{*)}	AMP 4-1437284-3 Deutsch 0413-204-2005

*) Filler plugs must be used to reach waterproofness

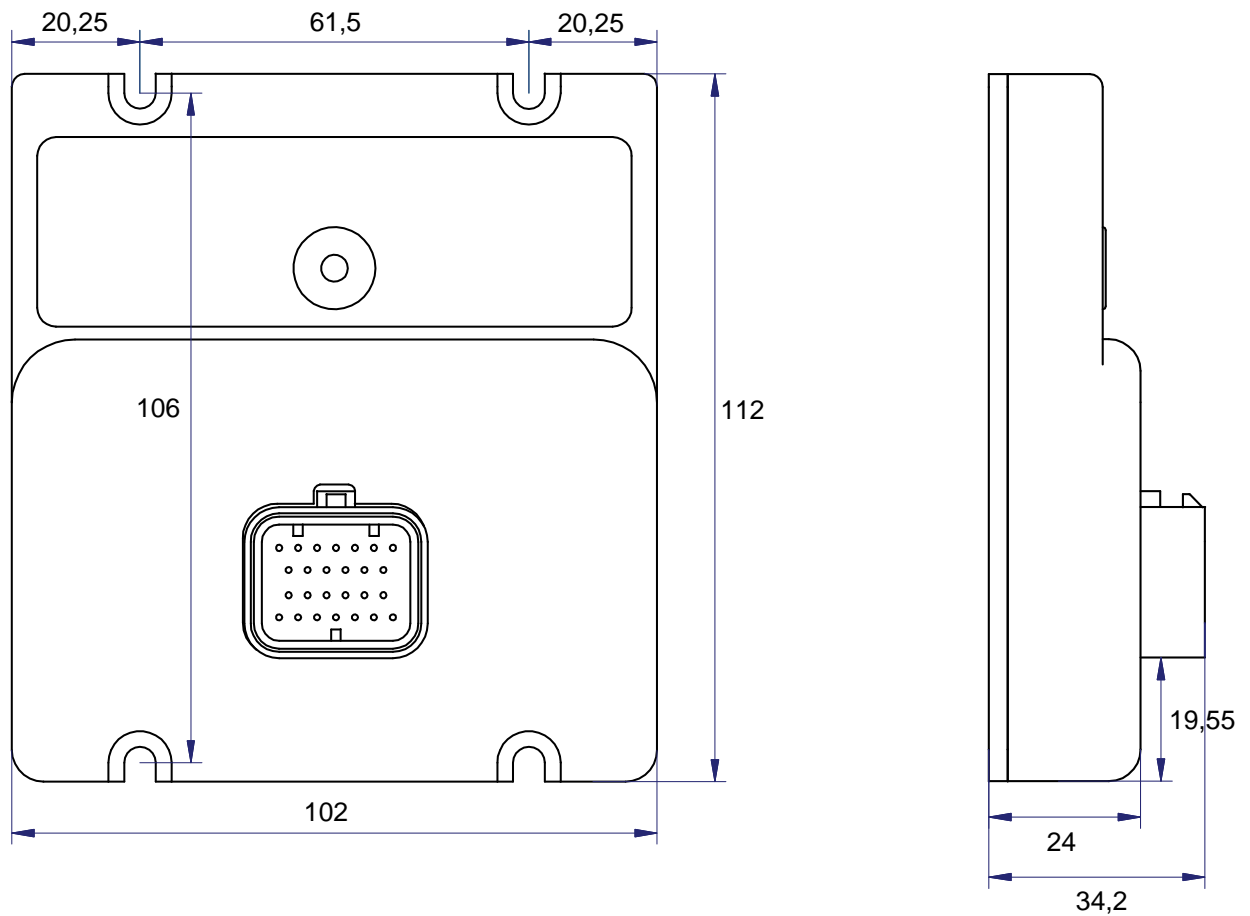


Tests & CE compliance – tests still pending

EMC	<p>EN 61000-4-2, Testing and measurement techniques – Electrostatic discharge immunity test E/ECE Regulation No. 10, Revision 4 (2012), Emission and immunity tests</p> <p>IEC 60255-22-1, Electrical disturbance tests for measuring relays and protection equipment – 1 MHz burst immunity test</p>
Environmental	<p>EN 60068-2-1, Cooling test</p> <p>IEC 60068-2-2, Dry heat test</p> <p>IEC 60068-2-30, Damp heat test</p> <p>EN 60068-2-6, Stationary vibration</p> <p>EN 60068-2-27, Mechanical shock test</p> <p>IEC 60529, IP6X dust test</p> <p>IEC 60529, IPX7 temporary inversion test to 1m</p> <p>ISO 9227, Salt spray test</p>

Mounting and Housing Dimensions

HCM3210S is fixed to flat surface with four M5 screws. The recommended mounting position is AMP connector facing down or to the side. In latter case it is recommended to leave some loose cable hanging in downward arc to prevent any moisture from accessing the module through the connector.



Exertus reserves the rights to change product details without prior notice.