CCM1100S

CCM1100S

Technical Data Sheet

EXERTUS

CCM1100S Compact Controller Module

- 38 configurable I/O
- Programmable via Guitu
- Designed for operation at both 12V and 24V
- Real Time Clock

CCM1100S is compact and versatile I/O controller equipped with information display. It has 38 configurable I/O lines.

The unit has a built in Real Time Clock, which can be used for logging events with a time stamp. In addition to flash there is also battery backed memory for storing fast changing information.

As an option the unit can be equipped with a RF interface (for instance for remote control).
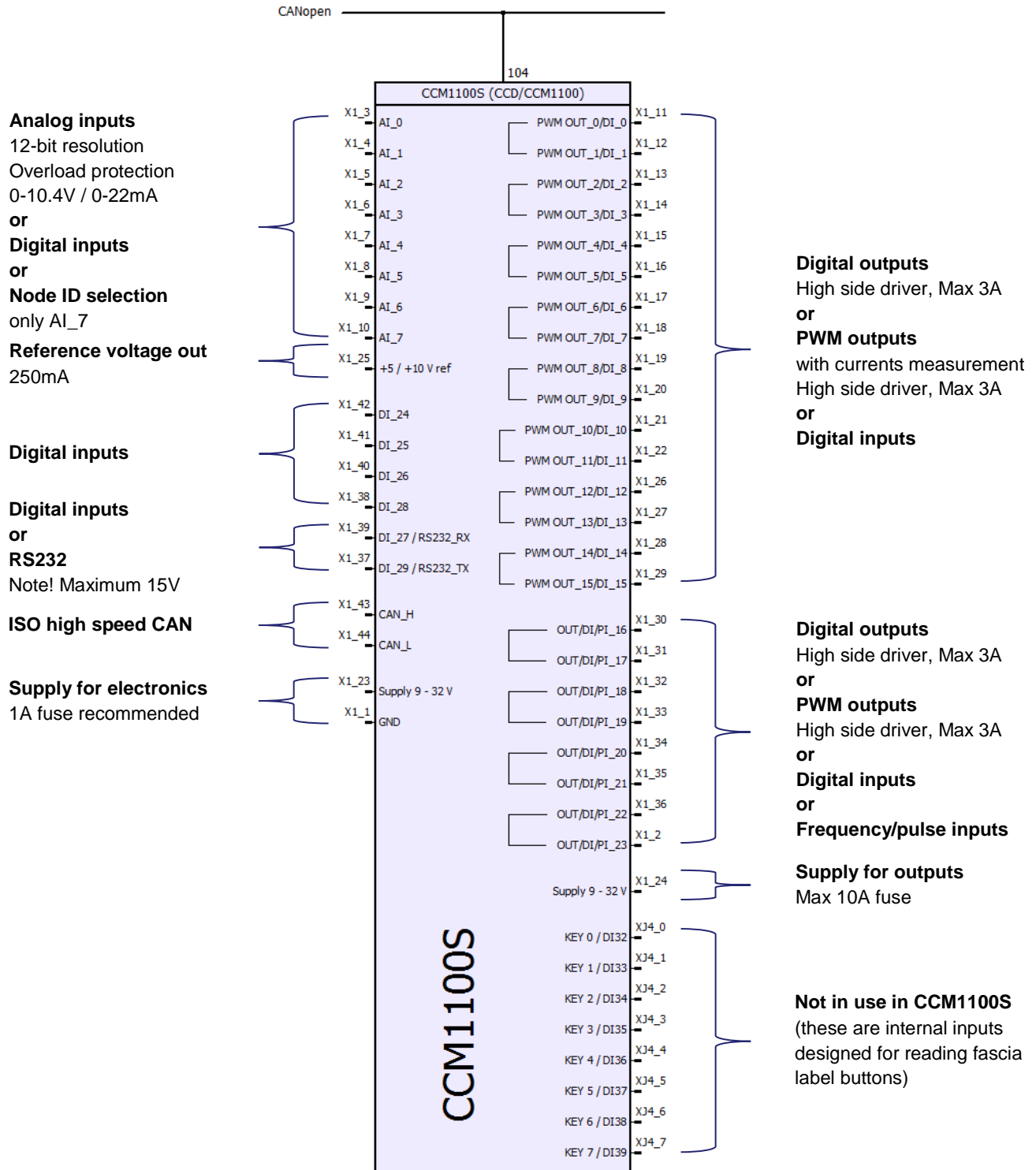
Technical Information

- 9-32V Operating voltage range
  (Protected against reverse polarity)
- -40…+85°C operating temperature range
- 32-bit microprocessor
- 96 kB RAM
- 1MB flash memory
- 84B battery backed memory
- IP67 aluminium housing
- Weight 0.7kg
- Main dimensions 127mm x 146mm x 37mm
- One 44 pin AMP Super Seal connector
- CAN Interface 2.0B, ISO 11898
- Serial port interface RS232
- Real time clock (RTC)
- Optional radio frequency interface

I/O Interface

- Total of 38 configurable IO-lines
- Separate supply for outputs and electronics
- The I/O interface is protected against short to GND and to supply voltage
- Configurable reference voltage: 5V / 10V, max 250mA

Amount	Configurability	Details
4	Digital input	Low<3.5V, High>5V, max 100Hz
8	Digital input	Low<3.5V, High>5V, max 100Hz
	Analog input	12-bit AD conv., 0-10.4V, 69kΩ 0-22mA, 150Ω
8	Digital input	Low<3.5V, High>5V, max 100Hz
	Frequency/pulse input	Low<3.5V, High>5V, max 20kHz
	Digital output	High side switch, max 3A
	PWM output	High side switch, max 3A
16	Digital input	Low<3.5V, High>5V, max 100Hz
	Digital output	High side switch, max 3A
	Current controlled PWM output	High side switch, max 3A
2	Digital inputs	Low<3.5V, High>5V, max 100Hz
	RS232 interface	! Note: Max 15V

Wiring Diagram:

CANopen

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CCM1100S (CCD/CCM1100)

Left	Right
X1_3 AI_0	PWM OUT_0/DI_0 X1_11
X1_4 AI_1	PWM OUT_1/DI_1 X1_12
X1_5 AI_2	PWM OUT_2/DI_2 X1_13
X1_6 AI_3	PWM OUT_3/DI_3 X1_14
X1_7 AI_4	PWM OUT_4/DI_4 X1_15
X1_8 AI_5	PWM OUT_5/DI_5 X1_16
X1_9 AI_6	PWM OUT_6/DI_6 X1_17
X1_10 AI_7	PWM OUT_7/DI_7 X1_18
X1_25 +5 / +10 V ref	PWM OUT_8/DI_8 X1_19
	PWM OUT_9/DI_9 X1_20
X1_42 DI_24	PWM OUT_10/DI_10 X1_21
X1_41 DI_25	PWM OUT_11/DI_11 X1_22
X1_40 DI_26	PWM OUT_12/DI_12 X1_26
X1_38 DI_28	PWM OUT_13/DI_13 X1_27
X1_39 DI_27 / RS232_RX	PWM OUT_14/DI_14 X1_28
X1_37 DI_29 / RS232_TX	PWM OUT_15/DI_15 X1_29
X1_43 CAN_H	OUT/DI/PI_16 X1_30
X1_44 CAN_L	OUT/DI/PI_17 X1_31
X1_23 Supply 9 - 32 V	OUT/DI/PI_18 X1_32
X1_1 GND	OUT/DI/PI_19 X1_33
	OUT/DI/PI_20 X1_34
	OUT/DI/PI_21 X1_35
	OUT/DI/PI_22 X1_36
	OUT/DI/PI_23 X1_2
	Supply 9 - 32 V X1_24
	KEY 0 / DI32 XJ4_0
	KEY 1 / DI33 XJ4_1
	KEY 2 / DI34 XJ4_2
	KEY 3 / DI35 XJ4_3
	KEY 4 / DI36 XJ4_4
	KEY 5 / DI37 XJ4_5
	KEY 6 / DI38 XJ4_6
	KEY 7 / DI39 XJ4_7

CCM1100S

Analog inputs
12-bit resolution
Overload protection
0-10.4V / 0-22mA
or
Digital inputs
or
Node ID selection
only AI_7
Reference voltage out
250mA

Digital inputs

Digital inputs
or
RS232
Note! Maximum 15V

ISO high speed CAN

Supply for electronics
1A fuse recommended

Digital outputs
High side driver, Max 3A
or
PWM outputs
with currents 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
Frequency/pulse inputs

Supply for outputs
Max 10A fuse

Not in use in CCM1100S
(these are internal inputs
designed for reading fascia
label buttons)

Node ID

As default the unit Node address is set by voltage level at AI_7.

Voltage at AI_7	Node ID offset	Rx / Ω
0V	1	open
0.9V	9	330k
1.7V	3	150k
2.6V	11	68k
3.5V	5	33k
4.3V	13	11k
5.2V	7	0

Node ID = Base Node ID (103) + Node ID offset
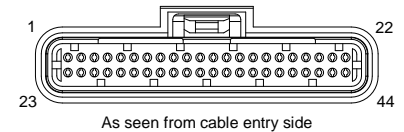
See also relevant CANopen profile for further details.
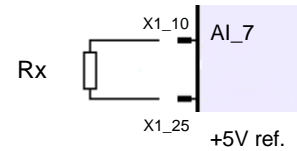
Connector

Tyco Electronics Superseal Connector

	Connector components needed:
Super Seal Connector Plug Housing	Ø1.6-2.2mm - AMP 1376886-1 Ø 2.0-2.4mm - AMP 2-1447232-6
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


As seen from cable entry side

Tests & CE compliance

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

Housing Dimensions and Mounting

CCM1100S 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.
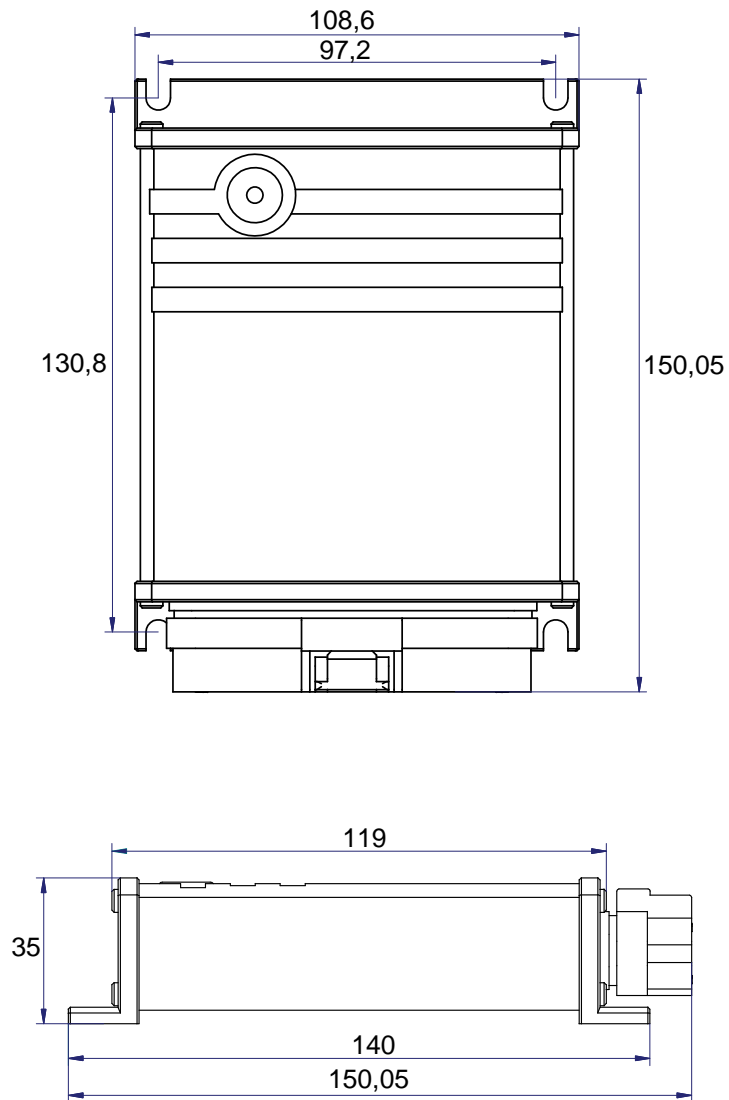
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