Universal I/O Expansion Module
HY-TTC 36X

Description

The HY-TTC 36X module is an intelligent I/O module which can be controlled and parameterized via CANopen Standard according to CiA DS 401.

It provides a means of expanding control systems with additional inputs and outputs, and hence additional functionality, in a simple and uncomplicated way.

The PID control devices built into the instrument make it possible to add independent proportional controls in conjunction with the powerful PWM outputs and the current measurement.

The module is protected in a proven, extremely compact housing of the 16-bit controller series, which was specially designed for the off-highway vehicle industry.

Special features

- 40 inputs and outputs:
  - 4 PWM outputs
  - 8 digital outputs
  - 8 analogue outputs
  - 4 current meas. inputs
  - 16 digital inputs
- Robust aluminium die cast housing with pressure equalization via a waterproof Gore-Tex® membrane
- Waterproof, 80-pin male connection
- e12 type approval

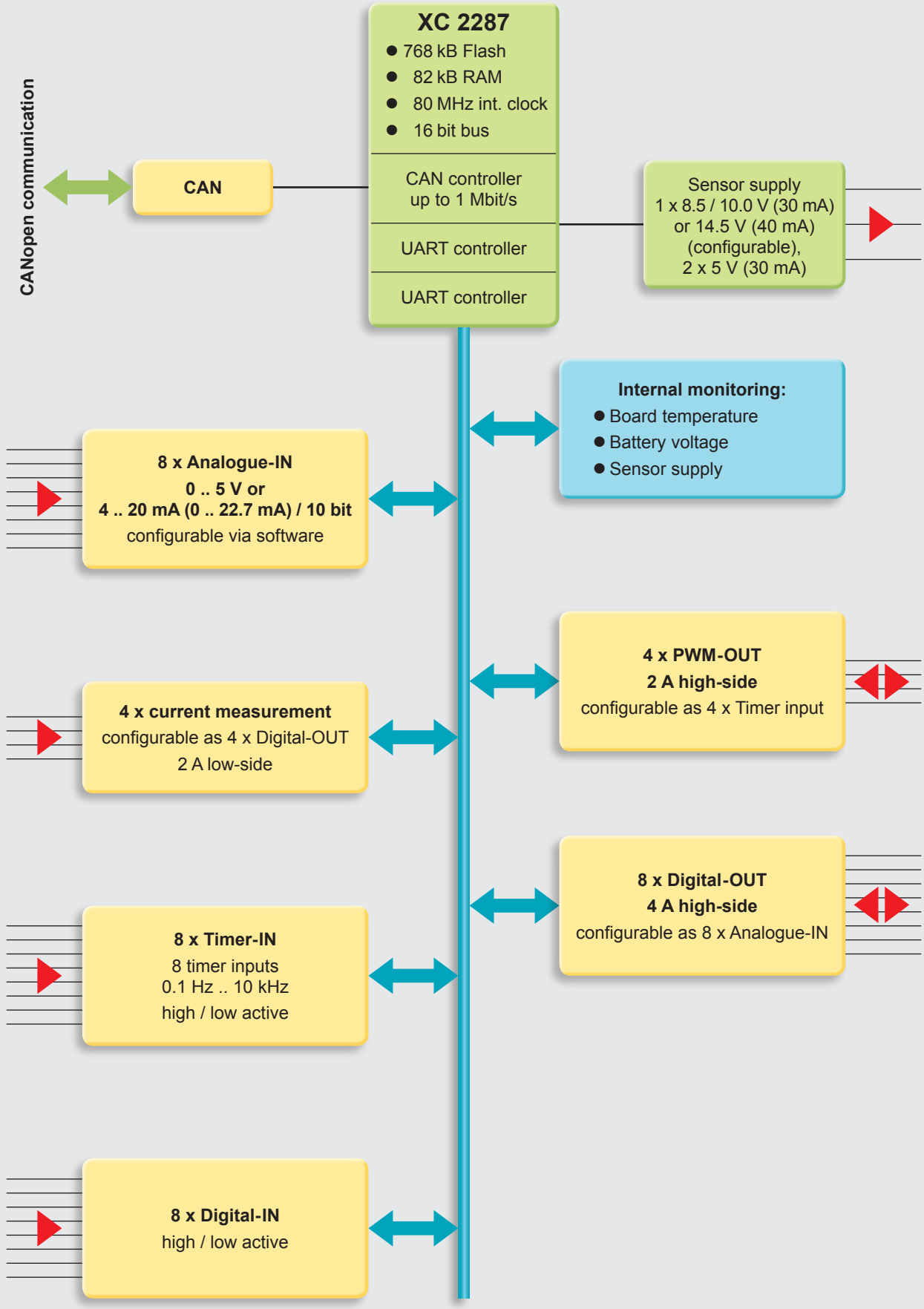
Technical data

Ambient conditions	
Operating temperature	-40 .. +85 °C (with full load) to EN 60068-2
Operating altitude	0 .. 4,000 m
Supply voltage	8 .. 32 V
Peak voltage	45 V max. (1 ms)
Idle current	0.15 A max. at 9 V
Standby current	0.5 mA max.
Current consumption	25 A max. (complete voltage and temperature range)
Complies with the following standards	
CE mark	Compliant with 2004/108/EC
E-mark	2009/19/EC
EMC	ISO 13766 (up to 200 V/m, 20 MHz .. 1 GHz)
ESD	IEC 61000-4-2
Load dump	ISO 7637-2
IP class	EN 60529 IP 65 / IP 67 DIN 40050 IP 6k9k
Temperature	EN 60068-2-1; -14Nb; -2; -78; -30
Vibration, shock, bump	IEC 60068-2-29; -64; -27; -32
Communication profile	CANopen CiA DS 401
Dimensions and weight	
Housing dimensions	148 x 181 x 40 mm
Minimum clearance for connection	198 x 203 x 40 mm
Weight	652 g
Features*	
16 bit Infineon XC 2287 microcontroller, 80 MHz, 768 kB int. Flash, 82 kB int. RAM	
1 x CAN, up to 1 Mbit/s	
IN	
8 x Analogue-IN 0 .. 5 V or 4 .. 20 mA (0 .. 22.7 mA) / 10 bit, configurable via software	
4 x current feedback, configurable as 4 x Digital-OUT / low-side 2 A	
8 x Timer-IN (timer inputs 0.1 Hz .. 10 kHz)	
8 x Digital-IN	
OUT	
4 x PWM-OUT 2 A high-side, configurable as 4 x Timer inputs	
8x Digital-OUT 4 A high-side, configurable as 8 x Analogue-IN	
Internal monitoring of circuit board temperature, sensor supply and battery voltage	
Connector types: 52-pole Tyco PN 1393450-5 / 28-pole Tyco PN 1393436-4	
1 x sensor supply 8.5 V / 10.0 V (30 mA) or 14.5 V (40 mA) configurable	
2 x sensor supply 5 V (30 mA)	

Note: * All I/O's and interfaces mentioned below are protected against short circuit to GND and BAT+.

Block circuit diagram

HY-TTC 36X



Model code

HY-TTC 36X – F11 – 00 – 000

CAN protocol
F11 = CANopen

Equipment options
00 = standard

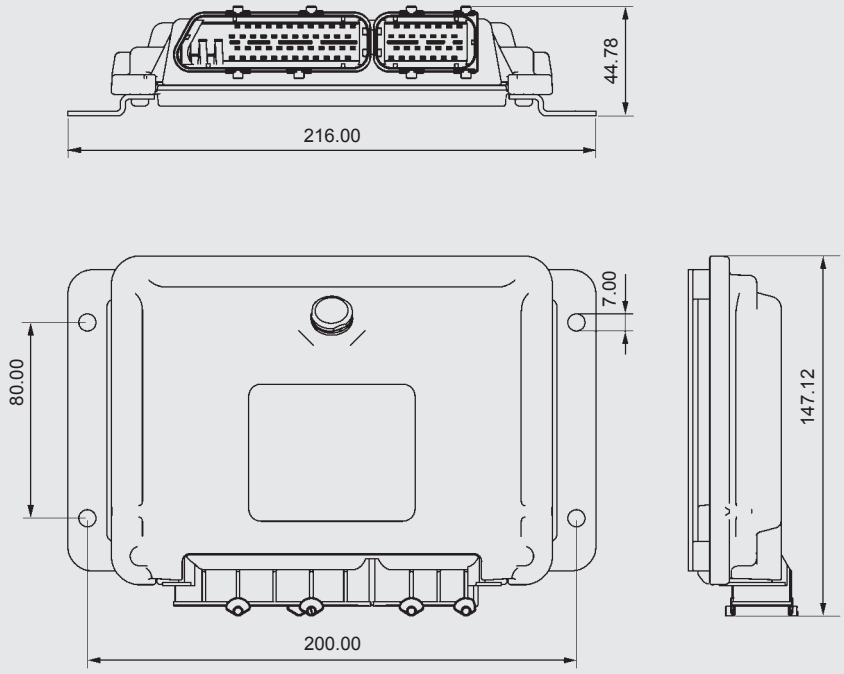
Modification number
000 = standard

Note
On instruments with a different modification number, please read the label or the technical amendment details supplied with the instrument.

Accessories
Appropriate accessories, such cables and connectors, service tools, software etc. can be found in the Accessories section.

Dimensions

52-pole Tyco PN 1393450-5 / 28-pole Tyco PN 1393436-4



Note

The information in this brochure relates to the operating conditions and applications described.

For applications and operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.

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