GYDAD INTERNATIONAL

HY-TTC 71

Mobile Controller



Description

The HY-TTC 71 is a powerful controller for mobile off-highway applications with 12 V voltage supply. The controller is designed for cost-sensitive requirements.

The design of the HY-TTC 71 meets the requirements for **PL b** (Performance Level) of the international standard EN ISO 13879.

The CPU XC 2288 H from Infineon used in the controller has enhanced safety features for protecting the internal RAM and Flash memory.

The HY-TTC 71 is part of the product series HY-TTC 70. It is protected by a robust and extremely compact housing which was specially designed for the off-highway vehicle industry.

Special features

- Programming in C
- 138 kB RAM
- 43 inputs and outputs
 - -18 power outputs
 - -24 analogue inputs
 - 1 Timer IN optional
- All inputs and outputs are protected against overvoltage and short circuits
- Stabilised sensor voltage supply with internal monitoring
- Robust aluminium die-cast housing with a waterproof 80-pole male connection and pressure equalization via a waterproof Gore-Tex[®] membrane
- E12 type approval

Technical data

Operating temperature -40+85 °C (full load) acc. to EN 60068-2 Operating altitude 04000 m Supply voltage 716 V Permitted voltage drop up to 24 V (U _{kn}) without reset to ISO 7637-1 (for engine start in 12 V systems) Peak voltage 28 V max. (1 ms) Idle current 0.15 A max. at 9 V Standby current 0.5 mA max. Current consumption 35 A max. (complete voltage and temperature range) Fulfils the following standards Emark Emark ECE-R10 Rev.4 EMC EN 13309, ISO 14982, CISPR 25 ESD ISO 10605 Electrical ISO 16750-2, ramp, Level II (4.5 V), Status A ISO 20653 IP 647 Temperature ISO 16750-4 Vibration, shock, bump ISO 16750-3 Dimensions 143 x 216 x 43 mm Minimum clearance for connection 198 x 216 x 43 mm Minimum clearance for connection 198 x 216 x 43 mm Minimum clearance for connection 198 x 216 x 43 mm Minimum clearance for connection 198 x 216 x 43 mm Minimum clearance for connection 198 x 216 x 43 mm Vibration x 200 g <	Environmental conditions			
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10 x Analogue IN 0 15 V pull-up in digital input mode/10 bit 10 x Analogue IN 0 15 V pull-down in digital input mode/10 bit 2 x Analogue IN 0 5 V; 10 bit; PL d classified 1 x Digital Timer IN (0.1 Hz 10 kHz); low-side with voltage measurement 1 x Analogue IN 0 25 mA Internal monitoring of board temperature, sensor supply and battery 3 x analogue sensor ground, 1 x digital ground 1 x sensor supply 5 V, each 100 mA Programming: C	1 x Analogue IN 0 5 V/0 25 mA / 0 65 kOhm/Digital IN low-side; 10 bit; configurable via software; PL d classified			
10 x Analogue IN 0 15 V pull-down in digital input mode/10 bit 2 x Analogue IN 0 5 V; 10 bit; PL d classified 1 x Digital Timer IN (0.1 Hz 10 kHz); low-side with voltage measurement 1 x Analogue IN 0 25 mA Internal monitoring of board temperature, sensor supply and battery 3 x analogue sensor ground, 1 x digital ground 1 x sensor supply 5 V, each 100 mA Programming: C	10 x Analogue IN 0 15 V pull-up in digital input mode/10 bit			
2 x Analogue IN 0 5 V; 10 bit; PL d classified 1 x Digital Timer IN (0.1 Hz 10 kHz); low-side with voltage measurement 1 x Analogue IN 0 25 mA Internal monitoring of board temperature, sensor supply and battery 3 x analogue sensor ground, 1 x digital ground 1 x sensor supply 5 V, each 100 mA Programming: C	10 x Analogue IN 0 15 V pull-down in digital input mode/10 bit			
1 x Digital Timer IN (0.1 Hz 10 kHz); low-side with voltage measurement 1 x Analogue IN 0 25 mA Internal monitoring of board temperature, sensor supply and battery 3 x analogue sensor ground, 1 x digital ground 1 x sensor supply 5 V, each 100 mA Programming: C	2 x Analogue IN 0 5 V; 10 bit; PL d classified			
1 x Analogue IN 0 25 mA Internal monitoring of board temperature, sensor supply and battery 3 x analogue sensor ground, 1 x digital ground 1 x sensor supply 5 V, each 100 mA Programming: C	1 x Digital Timer IN (0.1 Hz 10 kHz); low-side with	th voltage measurement		
Internal monitoring of board temperature, sensor supply and battery 3 x analogue sensor ground, 1 x digital ground 1 x sensor supply 5 V, each 100 mA Programming: C	1 x Analogue IN 0 25 mA			
3 x analogue sensor ground, 1 x digital ground 1 x sensor supply 5 V, each 100 mA Programming: C	Internal monitoring of board temperature, sensor s	supply and battery		
1 x sensor supply 5 V, each 100 mA Programming: C	3 x analogue sensor ground, 1 x digital ground			
Programming: C	1 x sensor supply 5 V, each 100 mA			
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Note: All I/Os and interfaces are protected against short circuit to GND and BAT+.



Model code

HY-TTC 71 – XX -	– 138K – 1.0	6M – 00 XX –	000
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Firmw	are	
CP	=	for C programming without CODESYS

RAM memory

138K = 138 kByte

Flash memory

1608K = 1608 kByte/1.6 MByte

Functional safety

00 = none

Equipment options

05	=	full configuration
10	=	open housing/developer version

Modification number

000 = standard

Note

On devices with a different modification number, please read the name plate or the technical amendment details supplied with the device.

Accessories

Appropriate accessories, such as cable harnesses, cabling and connection technology, service tools and software can be found in the Accessories section.

Dimensions





Note

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

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

Subject to technical modifications and corrections.

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