TTControl
HYDAC INTERNATIONAL

HY-TTC 30 Family

Compact and Flexible Control Unit

Key Benefits

- Extensive I/O set (30 I/Os) with multiple configuration options per pin
- Small form factor
- EN ISO 13849 PL c and PL d* certified
- C-Programming Environment
- CODESYS® V2.3 including support for CANopen® Master (HY-TTC 32 only)
- Automotive-style aluminum housing for rough operating conditions

The HY-TTC 30/32 is a compact control unit specially developed for use in cost-sensitive applications or smaller machines. The devices are equipped with the performant Infineon XC22xx microcontroller. With its 30 freely configurable I/Os it can be operated with a wide variety of sensors and actuators and offers a large degree of flexibility for the system designer.

Flexibility

This family of I/O modules includes four different variants that are all designed for control of proportional valves and are equipped with digital/analog outputs or inputs. The variants differ in their I/O mix in order to be able to meet the specific I/O requirements of the various mobile machinery applications. They also provide a wide range of configurable I/Os and allow local current control for its PWM outputs.

Usability

The unit is best suited for controlling proportional functions. Six out of the eight PWM outputs have integrated current measurement which means that, for example, up to three hydraulic axes can be current controlled. The HY-TTC 30S/32S was specially developed for vehicles and machines used in rugged operating environments and at extreme operating temperatures.

Safety

The controllers HY-TTC 30S and HY-TTC 32S are compliant with the international EN ISO 13849 standard on functional safety. Compliance has been certified by TÜV Nord for PL c and PL d* (Performance Level) requirements.

Programming

All HY-TTC 30/32 variants can be programmed in C, whereas the non-safety variant of the HY-TTC 32 can be also programmed in CODESYS.
When programmed in CODESYS, it can also be used as a CANopen Master.

* PL d certification available for HY-TTC 32S only.

Application Fields

- Distributed architecture
- I/O Extension
- Vehicle variants
- Subsystems

www.ttcontrol.com

Robustness

The devices are protected by a proven, robust and compact housing, specially designed for the off-highway industry, and offers an optimized relation of size to performance and can easily be mounted on the machine making use of the four available screw holes.

Variant Overview

	HY-TTC 30	HY-TTC 30S	HY-TTC 32S	HY-TTC 32
CPU core	16 bit Infineon XC2200 CPU, 80 MHz			
	768 kByte int. flash, 82 kByte int. RAM			
	8 kByte EEPROM			
Interfaces	1 x CAN, up to 1 Mbit/s		2 x CAN, up to 1 Mbit/s	
	1 x CAN bus termination configurable via connector pins			
Number I/Os	14 inputs (analog & timer), 16 outputs (analog, digital, voltage, PVG and 8 x PWM, 6 with current feedback)	14 inputs (analog & timer), 16 outputs (analog, digital, voltage, PVG and 8 x PWM, 6 with current feedback)	14 inputs (analog & timer), 16 outputs (analog, digital, voltage, PVG and 8 x PWM, 6 with current feedback)	14 inputs (analog & timer), 16 outputs (analog, digital, voltage, PVG and 8 x PWM, 6 with current feedback)
Sensor Supply	1 x sensor supply 5 V / 100 mA			
Internal	Internal monitoring of board temperature, sensor supply, K15 input and supply voltage			
Software	C Programming Environment			
				CODESYS® V2.3 including support for CANopen®Master
Functional Safety		EN ISO 13849 PL c	EN ISO 13849 PL c / PL d	

TTControl Italy, Brixen
Phone: +39 0472 26 80-11

TTControl Austria, Vienna
Phone: +43 1 585 34 34-0

products@ttcontrol.com www.ttcontrol.com