

CTL-S700 series

Safety controller for mobile machines

Applications

- Cranes and aerial working platform
- Logistic and material handling
- Forestry
- Earth moving and road processing

Special Features

- For use in safety-critical applications acc. to:
 - IEC/EN 61508 Parts 1-3:2010 SIL 2
 - EN ISO 13849-1:2023 PL d, Cat. 2
 - EN 62061:2021 + A1:2024 up to SIL 2
- 32-Bit Tri-Core processor
- up to 64 inputs and 56 outputs
- 4 CAN interfaces
- 2 Ethernet interfaces (internal switch)
- Programmable according to IEC 61131-3 with CODESYS 3.5



CTL-S701 Safety controller

Description

The CTL-S700 safety controller lifts safety to new heights! Especially developed for demanding tasks of mobile machines, the user is offered countless application possibilities.

The controller is ready for use in safety-critical applications and offers many interfaces and I/Os for safety-relevant machine control tasks.

With an IP6K9K protection rating, a robust aluminum cast housing and high shock- and vibration-resistance, CTL-S700 is perfectly equipped for use in harsh environments.

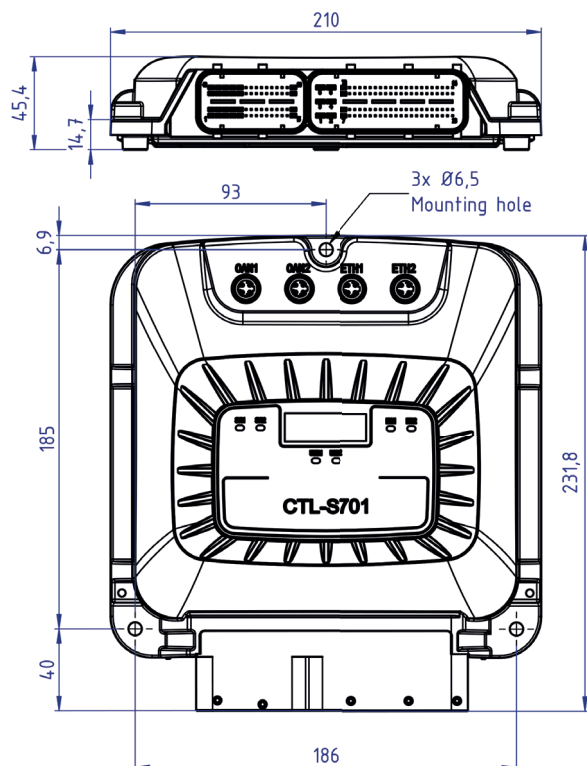
Technical Specifications

CTL-S700 series					
Processor	Aurix TC299TX, 300 MHz, Tri-Core lockstep CPU, 32 bit				
Flash	8 MB, internal / 64 MB external				
SRAM	2.7 MB, internal				
FRAM	512 kB, external				
Programming interface	CoDeSys 3.5 SIL 2				
I/O and Interface	Variant	S701	S702	S704	S705
Order #		83902699	83902700	83902701	83902702
Analog input 12bit, accuracy <1% FS in full temperature range. 4...20mA (configurable protection) - Configurable protection 0...10V 0...32V - Digital input high-side, non-safety	Safety	24	24	16	8
Digital input - Configurable via software to - Digital input high-side - Analog input 0...32V, non-safety	Safety	22	18	10	10
Digital input Frequency - Configurable via software to - Digital input high-side - Digital input low-side, non-safety - Frequency input: - Pulse range 0.6Hz...15kHz - Input voltage threshold 0.3...3.5V - Encoder, non-safety - Analog input 0...32V, non-safety	Safety	12	12	8	8
Digital input - Configurable via software to - Digital input high-side - Resistor input 0...10kΩ - Analog input 0...32V, non-safety	Safety	6	6	4	4
Digital output 4A@24V - Configurable via software to - Digital Output high-side MOSFET - PWM, non-safety - Output frequency: 50...1000Hz	Safety	18	18	10	6
Digital output 4A@24V - Configurable via software to - DO high-side MOSFET - PWM high-side - Output frequency: 50...1000Hz - DO with constant current - Output frequency: 50...1000Hz	Safety	24	20	12	6

CTL-S700 series

	Variant	S701	S702	S704	S705
Digital output 4A@24 H-Bridge - Configurable via software to - DO high-side MOSFET - PWM high-side - Output frequency: 50-1000Hz - DOCC, PWM with current control - Output frequency: 50-1000Hz - H-Bridge, used for switching motor rotation direction - DO low-side MOSFET (non-safety) - PWM low-side (non-safety)	Safety	12	8	6	4
Relay output NO 5A@24V	Safety	2	2	2	2
PVG output - Configurable via software to - PVG output: 10...90% of BAT+ - Voltage output: 0...100% of BAT+ - Analog input 0...32V - Digital input high-side	Non-Safety	2	2	2	2
Auxiliary power supply 5 V / 800 mA	Safety	1	1	1	1
Auxiliary power supply 10 V / 500 mA	Safety	1	1	1	1
Parameter storage	Safety	96 kB	96 kB	96 kB	96 kB
User Flash	Non-Safety	48 MB	48 MB	48 MB	48 MB
RTC	Non-Safety	RTC	RTC	RTC	RTC
CANopen Safety	Safety	4	4	4	4
Ethernet	Non-Safety	2	2	2	2
Environmental					
Operation temperature	-40...+85°C				
Storage temperature	-40...+105°C				
Power supply	8...36 VDC				
Protection class	IP6K9K				
Shock	EN 60068-27				
Vibration	EN 60068-6				
Housing material	Aluminum cast				
Certification					
Safety performance level / Safety integrity level	IEC/EN 61508 Parts 1-3:2010 SIL 2 EN ISO 13849-1:2023 PL d, Cat. 2 EN 62061:2021 + A1:2024 up to SIL 2				
CE marking	EN 61000-4-2, EN 61000-4-4, EN 61000-4-5, EN 61000-6-2, EN 61000-6-7				

Dimensions: CTL-S701 and CTL-S702



Dimensions: CTL-S704 and CTL-S705

