

CTL-S700 series

Safety controller for mobile machines

Applications

- Mobile Cranes
- Truck-mounted Cranes
- Knuckle Boom Cranes
- Forestry Equipment

Special Features

- For use in safety-critical applications acc. to (certification in preparation):
 - IEC/EN 61508 Parts 1-7:2015 SIL 2
 - EN ISO 13849:2015 PL d
 - EN 62061:2005 + AC:2010 + A1:2013 + A2:2015 SILCL 2
- 32-Bit Tri-Core processor
- up to 64 inputs and 56 outputs
- 4 CAN interfaces
- up to 2 Ethernet interfaces
- Programmable according to IEC 61131-3 with CODESYS 3.5



CTL-S701 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 IP66/67 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

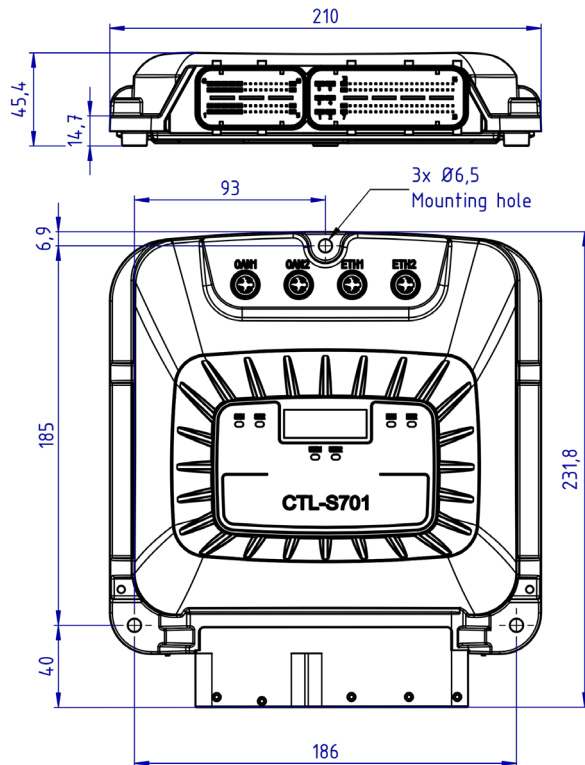
| CTL-S700 series | | | | | | |
|--|---|----------|----------|-------|----------|----------|
| Processor | Aurix TC299TX, 300 MHz, Tri-Core lockstep CPU, 32 bit | | | | | |
| Flash | 8 MB, internal/ optionally 64 MB external | | | | | |
| SRAM | 2.7 MB, internal | | | | | |
| FRAM | 32 kB, external | | | | | |
| Programming interface | CoDeSys 3.5 SIL 2 | | | | | |
| I/O and Interface | Variant | S701 | S702 | S703* | S704 | S705 |
| Order # | | 83902699 | 83902700 | -- | 83902701 | 83902702 |
| Analog input <ul style="list-style-type: none"> • 12bit, accuracy <1% FS in full temperature range. • Configurable via software to <ul style="list-style-type: none"> • 4...20mA • 0...10V • 0...32V | Safety | 24 | 24 | 24 | 16 | 8 |
| Digital input <ul style="list-style-type: none"> • Configurable via software to <ul style="list-style-type: none"> • Digital input high-side • Digital input low-side | Safety | 22 | 18 | 18 | 10 | 10 |
| Digital input HSC <ul style="list-style-type: none"> • Configurable via software to <ul style="list-style-type: none"> • Digital input high-side • Digital input low-side • Frequency input: <ul style="list-style-type: none"> • Pulse range 0.1Hz-15kHz • Input voltage threshold 0.3V-4-5V | Non-safety | 12 | 12 | 12 | 8 | 8 |
| Digital input <ul style="list-style-type: none"> • Configurable via software to <ul style="list-style-type: none"> • Digital input high-side • Digital input low-side • Resistor input: <ul style="list-style-type: none"> • Input: 0-10kΩ • Accuracy: ±2% FS in full temperature range | Non-safety | 6 | 6 | 6 | 4 | 4 |
| Digital output 4A@24V <ul style="list-style-type: none"> • Configurable via software to <ul style="list-style-type: none"> • High-side MOSFET • PWM <ul style="list-style-type: none"> • Output frequency: 50-1000Hz | Safety | 18 | 16 | 12 | 10 | 6 |
| Digital output 4A@24V <ul style="list-style-type: none"> • Configurable via software to <ul style="list-style-type: none"> • DO high-side MOSFET • PWM <ul style="list-style-type: none"> • Output frequency: 50-1000Hz • Digital output with constant current | Safety | 24 | 20 | 12 | 12 | 6 |

*currently not available

| CTL-S700 series | | | | | | |
|---|--|-------|------|-------|------|------|
| | Variant | S701 | S702 | S703* | S704 | S705 |
| Digital output 4A <ul style="list-style-type: none"> Configurable via software to <ul style="list-style-type: none"> DO high-side MOSFET PWMH (safety) Output frequency: 50-1000Hz DOCC (safety) H-Bridge (safety) Used for motor rotation DO low-side MOSFET (non-safety) PWML (non-safety) | Safety | 12 | 8 | 6 | 6 | 4 |
| Relay output NO <ul style="list-style-type: none"> 5A@24V | Safety | 2 | 2 | 2 | 2 | 2 |
| PVG output <ul style="list-style-type: none"> Configurable via software to <ul style="list-style-type: none"> PVG output: 10-90% of BAT+ Voltage output: 0-100% of BAT+ 0...10V 0...32V | Non-Safety | 2 | 2 | 2 | 2 | 2 |
| Auxiliary power supply 5V/ 1A | Safety | 1 | 1 | 1 | 1 | 1 |
| Auxiliary power supply 10V/ 500mA | Safety | 1 | 1 | 1 | 1 | 1 |
| Parameter storage | Safety | 32kB | 32kB | 32kB | 32kB | 32kB |
| Data logger | Non-Safety | 64 MB | - | - | - | - |
| RTC | Non-Safety | RTC | - | - | - | - |
| CANopen Safety | Safety | 4 | 4 | 4 | 4 | 4 |
| Ethernet | Non-Safety | 2 | 2 | 1 | 2 | 1 |
| Environmental | | | | | | |
| Operation temperature | -40...+85°C | | | | | |
| Storage temperature | -40...+105°C | | | | | |
| Power supply | 10...36 VDC | | | | | |
| Protection class | IP66/67 | | | | | |
| Shock | EN 60068-27 | | | | | |
| Vibration | EN 60068-6 | | | | | |
| Housing material | Aluminum cast | | | | | |
| Certification | | | | | | |
| Safety performance level / Safety integrity level (Certification in preparation) | IEC/EN 61508 Parts 1-7:2015 SIL 2 EN ISO 13849:2015 PL d EN 62061:2005 + AC:2010 + A1:2013 + A2:2015 SILCL 2 | | | | | |
| CE marking | EN 61000-4-2, EN 61000-4-4, EN 61000-4-5, EN 61000-6-2, EN 61000-6-7 | | | | | |

*currently not available

Dimensions: CTL-S701 and CTL-S702



Dimensions: CTL-S704 and CTL-S705

