Sheet

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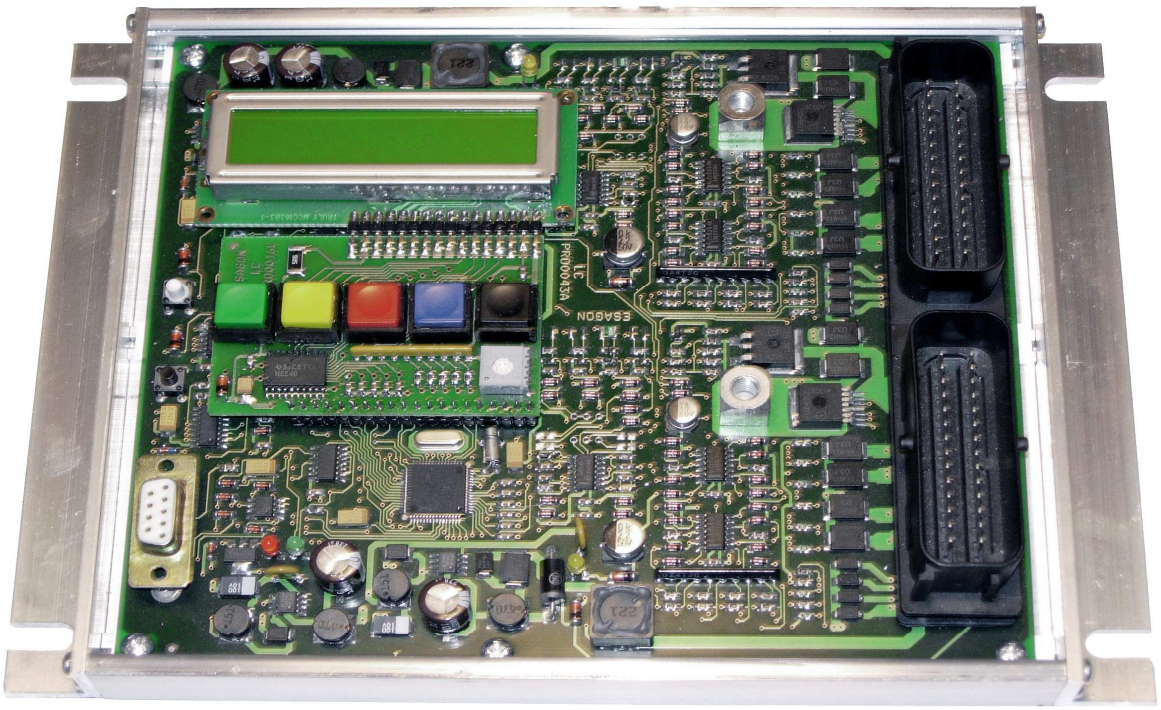
Sentry

Double channel control unit of safety functions and management logics

Sentry is a double channel control unit of safety functions and also management logics, for aerial platforms and lifting means; functions for which is required the processing redundancy and control. Thanks to a very flexible analogical front-end it can interface several kinds of sensors, including full-bridge strain gauges. The dual-channel architecture allows a double and independent processing, in order to ensure a high level of response certainty and reliability. The particular outputs structure also allows the implementation of functions “and wired” type, with state feed-back directly given on the actuators. In addition to safety functions, through its inputs and outputs, it is possible to carry out small control logics, which can meet the needs of arms and lifting systems moving. Thanks to a sturdy container it gets an IP 64 protection degree. In the case of addition of the optional diagnostics plug-in display, the protection degree is IP 52. Power supply between 6 and 36 Volt which enables it to operate on any kind of vehicle and be installed in free air. 56-way connector.



Sentry with diagnostics plug-in display

- Operational and user programs totally upgradeble.
- Double-channel processing with independent microprocessors.
- External watch-dog timers, independent for each microprocessor.
- Independent power supply between channels and between external sensors and internal logic.
- Support for customized boards add-on to extend the hardware functions.
- Proportional valves control with current feed-back.
- Analogical potentiometric joysticks control with high resolution.
- Short-circuit and over-temperature protection on all of the outputs.
- High side or low side power outputs for and-wired on safety outputs.
- CAN-Bus interface.
- 56-way connector.

Working conditions

Operational supply voltage:	**+6V - +36V**
Operational absorption logic circuit:	**< 0,5A**
Working temperature:	**-20°C - +85°C**
Maximum working temperature:	**-40°C - +105°C**

Inputs and outputs for each channel

Digital ratiometric inputs On/Off:	**8**
Analogical inputs 10 bit resolution:	**4**
Digital power outputs 5A max:	**4**
Digital power outputs 2A max:	**4**
Digital safe outputs 5A max:	**2**

The indicated quantities of inputs and outputs should be multiplied by 2, ie by the number of channels,

CAN-Bus and communication door

CAN-Bus channel:	**FULL CAN 2.0 A e B**
Protocol standard:	**SAE J1939**
Maximum speed:	**500 Kbit / sec.**
Communication door:	**RS 232 C**
Maximum data speed:	**19,2 Kbi/sec.**

Processing for each channel

Microprocessor:	**16 bit**
Operational rate:	**16 MHz**
Flash memory program:	**128 Kbytes**
PL (Performance Level) EN ISO 13849-1:	**E**
SIL (Safety Integrity Level) EN 62061:	**3**
MTBF (Mean Time Between Failures) Siemens SN29500-1 Ground Mobile:	**352,92**

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