

### DESCRIPTION

The SAUER-SUNDSTRAND Mobile Microcomputer Family SUSMIC 10/12 is a digital electronic series, which is designed for open loop and closed loop mobile off-highway system applications.

Modern day controls in mobile applications driving rotary and linear actuators (hydrostatic transmissions, hydraulic cylinders etc.) increasingly need more flexible and intelligent electronics. The rugged design of the SUSMIC 10/12 digital electronic series provides the best option for this. The design provides the required performance for a mobile environment and the high performance, 16 bit microcontroller provides the capability for future expansion.

It is possible to load different software programs via the RS232 interface for the whole series without any hardware changes. This feature makes it possible for a non-electronically oriented user to use standard



hardware for different applications if the appropriate software is selected.

The SUSMIC 10/12 software and hardware have been developed so that communication between the controller and specially developed tools can be used to optimize the performance during production. This facility simplifies start-up, field service and stock.

### FEATURES

- Mobile off-highway microcomputer
- 16 bit microcontroller
- 5V Flash Memory
- Supply voltage 12V<sub>DC</sub> or 24V<sub>DC</sub> (one unit)
- RS232 interface
- CAN Bus network (optional)
- Software download without hardware changes
- Easy service

### TECHNICAL DATA

#### SUPPLY VOLTAGE

12V<sub>DC</sub> or 24V<sub>DC</sub>

#### SWITCHING INPUTS

4 (low side 0V<sub>DC</sub> or high side switching  
> 8V<sub>DC</sub> ... < 30V<sub>DC</sub>)

#### ANALOG INPUTS

4 (0V<sub>DC</sub> to 5V<sub>DC</sub>)

#### FREQUENCY INPUTS

2 (2- or 3-wire PPU)

#### PROPORTIONAL OUTPUTS

1 bidirectional current source (160mA into 30 $\Omega$ )  
can be divided into  
2 unidirectional current sources (100mA into 30 $\Omega$ )  
by software

#### SENSOR VOLTAGE

5V<sub>DC</sub> up to 300mA

#### SWITCHING OUTPUTS

2 (2A high side switching),  
can be configured to drive engine actuator

#### LED OUTPUTS

2 (under software control)  
2 (for internal voltages)  
all visible from outside the enclosure

#### COMMUNICATION

RS232 fully buffered

#### CAN Interface

optional with add-on board

#### CONTROLLER

Intel 80196 family

#### MEMORY

Flash Memory: 128kByte  
RAM: 8kByte

## ENVIRONMENTAL SPECIFICATION

Valid for the electronic board in an enclosure. Specification for series release electronics. Proven according the following standards:

### Climate

DIN IEC 68-2-3  
DIN IEC 68-2-14  
DIN IEC 68-2-38

### EMV

DIN 40839 T1/T2/T3/T4  
VDE 0879 T3

### Water protected

DIN IEC 68-2-18

### ESD

DIN IEC 801-2

### Corrosion

DIN IEC 68-2-52

### Vibration

DIN IEC 68-2-6  
DIN IEC 68-2-34  
DIN IEC 68-2-35

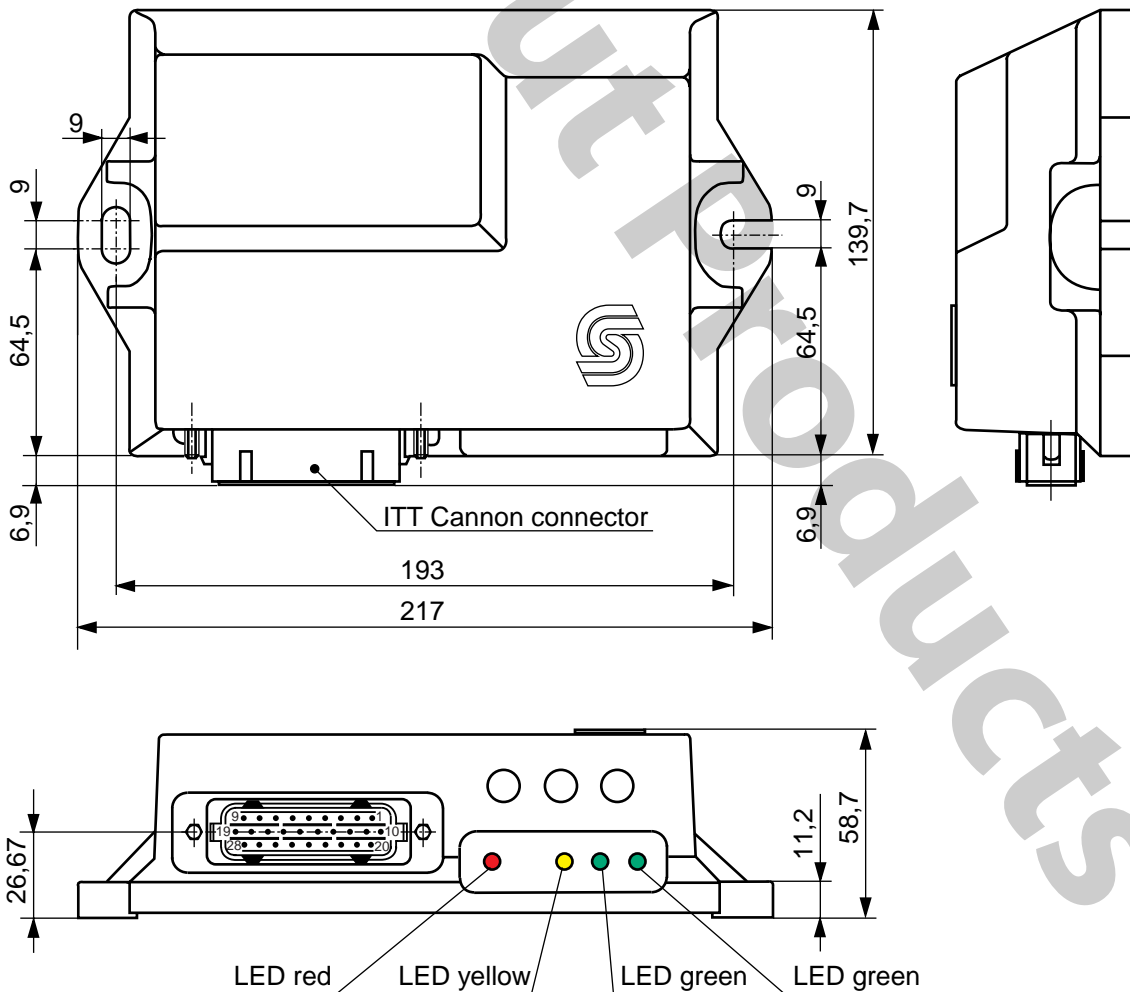
### Shock

DIN IEC 68-2-27

**ATTENTION**

**Before welding disconnect the electronic complete!**

## DIMENSIONS



S00832A

# CONNECTION SUSMIC 10/12

ITT Cannon-connector, 28-pin

Battery (+)	1
Battery (-)	2
Chassis	3
Sensor (-)	4
Sensor (+)	5
BID.OUT1	6
BID.OUT2	7
DIG.INP1.2	8
DIG.INP1.0	9
Battery (+)	10
PPU.IN1	11
Ignition	12
Sensor (-)	13
PPU.IN0	14
DIG.INP1.3	15
RXD	16
TXD	17
AN.IN ACH0	18
AN.IN ACH1	19
DOUT0	20
DOUT1	21
Sensor (-)	22
Sensor (+)	23
Sensor (+)	24
AN.IN ACH3	25
RS232 GND	26
DIG.INP1.1	27
AN.IN ACH2	28

S00846