



**TRS.ALMX**

THREEAXIAL ANGULAR SAFETY SENSOR with DINAMIC COMPENSATION and 2 SEPARATE CAN-BUS LINES



- Double CPU, a double 3D-MEMS accelerometer and a double gyroscope, in a fully redundant circuit scheme, with 2 independent CAN-Bus lines
- Termination resistors are permanent (electrically measurable even with the device off)
- M12 connector with 8 poles
- The device can filter and improve the measure accuracy in presence of vibration and acceleration loads
- Implementable as a SLAVE in a CAN network
- Polyurethane resin case
- E3 certified UNECE regulation 10 automotive



**TECHNICAL FEATURES**

MASTER CODE	TRS.184.367
POWER SUPPLY	9-36 VDC / CURRENT CONSUMPTION 30 mA AT 24 VDC
CAN BUS	<b>2 INDEPENDENT PORT:</b> 2.0B COMPLIANT - (11, 29 BIT) - ISO 11898 - UP TO 1MBIT/S
CAN BUS PROTOCOLS	CAN OPEN (CIA DS410 DEVICE PROFILE FOR INCLINOMETER, WITH DS306 COMPLIANT EDS FILE)
TECHNOLOGY	3D-MEMS ACCELEROMETER AND GYROSCOPE
SAFETY	DOUBLE CPU DOUBLE SENSOR DOUBLE CAN LINE
CONNECTION PORT	WIRED , WITH PUR CABLE AND M12 8PIN MALE CONNECTOR
LED	N.1 BI-COLOR STATUS LED
CASE	ENCAPSULATED IN PUR RESIN - SELF-EXTINGUISHING UL94 (V0)
WORKING TEMPERATURE	-40°C +85°C (TEMPERATURE DRIFT-REDUCTION)

**MEASURE FEATURES**

OPTIONS	ANGLE – TILT
FILTERING	USER CONFIGURABLE
RESOLUTION	UP TO 0,01°
ADDITIONAL DATA	3-AXIS ACCELERATION ACCURACY: 0,5 mg/sample 3-AXIS ROTATION SPEED ACCURACY: 0,03 (deg/s)/sample



(20/02/2026) - 1



**TRS.ALMX**

THREEAXIAL ANGULAR SAFETY SENSOR with DINAMIC COMPENSATION and 2 SEPARATE CAN-BUS LINES

**ELECTRONIC FEATURES**

<b>SLAVE USAGE</b>	EDS FILE
<b>PROGRAMMING</b>	FIRMWARE UPLOAD BY CAN BUS WITH ALOADER SOFTWARE TOOL
<b>CONFIGURING</b>	THROUGH ALTILT CONFIG
<b>SAMPLE TIME</b>	LESS THAN 5 ms
<b>CPU</b>	DOUBLE ARM CORTEX M4, 32 bit MICROCONTROLLER CORE

**STANDARDS**

<b>ELECTROMAGNETIC EMISSIONS</b>	EN 61000-6-4
<b>ELECTROMAGNETIC IMMUNITY</b>	EN 61000-6-2
<b>ROAD VEHICLES — ELECTRICAL DISTURBANCES FROM CONDUCTION AND COUPLING — PART 2</b>	ISO 7637-2: 2011
<b>ROAD VEHICLES — COMPONENT TEST METHODS FOR ELECTRICAL DISTURBANCES FROM NARROWBAND RADIATED ELECTROMAGNETIC ENERGY — PART 1</b>	ISO 11452-1: 2005

**VERIFICATIONS AND TESTS**

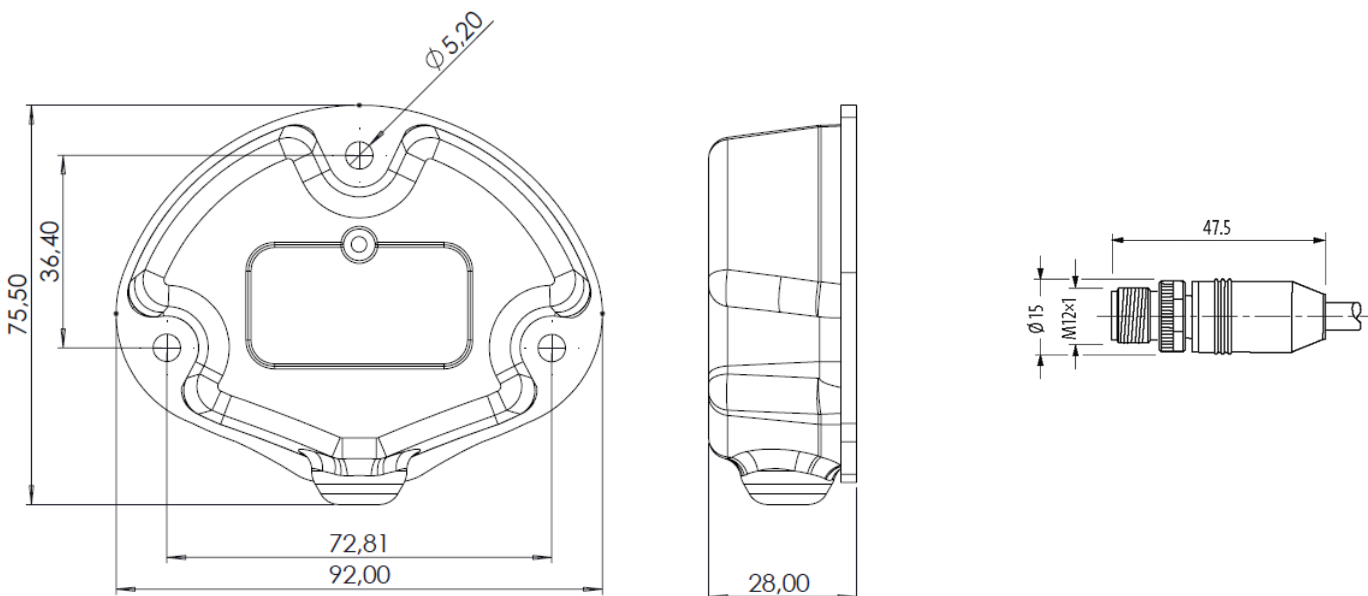
PERFORMED ACCORDING TO THE REQUIREMENTS OF UNECE REGULATION 10 - AMENDMENT 06 - SUPPLEMENT 0	E3 – TYPE APPROVAL
--	--------------------

<b>BOX IP</b>	IP68
---------------	------

<b>MTTFd</b> CALCULATED ACCORDING TO THE IEC61709 (SIEMENS SN29500), WITH ENVIRONMENTAL FACTORS 3K7 (IEC60721)	231,98 YEARS
---	--------------

<b>PERFORMANCE AND SAFETY INTEGRITY LEVEL</b>	PLd – SIL2 (DUAL CHANNEL INTERNAL SCHEME)
---	--

**SIZE (mm)**





**TRS.ALMX**

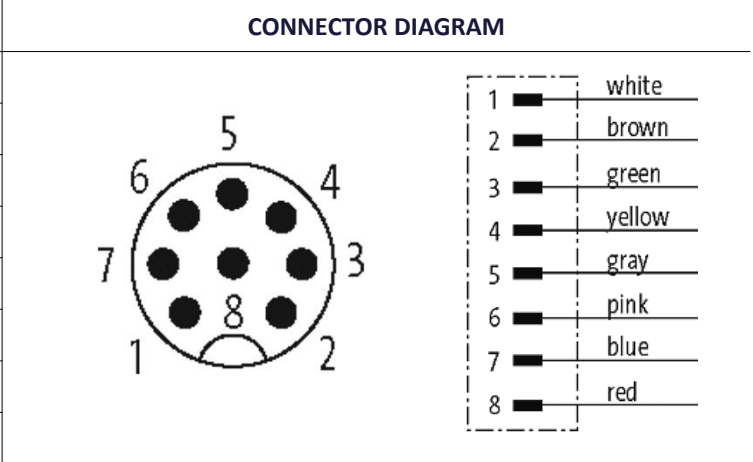
THREEAXIAL ANGULAR SAFETY SENSOR with DINAMIC COMPENSATION and 2 SEPARATE CAN-BUS LINES

**ELECTRICAL CONNECTIONS**

		PINOUT
<b>WIRED</b>	1	CAN BUS L - PORT 1
	2	POSITIVE POWER SUPPLY
	3	CAN BUS H - PORT 1
	4	CAN BUS L - PORT 2
	5	empty
	6	empty
	7	GND POWER SUPPLY
	8	CAN BUS H - PORT 2

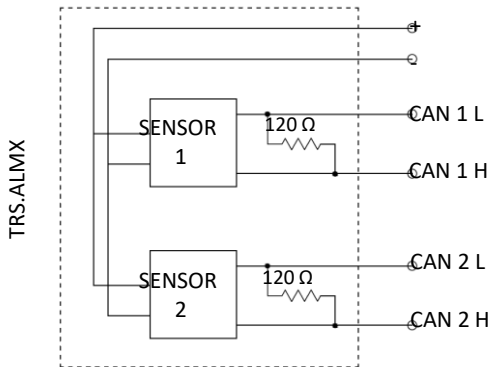
CABLE:  
L=30cm

CONNECTOR:  
M12 8 PIN MALE  
(FPM)

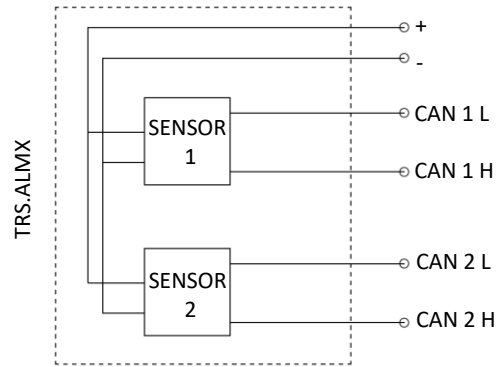


**INTERNAL SCHEME**

WITH TERMINATION RESISTORS  
Code: **TRS.ALMX.367.6.R.S00**



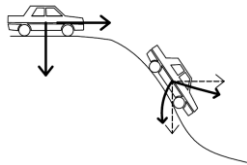
WITHOUT TERMINATION RESISTORS  
Code: **TRS.ALMX.367.6.S00**



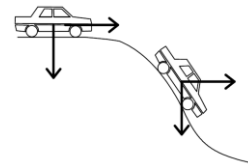
**FEATURES**

DEVICE SUITABLE FOR MOTION APPLICATION WITH BASIC CONSTANT REFERENCE

ACCURACY OF A TRADITIONAL DEVICE



ACCURACY WITH TRS.ALMX



**MEASURE OPTIONS**

**S00**

TRASDUCER WITH CONFIGURABLE MEASUREMENT MODE ON X Y & Z AXIS (FOR TILT/ANGLE/ROTATION)

**ACCURACY:** SELECTABLE AS: 1°-0,1°-0,01°-0,001°

**MEASURING RANGE:** 0 ... 360° // -180°+180°





NOTE