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	**2 INDIPENDENT PORT:** 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

Scan me

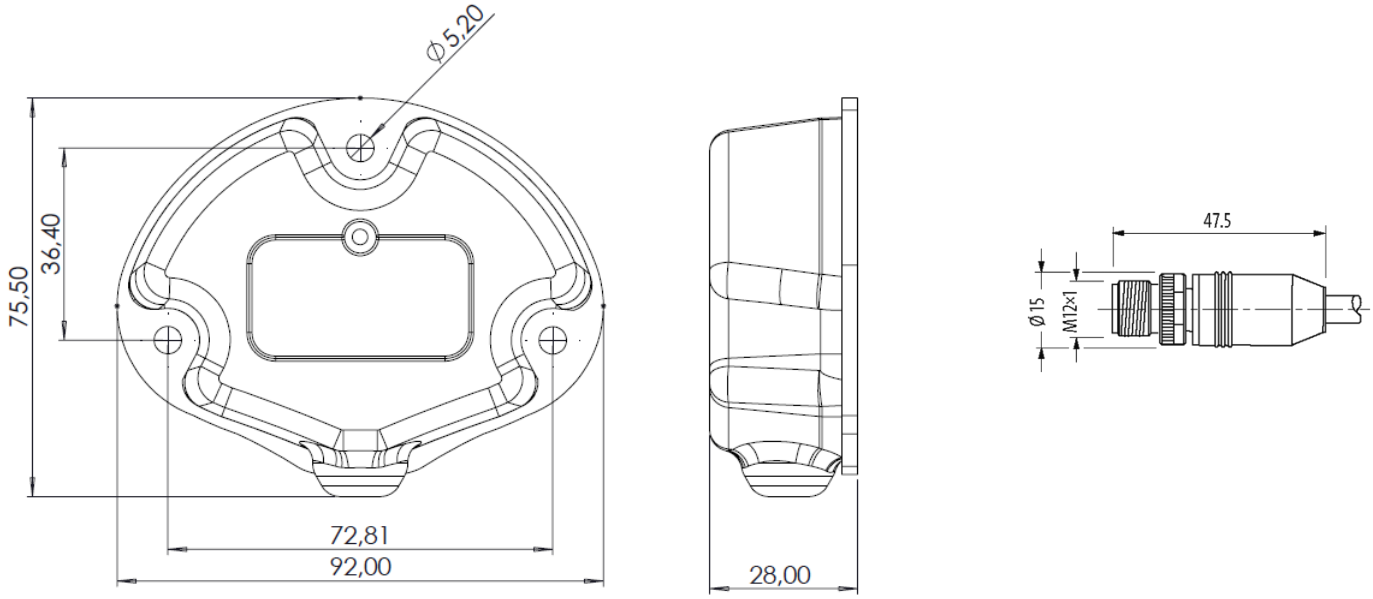
(25/06/2025) - 1

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

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

STANDARDS	
ELECTROMAGNETIC EMISSIONS	EN 61000-6-4
ELECTROMAGNETIC IMMUNITY	EN 61000-6-2
ROAD VEHICLES — ELECTRICAL DISTURBANCES FROM CONDUCTION AND COUPLING — PART 2	ISO 7637-2: 2011
ROAD VEHICLES — COMPONENT TEST METHODS FOR ELECTRICAL DISTURBANCES FROM NARROWBAND RADIATED ELECTROMAGNETIC ENERGY — PART 1	ISO 11452-1: 2005
VERIFICATIONS AND TESTS PERFORMED ACCORDING TO THE REQUIREMENTS OF UNECE REGULATION 10 - AMENDMENT 06 - SUPPLEMENT 0	E3 – TYPE APPROVAL
BOX IP	IP68
MTTFd CALCULATED ACCORDING TO THE IEC61709 (SIEMENS SN29500), WITH ENVIRONMENTAL FACTORS 3K7 (IEC60721)	231,98 YEARS
PERFORMANCE AND SAFETY INTEGRITY LEVEL	PLd – SIL2 (DUAL CHANNEL INTERNAL SCHEME)

SIZE (mm)



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TRS.ALMX

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

ELECTRICAL CONNECTIONS

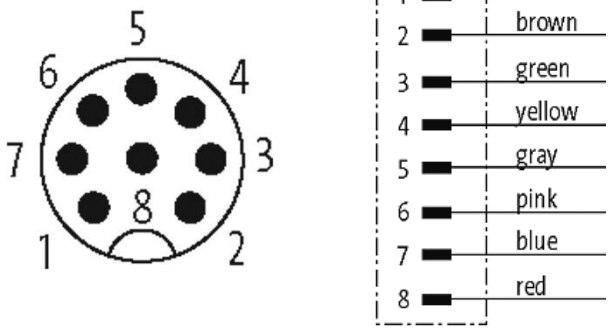
WIRED

CABLE:
L=30cm

CONNECTOR:
M12 8 PIN MALE
(FPM)

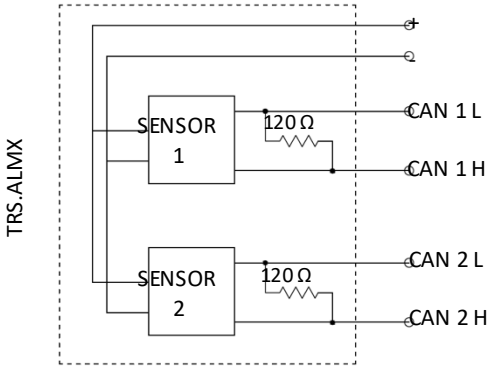
PINOUT	
1	CAN BUS L - PORT 1
2	POSITIVE POWER SUPPLY
3	CAN BUS H - PORT 1
4	CAN BUS L - PORT 2
5	*empty*
6	*empty*
7	GND POWER SUPPLY
8	CAN BUS H - PORT 2

CONNECTOR DIAGRAM

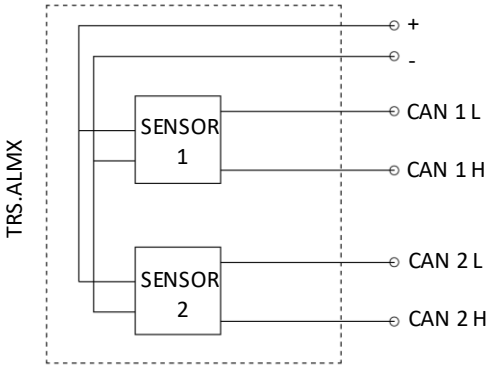


INTERNAL SCHEME

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



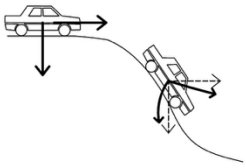
WITHOUT TERMINATION RESISTORS
Code: **TRS.ALMX.367.6.S00**



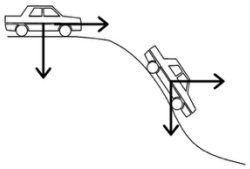
FEATURES

DEVICE SUITABLE FOR MOTION APPLICATION WITH BASIC CONSTANT REFERENCE

ACCURANCY OF A TRADITIONAL DEVICE



ACCURANCY 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°

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NOTE