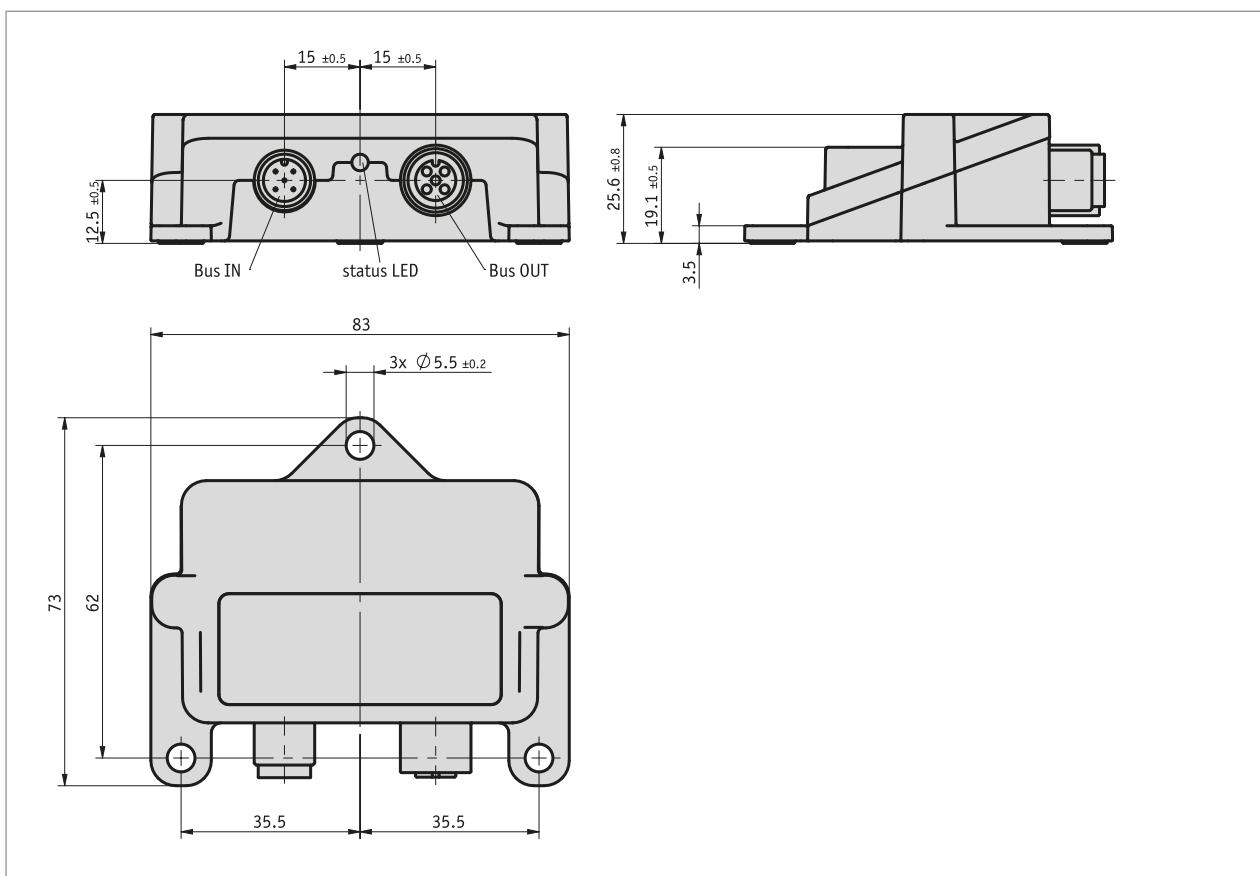


Profile

- 6 Axis Inertial Measurement Unit (IMU)
- SIL2 (IEC 61508) PLd (DIN EN ISO 13849) certified (in preparation)
- Compensation of external acceleration thanks to innovative sensor fusion
- Freely configurable installation position and axis alignment
- Euler angle measurement (pitch & roll)
- E1 Approval by the German Federal Office for Motor Vehicles
- With PURE.MOBILE technology



Mechanical data

Feature	Technical data	Additional information
Housing	zinc die-cast	
Mounting type	3-point mounting	
Weight	~0.25 kg	

Electrical data

Feature	Technical data	Additional information
Operating voltage	9 ... 36 V DC	
Power input	≤330 mW ≤4.3 W	with activated heating
Status display	two-color LED (red/green)	device status/CAN status
Power rating	±36 mW	CAN interface
Interface	according to ISO 11898-1, not electrically isolated	CANopen Safety
Address	1 ... 127	default: 1
Baud rate	100 kbit/s 125 kbit/s 250 kbit/s 500 kbit/s 800 kbit/s 1 Mbit/s	default
Starting time	<800 ms	
Parameter	according to CiA 301, CiA 303 Part 3, CiA 305, CiA 410, EN 50325-5	CANopen Safety
Type of connection	2x M12 plug connectors (A-coded)	5-pole, 1x pin, 1x socket

System data

■ Acceleration sensor

Feature	Technical data	Additional information
Scanning	MEMS	
Resolution	0.25 mg	
System accuracy	±0.4 % at 25 °C ±0.7 % ±0.5 %	based on measured value based on measured value based on measured value, with activated heating
Offset drift	±5 mg at 25 °C ±20 mg ±10 mg	with activated heating
Measuring range	±3 g	
Approval	E1	UN ECE R10 approval No: E1*10R06/02*10285*00

■ Gyroscope

Feature	Technical data	Additional information
Scanning	MEMS	
Resolution	0.14 dps	default: ±0.035 dps, depending on selected measurement range
System accuracy	±2 % at 25 °C ±5 % ±3 %	based on measured value based on measured value based on measured value, with activated heating
Offset drift	±2 dps at 25 °C ±5 dps ±3 dps	with activated heating
Measuring range	±4000 ±1000	configurable, default: ±1000 dps with activated Kalman filter
Approval	E1	UN ECE R10 approval No: E1*10R06/02*10285*00

■ Inclinometer

Feature	Technical data	Additional information
Scanning	MEMS	
Resolution	0.01 °	
System accuracy	±0.3 ° at 25 °C ±0.8 ° ±0.5 ° ±0.6 ° at 25 °C ±1.6 ° ±1 °	over the entire temperature range over the entire temperature range with heating activated with activated Kalman filter over the entire temperature range with Kalman filter activated over the entire temperature range with activated Kalman filter and activated heater
Measuring range	0 ... 360 °	configurable
Approval	E1	UN ECE R10 approval No: E1*10R06/02*10285*00

■ Characteristics of functional safety

Feature	Technical data	Additional information
Performance Level (PL)	PLd	ISO 13849-1:2023
Security Integrity Level (SIL)	SIL2	IEC 61508:2010
MTTF	203 Year(s) at 40 °C	SN 29500
MTTFd	≥75 Year(s)	ISO 13849-1:2023
PFH	≤65 FIT	IEC 61508:2010, 1 FIT = 1.0 E -09 1/h
DCavg	92.2 %	ISO 13849-1:2023

Ambient conditions

Feature	Technical data	Additional information
Ambient temperature	-40 ... 85 °C	
Storage temperature	-40 ... 85 °C	
Relative humidity	98 %	ISO 16750-4, condensation inadmissible
EMC	EN 61326-1	immunity requirement of industry
	EN 61000-4-3, -4, -6, -8	interference resistance / immission
	ISO 11452-2, -5	interference radiation ESA
	ISO 7637-2, -3	transient pulses
Protection category	IPx7	EN 60529 installed according to assembly instructions and with suitable mating connector
	IP6K5	ISO 20653 installed according to assembly instructions and with suitable mating connector
Salt spray test	severity level 4	EN 60068-2-52
Shock resistance	490 m/s ² , 6 ms	EN 60068-2-27, half sine, 3 axes (+/-), each 10 shocks
Vibration resistance	10 ... 2000 Hz	EN 60068-2-64, 3 axes, each 32 hours

pin assignment

Signal	PIN
CAN_SHLD	1
+UB	2
GND	3
CAN_H	4
CAN_L	5

Order

■ Ordering table

Feature	Ordering data	Spezifikation	Additional information
Number of axes	A 1	Z-axis, 0 ... 360°	
	A 2	X-axis and Y-axis, -90 ... +90° each	

■ Order key

IMS365R - CANs - A



Scope of delivery:
IMS365R, Quick Start Guide



Accessories you can find:

Cable extension KV05S0	www.siko-global.com
Overview Mating connector	www.siko-global.com
Mating connector, 5-pole, angle socket	Order key 83006
Mating connector, 5-pole, socket	Order key 84109
Bus terminating connector, 5-pole, pin	Order key 82815