

Acceleration sensors

With relay output for limit monitoring

Analog / CANopen®

GAM900



GAM900

Features

- Acceleration sensor / analog / CANopen®
- Up to two relay outputs for limit monitoring
- 3 axes detection, MEMS based
- Measuring range ± 2 g
- Connection: connector M12, 12-pin
- Offshore capability (plastic housing)

Optional

- Filter up to 150 Hz and order 8

Technical data - electrical ratings

Voltage supply	10...30 VDC
Reverse polarity protection	Yes
Consumption w/o load	≤ 200 mA (24 VDC)
Initializing time	≤ 2000 ms after power on
Interfaces	CANopen®, Analog (4...20 mA or 0...10 V)
Frequency bands	6 (configurable)
Measuring range	± 2 g
Resolution	< 4 mg
Accuracy 3σ (with band pass filtering)	$= 35$ mg (in the range of ± 1000 mg) $= 10$ mg (in the range of ± 250 mg)
Interference immunity	DIN EN 61000-6-2 EN 61326-3-1
Emitted interference	DIN EN 61000-6-4
Status indicator	DUO-LED integrated in housing
Approvals	UL approval / E63076, Option: PLd according to EN ISO 13849-1:2008 +AC:2009 SIL CL2 according to EN 62061:2005 +AC:2010 +A1:2013 SIL2 according to IEC 61508-1..7:2010

Technical data - mechanical design

Dimensions W x H x L	55 x 30 x 90 mm
Protection DIN EN 60529	IP 67
Materials	GAM900-M: Aluminium GAM900-P: glass-fiber reinforced plastic
Operating temperature	$-40 \dots +85$ °C
Resistance	DIN EN 60068-2-6 Vibration 20 g, 60-2000 Hz DIN EN 60068-2-27 Shock 100 g, 6 ms
Weight approx.	200 g (Plastic), 250 g (Aluminium)
Connection	Connector M12, 12-pin

Acceleration sensors

With relay output for limit monitoring

Analog / CANopen®

GAM900

Part number

GAM900-

	3	2G	.		.ACA	...
--	---	----	---	--	------	-----

							<u>Relay trigger threshold</u>
							... Encoding value 05...99 at choice
							Trigger threshold = encoding value x 10 mg
							(e.g. 80 mg = 08 x 10 mg)
							Encoding value 00: parameterization by the customer or with two
							switching threshold
							<u>Voltage supply / interface</u>
							CC 10...30 VDC / CANopen® and analog (4...20 mA)
							VC 10...30 VDC / CANopen® and analog (0...+10 V)*
							<u>Connection / Output</u>
						J	1 x M12 connector, 12-pin / 1 x relay
						2	2 x M12 connector, 12-pin / 2 x relay
							<u>Measuring range</u>
						2G	±2 g
							<u>Number of axes</u>
						3	Three axes
							<u>Housing material</u>
						M	Aluminium
						P	Glass-fiber reinforced plastic

* On request

Accessories

Connectors and cables

11142900	Female connector M12, 12-pin, 1 m cable (Z 201.M01)
11138627	Female connector M12, 12-pin, 5 m cable (Z 201.M05)
11142902	Female connector M12, 12-pin, 10 m cable (Z 201.M10)

· Subject to modification in technic and design. Errors and omissions excepted.

Acceleration sensors

With relay output for limit monitoring

Analog / CANopen®

GAM900

Terminal assignment

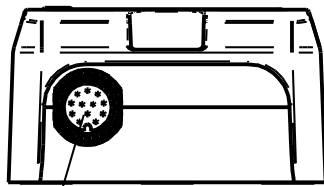
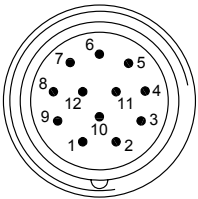
Connector 1, connector M12, 12-pin

Pin	Description
Pin 1	GND
Pin 2	Test input
Pin 3	UB
Pin 4	Analog ground
Pin 5	Analog output X
Pin 6	Analog output Y
Pin 7	Relay 1 / contact NO*
Pin 8	CAN Ground
Pin 9	Relay 1 / contact CO*
Pin 10	Relay 1 / contact NC*
Pin 11	CAN Low
Pin 12	CAN High

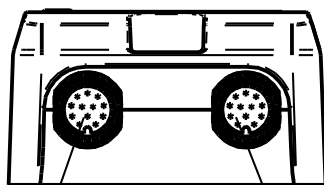
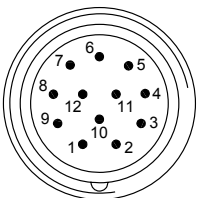
Connector 2, connector M12, 12-pin

Pin	Description
Pin 1	Relay 2 / contact CO*
Pin 2	n.c.
Pin 3	n.c.
Pin 4	n.c.
Pin 5	n.c.
Pin 6	n.c.
Pin 7	n.c.
Pin 8	CAN Ground
Pin 9	Relay 2 / contact NO*
Pin 10	Relay 2 / contact NC*
Pin 11	CAN Low
Pin 12	CAN High

* Customer-specific relay configuration on request



Connector 1



Connector 1

Connector 2

Acceleration sensors

With relay output for limit monitoring

Analog / CANopen®

GAM900

Configuration profile

Band	CANopen 1	CANopen 2	CANopen 3	CANopen 4	Analog 1	Analog 2
Direction	X	Y	Z	X,Y	X	Y
Range	±2 g	±2 g	±2 g	±2 g	±0.5 g	±0.5 g
Resolution	1.00 mg	1.00 mg	1.00 mg	1.00 mg	0.244 mg	0.244 mg
Filter type	Bandpass	Bandpass	Bandpass	Bandpass	Bandpass	Bandpass
Filter order	4	4	4	4	4	4
Bandwidth	0.05...25 Hz	0.05...25 Hz	0.05...25 Hz	0.05...25 Hz	0.05...25 Hz	0.05...25 Hz
Relay ID	2	2	–	1	–	–
Relay attack value	see part no.	see part no.	–	see part no.	–	–
Relay attack time	0 s	0 s	–	0 s	–	–
Relay decay value	100 %	100 %	–	100 %	–	–
Relay decay time	1 s	1 s	–	1 s	–	–

Different configurations on request.

Installation position



· Subject to modification in technic and design. Errors and omissions excepted.

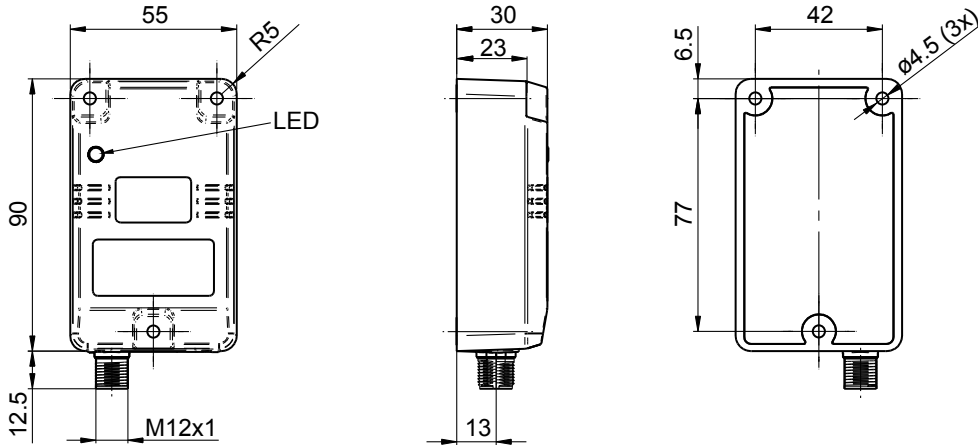
Acceleration sensors

With relay output for limit monitoring
Analog / CANopen®

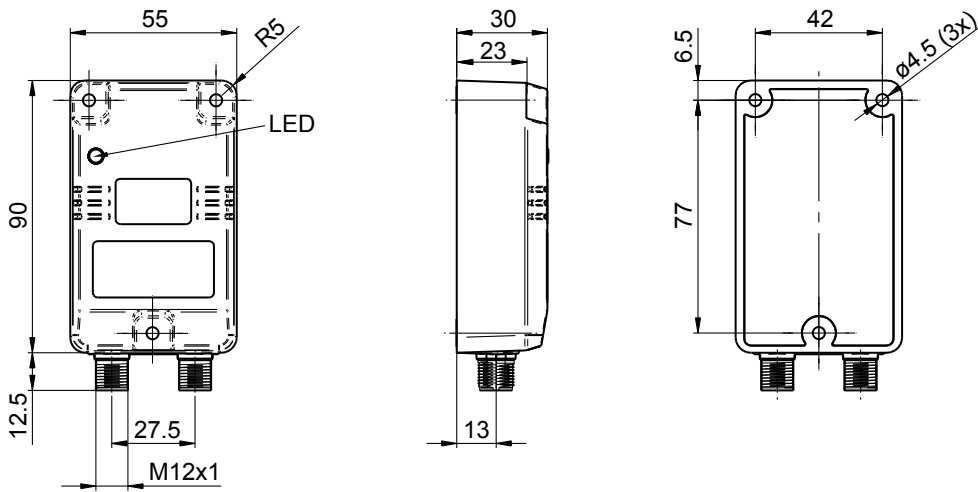
GAM900

Dimensions

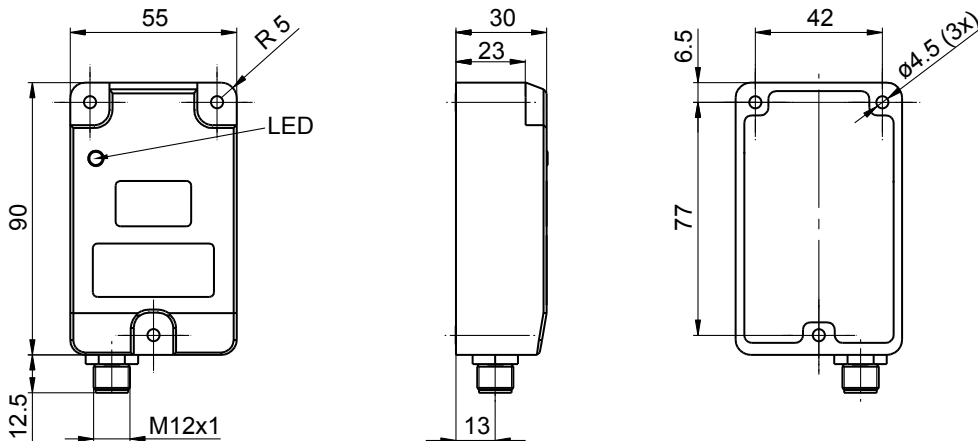
GAM900 - plastic housing 1x connector M12



GAM900 - plastic housing 2x connector M12



GAM900 - aluminium housing 1x connector M12



· Subject to modification in technic and design. Errors and omissions excepted.

Acceleration sensors

With relay output for limit monitoring
Analog / CANopen®

GAM900

Dimensions

GAM900 - aluminium housing 2x connector M12

