Baumer
Passion for Sensors

Radar distance measuring sensors

R600V.DAE0-11188367

Off-Highway radar sensor for ground and crop distance

Article number: 11188367

Overview

- Superior crop penetration and ground detection
- Heavy duty connector, lens protection
- Rectangular flat backside mounting
- Tested according to the highest off-highway industry standards
- Robust against environmental influences such as wind, temperature, humidity
- Sensor with CAN SAE J1939 interface

Picture similar

CE

Technical data

General data	
Scanning range Sd	0.3 … 5 m
Version	Multi-object (ground & crop)
Repeat accuracy	6.5 mm
Temperature drift	≤ ± 3 % Sd (Full Scale; ± 15 mm)
Power on indication	LED green
Carrier frequency	122 … 123 GHz
Band width	1 GHz
Linearity error	± 0.3 %
Modulation type	FMCW
Transmitting power (EIRP)	< +20 dBm
Aperture angle	6 °
MTTF	> 126 years
Approvals/certificates	FCC / CFR-47 part 15 (USA) RSS-210 Issue 10 (Canada) EN 305 550-1 V.1.2.1 (European Union) EN 305 550-2 V.1.2.1 (European Union) EN 61000-6-2 EN 61000-6-3 EN 50581 EN 13309 EN ISO 14982 ISO 13766
Electrical data	
Voltage supply range +Vs	9 … 32 VDC
Current consumption max. (no load)	160 mA
Baud rate	250 kBaud (500 kBaud)
Output rate	1 … 100 Hz
Short circuit protection	Yes
Reverse polarity protection	Yes, Vs to GND

Electrical data	
Output circuit	CAN (5 V), CAN SAE J1939
Mechanical data	
Type	Cubic with M6 mounting holes
Housing material	Polyamid (glass fiber reinforced), aluminium
Width / diameter	97 mm
Height / length	84 mm
Depth	42.5 mm
Connection types	Connector AMPSEAL 16 4 pin
Tightening torque max.	15 Nm (A: 12 Nm)
Ambient conditions	
Operating temperature	-40 … +60 °C
Storage temperature	-40 … +85 °C
Protection class	IP 69K IP 68
Shock (semi-sinusoidal)	50 g / 11 ms, 18 jolts per axis and direction
Particle impact	Gravel acc. to EN 11124-2; gravel pressure 2 bar, 2 cycles
Random vibration	IEC 60068-2-64 Frequency : 5 … 2000 Hz Overall Grms: 11,55 Grms Axis: all 3 axes / 8h per axis
Salt environment	ISO 9227 48h / +35 °C / pH=6,5 ... 7,2 / 5 % sodium chloride solution
Chemical resistance	Brush test with typical chemicals in agriculture, mobile machines (soak 168h)
Combined environment	32 VDC / -40 … +85 °C / 0 ... 70 % RH; 100 cycles / 12h per cycle

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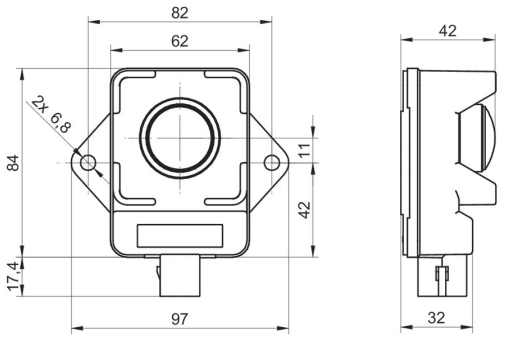
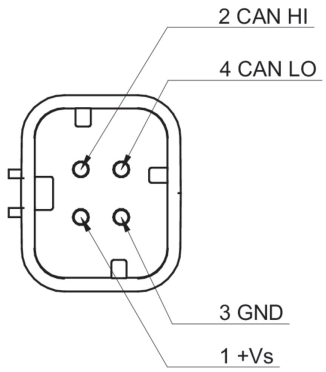
Remarks

- EN 13309 1) 3)
- EN ISO 14982 1) 2)
- EN 13766 1)
- 1) only for use in machines with centralized load dump suppression (35 V @ 12 VDC vehicle power, 58 V @ 24 VDC vehicle power)
- 2) shall not be used in the direct control and modification of the state of function of the machine
- 3) not for operations during engine start phase in 12 VDC / 24 VDC vehicle power
- For Brazil there is currently no type approval required

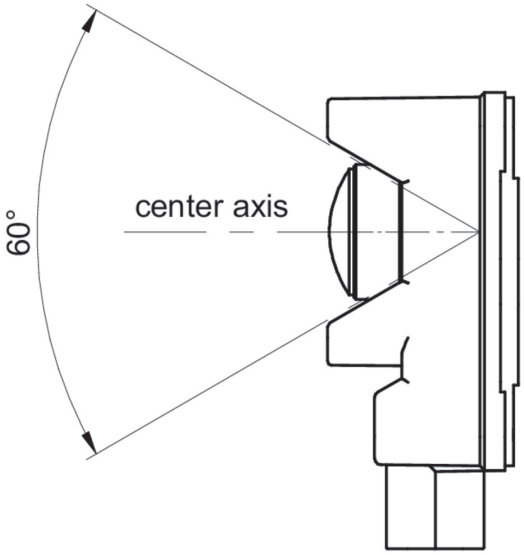
Dimension drawing



Pin assignment



Installation instructions



Objects within a rotational cone of ± 30 ° may be picked up by the sensor depending on position and/or surface properties. When mounting behind a cover material properties and thickness must be taken into account to avoid excessive damping of the signal. Coatings containing metal must be avoided. The effect of objects in the defined free area must be verified in the application. Loose objects should be avoided.