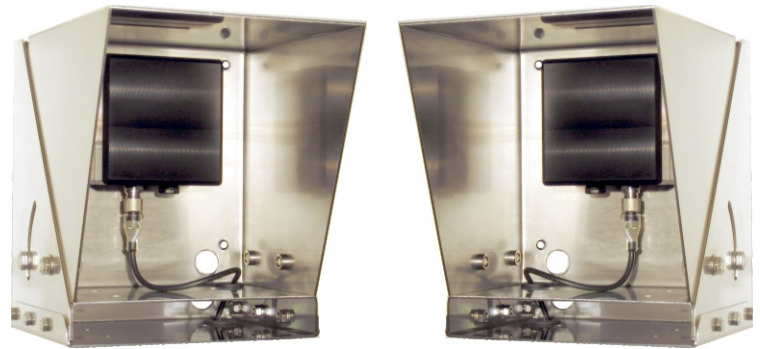
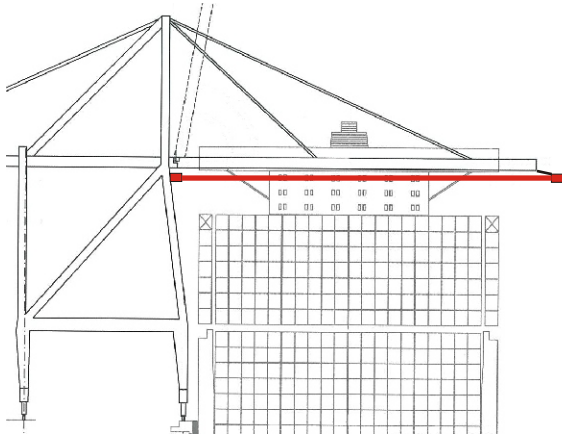


Anti Collision Device Radar Barrier

Radar Anti Collision Device



Description

The radar barrier consists of two radar systems, which have contact with each other during operation. A break due to an obstacle between the two devices will be reported by an alarm output to both units. FMCW-Radar which works in the frequency range from 24,000 - 24,250 GHz is used. The antenna characteristics is $11^\circ (\pm 5,5^\circ)$ vertical and horizontal. This allows a high parallel offset. It will detect objects within a distance from 0,2 m up to adjustable 2 - 40 m.

Objects with a relative movement of a minimum speed from 5 cm/sec (3 m/min) will be detected.

Object detections will be reported by open-collector-outputs. The unit has 2 outputs which can be used for example as slow down or stop features. The output is by a 3-pin RSF4 standard connector.

This device was especially developed for the anti-collision and start up protection in the field of fast moving marine port cranes, f.e. Straddle Carrier, RTGC, RMGC, STS and OHBC.

Advantages:

- high operating distance
- high parallel offset
- insensibility against environmental conditions
- high class of protection, heavy duty enclosure
- cost competitive solutions for new or existing cranes

Special brackets from the accessories program are helpful for easy mounting.

For the re-fitting of existing equipment we offer an interfacebox with different input voltages and galvanically isolated outputs.

Due to there physical properties, radar scanner devices must NOT be used for personal safety or EMERGENCY OFF functions.

Mechanical Design:

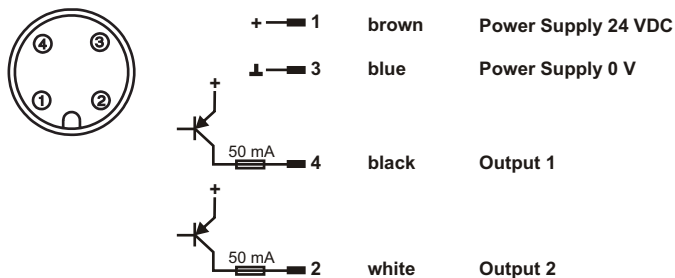
Weight	approx. 600 g
Material	Lower Housing Section: ALg, black anodized Housing Cover: POM-Plastic black colored
Protection Class	IP 67
Housing Dimensions	100 x 100 x 42 mm
Mounting Drillings/Housing Back Side	4 X M4-Tread, 10mm deep, quadratically arranged: 82 x 82 mm

Electrical Design:

Supply Voltage	24 VDC +/- 20%
Current Consumption	typ. 130 mA, plus current for the Open-Collector-Outputs
Output	2 Open-Collector-Outputs with each 50mA
Connection	4-pin Connector M12x1, RSF4 compatible
Sending Frequency	24.000 24.250 GHz
Transmitting Power	< 20dBm (EIRP) max.
Antenna Characteristics	11° (+/-5,5°) vertical und horizontal
Distance Detection	0,2m Treshold (in 1m steps from 2 - 40m adjustable)
Response Time	< 50 ms
Hold Time of the Outputs	ca. 0,1 1 sec depending of Object Dimensions
Readiness delay after power on	approx. 10 sec
Operating Temperature	-40 +85 °C
Storage Temperature	-40 +85 °C

The radar scanner has a selftest checking routine. After power on and during operation this programm will check all functions of the system. Malfunctions will be reported.

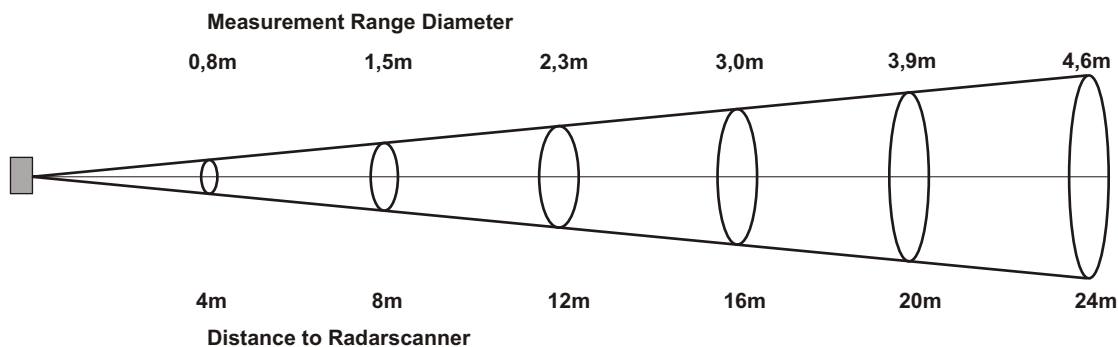
Connection Diagramm:



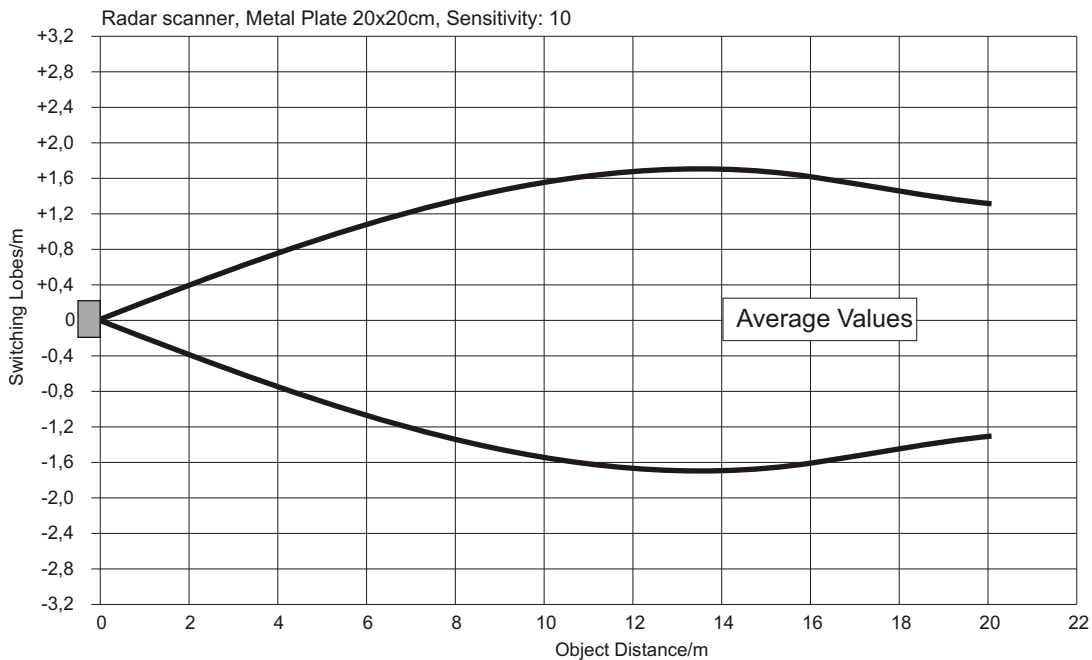
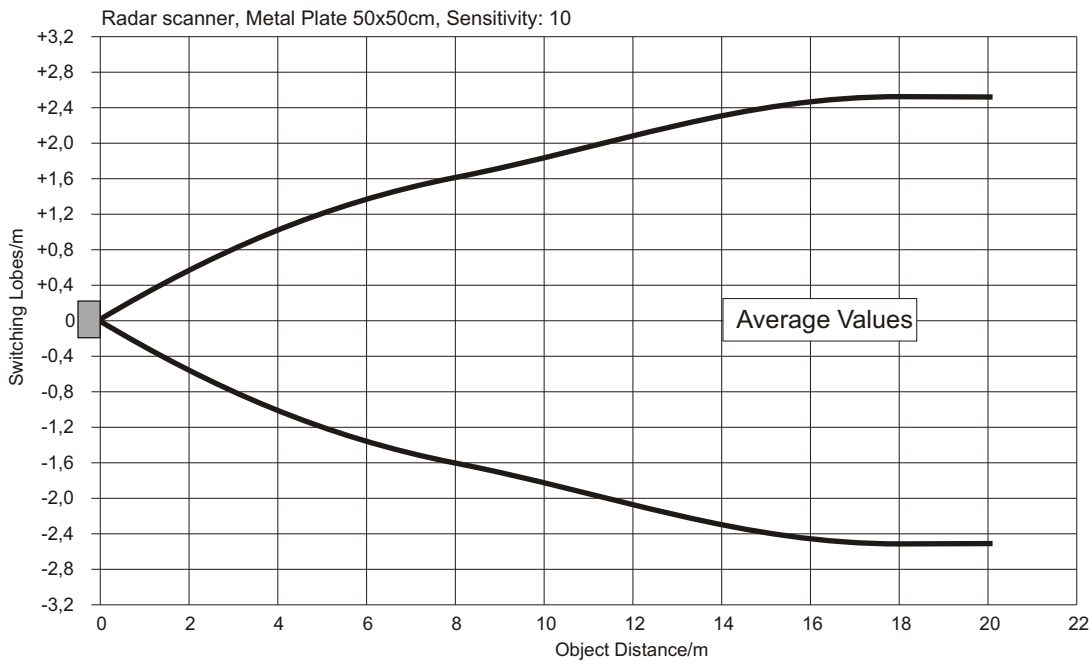
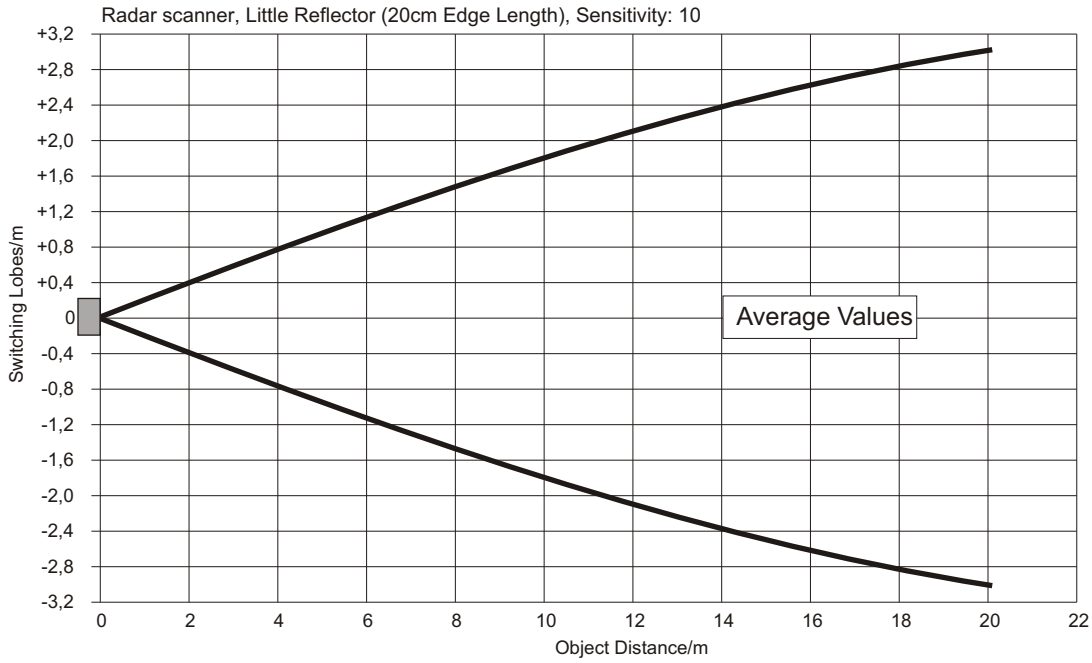
Standard Conformity:

- Radio Standard ETSI EN 300440
- EMV-Testing ETSI EN301 489-3
particular EN 55022,
EN/IEC 61000-4-3, EN/IEC 61000-4-6,
EN/IEC 61000-4-4, EN/IEC 61000-4-2,
EN/IEC 61000-4-5, EN/IEC 61000-4-11
- Safty Testing EN 60950-1

Antenna Characteristics:



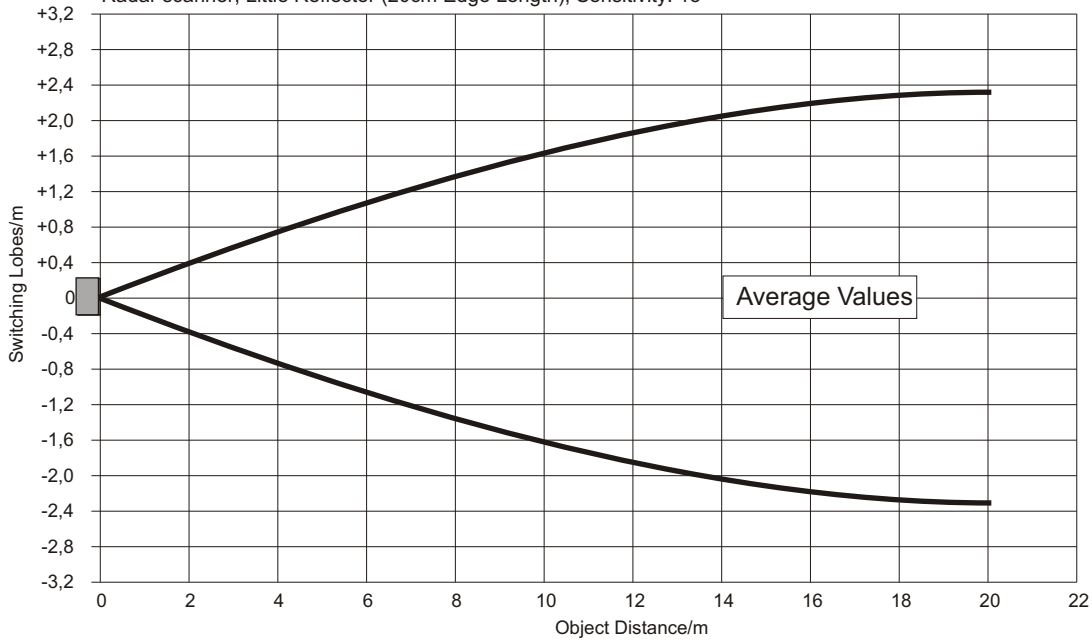
Switching Lobes



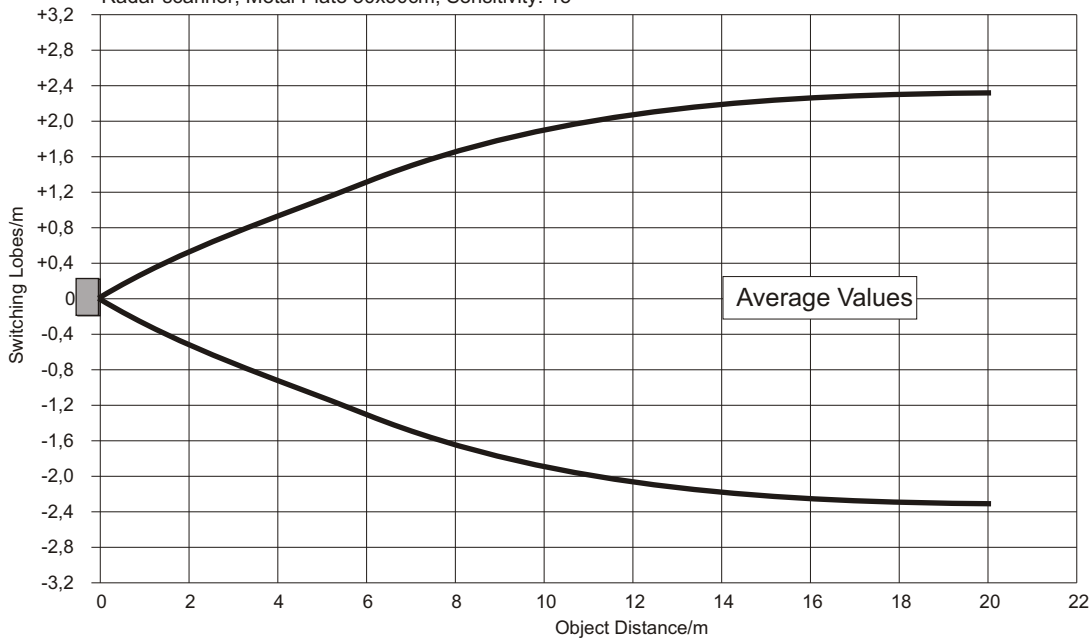
Switching Lobes



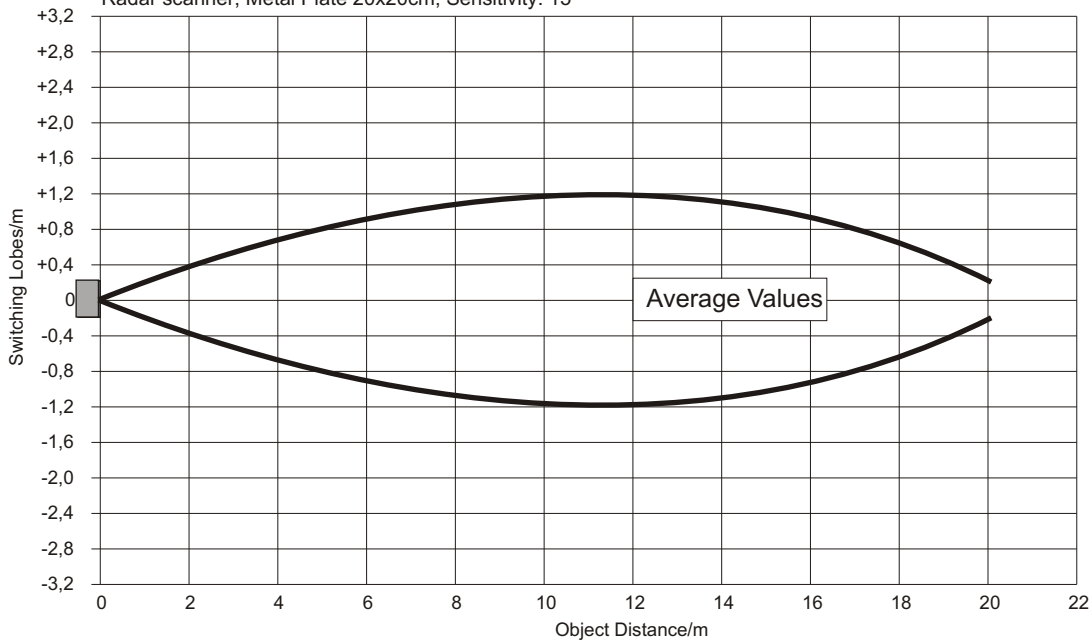
Radar scanner, Little Reflector (20cm Edge Length), Sensitivity: 15



Radar scanner, Metal Plate 50x50cm, Sensitivity: 15



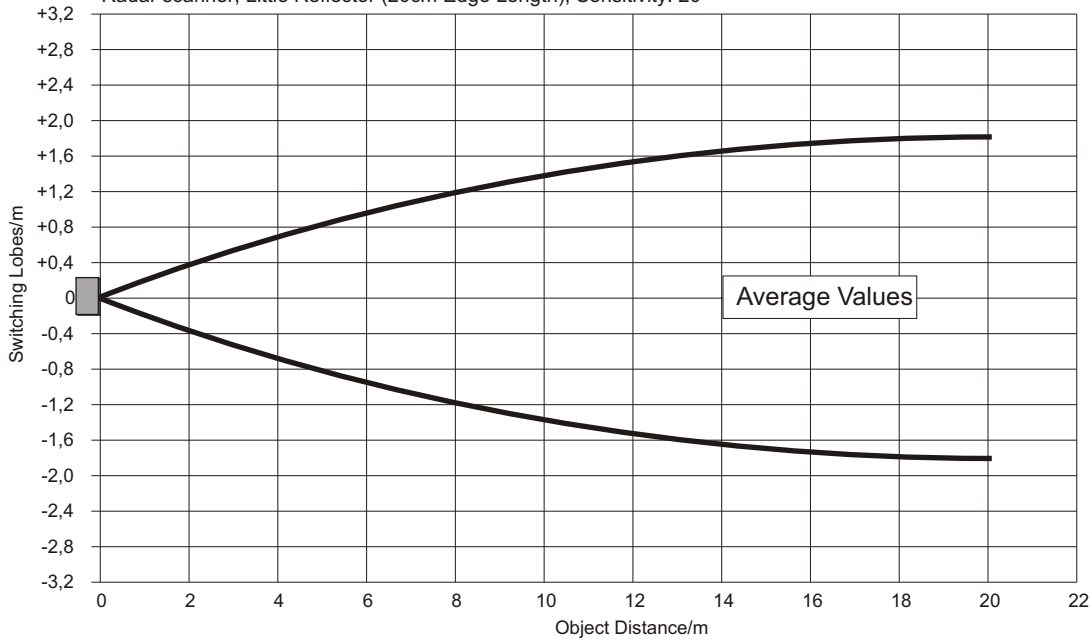
Radar scanner, Metal Plate 20x20cm, Sensitivity: 15



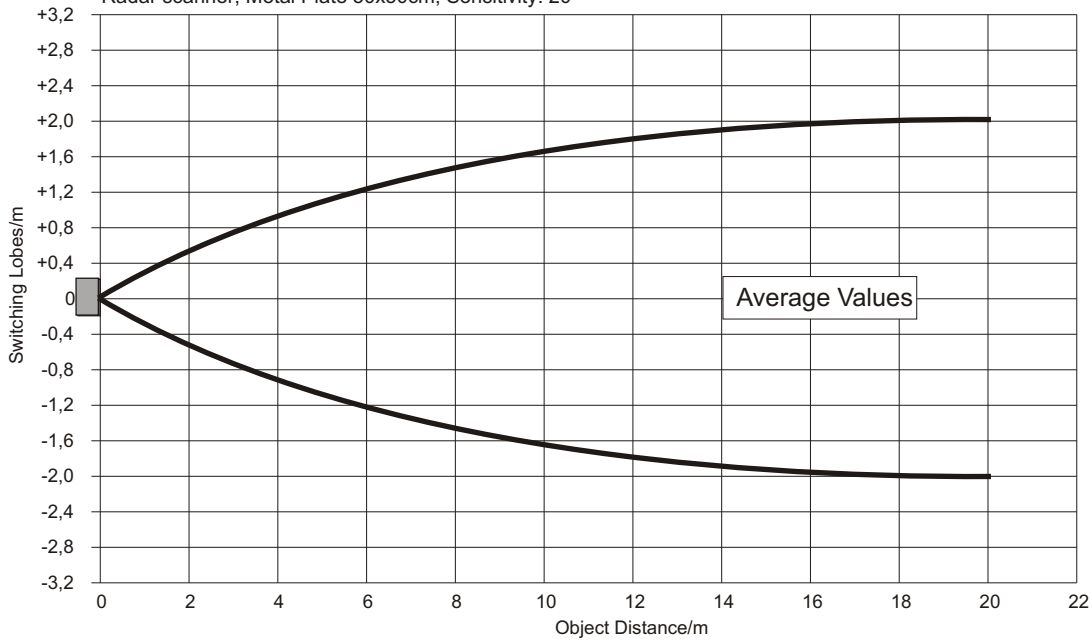
Switching Lobes



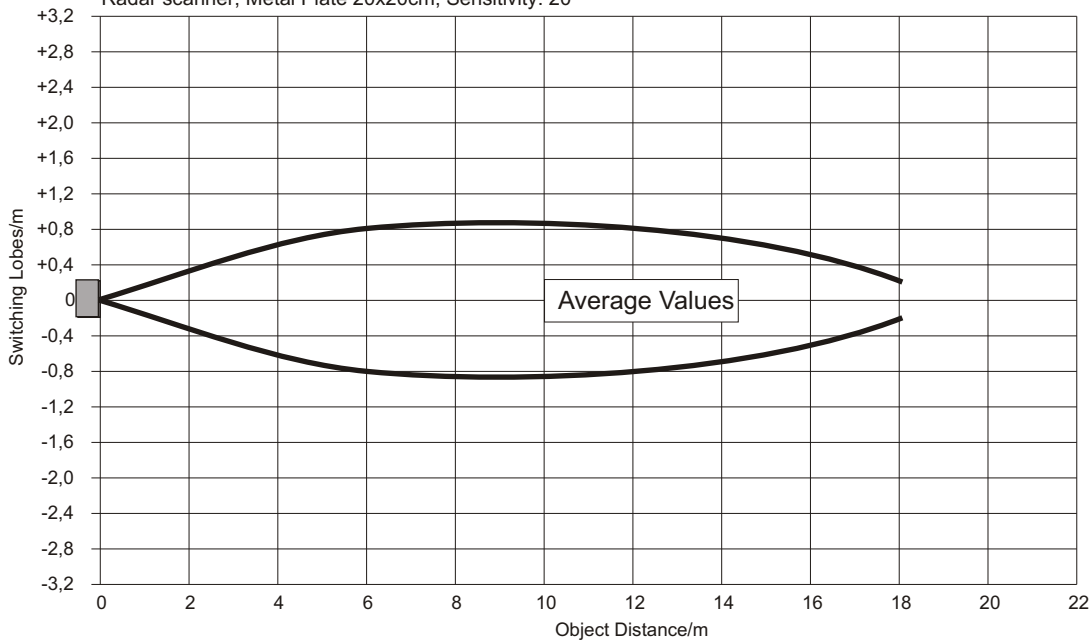
Radar scanner, Little Reflector (20cm Edge Length), Sensitivity: 20



Radar scanner, Metal Plate 50x50cm, Sensitivity: 20



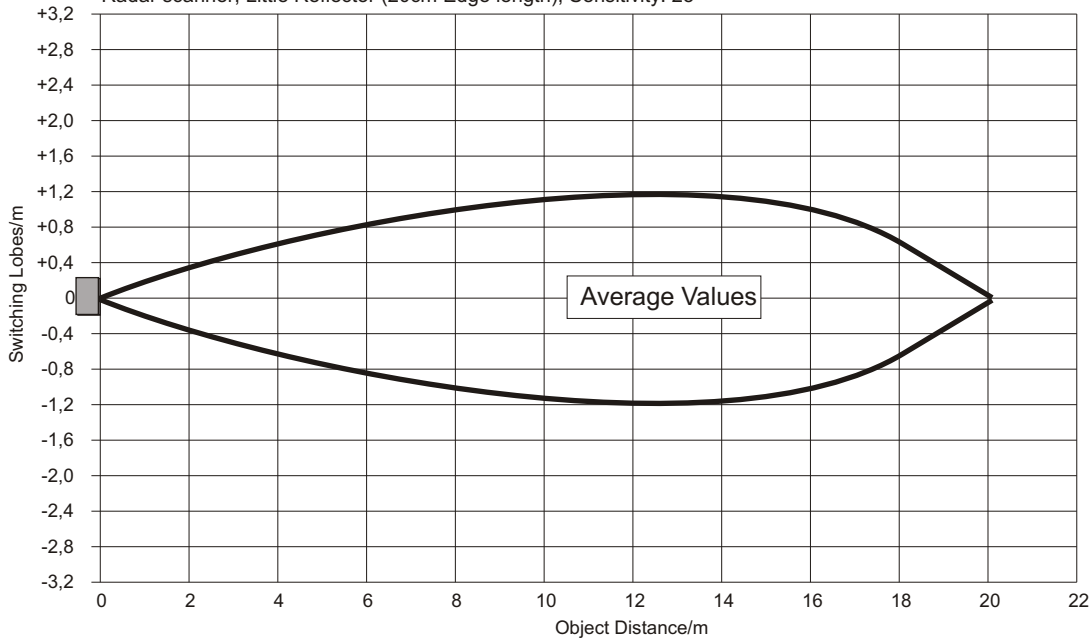
Radar scanner, Metal Plate 20x20cm, Sensitivity: 20



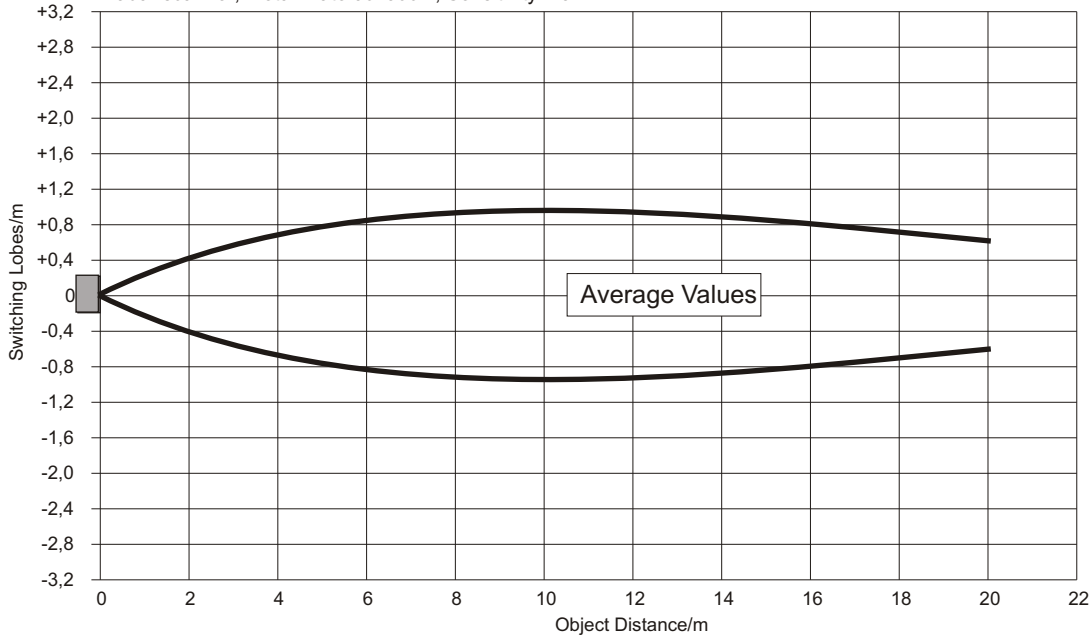
Switching Lobes



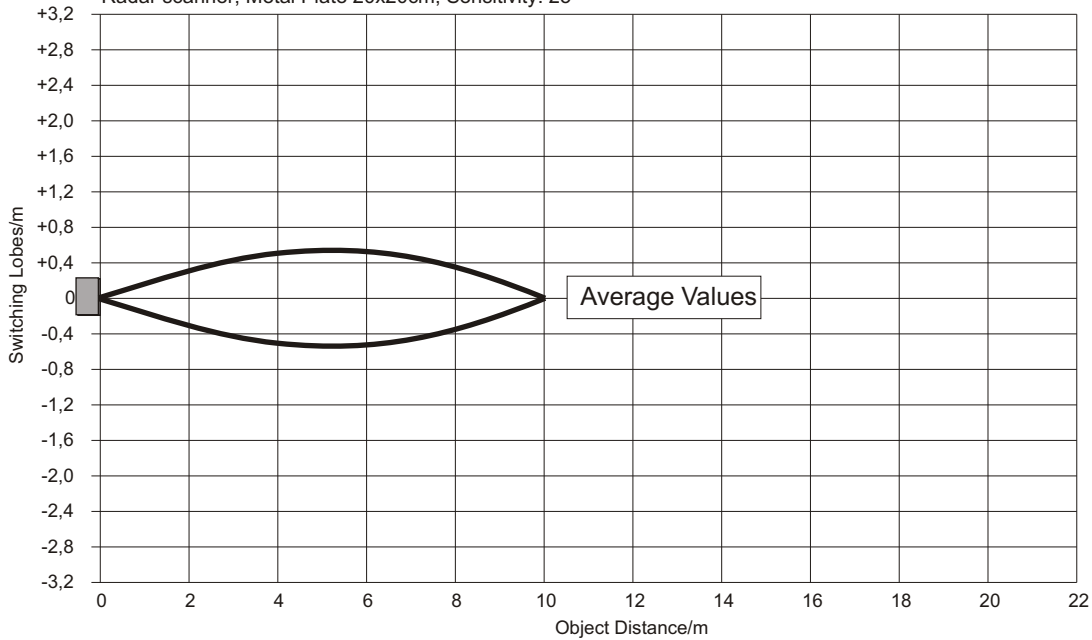
Radar scanner, Little Reflector (20cm Edge length), Sensitivity: 25



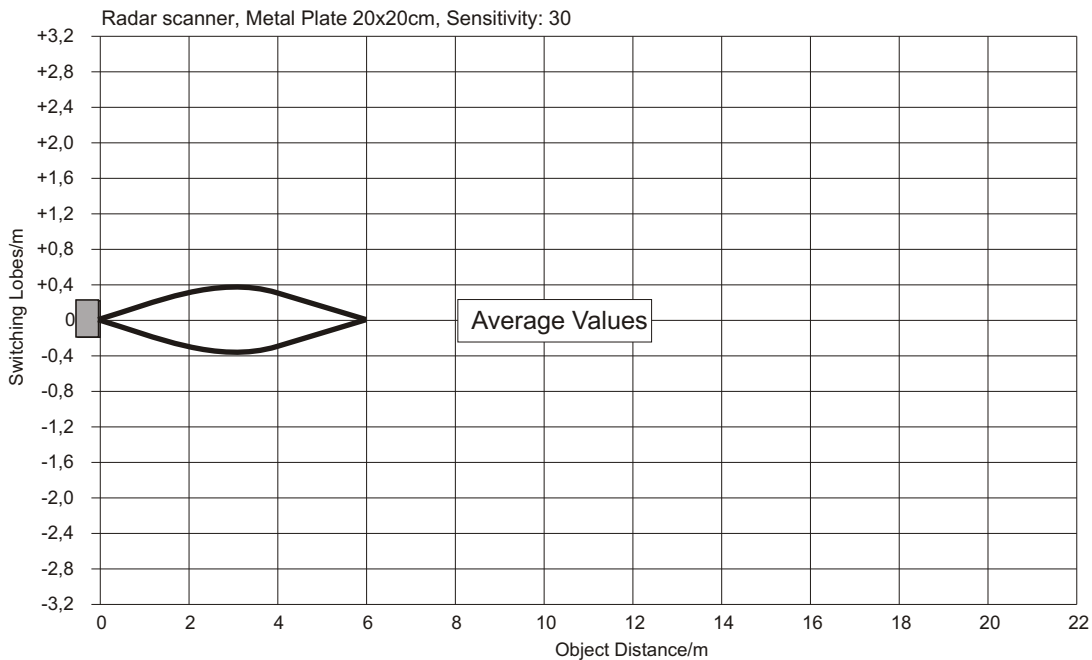
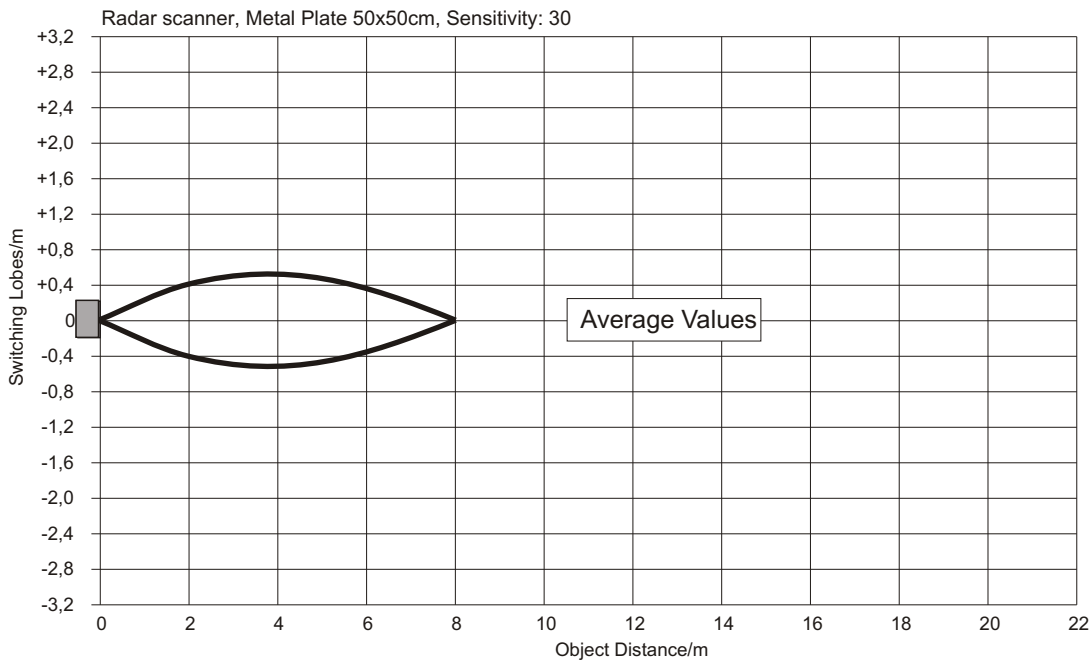
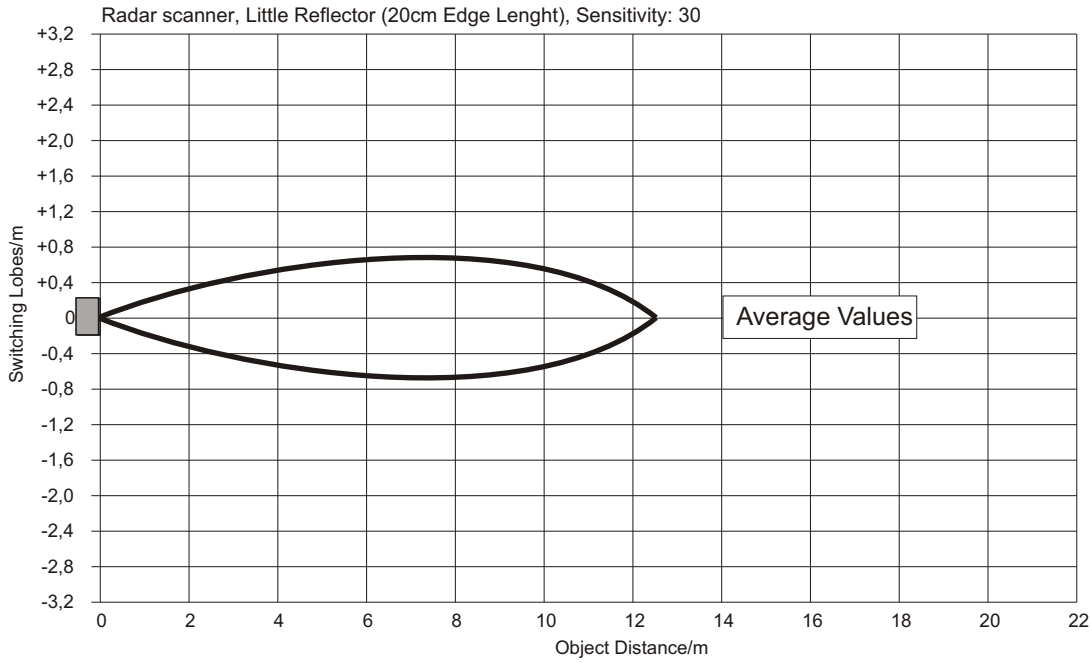
Radar scanner, Metal Plate 50x50cm, Sensitivity: 25



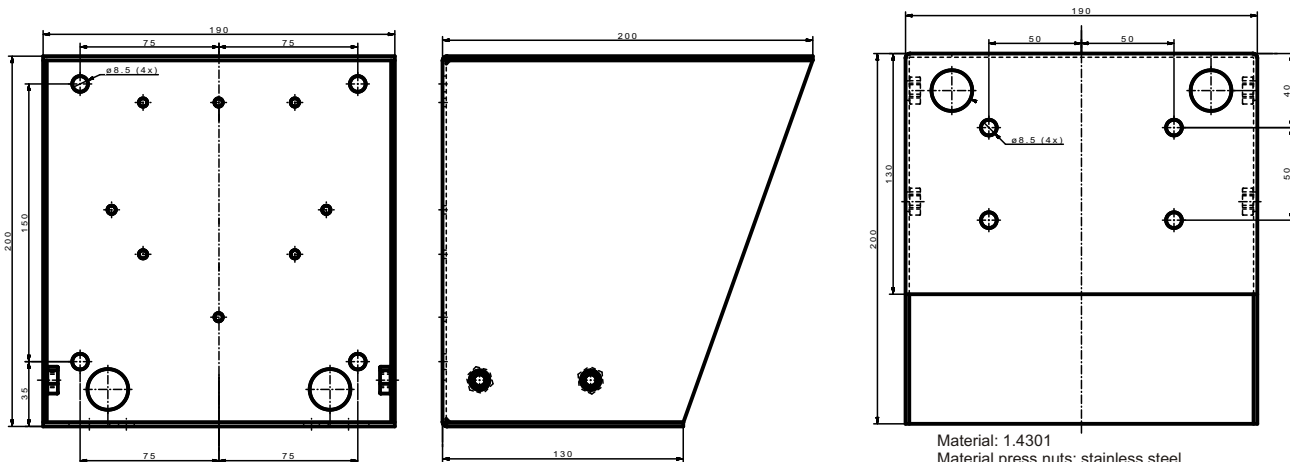
Radar scanner, Metal Plate 20x20cm, Sensitivity: 25



Switching Lobes



Scanner Protection Dome:



2x protective sleeve

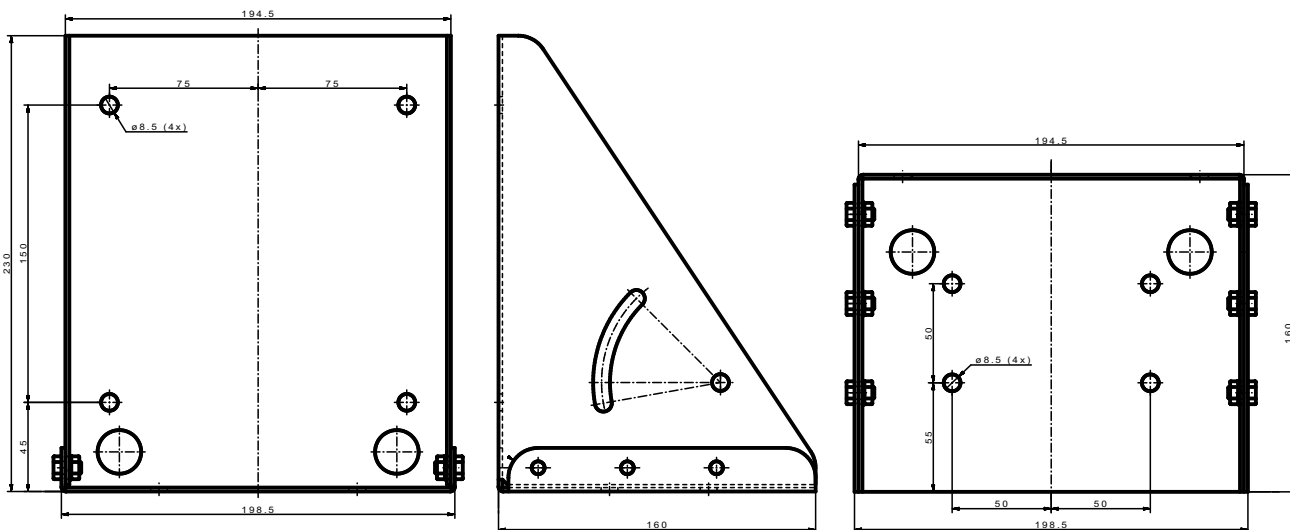


4x stud mounts





4x flat head screw M4x6mm included in each delivery

Support Bracket:



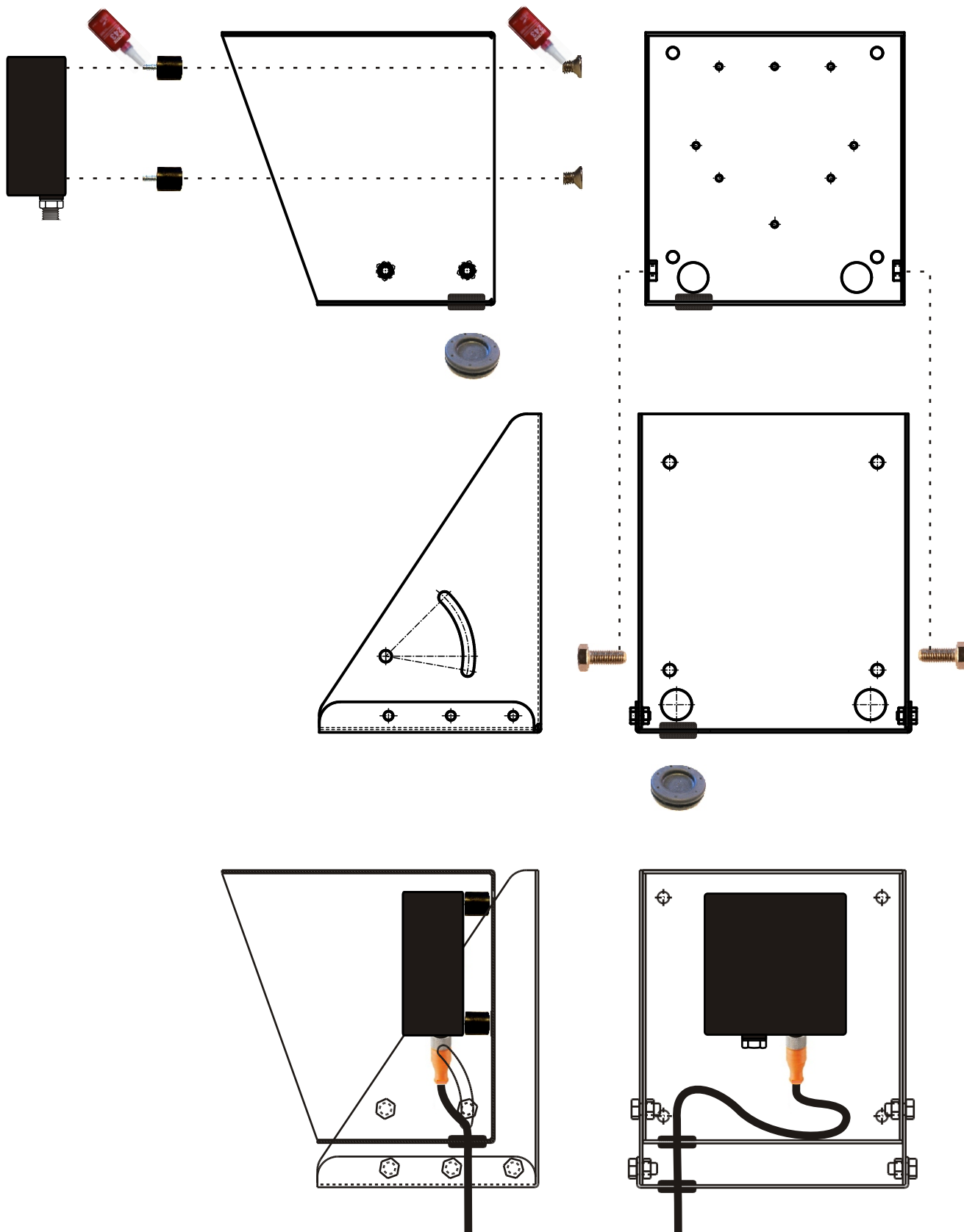
Cordsets:

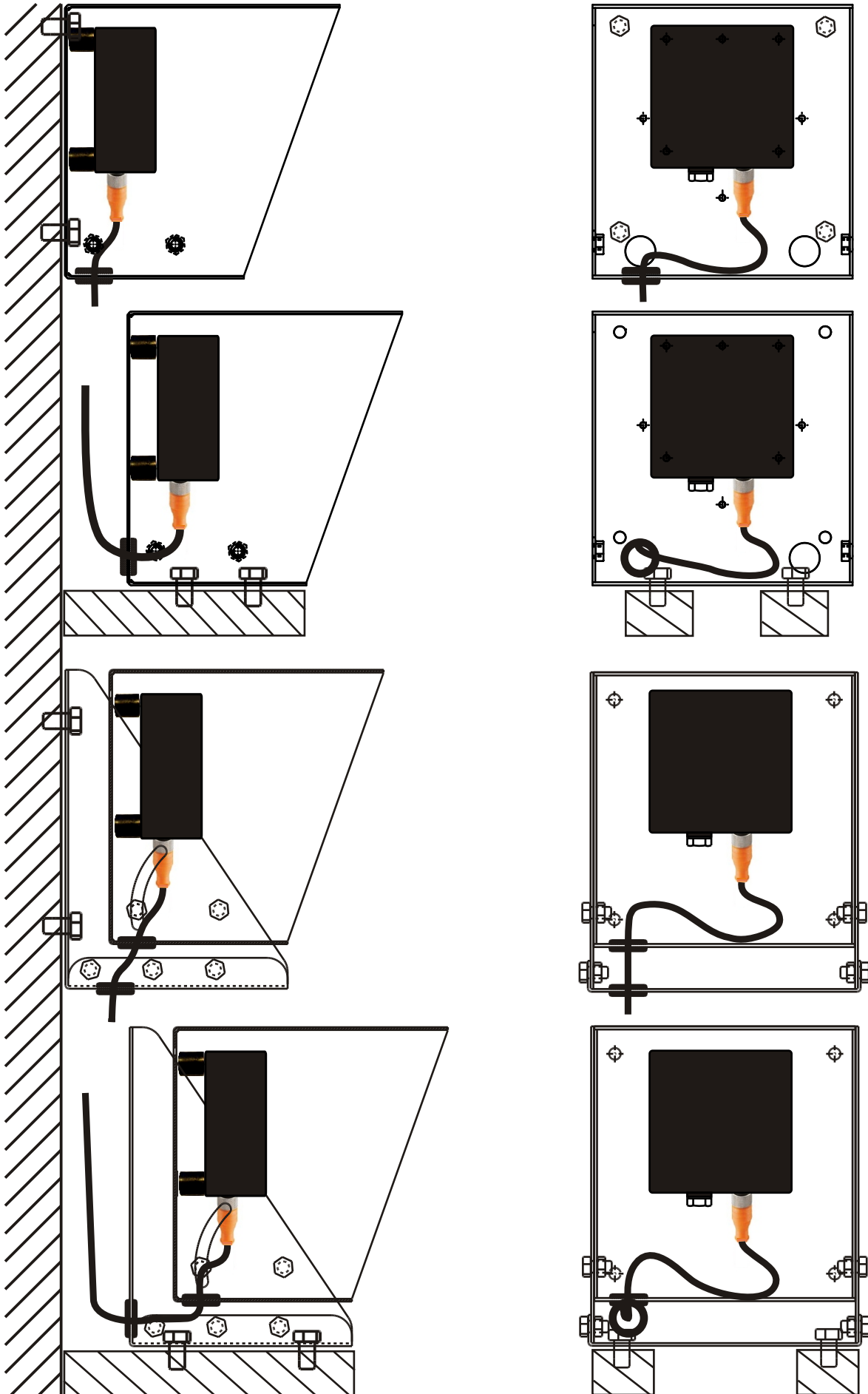
		Type
	4-pin straight plug with LED	
	3m cable length	S19-8-PU-03
	5m cable length	S19-8-PU-05
	4-pin straight plug without LED	
	3m cable length	S19-3-PU-03
	5m cable length	S19-3-PU-05
	10m cable length	S19-3-PU-10
	15m cable length	S19-3-PU-15

Assembly Order

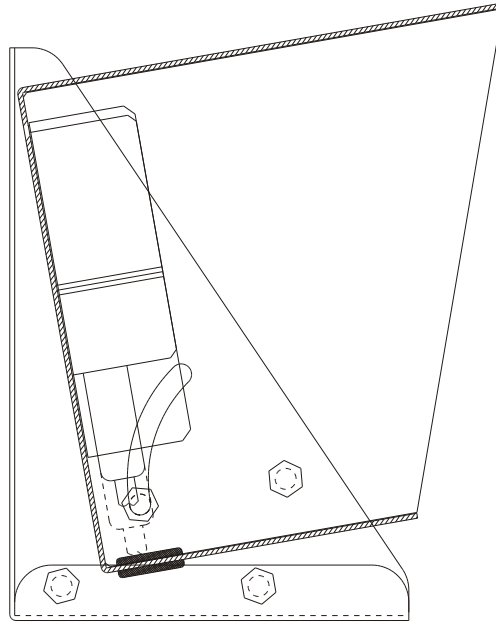
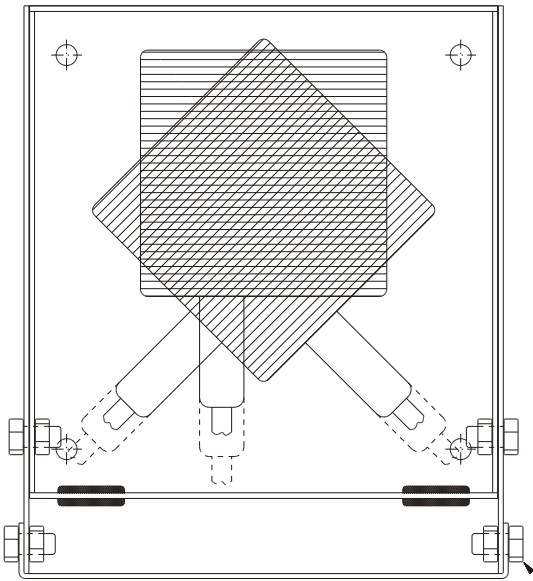


!!Please use Threadlocker **LOCTITE 243** medium strength or equivalent!!

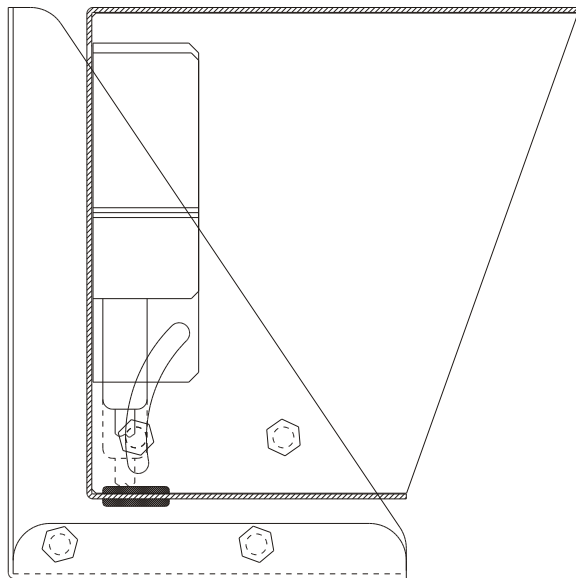
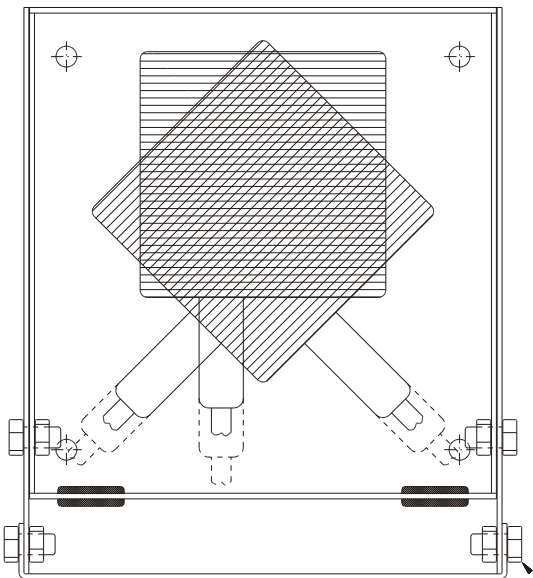




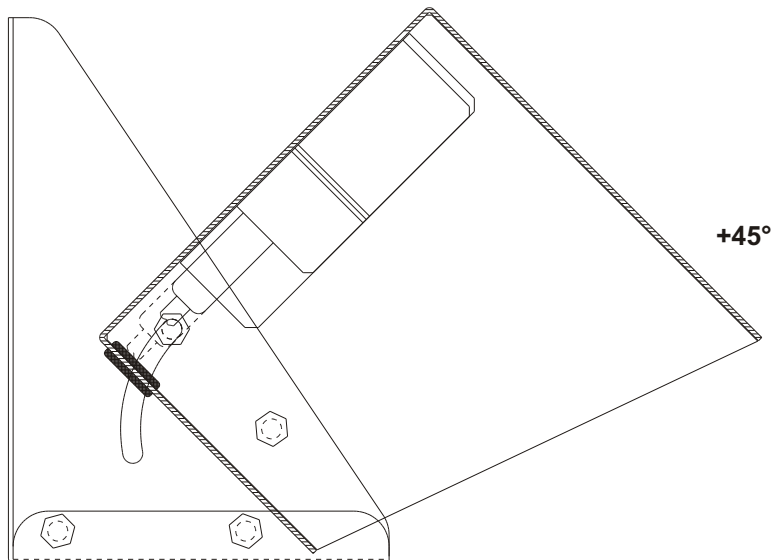
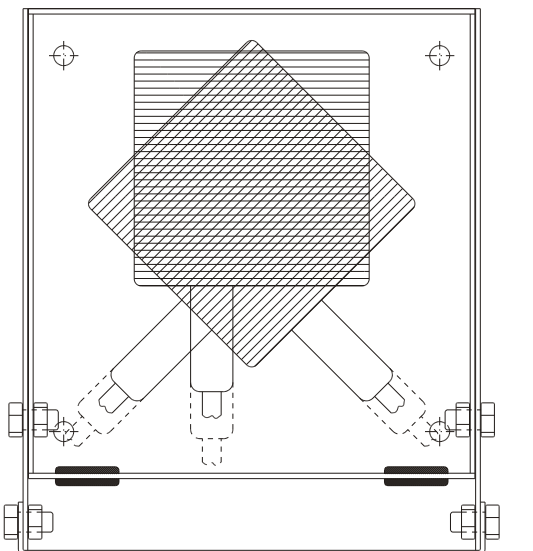
Adjustability of the Bracket



-10°



0°



+45°

Meyer Industrie-Electronic GmbH – MEYLE

Carl-Bosch-Straße 8 Tel.: +49 54 81-9385-0 Internet: www.meyle.de
49525 Lengerich/Germany Fax: +49 54 81-9385-12 E-Mail: sales@meyle.de