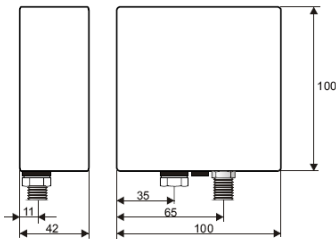


**DISTER**  
**DT20-11/11**  
Anti-collision device

# ANTI-COLLISION DEVICE for Ship-to-Shore CRANE



### DESCRIPTION

The DISTER is a FMCW-Radar and works in the frequency range from 24,000 – 24,250 GHz.  
The antenna characteristics is 11° (+/- 5,5°) vertical and horizontal.

The device is able to detect objects within a distance from 0,2 m up to an adjustable distance from 2 to 40 m. It will only detect objects which have a relative movement with a minimum speed of 5 cm/sec (3 m/min) to the radar.

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. We can program them to the needed values of each application.

The 2 outputs are allocated at a 4-pin RSF4 standard connector.

### USE

The radar has a self test checking routine.

After power on and during operation this program will check all functions of the system.

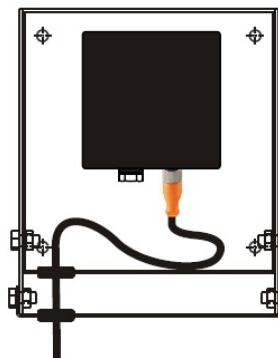
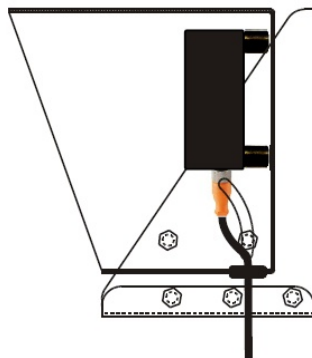
Malfunctions will be reported.

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

Special brackets are helpful for easy mounting.

For re-fitting of existing equipment, an interface box with different input voltages and galvanically isolated outputs is available.

Because of its physical properties, DISTER device must not be used for personal safety or emergency off functions.



### AVANTAGES

- High operating distance
- Insensibility against environmental conditions
- Wide temperature range
- High class of protection
- Heavy duty enclosure

Product design  
& manufacturing  
by



PETER - PAUL TITZTE  
IDEEN IN SENSORIK

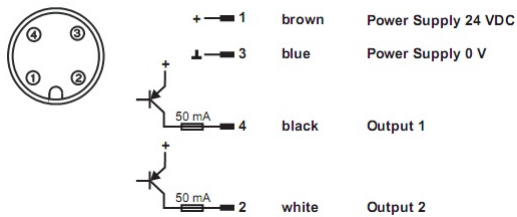
**DISTER  
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# ANTI-COLLISION DEVICE for Ship-to-Shore CRANE

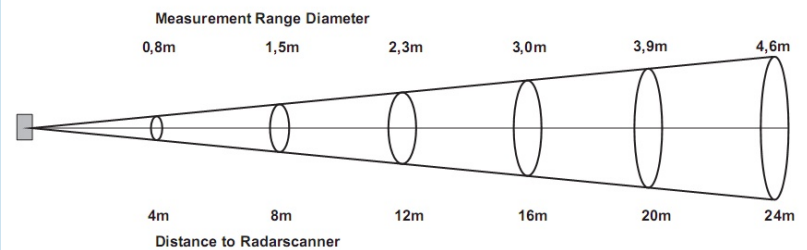
## TECHNICAL SPECIFICATIONS

Working range :	0,2m threshold (in 1m steps from 2 to 40m adjustable)
Sending frequency :	24,000 – 24,250 GHz
Response time :	< 50ms
Connection :	4-pin connector M12x1, RSF4 compatible
Transmitting power :	< 20dBm (EIRP) max.
Antenna characteristics:	11° (+/-5,5°) vertical and horizontal
Outputs:	2 Open-collector Outputs with each 50mA
Hold time of the Outputs :	ca. 0,1 ... 1 sec depending of object dimensions
Power supply :	24VDC +/- 20%
Current consumption :	typ. 130mA, plus current for the Open-collector outputs
Readiness time after power on :	approx. 10 sec
Environment :	Working temperature : -40°C to +85°C Storage temperature: -40°C to +85°C
Material :	Lower Housing Section : ALg, black anodized Housing cover : POM- Plastic black colored
Protection :	IP 67
Weight :	approx. 600 g
Dimensions :	Housing : 100 x 100 x 42 mm Mounting drillings/ Housing back side : 4 x M4-Tread, 10 mm deep quadratically arranged 82 x 82 mm

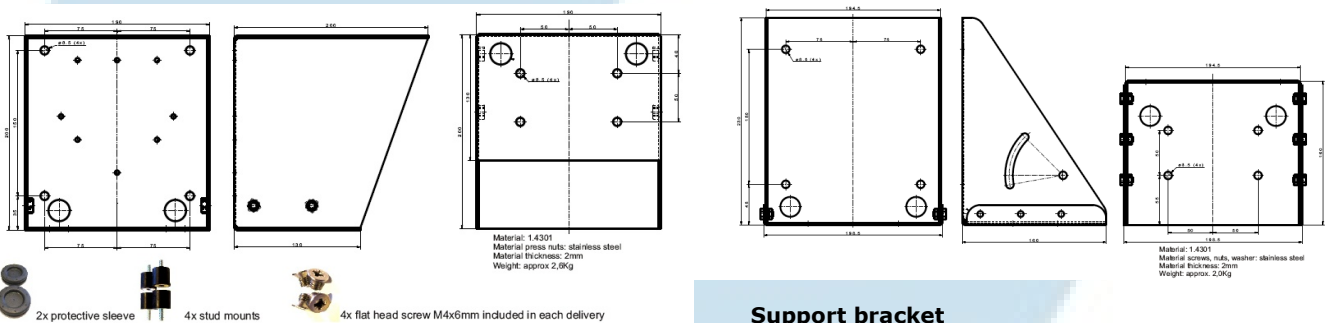
## CONNECTION DIAGRAM



## ANTENNA CHARACTERISTICS



## ACCESSORIES



	<b>Scanner protection dome</b>	
	<b>Support bracket</b>	
	<b>Cable</b>	
4-pin straight plug <u>with</u> LED	3m cable length	BKS-S19-8-PU-03
	5m cable length	BKS-S19-8-PU-05
<b>SALES REFERENCE</b>	DISTER DT20-11/11	

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& manufacturing  
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Nota : Non-contractual document, specifications may be subject to modification without prior warning / May 2010 / DCFP 003 11