

SIRRAH
LS08 / SI08
Sway & Skew Sensor

POSITIONING SENSOR FOR CRANES' HOISTING SYSTEM



DESCRIPTION

SIRRAH is a sensor giving angle positions of a hoisting system fitted with an infrared transmitter : to use for sway regulation and skew control.

The coordinates are evaluated as plus or minus relative to the axis of the detector.

In its LS08 version, SIRRAH is improved for applications on overhead travelling cranes of small height (RTG for ex.) : sway measuring and load positioning on ground.

It is waterproof and insensitive to the ambient infrared.

Using two of them, the crane can also be controlled on the skew movement.

USE

SIRRAH, fixed on the overhead bridge crane's or RTG's trolley, analyses the beacon position fixed on the hoist. It is the sway sensor function or positioning sensor X, Y of a load.

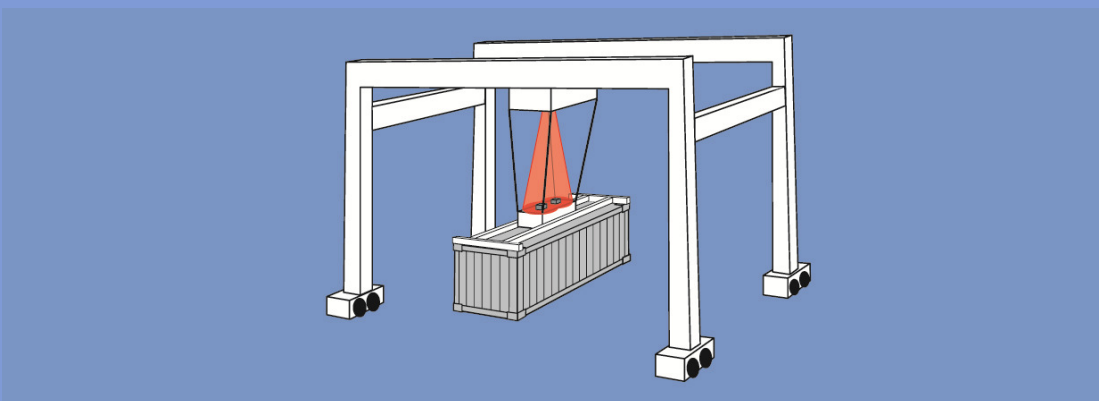
Its high speed of measure enables itself to enter in a sway readjustment loop.

If the is fitted with two infrared beacons and the trolley with two LS08, the crane computer can also regulate the skew movement of the load

PRESENTATION

SIRRAH is presented in a monolithical way, in a box including optics, electronics and the processor for the measurement control. A calculator or a programmable robot can be directly connected to SIRRAH to enable the use with several softwares.

SIRRAH is associated to one I.R. beacon to put on the hook or spreader. It is independent from the sensor and synchronises itself automatically on SIRRAH.





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TECHNICAL SPECIFICATIONS

	Degrees	At 5 m in mm	At 25 m in mm
Numerical resolution	1/1000		
Sensor resolution at 50 Hz	<20/1000	1.8	9
Sensor resolution at 2 Hz	4/1000	< 0,5	2,5
Long distance non linearity			
* at the sensor center		9	30
* on 50% of the field		35	100

Working range : Up to 25 m
 Saturation distance : Down to 2 m
 Measurement frequency : Up to 200Hz in mode 1 "mono beacon": anti-sway function and X, Y positioning
 Up to 60 Hz in mode 6 "bi beacon" : anti-sway, twist and X, Y positioning
 Output frequency : Programmable by the outside calculator
 Average of measures : Programmable by the outside calculator
 Detector type : Optical : View angle of +/- 7°
 Narrow band interferential filters
 Infrared source : 880 nm LEDs beacon
 Communication : With a serial line computer : RS422 or RS232 or PROFIBUS
 Power supply : 220VAC / 0,2A or 120 VAC / 0,4A or 24VDC 50/60 Hz
 Environment : Working temperature : -20°C to +50°C
 Storage temperature : -40°C to +70°C
 Protection : IP 54 / SI08 : IP 65
 Weight : About 2,6 Kg
 Dimensions : About 120 x 120 x 260 mm
 Notes : All the results are given in R.M.S. values at 20°C
 Software : functioning mode choice : 1, 6, 7 / Angular speed option choice
 Display : One Red LED & one Green LED on SI08

OPERATING SPECIFICATIONS

Optical filtering of undesirable waves, by narrow band interference filter (40 nm)
 Analogical signal and numerical filtering
 Numerical position calculation and non linearity compensation of the electrical and optical sets

SALES REFERENCES

LS08 SIRRAH sensor +/- 7°
SI08 LS08 sensor included in BO25 protective housing + SCB13 cable + SCB4 cable
LS08-P/SI08-P LS08 sensor with Profibus interface
LS08-D/SI08-D LS08 sensor with 24VDC Supply
SCB4 Power supply cable 220 VAC SCB13 RS422 cable
SCB5 Power supply cable 110 VAC SCB14 RS232 cable
SCB6 Power supply cable 24VDC SCB15 PROFIBUS cable

Associated beacon: Ref. BMU-02 (modes 1,6,7).

OTHER PRODUCTS OF THE RANGE

TS10 SIRRAH sensor +/- 6° SI10 TS10 sensor + BO25 protective housing factory mounted
TS20 SIRRAH sensor +/- 8,8° SI20 TS20 sensor + BO25 protective housing factory mounted
TS19 SIRRAH sensor +/- 9° SI19 TS19 sensor + BO25 protective housing factory mounted

Nota : Non-contractual document - specifications may be subject to modification without prior warning / April 2011/DCFP008 12