SP-LAM-HR

DATASHEET

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Sensor Partners

SP-LAM-HR SPECIFICATIONS

	SP-35-HR	SP-150-HR	SP-500-HR	SP-1200-HR
Performance				
Max measuring range (90%)*	35 m	150 m	500 m	1200 m
Max measuring range (18%)*	17.5 m	75 m	250 m	600 m
Min measuring range	0.5 m	0.5 m	1 m	10 m
Accuracy**	10 cm	10 cm	10 cm	10 cm
Repeatability**	10 cm	10 cm	10 cm	8 cm
Ouput frequency (max)	400 Hz	400 Hz	400 Hz	1000 Hz
Resolution	10 cm	10 cm	10 cm	1 cm
Electrical				
Supply voltage	9 ... 24 Vdc	9 ... 24 Vdc	9 ... 24 Vdc	9 ... 24 Vdc
Power consumption	< 5 W	< 5 W	< 5 W	< 5 W
Optical				
Laser classification	Class 1	Class 1	Class 1 MM***	Class 1 MM***
Beam divergence	2.45 x 1.50 mrads	2.45 x 1.50 mrads	2.45 x 1.50 mrads	2.45 x 1.50 mrads
Typical spot size at max. distance	0.104 x 0.071 m	0.386 x 0.243 m	1.028 x 0.767 m	2.746 x 1.846 m
Wavelength (peak)	905 nm	905 nm	905 nm	905 nm
Max pulse energy	306 nJ	306 nJ	1020 nJ	1100 nJ
Light source	InGaAs Laser diode	InGaAs Laser diode	InGaAs Laser diode	InGaAs Laser diode
Inputs / outputs				
Connection type	Fischer DBEE-102A054-130	Fischer DBEE-102A054-130	Fischer DBEE-102A054-130	Fischer DBEE-102A054-130
Standard adaptor cable	Fischer to 9-way D-type cable 2 m	Fischer to 9-way D-type cable 2 m	Fischer to 9-way D-type cable 2 m	Fischer to 9-way D-type cable 2 m
interface	RS232	RS232	RS232	RS232
Baud rate	38400	38400	38400	115200
Mechanical				
Dimensions (L x W x H)	116 x 54 x 43 mm	116 x 54 x 43 mm	116 x 54 x 43 mm	116 x 54 x 43 mm
Housing materials	Anodised aluminium	Anodised aluminium	Anodised aluminium	Anodised aluminium
Weight	320 g	320 g	710 g	1400 g
Environment				
Protection grade	IP67	IP67	IP67	IP67
Vibration resistance	EN 60068-2-6:2008	EN 60068-2-6:2008	EN 60068-2-6:2008	EN 60068-2-6:2008
Operating temperature	-20 °C ... +60 °C	-20 °C ... +60 °C	-20 °C ... +60 °C	-20 °C ... +60 °C
Storage temperature	-20 °C ... +90 °C	-20 °C ... +90 °C	-20 °C ... +90 °C	-20 °C ... +90 °C
Tests and approvals				
CE conformity	EC DoC available	EC DoC available	EC DoC available	EC DoC available
Safety of laser products	EN 60825-1:2014	EN 60825-1:2014	EN 60825-1:2014	EN 60825-1:2014
EMC	acc. EN 61326-1:2013	acc. EN 61326-1:2013	acc. EN 61326-1:2013	acc. EN 61326-1:2013

Sensor Partners-LAM-HR
Industrial laser distance meters

SP-LAM-HR DIMENSIONS

	SP-35-HR	SP-150-HR	SP-500-HR	SP-1200-HR
Key dimensions				
A	43 (Fig 1)	43 (Fig 1)	53 (Fig 2)	69 (Fig 3)
B	16 (Fig 1)	16 (Fig 1)	25 (Fig 2)	32 (Fig 3)
C	ø 18 (Fig 1)	ø 18 (Fig 1)	ø 30 (Fig 2)	ø 46 (Fig 3)
D	116	116	139	147
E	106	106	129	137
F	54	54	83	124
G	ø 14	ø 14	ø 14	ø 14
Mounting dimensions				
H	46	46	71	Please contact SP for dimensions.
I	40	40	43	
J	M4 x 0.7	M4 x 0.7	M6 x 1.0	

Dimensions given in mm

Electrical connections

- Fischer DBEE-102A054-130 is located on the rear of the SP-LAM-HR unit.
- A standard 2 m adaptor cable is available with each unit, which converts the Fischer connector to a 9-way D-type and two flying leads for power.

The pin outs for these connectors are described in the table below.

Function	Fischer pin number	9-way D-type pin number
GND (0 V)	1	5
+9 V to 24 Vdc	2	Not connected
Data out	3	2
Data in	4	3
Trigger out	5	Not connected

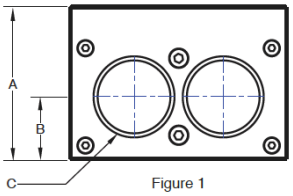


Figure 1

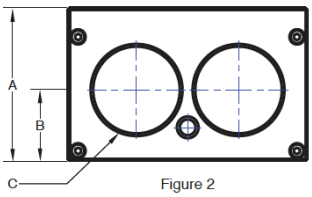


Figure 2

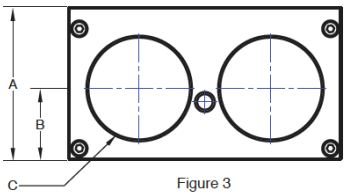
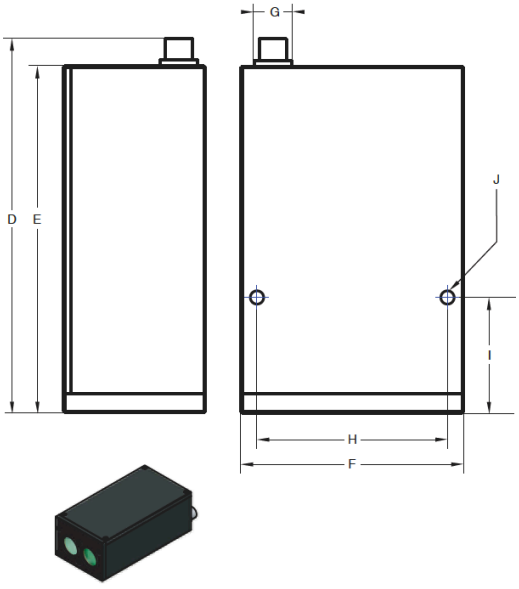


Figure 3



* * Max measuring ranges are recorded against Kodak white card (90% reflectivity) and grey card (18% reflectivity).
** Completed to Kodak white card, statistical error of 1σ. Both specifications are tested under standard Sensor Partners test conditions.
*** Viewing the laser output with certain optical instruments designed for use at distance (for example, telescopes and binocu-lars) may pose an eye hazard.
**** Environmental compability requirements of EN 60529:1992+A1:2002.

Please note : Observed performance is application specific and dependent on a number of enviromental and target parameters. As a result it may vary from the performance figures stated above. It is the customer's responbility to confirm that laser performance is compatible with their application.