HAMAMATSU

DATA SHEET

Position Sensor System C5949



▲ Shown with optional lens.

The C5949 is a compact, high-resolution, light-spot position measurement system using a non-discrete position sensitive detector (PSD) and infrared LED.

The system allows you to track the movement of up to seven LEDs (LED target: M1375-16) that are attached to an object and measured in real-time (300Hz). An IR filter and background-light elimination circuit installed in the sensor head allows for accurate measurement.

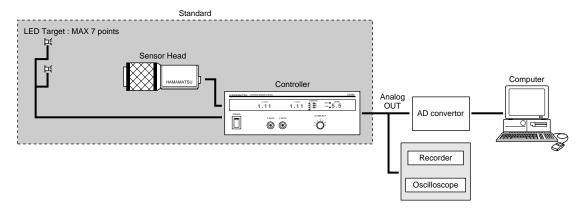
Using the optional M6523 LED Driver, wireless operation between the controller and LED target is possible.

Two C5949 systems can be combined to conduct threedimensional measurements.

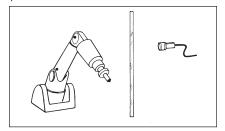
FEATURES

- Real-time measurement (300Hz sampling)
- Prevents intruding background light
- Supports up to 7 simultaneous measurement points (when used with an optional M6254 board)

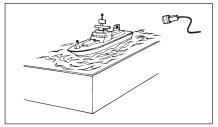
SYSTEM CONFIGURATIONS



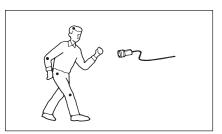
PAPPLICATION



Measurement of movements of a robot or other objects



Measurement of movement of an object floating in a tank, measurement of bridge vibration



Measurement of a person's movements

CONFIGURATIONS

C5949-01		C5949-04		C5949-07	
Sensor head	1	Sensor head	1	Sensor head	1
Sensor Head Cable	1	Sensor Head Cable	1	Sensor Head Cable	1
Controller	1	Controller	1	Controller	1
AC Cable	1	AC Cable	1	AC Cable	1
LED Target	1	LED Target	4	LED Target	7
		Measuring Points Extension board	1	Measuring Points Extension board	2

SPECIFICATIONS

Detector	non-discrete position sensitive detector (PSD)		
Spectral Response	700 to 1150 nm		
Measurement point	1 (Standard)		
Max. Measurement point	7 (using two M6254 board)		
Sampling frequency	300 Hz		
Position Detecting Error	Zone A (refer to figure below) ± 1%, Zone B ± 2%		
Resolution	1/5000 (using recorder)		
Error due to light intensity variations	± 1% (Light level 8 to 4)		
Lens Mount	C Mount		
Output Signal	Parallel ± 5 V (Analog Signal output by 50 pin connector)		
	Serial ± 5 V (Analog Signal output by BNC connector)		
Operating temperature	0 to +40 °C		
Storage temperature	-10 to +50 °C		
Operating/storage humidity	Less than 90% (with no condensation)		
Line voltage	100/117/220/240 VAC ± 1%, 50/60 Hz		
Power consumption	Approx. 30 VA		

OPTIONAL

For more measuring points

M6254: Measuring Points extension board

Additional 3 points

(Max 2 boards can be installed in

C5949 Controller)

M1375-16 : LED Target

Peak Emitting Wavelength = 890 nm LED Holder size = $30 \text{ mm} \times 16 \text{ mm}$

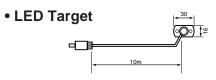
Cable Length = 10 m

DIMENSIONAL OUTLINES (UNIT: mm)

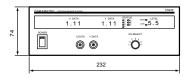
• Sensor head (Weight: Approx. 140 g)

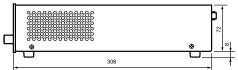






• Controller (Weight: Approx. 3.4 kg)





- Subject to local technical requirements and regulations, availability of products included in this promotional material may vary.
 Please consult with our sales office.
- Information furnished by HAMAMATSU is believed to be reliable. However, no responsibility is assumed for possible inaccuracies
 or omissions. Specifications and external appearance are subject to change without notice.

© 1999 Hamamatsu Photonics K.K.



HAMAMATSU

Homepage Address http://www.hamamatsu.com

HAMAMATSU PHOTONICS K.K., Systems Division

812 Joko-cho, Hamamatsu City, 431-3196, Japan, Telephone: (81)53-431-0124, Fax: (81)53-435-1574, E-mail:export@sys.hpk.co.jp

U.S.A. and Canada: Hamamatsu Photonic Systems: 360 Foothill Road, Bridgewater, N.J. 08807-0910, U.S.A., Telephone: (1)908-231-1116, Fax: (1)908-231-0852

Germany: Hamamatsu Photonics Deutschland GmbH: Arzbergerstr. 10, D-82211 Herrsching am Ammersee, Germany, Telephone: (49)8152-375-0, Fax: (49)8152-2658

France: Hamamatsu Photonics France S.A.R.L.: 8, Rue du Saule Trapu, Parc du Moulin de Massy, 91882 Massy Cedex, France, Telephone: (33)1 69 53 71 00, Fax: (33)1 69 53 71 10

United Kingdom: Hamamatsu Photonics United: Lough Point, 2 Gladbeck Way, Windmill Hill, Enfield, Middlesex EN2 7JA, United Kingdom, Telephone: (44)208-367-3560, Fax: (44)208-367-6384

North Europe: Hamamatsu Photonics Norden AB: Smidesvägen 12, SE-171-41 Solna, Sweden, Telephone: (46)8-509-031-00, Fax: (46)8-509-031-01

Italy: Hamamatsu Photonics Italia S.R.L.: Strada della Moia, 1/E 20020 Arese (Milano), Italy, Telephone: (39)02-935 81 733, Fax: (39)02-935 81 741

Cat. 1