HAMAMATSU

DATA SHEET

Position Sensor System C5949



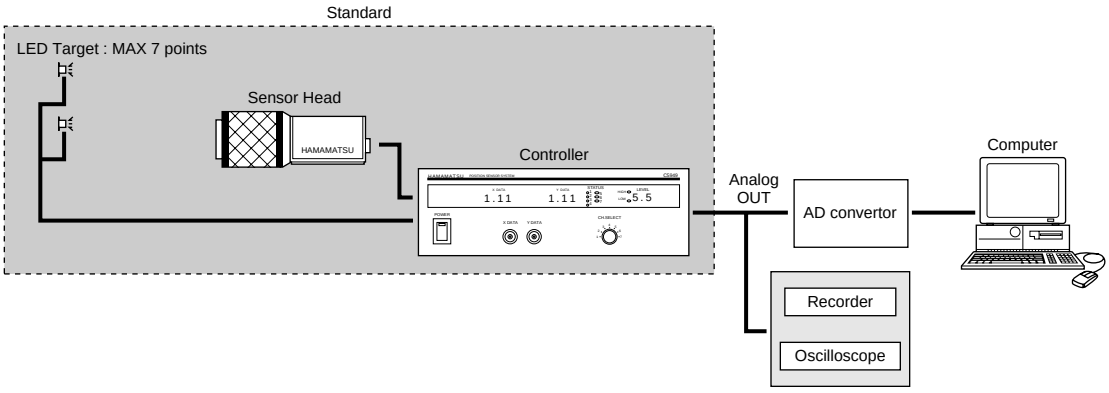
▲ Shown with optional lens.

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 three-dimensional measurements.

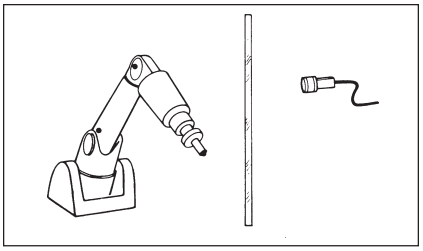
FEATURES

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

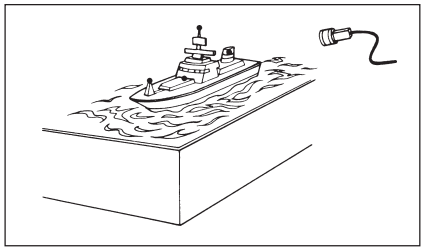
SYSTEM CONFIGURATIONS



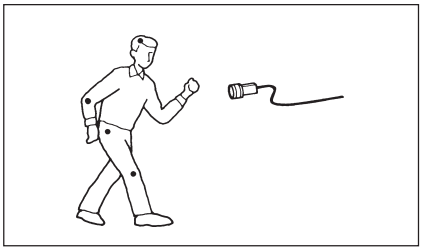
APPLICATION



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

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 mm × 16 mm
Cable Length = 10 m

SPECIFICATIONS

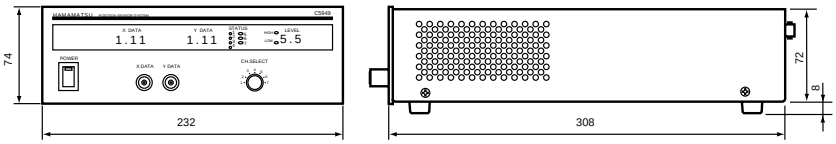
Detector	non-discrete position sensitive detector (PSD)
Spectral Response	700 to 1150 nm
Measurement point	1 (Standard)
Max. Measurement point	7 (using two M6254 board)
Sampling frequency	300 Hz
Position Detecting Error	Zone A (refer to figure below) ± 1%, Zone B ± 2%
Resolution	1/5000 (using recorder)
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

DIMENSIONAL OUTLINES (UNIT: mm)

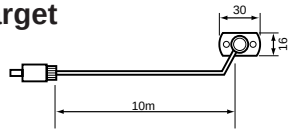
• **Sensor head** (Weight: Approx. 140 g)



• **Controller** (Weight: Approx. 3.4 kg)



• **LED Target**



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