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Signal processing unit for PSD module



C10460

Specifically dedicated for PSD module (C10443 series)

The C10460 is a signal processing unit specifically design to convert the output from a PSD module (C10443 series) into position signals.
Position signals are output as both analog and digital signals. In case of analog output, connecting the output connector to a voltmeter shows an output voltage that directly represents the position information (The output voltage indicates a position from the center of the PSD, 1 V=1 mm). While, digital output allows serial connection (RS-232C) to a PC. Position information can be easily loaded into a PC via the sample software that comes with the unit.

Features

- **Both analog and digital outputs**
  Analog output: Output voltage directly represents the position information.
  Digital output: High-resolution digital output (16-bit)
- **AC adapter (+12 V) operation**
- **Supplies power to PSD modules**

Applications

- **Optical axis alignment**
- **Range finder**
- **Three-dimensional measurement**
- **Length measurement**
- **Liquid level sensors**
- **Distortion measurement**

Absolute maximum ratings (Ta=25 °C, unless otherwise noted)

Parameter	Symbol	Min.	Max.	Unit
Supply voltage	Vcc	-	+18	V
Input voltage	Vin	-13	+13	V
Output voltage	Vout	-15	+15	V
Operating temperature*1	Topr	0	+40	°C
Storage temperature*1	Tstg	-10	+60	°C

Note: Exceeding the absolute maximum ratings even momentarily may cause a drop in product quality. Always be sure to use the product within the absolute maximum ratings.
*1: No condensation

Specifications (Ta=25 °C, Vcc=+12 V, unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Supply voltage	Vcc	+9	+12	+18	V
Input voltage	Vin	-12	-	0	V
Current consumption	Icc	-	200	-	mA

Analog section

Parameter	Symbol	Min.	Typ.	Max.	Unit
Output amplitude voltage	Vout	-10	-	+10	V
Output noise voltage	Vn	-	5	-	mVp-p
Offset voltage	Vos	-5	-	+5	mV
Position detection error	E	-	±3	-	%
Position resolution*2	ΔR	-	5	-	μm
Cutoff frequency (-3 dB)	fc	-	13.5	-	kHz

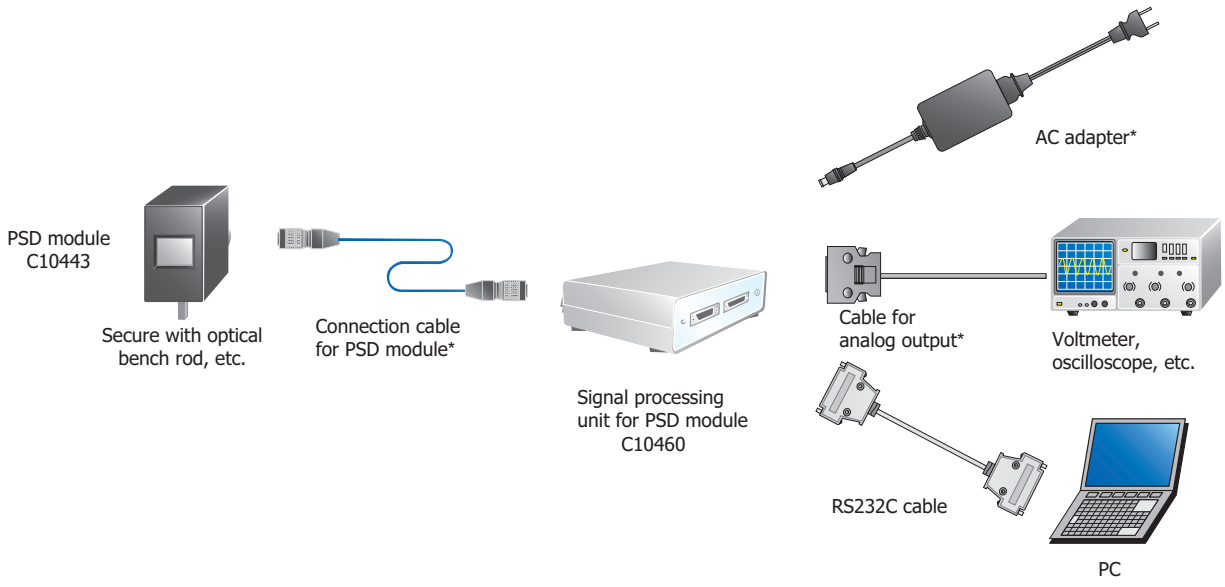
*2: Reference value. Values may vary depending on operating environment.

Digital section

Parameter	Symbol	Min.	Typ.	Max.	Unit
Signal conversion time - mode 1*3	Tr1	2	-	-	ms
Signal conversion time - mode 2*4	Tr2	5	-	-	ms
Output form	-	Conforms to RS-232C (position signals, light level monitor), 16-bit			-

*3: Communication parameter 115200 bps/8-bit/Non-parity/1 stop bit
*4: Communication parameter 38400 bps/8-bit/Non-parity/1 stop bit

Connection example



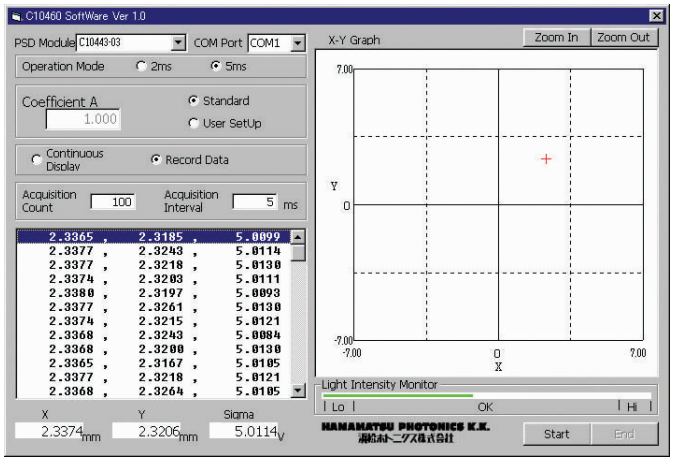
* Accessories of C10460

KACCC0349EC

Sample software (accessory)

Sample software acquires and displays position data as numerical values and on an XY graph, as well as recording the data.

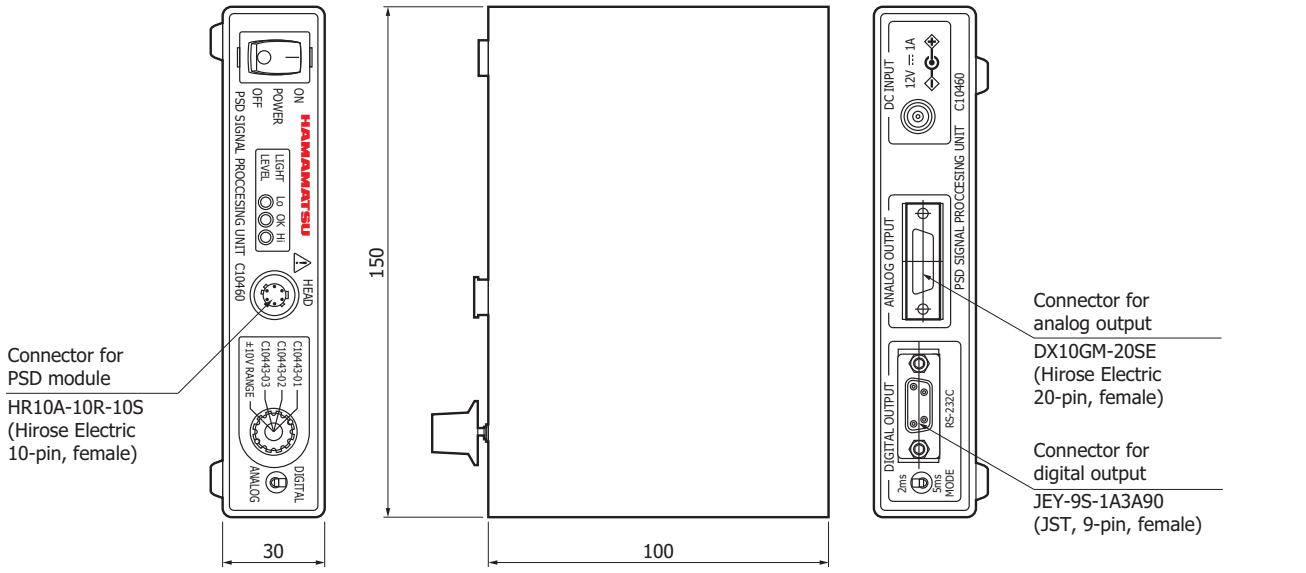
· Acquisition count: 1 to 300000
· Acquisition interval
  Mode 1: 2 ms to 120000 ms (in 2 ms intervals)
  Mode 2: 5 ms to 300000 ms (in 5 ms intervals)



Compatible OS:
Microsoft® Windows® 7 Professional (32-bit)*5
Microsoft® Windows® 7 Professional (64-bit)*5
Microsoft® Windows® 7 Professional SP1 (32-bit)*5
Microsoft® Windows® 7 Professional SP2 (64-bit)*5

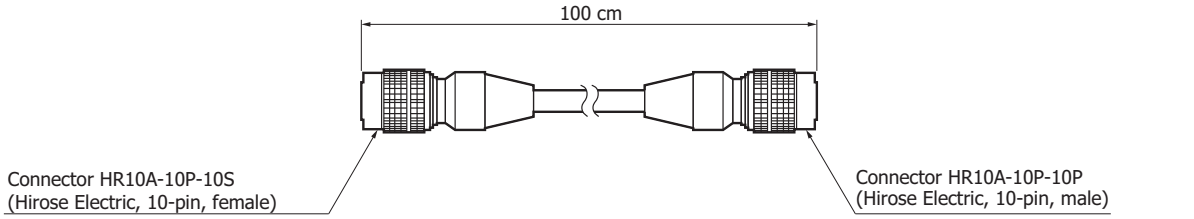
*5: Microsoft Windows is either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

Dimensional outline (unit: mm)

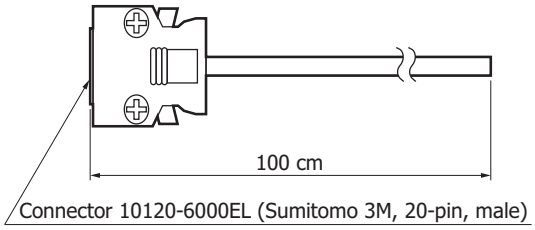


Accessories

· AC adapter
· Cable for PSD module



· Cable for analog output (no connector on one end)



· Sample software CD-ROM

Note: RS232C cable is not supplied with C10460. Use a commercially available cable with 9-pin D-sub connectors. (male - female, straight)

Information described in this material is current as of July, 2014.
Product specifications are subject to change without prior notice due to improvements or other reasons. This document has been carefully prepared and the information contained is believed to be accurate. In rare cases, however, there may be inaccuracies such as text errors. Before using these products, always contact us for the delivery specification sheet to check the latest specifications.

The product warranty is valid for one year after delivery and is limited to product repair or replacement for defects discovered and reported to us within that one year period. However, even if within the warranty period we accept absolutely no liability for any loss caused by natural disasters or improper product use.
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