

# HCW4

## INCREMENTAL MODULAR SENSORS



### Features

- With its two-part design, the HCW4 incremental sensor offers maximum flexibility when installing it.
- Application fields : agriculture, construction, forestry vehicles, medical, solar panels...
- Robustness and excellent resistance to shocks / vibrations.
- Standard IP 67 protection (IP69K option).
- Operating temperature range: -40°C to 85°C (-40..+125°C option).
- Magnetic technology.
- Universal supply 5 to 30Vdc – incremental output.
- Available resolution up to 1024 points per revolution.
- Standard PVC or PUR cable output.

### SPECIFICATIONS

<b>Material</b>	Macromelt OM638
<b>Encoder weight (approx.)</b>	0,100 kg
<b>Operating temperature</b>	- 40... + 85 °C (sensor T°)
<b>Storage temperature</b>	- 40... + 85 °C
<b>Protection</b>	IP 67
<b>Shocks (EN60068-2-27)</b>	≤ 2000m.s <sup>2</sup> (during 6 ms)
<b>Vibrations (EN60068-2-6)</b>	≤ 200m.s <sup>2</sup> (55 ... 2 000 Hz)

### ADAPTATION POSSIBILT Y

BEI Sensors distinguishes itself by its flexible approach and ability to react to customers needs, with us no limit exists; we shall always try to supply you the product offering the best solution to your specifications.

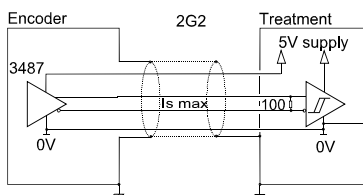
**Modified mechanics:** Precision prototypes units, small and medium size. Units that will match themselves exactly to your mechanical configuration or to your dimensional constraints.

**Specific shaft system:** for example with integrated coupling.

**Send us your subset:** we can integrate our encoder into your subset and return you the complete assembly with the guarantee of an optimal mounting.

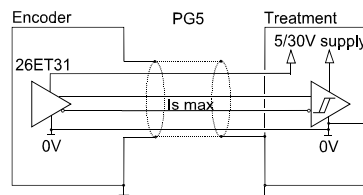
**Connection / Cable assemblies:** On the whole range of our sensors a wide selection of electrical connections are possible.

### OUTPUT ELECTRONIC / POWER SUPPLY



#### 2G2 electronic (100kHz)

Supply : 5Vdc ± 10%  
 Cons. without load : 40mA max  
 Current per channel: 40mA max  
 0 max (Is=20mA) : V<sub>oi</sub> = 0,5Vdc  
 1 min (Is=20mA) : V<sub>oh</sub> = 2,5Vdc



#### PG5 electronic (100kHz)

Supply: 5 to 30Vdc  
 Cons. without load : 40mA max  
 Current per channel: 40mA max  
 0 max (Is=20mA) : V<sub>oi</sub> = 0,5Vdc  
 1 min (Is=20mA) : V<sub>oh</sub> = V<sub>cc</sub>-2,5Vdc

Protection against short circuits and inversion of polarity for the electronic PG5.

## STANDARD CONNECTION

		-	+	A	B	O	A/	B/	O/	Ground
<b>G3</b>	<b>PVC cable 8 wires 8230/020</b>	WH white	BN brown	GN green	YE yellow	GY grey	PK pink	BU blue	RD red	Main shield
<b>GP</b>	<b>PUR cable 12 wires 8230/050</b>	WH white + WH/GN white/green	BU blue + BN/GN brown/green	GY grey	BN brown	RD red	PK pink	GN green	BK black	General shielding

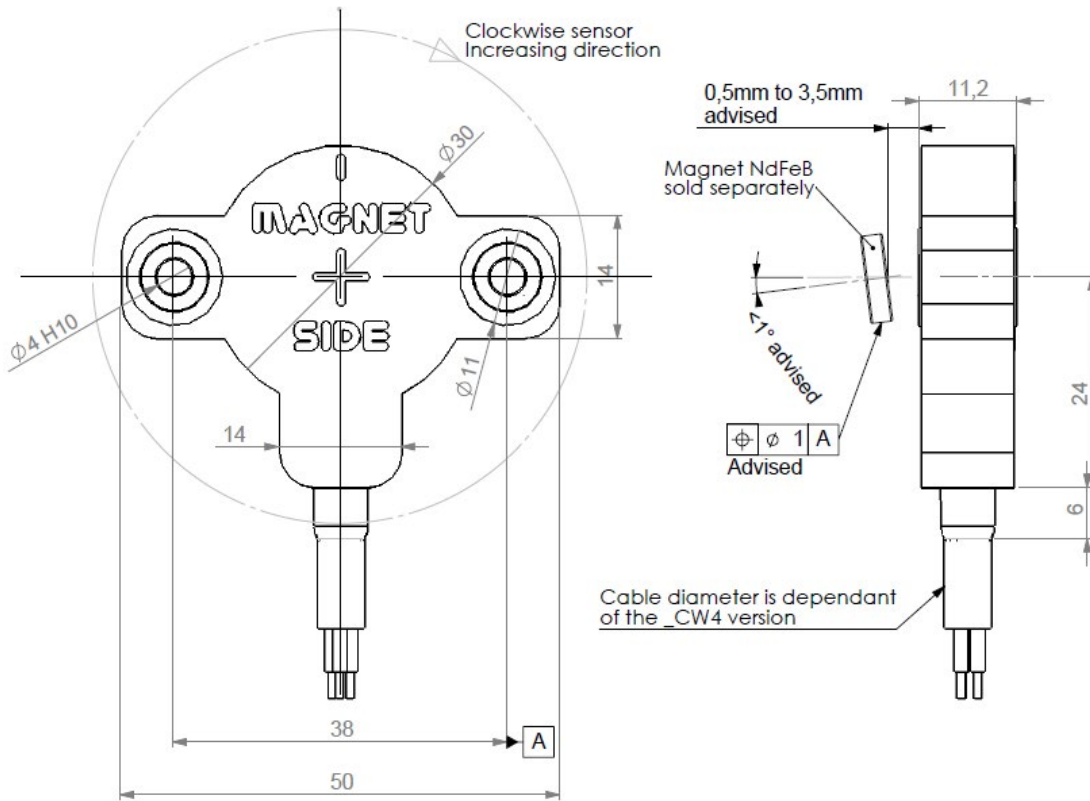
## AVAILABLE RESOLUTIONS

32 64 128 256 1024

## DIMENSIONS

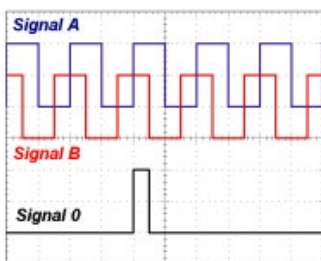
Tolerance, unless otherwise noted:  
All dimensions are in millimeters [inches]

### STANDARD HCW4



Shaft system with magnet to be ordered separately (cf specific data-sheet).

## INCREMENTAL OUTPUT



## ORDERING REFERENCE

Example : HCW4\_00//PG59//01024//G3R020

<b>HCW</b>	<b>00</b>	<b>//</b>	<b>PG5</b>	<b>9</b>	<b>//</b>	<b>01024</b>	<b>//</b>	<b>G3</b>	<b>R020</b>
<b>Series</b>									
<b>HCW4:</b> Incremental encoder									
<b>Mechanics</b>									
<b>00:</b> Modular									
<b>Supply Output stage</b>									
<b>2G2:</b> 5Vdc supply TTL / RS422 output									
<b>PG5:</b> 5 to 30Vdc supply Push-pull output (TTL / RS422 available if encoder supply is 5Vdc)									
<b>Signals</b>									
<b>9 :</b> A, A/B, B, 0, 0/									
<b>Resolution</b>									
<b>1024 :</b> max									
<b>Connection</b>									
<b>G3 :</b> PVC cable 8 wires									
<b>GP:</b> PUR cable 12 wires									
<b>Connection orientation</b>									
<b>R020 :</b> Radial cable 2m									

## AGENCY APPROVALS & CERTIFICATES



Made In France

Page 3

Datasheets provided by Sensata Technologies, Inc., its subsidiaries and/or affiliates ("Sensata") are solely intended to assist third parties ("Buyers") who are developing systems that incorporate Sensata products (also referred to herein as "components"). Buyer understands and agrees that Buyer remains responsible for using its independent analysis, valuation, and judgment in designing Buyer's systems and products. Sensata datasheets have been created using standard laboratory conditions and engineering practices. Sensata has not conducted any testing other than that specifically described in the published documentation for a particular datasheet. Sensata may make corrections, enhancements, improvements, and other changes to its datasheets or components without notice.

Buyers are authorized to use Sensata datasheets with the Sensata component(s) identified in each particular datasheet. HOWEVER, NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE TO ANY OTHER SENSATA INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY THIRD PARTY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT, IS GRANTED HEREIN. SENSATA DATASHEETS ARE PROVIDED "AS IS". SENSATA MAKES NO WARRANTIES OR REPRESENTATIONS WITH REGARD TO THE DATASHEETS OR USE OF THE DATASHEETS, EXPRESS, IMPLIED, OR STATUTORY, INCLUDING ACCURACY OR COMPLETENESS. SENSATA DISCLAIMS ANY WARRANTY OF TITLE AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUIET ENJOYMENT, QUIET POSSESSION, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS WITH REGARD TO SENSATA DATASHEETS OR USE THEREOF.

All products are sold subject to Sensata's terms and conditions of sale supplied at [www.sensata.com](http://www.sensata.com). SENSATA ASSUMES NO LIABILITY FOR APPLICATIONS ASSISTANCE OR THE DESIGN OF BUYERS' PRODUCTS. BUYER ACKNOWLEDGES AND AGREES THAT IT IS SOLELY RESPONSIBLE FOR COMPLIANCE WITH ALL LEGAL, REGULATORY, AND SAFETY-RELATED REQUIREMENTS CONCERNING ITS PRODUCTS, AND ANY USE OF SENSATA COMPONENTS IN ITS APPLICATIONS, NOTWITHSTANDING ANY APPLICATIONS-RELATED INFORMATION OR SUPPORT THAT MAY BE PROVIDED BY SENSATA.

Mailing Address: Sensata Technologies, Inc., 529 Pleasant Street, Attleboro, MA 02703, USA

### CONTACT US

#### Americas

+1 (800) 350 2727  
[sales.beisensors@sensata.com](mailto:sales.beisensors@sensata.com)  
**Europe, Middle East & Africa**  
+33 (3) 88 20 8080  
[position-info.eu@sensata.com](mailto:position-info.eu@sensata.com)

#### Asia Pacific

[sales.isasia@list.sensata.com](mailto:sales.isasia@list.sensata.com)  
China +86 (21) 2306 1500  
Japan +81 (45) 277 7117  
Korea +82 (31) 601 2004  
India +91 (80) 67920890  
Rest of Asia +886 (2) 27602006  
ext 2808