

CHO5

SSI ABSOLUTE SINGLE TURN ENCODERS



Features

- Through hollow shaft version Ø14mm, with reduction hubs in aluminium of 6, 8, 10 and 12 mm
- Robustness and excellent resistance to shocks / vibrations
- High protection level IP65
- High resolutions possibility, up to 16 bits (Gray or binary)
- Universal power supply from 5 to 30 Vdc
- High performances in temperature -20°C to 90°C (option -40°C to 100°C)
- Standard DIRECTION and RESET input
- Numeric or sine incremental outputs option

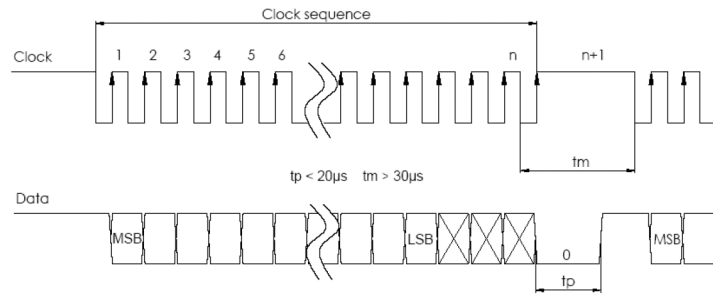
SPECIFICATIONS

Material	Cover: Zinc Alloy Body: Aluminum Shaft: Stainless Steel
Bearings	6803 series
Maximal Loads	Axial: 20 N Radial: 50 N
Shaft Inertia	$\leq 2,2 \cdot 10^{-6} \text{ kg.m}^2$
Torque	$\leq 6 \cdot 10^{-3} \text{ N.m}$
Permissible Max. Speed	9,000 min ⁻¹
Continuous Max. Speed	6,000 min ⁻¹
Shaft Seal	Viton
Shocks (EN60068-2-27)	$\leq 500 \text{ m.s}^{-2}$ (during 6 ms)
Vibrations (EN60068-2-6)	$\leq 100 \text{ m.s}^{-2}$ (10 ... 2,000 Hz)
EMC	EN 61000-6-4, EN 61000-6-2
Isolation	1,000 V eff
Encoder Weight (Approx.)	0,270 kg
Operating Temperature	- 20 ... 90°C (encoder T°)
Storage Temperature	- 40 ... + 100°C
Protection (EN 60529)	IP 65
Torque (Ring Pressure Screw)	0,7 ... 0,9 N.m
Theoretical mechanical lifetime 10⁹ turns (F_{axial} / F_{radial})	
10 N / 25 N	230
25 N / 50 N	29

Electrical Characteristics

Input Signal CLK	Per Optocoupler
Output Signal Data	Line - Driver RS422
Power Supply	5 - 30Vdc
Introduction	< 200ms
Consumption Without Load	Max. 100mA
Clock Frequency (CLK)	100kHz to 1MHz for 13 bits encoder $100\text{kHz} - F_{\text{max}} = 10^6 / (\text{resolution in bits} - 10)$ for encoder >13bits, ex : $F_{\text{max}} = 166\text{kHz}$ for 16 bits encoder
Interrogation Frame	n=13 bits for 13 bits resolution n=21 bits for >13bits resolution

SSI Transmission



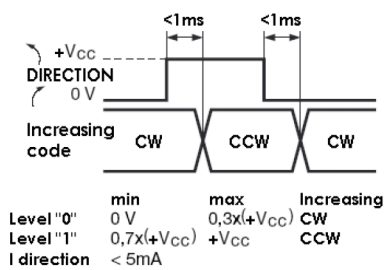
Transmission	Transmission up to 400m at 100kHz in function of the cable characteristics
Cable	High security of transmission by using shielded cable and twisted pairs

* Consult us for length > 100m

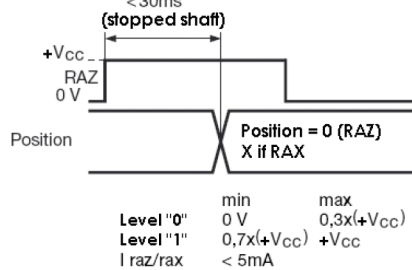
Connection

Type	+ Vcc	0V	Clk+	Data+	RAZ	Data-	Clk-	Direction
S6	1	2	3	4	5	6	7	9
S5	BN/GN Brown/Green	WH/GN White/Green	GN Green	GY Grey	BU Blue	PK Pink	BN Brown	WH White
S8	8	1	3	2	6	10	11	5

DIRECTION input



RAZ / RAX input



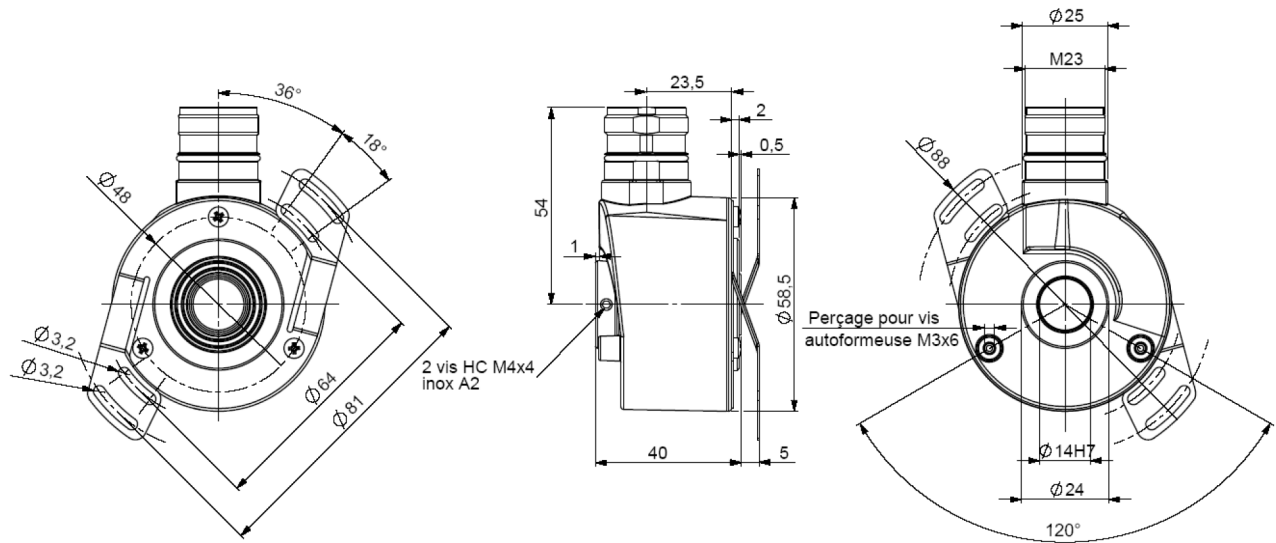
Note: Do not connect other pinouts, connect DIRECTION and RAZ to a potential (RAZ at 0V if not used).



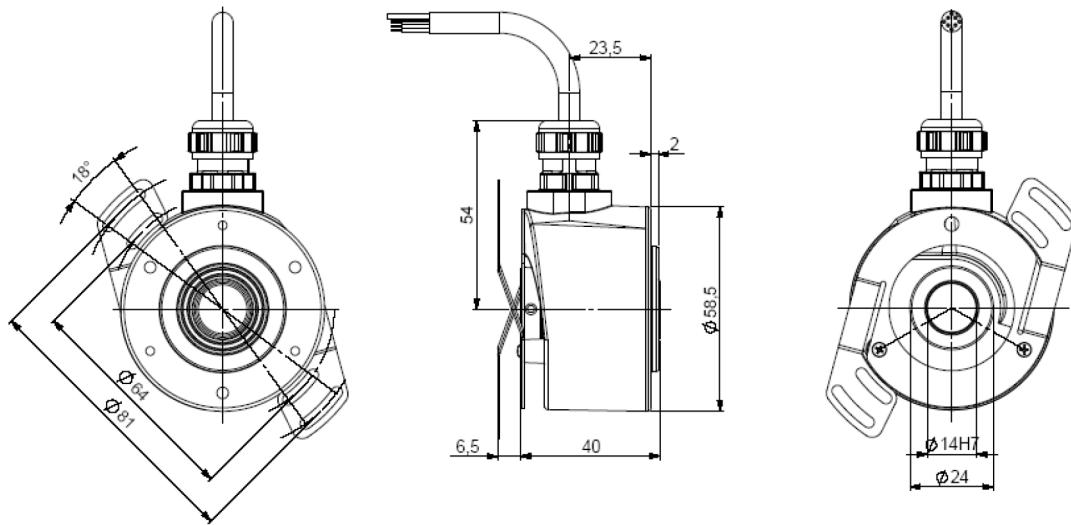
DIMENSIONS

Dimensions in mm

CH05_14 connection S6R (radial M23), DAC 9445/015* mounted on body



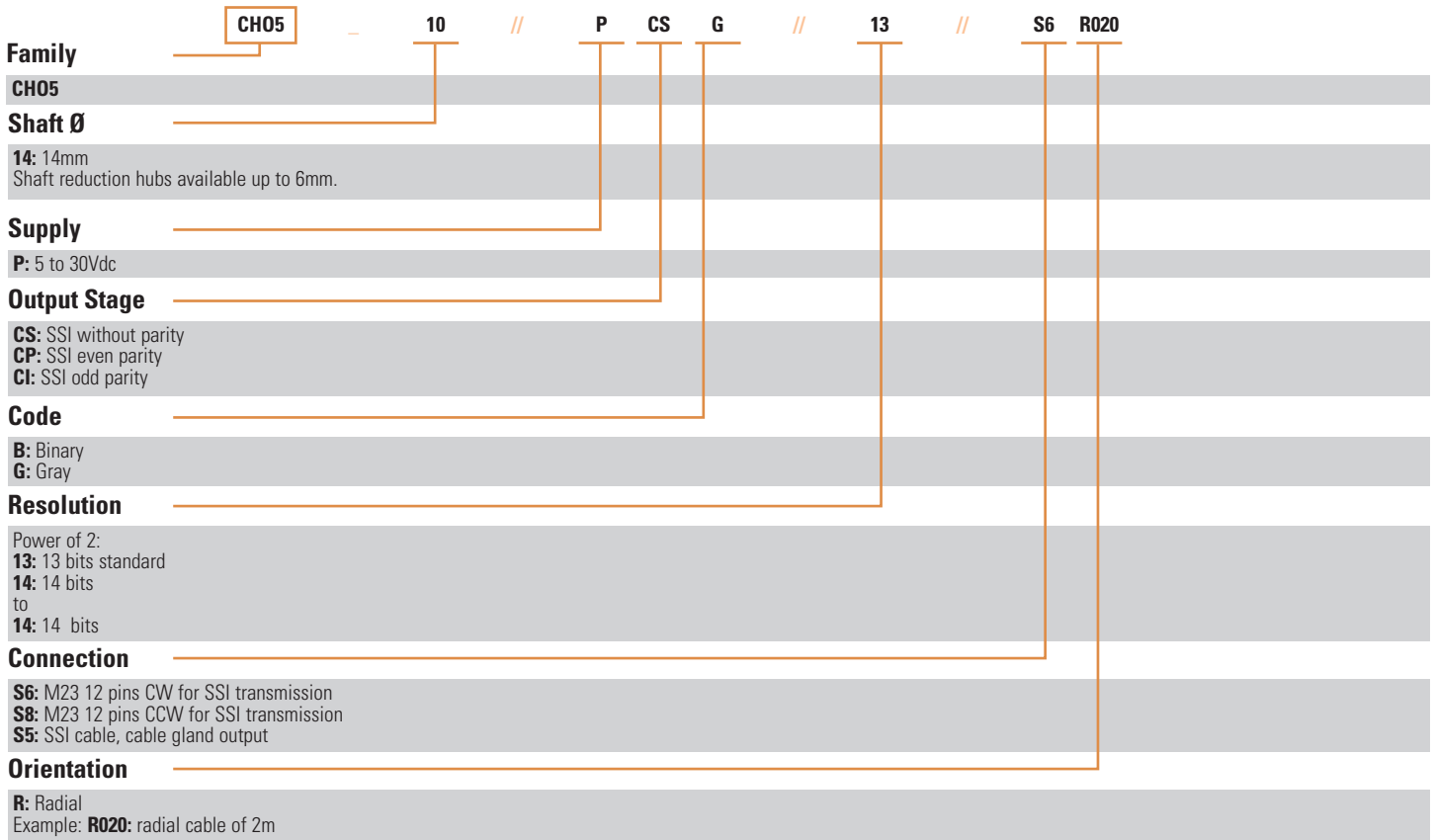
CH05_14 connection S5R (radial cable), DAC 9445/015* mounted on the cover



* Accessory to be ordered separately.



Contact the factory for special versions, ex: special flanges, electronics, connections...



Monitoring function available in option:

- of the code coherence
- of the LED internal regulated current loop
- of temperature range with 2 limits

Entry / output available as option:

- RAX input (reset to a value X, manufacture setting)
- ERROR output for monitoring functions
- Sine & Cosine outputs without index, 2048ppr (option: 4096 ppr)
- A & B incremental outputs without index, 2048ppr (option: 4096 ppr)



Sensata Technologies, Inc. ("Sensata") data sheets are solely intended to assist designers ("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, evaluation and judgment in designing Buyer's systems and products. Sensata data sheets 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 data sheet. Sensata may make corrections, enhancements, improvements and other changes to its data sheets or components without notice.

Buyers are authorized to use Sensata data sheets with the Sensata component(s) identified in each particular data sheet. 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 DATA SHEETS ARE PROVIDED "AS IS". SENSATA MAKES NO WARRANTIES OR REPRESENTATIONS WITH REGARD TO THE DATA SHEETS OR USE OF THE DATA SHEETS, 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 DATA SHEETS OR USE THEREOF.

All products are sold subject to Sensata's terms and conditions of sale supplied at 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 – Option 1
sales.beisensors@sensata.com
Europe, Middle East & Africa
+33 (3) 88 20 8080
position-info.eu@sensata.com

Asia Pacific

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