

CHM9

BISS ABSOLUTE SINGLE TURN ENCODERS

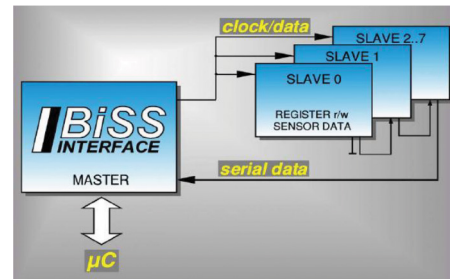
Introduction

Especially designed for heavy-duty (steel, paper, wood – mills, cranes ...) Compact and robust conception. Excellent resistance to shocks/vibrations and to extreme axial/radial loads. Also available in SSI or parallel output and fieldbus: CanOpen, DeviceNet, Profibus.

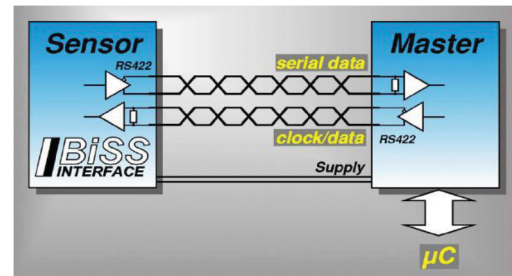


Features

- Bi-directional
- Synchronous-serial communication
- Short cycle times
- Up to 8 slaves with one master
- Multicycle data transmission



The BiSS Interface master–slave concept supports up to 8 data sources in one or more devices.



BiSS Interface wiring with unidirectional lines (one sensor with several slave levels, for example).

CHM9 BiSS encoder is slave 0. Consult us in the case of other slave number



SPECIFICATIONS

Material	Cover: Zinc Alloy Body: Aluminum Shaft: Stainless Steel
Bearings	6001 series
Maximal Loads	Axial: 100 N Radial: 200 N
Shaft Inertia	$\leq 15 \cdot 10^{-6} \text{ kg.m}^2$
Torque	$\leq 10 \cdot 10^{-3} \text{ N.m}$
Permissible Max. Speed	9,000 min ⁻¹
Continuous Max. Speed	6,000 min ⁻¹
Shaft Seal	Viton double lips
Shocks (EN60068-2-27)	$\leq 500 \text{ m.s}^{-2}$ (during 6 ms)
Vibrations (EN60068-2-6)	$\leq 200 \text{ m.s}^{-2}$ (10 ... 1,000 Hz)
EMC	EN 61000-6-4, EN 61000-6-2
Isolation	1,000 Veff
Encoder Weight (Approx.)	1,100kg zinc alloy cover, alu body 2,400kg zinc alloy cover, stainless steel body 2,600kg stainless steel cover and body
Operating Temperature	- 20 ... + 90°C (encoder T°)
Storage Temperature	- 40 ... + 100°C
Protection (EN 60529)	IP 65
Theoretical mechanical lifetime 10⁹ turns (F_{axial} / F_{radial})	
20 N / 30 N	360
50 N / 100 N	18
100 N / 200 N	2,2

Electrical Data

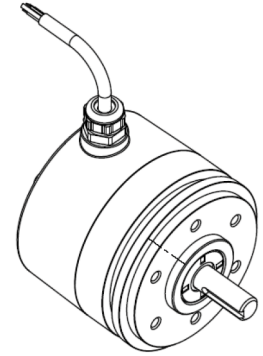
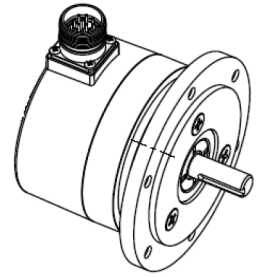
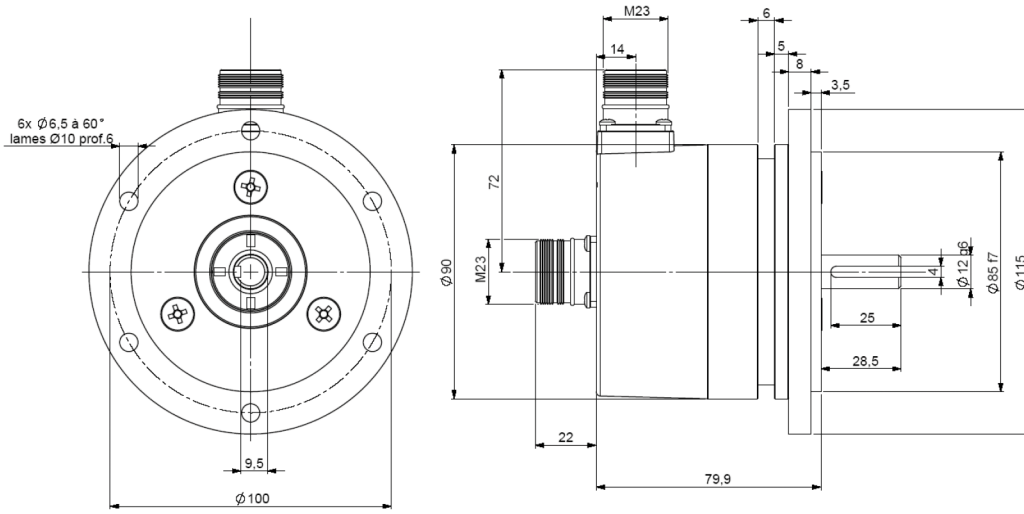
Power Supply Vcc	5 to 30Vdc (polarity protected)
Consumption Without Load	Max 100mA
Introduction	< 1 s
Inputs	DIRECTION and RESET
Outputs	Level high $\geq 2,5\text{V}$ (for I=20mA) Load high $\leq -20\text{mA}$ BiSS: RS-422 Level low $\leq 0,5\text{Vdc}$ (for I=20mA) Load low $\leq 20\text{mA}$



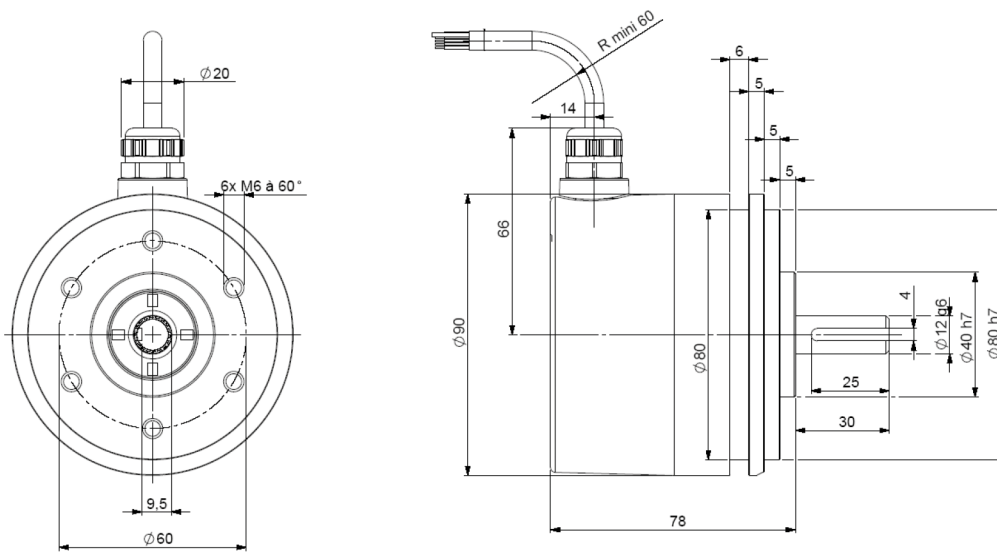
DIMENSIONS

Dimensions in mm

CHM9_11 connection S6 or S8 (radial or axial)



CHM9_12 connection S5R (radial cable)

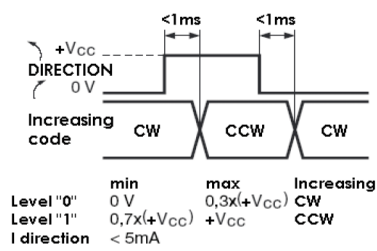




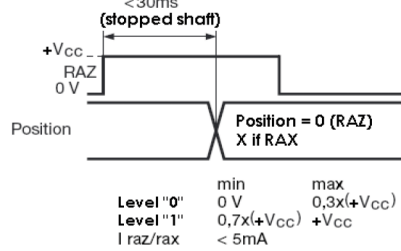
BISS STANDARD CONNECTION

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)



ORDERING OPTIONS

Example : CHM9_12//PCBG//13//S5 R050

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

Family	CHM9	-	12	//	P	CB	G	//	13	//	S5	R050
CHM9												
Shaft Ø												
12: 12mm												
Supply												
P: 5 to 30Vdc												
Output Stage												
CB: BiSS Electronic												
Code												
B: Binary G: Gray												
Resolution												
Max: 16 bits, power of 2 13: 13 bits 16: 16 bits												
Connection												
S6: M23 12 pins CW S8: M23 12 pins CCW S5: cable gland output												
Orientation												
R: Radial Example: R020: radial cable of 2m												

Monitoring function available in option:

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

Input / output available in option:

- ERROR output for monitoring functions
- Sine & Cosine outputs without index, 2048ppr (option: 4096 ppr)
- A & B incremental outputs without index, 2048ppr (option: 4096 ppr)



AGENCY APPROVALS & CERTIFICATIONS



Made in France

Page 5

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