Sensata Technologies

| CHM9

PARALLEL ABSOLUTE SINGLE TURN ENCODERS

Features

- 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.
- Solid shaft 11mm and 12mm.
- High protection level IP65 – IP67 option.
- High performances in temperature –20°C to 90°C.
- Universal power supply from 5 to 30 Vdc – parallel output.
- High resolutions possibility, up to 14 bits (Gray or binary).
- Standard DIRECTION input.

SPECIFICATIONS

Material	**Cover:** Zinc Alloy **Body:** Aluminum **Shaft:** Stainless Steel
Bearings	6001 series
Maximal Loads	**Axial:** 100 N **Radial:** 200 N
Shaft Inertia	$\leq 15.10^{-6}$ kg.m^2
Torque	$\leq 10.10^{-3}$ N.m
Permissable Max. Speed	9,000 min^{-1}
Continuous Max. Speed	6,000 min^{-1}
Shaft Seal	Viton double lips
Shocks (EN60068-2-27)	$\leq$ 500 m.s^{-2} (during 6 ms)
Vibrations (EN60068-2-6)	$\leq$ 200 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 - IP 67 option
Theoretical mechanical lifetime 10^9 turns (F_{axial} / F_{radial})	
20 N / 30 N	360
50 N / 100 N	18
100 N / 200 N	2,2

Connection

	Color	13 bits + DIRECTION CP or C3	14 bits + DIRECTION C1
1	White WH	0V	0V
2	Brown BN	+Vcc	+Vcc
3	Green GN	D0	D0
4	Yellow YE	D1	D1
5	Grey GY	D2	D2
6	Pink PK	D3	D3
7	Blue BU	D4	D4
8	Red RD	D5	D5
9	Black BK	D6	D6
10	Violet VT	D7	D7
11	White/Brown WH/BN	D8	D8
12	White/Green WH/GN	D9	D9
13	White/Yellow WH/YE	D10	D10
14	White/Grey WH/GY	D11	D11
15	White/Pink WH/PK	D12	D12
16	White/Blue WH/BU	DIRECTION	D13
17	White/Red WH/RD	/	DIRECTION

Example, 10 bits encoder: only MSB will be supplied (D3 to D12)

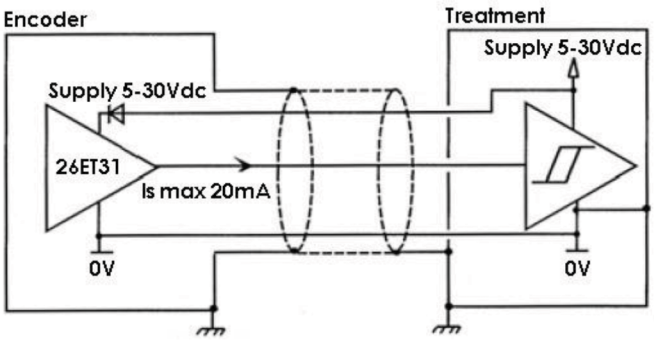
Direction

CW increasing code: DIRECTION pin to +Vcc
CCW increasing code: DIRECTION pin to 0V

Latch (Option)

Active data on the outputs: LATCH pin to 0V
Frozen data on the outputs: LATCH pin to +Vcc
Consult us for the connection of an encoder with this option.

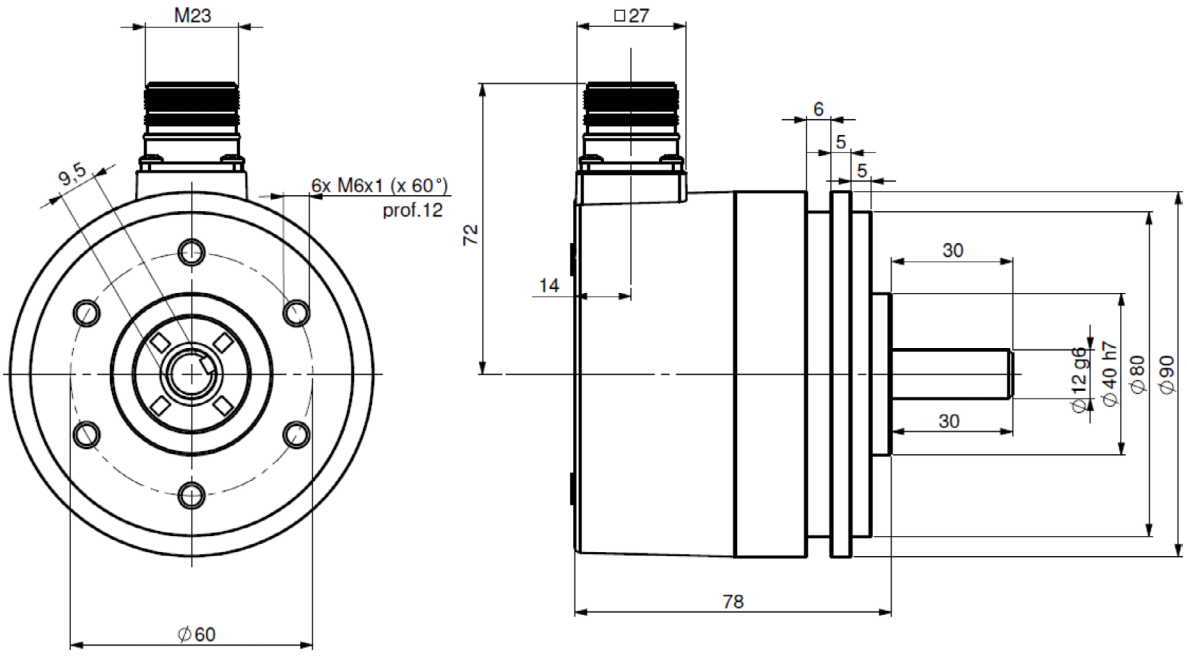
Electronic



Power supply: 5 to 30Vdc
Consumption without load: 100mA max
Current output per channel: Is=20mA max
Level "0" (Is=20mA) max: V_{ol} = 0,5Vdc
Level "1" (Is=20mA) min: V_{oh} = Vcc-2,5Vdc
Protection against short circuits and inversion of polarity

DIMENSIONS

Dimensions in mm



ORDERING OPTIONS

Example : CHM9_12//PC5G//13//C3R020

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

CHM9 _ 12 // P C5 G // 13 // C3 R020

Family

CHM9:
Cover: zinc
Body: alu
CBM9:
Cover: zinc
Body: st. steel
CXM9:
Stainless steel cover & body

Shaft Ø

11: 11mm
12: 12mm
C2: 12mm
25mm length

Supply

P: 5 to 30Vdc

Output Stage

C5: push pull 5 to 30Vdc

Code

B: Binary
G: Gray

Resolution

Power of 2:
1: 1 bit
to
14: 14 bits

Connection

CP: M23 16 pins
13 bits + direction
C1: M23 17 pins
14 bits + direction
C3: Cable gland + 16 wires cable

Orientation

A: Axial
R: Radial
Example: **A020:** axial cable of 2m
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 avalable in option:

- LATCH entry.
- ERROR output for monitoring functions.

AGENCY APPROVALS & CERTIFICATIONS

CE

Made in France

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