

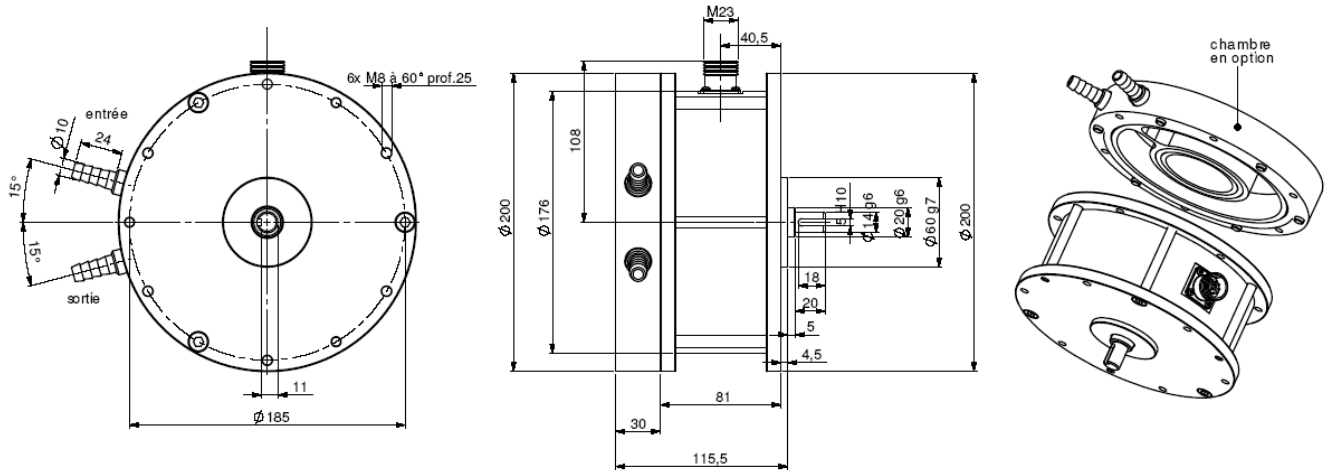
ABSOLUTE PARALLEL ENCODERS, CHML RANGE

- With 200mm diameter, especially for heavy duty, extreme resistance to shocks/vibrations and to axial and radial charges
- Bodies are in steel treated against corrosion
- Water cooling flange in option
- Double shaft output in option
- Duplex version with 2 opto-electronic redundant systems

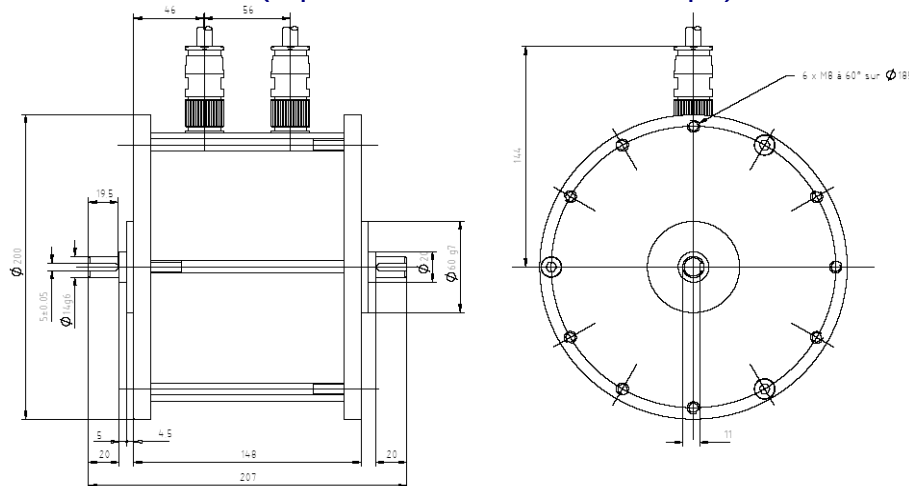
Application : Glass factory, iron industry, cement works, platform marines, locks



CHML (simple version)



CHDD (Duplex version with double shaft output)

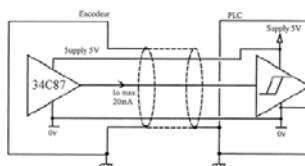


Material (connector output or cable version)	Cover : steel	Shock (EN60068-2-29)	≤ 10 g (for 6 ms)
	Body: chromium-plated steel	Vibration (EN60068-2-6)	≤ 10 g (10 Hz...500 Hz)
	Shaft : stainless steel Ø14g6	EMC	EN 61000-6-4, EN 61000-6-2
Ball bearings	6004 DDU	Isolation voltage	2 000 V eff
Maximal load	Axial : 200 N	Electrical lifetime	> 10 ⁵ h
	Radial : 200 N	Weight	Simple Version: 10 kg
Simple / duplex inertia	500 / 2000 g.cm ²		Duplex Version: 15 kg
Torque	≤ 3 N.cm	Operating temperature	- 20... + 85 °C
Max. speed	6 000 rpm	Storing temperature	- 40... + 85 °C
Max. speed (continuous)	3 600 rpm	Relative humidity	98 % (without condensation)
Max. acceleration	1.10 ⁵ rad.s ⁻²	Protection degree(EN 60529)	IP 65
Shaft seal	Viton	Theoretical electrical lifetime 10 ⁹ turns (F _{axial} / F _{radial})	
Shock (EN60068-2-27)	≤ 30 g (for 11 ms)	20 N / 30 N : 360	100 N / 200 N : 2,5
		50 N / 100 N : 30	

ABSOLUTE PARALLEL ENCODERS, CHML RANGE

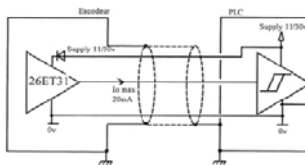
PARALLEL OUTPUTS		13 bits + sense CP or C3	14 bits + sense C1	13 bits + sense + rax CZ
1	white WH	-	-	-
2	brown BN	+	+	+
3	green GN	D0	D0	D0
4	yellow YE	D1	D1	D1
5	grey GY	D2	D2	D2
6	pink PK	D3	D3	D3
7	blue BU	D4	D4	D4
8	red RD	D5	D5	D5
9	black BK	D6	D6	D6
10	violet VT	D7	D7	D7
11	white/brown WH/BN	D8	D8	D8
12	white/green WH/GN	D9	D9	D9
13	white/yellow WH/YE	D10	D10	D10
14	white/grey WH/GY	D11	D11	D11
15	white/pink WH/PK	D12	D12	D12
16	white/blue WH/BU	Sense	D13	RAZ
17	white/red WH/RD	NC	sense	sense

OUTPUT STAGE / SUPPLY - PARALLEL OUTPUT



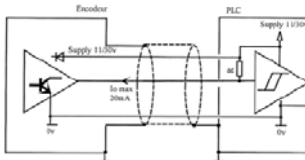
Electronic 2CD

Supply : 5Vdc ± 10%
Consumption : 80mA
Intensity per level : 20mA
Level 0 max : $V_{ol} = 0,5Vdc$
Level 1 min : $V_{oh} = 2,5Vdc$



Electronic 5C5

Supply: 11 to 30Vdc
Consumption : 100mA
Intensity per level : 20mA
Level 0 max : $V_{ol} = 1,5Vdc$
Level 1 min : $V_{oh} = V_{cc}-2,5Vdc$



Electronic 5CN

Supply: 11 to 30Vdc
Consumption : 100mA
Intensity per level : 50mA
Level 0 max : $V_{ol} = 1,25Vdc$
Level 1 min : $V_{oh} = V_{cc}-2,5Vdc$

RAZ to be used with non turning shaft :

For an electrical reset / with push button (option) : give an impulse to the +Vcc during 1s minimum

Sense

CW code : pin Sense at 0V

CCW code : pin Sense at +Vcc

Protection against shortcuts and polarity inversions for the electronics 5CN and 5C0

Example 10 bits encoder : only most significant bits (D3 to D12) would be available

ORDERING CODE (Special versions upon request, for ex: special flanges/electronics/connections...)

	Shaft Ø	Parallel output : 2CD, 5C5, 5CN, 2ED, 5E5		Code	Resolution	Connection	Connection orientation
		2: 5Vdc	5: 11 - 30Vdc				
CHML	14 :14mm	CD: driver 5Vdc C5: Push-Pull 11-30Vdc CN: NPNCO 11-30Vdc	With electrical reset: ED: driver 5Vdc E5: push-pull 11-30Vdc	B : binary	14 13 ... 1	CP : M23 16 pins CW 13 bits + sense C1 : M23 17 pins CW 14bits + sense C3 : 16 wires cable	Connector : R : radial Ex cable : R020 : 2m radial cable R050 : 5m radial cable
		G : gray		CZ : M23 17 pins CW 13bits + sense + RAX			
Ex: CHML _ 14 //		5C5		G //	13 //	C3	R050

14 bits : only available in GRAY code and 5C5 and 2CD electronics

GHML : simple shaft output, standard,
GHDL : double shaft output, standard,
GHMD : simple shaft output, Duplex,
GHDD : double shaft output, Duplex.

In Duplex version, 2 outputs (independent electronic and optronic) ensure a redundant security of the encoder