

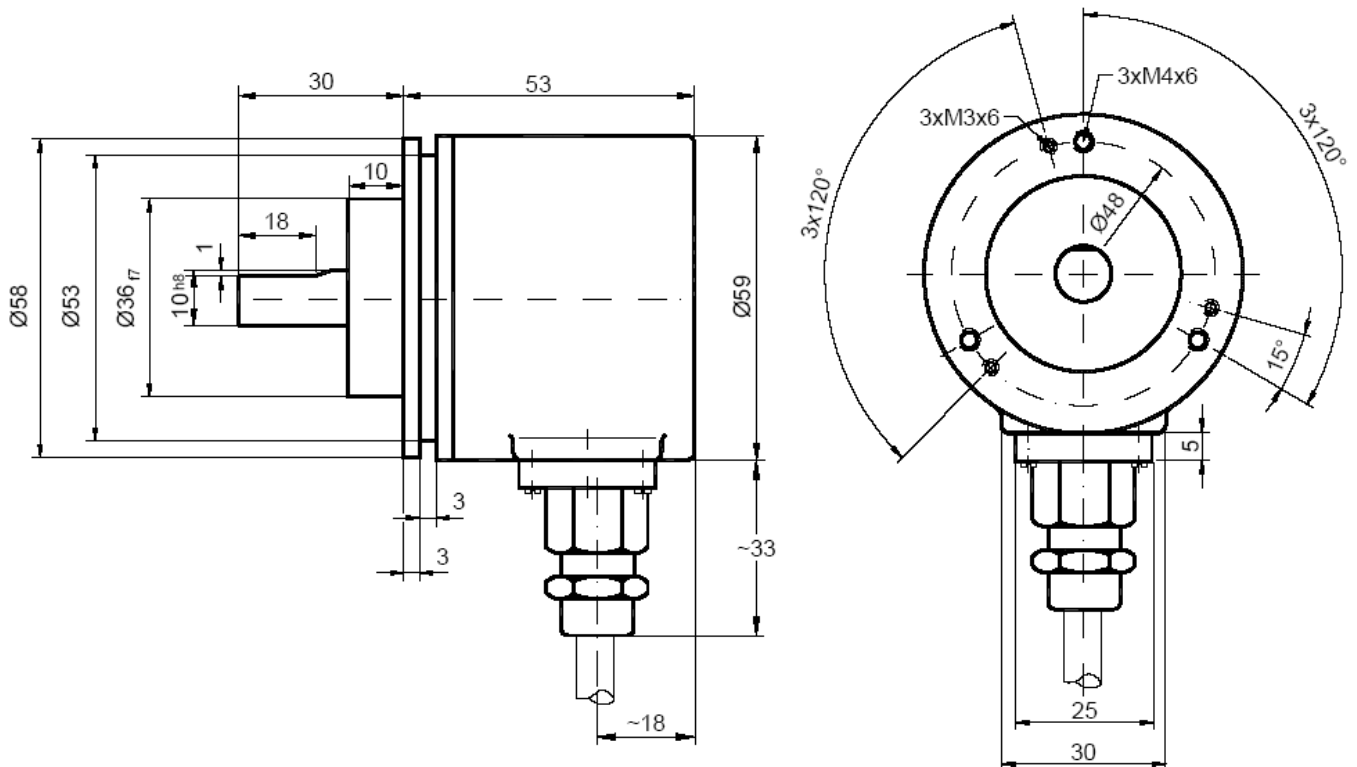
## PARALLEL ABSOLUTE MONOTURN ENCODERS, FHM510-PARA

FHM510-PARA, Ø58mm standard encoder with with parallel output :

- compact and robust conception
- Ø 10 mm solid shaft version
- Precision bearing with sealing flange
- high performances between -40°C and 85°C
- Coded disc in non-distortable and unbreakable material
- Mechanical memory of turns number with a pignoney system
- GRAY code
- Resolution : 13 bits = 8192 points / turn (max 16 bits)
- Protection against polarity inversions and tensions
- High integration CMS Technology



FHM510-PARA (radial cable output)



### MECHANICAL CHARACTERISTICS

Material (option Stainless steel)	Capot : aluminium	Vibrations (EN 60068-2-6)	≤ 10 g (10Hz... 1 000Hz)	
	Embase : aluminium	Weight (aluminium version)	200 g	
	Axe: Stainless steel	Operating temperature	- 40 ... + 85°C	
Maximal load	Axial : 40 N	Storing temperature	- 40 ... + 85°C	
	Radial : 110 N	Humidity	98 % sans condensation	
Shaft inertia	≤ 30 g.cm <sup>2</sup>	Protection degree	Capot: IP65	
torque	≤ 3 N.cm		Embase: IP64	
Maximal speed (continuous)	12 000 tr/min	Theoretical electrical lifetime 10 <sup>9</sup> turns (F <sub>axial</sub> /F <sub>radial</sub> )		
Shocks (EN 60068-2-27)	≤ 100 g (half sinus, 6 ms)	40 N / 60 N	40 N / 80 N	40 N / 110 N
Shocks (EN 60028-2-29)	≤ 10 g (half sinus, 16ms)	25	10	4

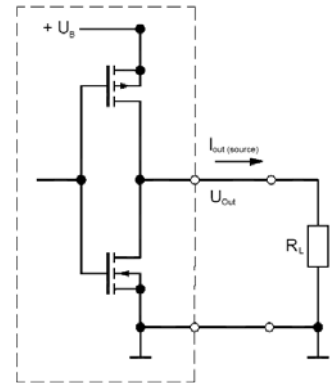
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### ELECTRICAL CHARACTERISTICS

Outputs	Parallèles, push-pull	Precision	+ 1/2 LSB
High level	~ supply tension (charge)	CEM	EN 61000-6-4 EN 61000-6-2
Output supply	Max 20mA / voie	Supply	10 – 30Vdc
Cycle time	< 150 µs	Consumption	180 mA (24Vdc)
Introduction	< 1s	Electrical lifetime	> 10 <sup>5</sup> h

### PUSH-PULL INTERFACE

Transmission	Per 2 transistors in push-pull circuit
Cable length	Up to 50m
Cable type	General shielding to obtain the best immunity possible to resist against eventual parasites
Connexion	Of all the automate input (I/O)
Option	Binair Code also available



### CONNECTION

Signal	Wire colour	Bit 11	
Bit 1		Bit 12	
Bit 2		Bit 13	
Bit 3		Bit 14	
Bit 4		Bit 15	
Bit 5		Bit 16	
Bit 6		Reset	
Bit 7		Latch	
Bit 8		Sens	
Bit 9		+U <sub>b</sub> = 10 – 30 V	
Bit 10		GND	

### INPUTS

Sense : counts when shaft in CW sense (body side)		Reset : Value back to zero		Latch input	
0 (input = NC ou GND)	increasing counting	0 (input = NC ou GND)	Position	0 (input = NC ou GND)	Position
1 (entrée = +U <sub>b</sub> ou ≥ 4,5V)	Decreasing counting	1 (entrée = +U <sub>b</sub> ou ≥ 4,5V)	Reset on decreasing front (100ms)	1 (input = +U <sub>b</sub> ou ≥ 4,5V)	Fix Value

### REFERENCE ( Exécution spécifique sur demande, ex: bride/électronique/connectique spécifique...)

FHM5	P1	00	G	00	13	C	10	0	CRW	2M
absolute monoturn encoder	Reset Function	Version	Gray Code :	monoturn encodeur	Resolution in turn : 2 <sup>13</sup> (8 192)	Bride à vis et synchro	Shaft diameter : 10mm	Without mechanical option	cable radial output	2m cable

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