



## CHM5 SERIES

PARALLEL SINGLE TURN ABSOLUTE ENCODER



### CHM5, absolute single turn encoders :

- Robustness and excellent resistance to shocks / vibrations
- High protection level IP65, IP67 feasible with a sealing flange
- High resolutions, up to 15 bits (gray or binary)
- Universal power supply from 5 to 30 Vdc
- High performances in temperature  $-20^{\circ}\text{C}$  to  $90^{\circ}\text{C}$  (option  $-40^{\circ}\text{C}$  to  $100^{\circ}\text{C}$ )
- Standard DIRECTION entry, LATCH option

### MECHANICAL CHARACTERISTICS

<b>Material</b>	Cover : zinc alloy
	Body: aluminum
	Shaft : stainless steel
<b>Bearings</b>	6 000 serie
<b>Maximal Load</b>	Axial : 50 N
	Radial : 100 N
<b>Shaft Inertia</b>	$\leq 1.10^{-6} \text{ kg.m}^2$
<b>Torque</b>	$\leq 4.10^{-3} \text{ N.m}$
<b>Permissible max. Speed</b>	12 000 $\text{min}^{-1}$
<b>Continuous max. Speed</b>	9 000 $\text{min}^{-1}$
<b>Shock (EN60068-2-27)</b>	$\leq 500 \text{ m.s}^{-2}$ (Durant 6 ms)
<b>Vibration (EN60068-2-6)</b>	$\leq 100 \text{ m.s}^{-2}$ (10 ... 2 000 Hz)
<b>EMC</b>	EN 61000-6-4, EN 61000-6-2
<b>Isolation</b>	1 000 Veff
<b>Encoder weight (approx.)</b>	0,300 kg
<b>Operating temperature</b>	$-20 \dots +90^{\circ}\text{C}$ (encoder T°)

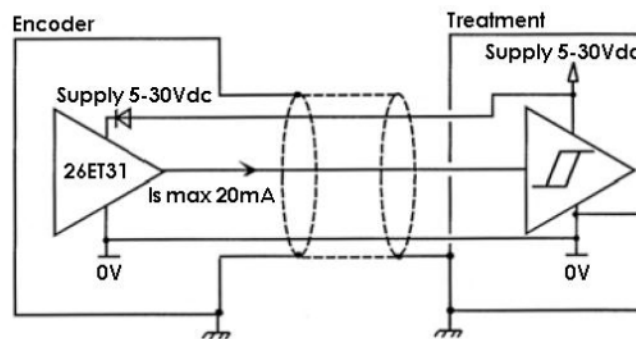
<b>Storage temperature</b>	- 40 ... + 100 °C
<b>Protection(EN 60529)</b>	IP 65 (IP67 with flange option)
<b>Theoretical mechanical lifetime 10<sup>9</sup> turns (F axial / F radial)</b>	25 N / 50 N : 99
	50 N / 100 N : 12

## 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)

## ELECTRONIC



<b>Power supply</b>	5 to 30Vdc
<b>Consumption without load</b>	100mA max
<b>Current output per channel</b>	1s=20mA max
<b>Level "0" (<math>I_s=20\text{mA}</math>) max</b>	$V_{ol} = 0,5\text{Vdc}$
<b>Level "1" (<math>I_s=20\text{mA}</math>) min</b>	$V_{oh} = V_{cc}-2,5\text{Vdc}$
<b>Protection against short circuits and inversion of polarity</b>	

Consult us for the connection of an encoder with this option

## DIRECTION

<b>CW increasing code</b>	DIRECTION pin to +Vcc
<b>CCW increasing code</b>	DIRECTION pin to 0Vdc

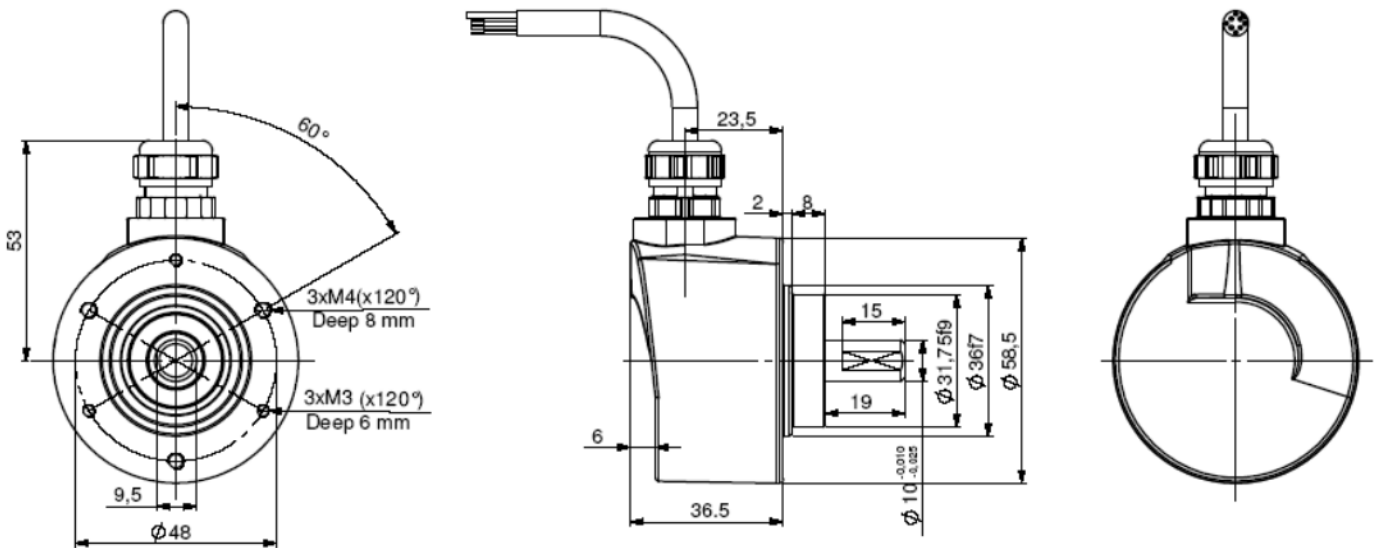
## LATCH (option)

<b>Active data on the outputs</b>	LATCH pin to 0V
<b>Frozen data on the outputs</b>	LATCH pin to +Vcc

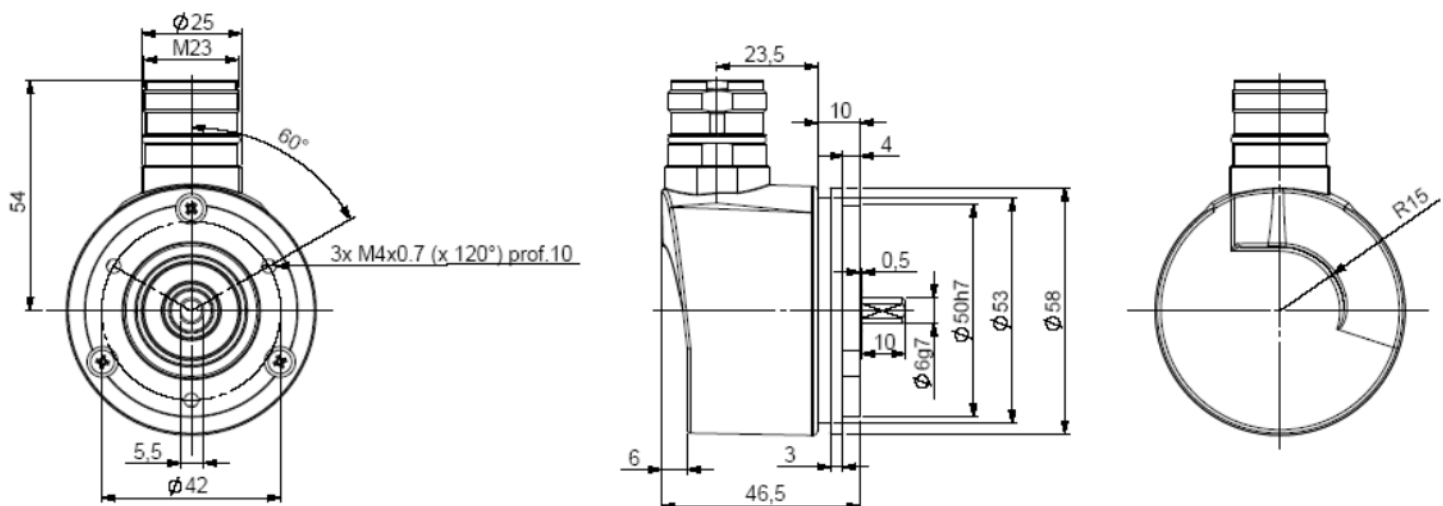
## DIMENSIONS

Tolerance, unless otherwise noted:  
All dimensions are in millimeters [inches]

CHM5\_10 connection C3R (radial cable)



CHM5\_06 connection C6R (radial M23), flange 9500/003 mounted on the body



## ORDERING OPTIONS

Example : CHM5\_10//PC5G//13//C3R020

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

	<b>CHM5</b>	<b>10</b>	<b>//</b>	<b>P</b>	<b>C5</b>	<b>G</b>	<b>//</b>	<b>13</b>	<b>C3</b>	<b>R020</b>
<b>Serie</b>										
<b>CHM5</b>										
<b>Shaft Ø</b>										
<b>10</b> : 10mm <b>06</b> : 6mm										
<b>Supply</b>										
<b>P</b> : 5 to 30Vdc										
<b>Output stage</b>										
<b>C5</b> : push pull 5 to 30 Vdc										
<b>Code</b>										
<b>B</b> : Binary <b>G</b> : Gray										
<b>Resolution</b>										
Power of 2: <b>1</b> : 1 bit to <b>14</b> : 14 bits Max: <b>15</b> bits Consult us										
<b>Connection</b>										
<b>CP</b> : M23 16 pins 13 bits + direction <b>C1</b> : M23 17 pins 14 bits + direction <b>C3</b> : Cable gland + 16 wires cable										
<b>Orientation</b>										
<b>R</b> : radial Example : <b>R020</b> : radial cable 2m										

### Monitoring function available as option :

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

### Entry / output available as option :

- LATCH entry
- ERROR output for monitoring functions

## AGENCY APPROVALS & CERTIFICATES



Made In France

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