

# **Pulse Generators**

## **GDC - GDP**



**Heavy duty Pulse Generators**

**Water cooling for operation up to 250 °F**



**Typical applications**

The main applications of the Pulse Generators **GDC** and **GDP** are positioning, length measurement and numerical tachometry on continuous casting machines and hot and cold rolling mills.

**Features**

The Pulse Generators **GDC-GDP** have been designed for heavy industry. They are extremely robust and can withstand vibration and work in difficult temperature condition.

- Rugged and reliable under most difficult environmental conditions
- Cast Aluminium housing
- Stainless steel shaft
- Water cooling version for ambient temperature up to 120 °C / 248 °F
- Waterproof (IP66).

**Description**

The **GDC** encoder has a cylindrical housing. The **GDP** encoder has 4 fixing feet.

The shaft is mounted with 2 large ball bearings, lubricated for life and sized for high radial and axial load. They offer a high vibration and shock resistance.

The connection of the **GDC** model is made with a connector, and the **GDP** model with terminals.

**Operating Principle**

A disc with radial transparent slots is scanned with an opto-electronic reading unit. The number of slots determines the resolution (pulses per turn).

Signals from each channel are processed by the built-in electronics. The output is high level pulses in complementary pairs. This enables transmission over large distances without interference even in electrically noisy environments.

**Output channels**

- Single channel **GDC-GDP** with one output signal S1 is used when the drive only rotates in one direction or if it is not necessary to detect the direction of rotation.
- Double channel **GDC-GDP** with two output signals offset by 90°, S1 and S2, can detect the direction of rotation.
- Double channel **GDC-GDP** with a marker pulse (REF): the additional marker pulse enables counting full revolutions or counter reset.

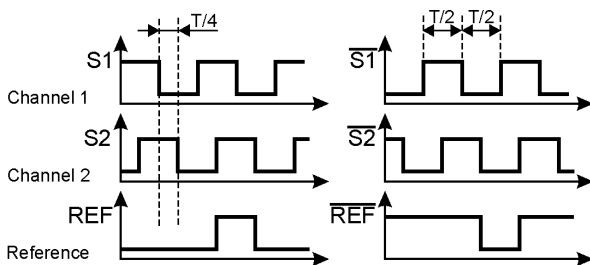
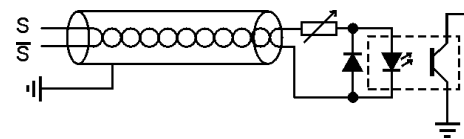
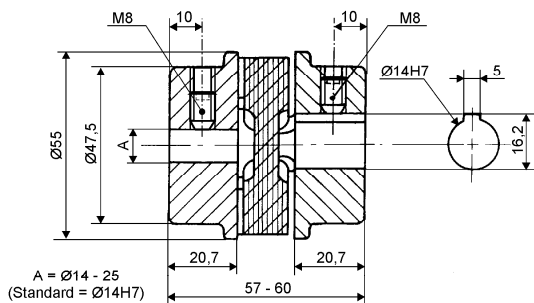


Diagram for clockwise shaft rotation as seen from the shaft.



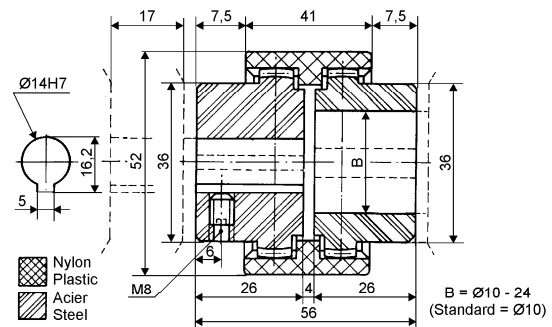
Recommended connection

**Accessories: Coupling**



Torsionally flexible coupling  
Ref : GCF 55

GDC  
GDP



Curved tooth gear coupling  
Ref : GCT 52



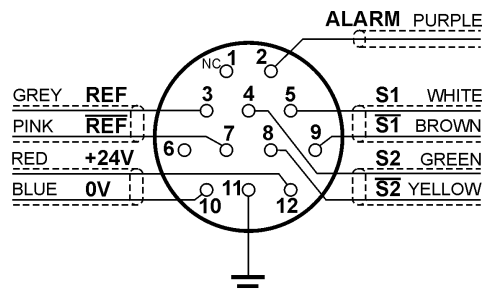
Reference	GDC	GDP
Pulses per turn (*)	1 → 4000	
Phase offset between tracks	90° ± 45°	
Max. frequency	100 kHz	
On-off pulses ratio	1	
Pulses output	24 V - 100 mA (limited in case of short circuit) 20 Ω impedance	
Supply	24 VDC (±20 %)	230V (± 10 %) - 50/60 Hz or 115V (± 10 %) - 50/60 Hz or 24 VDC (± 20 %)
Supply current	100 mA + output current	100 mA + output current for DC version 5 VA for AC version
Working temperature	-20 °C to 60 °C (0 °F to 140 °F) -20 °C to 120 °C (0 °F to 250 °F) water cooling version With industrial quality water at about 25 °C (77 °F), 1-2 bar, 1 to 2 l/mn	
Alarm output	0V if internal temperature over 55 °C (130 °F)	
Storage temperature	- 40 °C to 70 °C (-40°F to 160 °F)	
Housing	Aluminum cast	
Shaft	Stainless steel Ø 14 mm	
Weight	3.5 kg 5.5 kg water cooling version	8.2 kg 9 kg water cooling version
Max. speed of rotation	5000 r.p.m.(limited by the maximum frequency)	
Torque	< 0.06 m.N at 18 °C (65 °F)	< 0.08 m.N at 18 °C (65 °F)
Moment of inertia	0.14 x 10 <sup>-3</sup> kg.m <sup>2</sup>	0.16 x 10 <sup>-3</sup> kg.m <sup>2</sup>
Max. axial load	150 N	200 N
Max. radial load	180 N	250 N
Protection	IP 66	



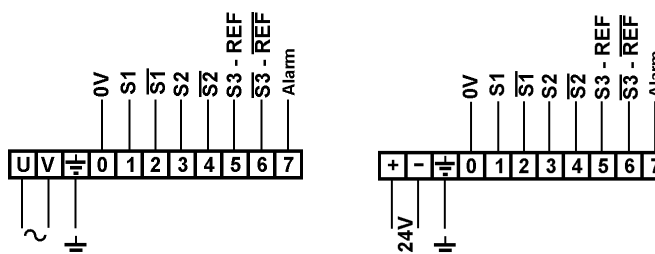
(\*) : Standard pulses per turn GDC-GDP, other values available on request

5	10	25	30	36	40	50	60	80
100	128	160	180	200	240	250		
300	314	350	360	400	450			
500	512	560	600	700	800	900		
1000	1024	1200	2000	2500	4000			

**Connection**



**GDC:** The connection is made via a connector. The GDC is delivered with the corresponding plug and 2 meter cable

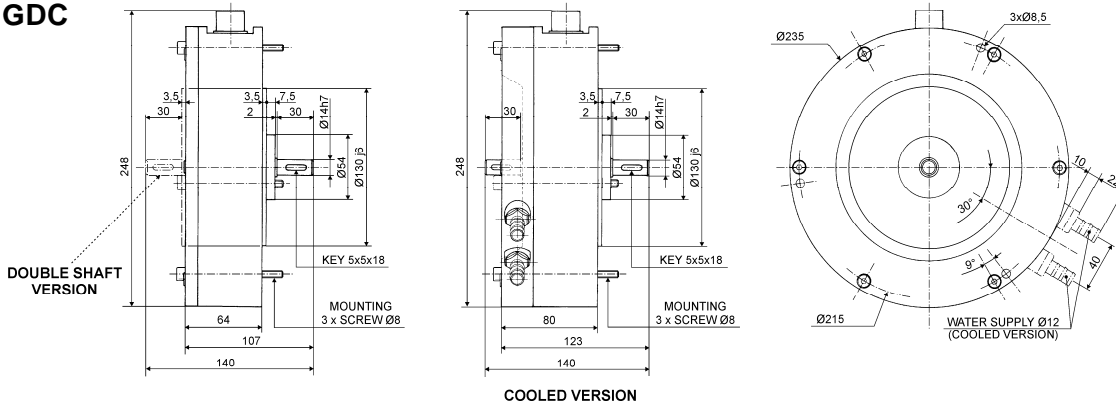


**GDP:** Connection is made with terminal block, 3 cable glands diameter 13.5 mm.

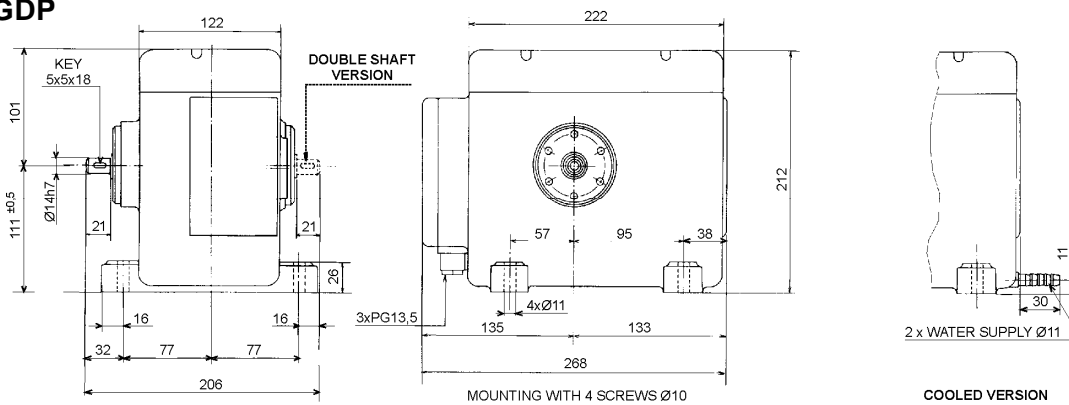


## Dimensions

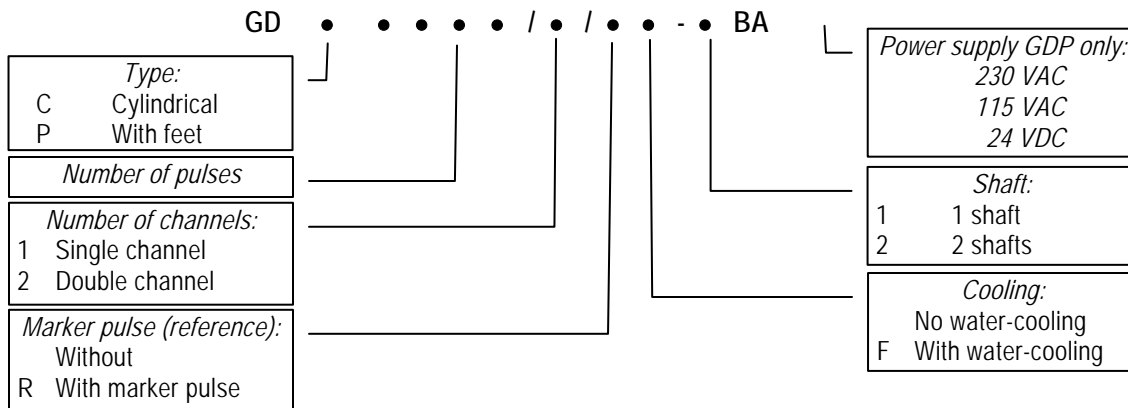
### GDC



### GDP



## References



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