

## 7.5° 5 Watts 2 phases Part number 82910001



- 48 steps/revolution (7.5°)
- Absorbed power : 5 W
- 2 or 4 phase versions available

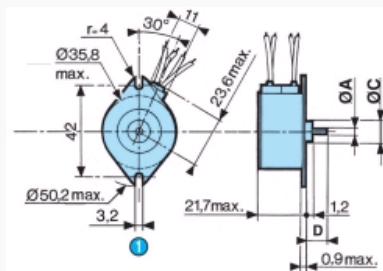
### Part numbers

| Type     | Type     | Electronic controller used | Bearings |                 |
|----------|----------|----------------------------|----------|-----------------|
| 82910001 | 2 phases | 82 910 0                   | Bipolar  | Sintered bronze |

### Specifications

|   |                       |
|---|-----------------------|
| Resistance per phase ( $\Omega$ )                                     | 9                     |
| Inductance per phase (mH)   | 12                    |
| Current per phase (A)   | 0,52                  |
| Holding torque (mNm)  | 25                    |
| Voltage at motor terminals (V)  | 4,7                   |
| Absorbed power (W)  | 5                     |
| Step angle ( $^{\circ}$ )   | 7,5                   |
| Positioning accuracy (%)  | 5                     |
| Rotor inertia ( $\text{gcm}^2$ )                                      | 4,9                   |
| Max. detent torque (mNm)  | 3                     |
| Max. coil temperature ( $^{\circ}\text{C}$ )                          | 120                   |
| Storage temperature ( $^{\circ}\text{C}$ )                            | -40 $\rightarrow$ +80 |
| Thermal resistance of coil - ambient air ( $^{\circ}\text{C/W}$ )     | 14                    |
| Insulation resistance (at 500 Vcc) (MQ) following NFC 51200 standard  | $> 10^3$              |
| Insulation voltage (50 Hz, 1 minute) (V) following NFC 51200 standard | $> 600$               |
| Wires length (mm)   | 250                   |
| Weight (g)  | 90                    |
| Protection rating   | IP 40                 |

### Dimensions (mm)

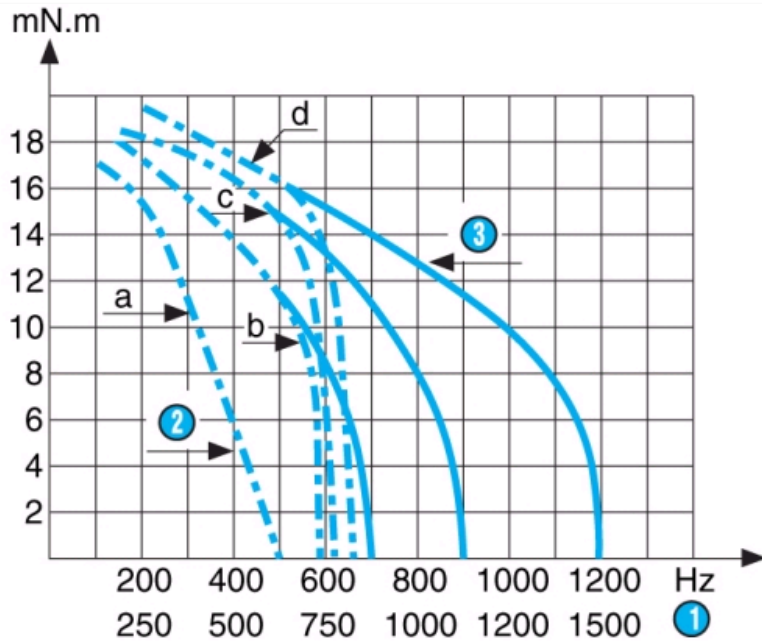


| Axe version | $\varnothing A$                                  | $\varnothing C$                                     | D |
|-------------|--|---|---|
| Version 1   | 2 $\begin{matrix} -0,002 \\ -0,006 \end{matrix}$ | 9 $\begin{matrix} -0,010 \\ -0,060 \end{matrix}$    | 9 |
| Version 2   | 2 $\begin{matrix} -0,002 \\ -0,006 \end{matrix}$ | 10 $\begin{matrix} -0,010 \\ -0,060 \end{matrix}$   | 9 |
| Version 3   | 3,17 $\begin{matrix} 0 \\ -0,006 \end{matrix}$   | 9,52 $\begin{matrix} -0,010 \\ -0,060 \end{matrix}$ | 9 |

| N° | Legend                           |
|----|----------------------------------|
| ①  | 2 fixing holes $\varnothing 3.2$ |

### Curves

2 phases

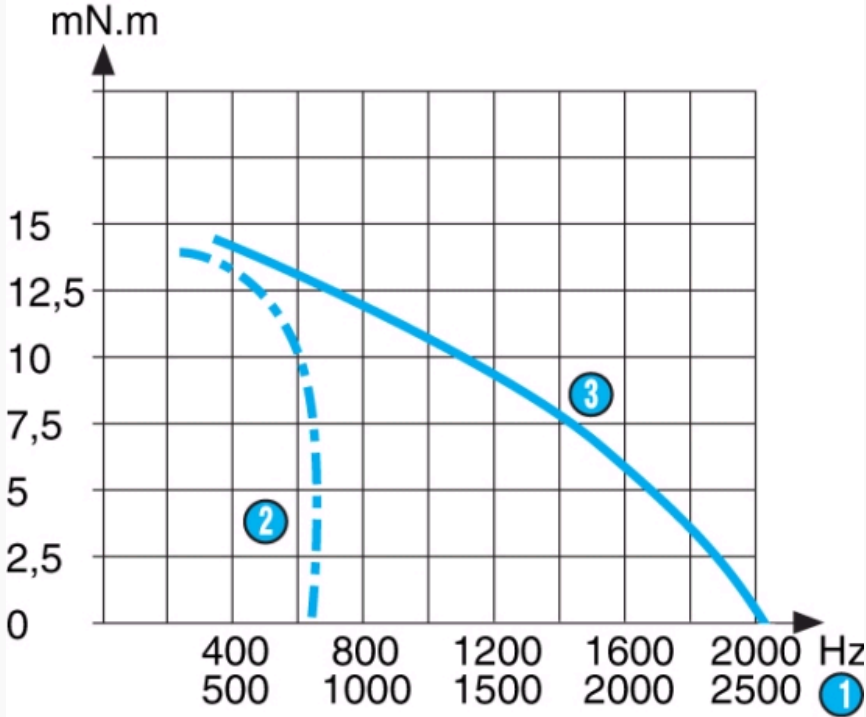


Inertia of measuring chain : 1,5 g.cm2 a = constant voltage controller with  $R_s$  (resistance in series) = 0 b = constant voltage controller with  $R_s$  (resistance in series) = R motor c = constant voltage controller with  $R_s$  (resistance in series) = 2R motor d = constant voltage controller with  $R_s$  (resistance in series) = 3R motor The measurements are made with full stepping, 2-phases energised.

| N° | Legend                        |
|----|-------------------------------|
| ①  | RPM                           |
| ②  | Max. stopping-starting curves |
| ③  | Max. operating curves         |

**Curves**

Max. stopping-starting and operating curves at  $I$  constant (PBL 3717) for 2 (motor) phases 12.9  $\Omega$



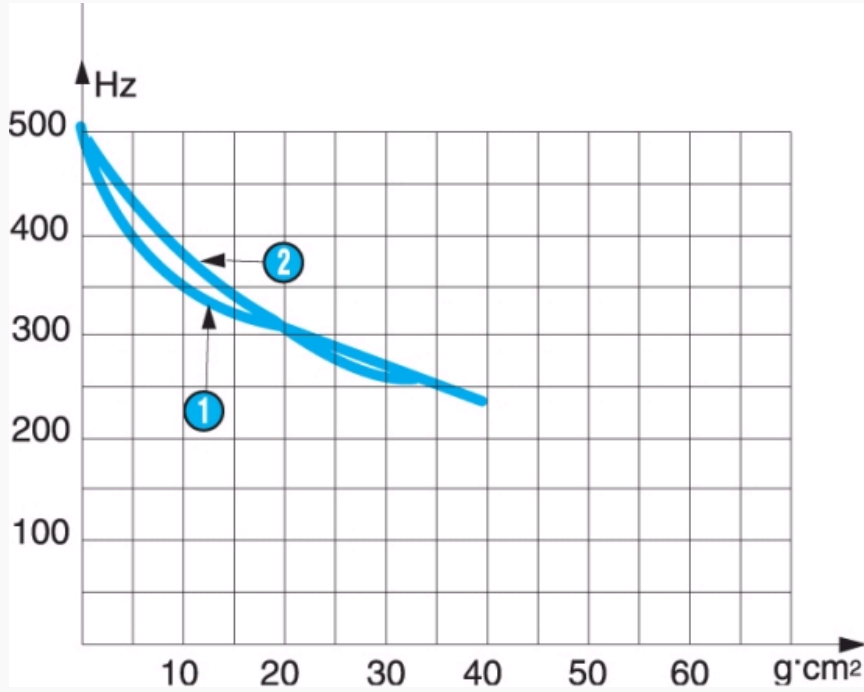
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| N° | Legend |
|----|--------|
| ①  | RPM    |

|   |                               |
|---|-------------------------------|
| ② | Max. stopping-starting curves |
| ④ | Max. operating curves         |

**Curves**

Max. stopping-starting frequency curves as a function of the external inertia load at zero antagonistic torque. Tests at constant U



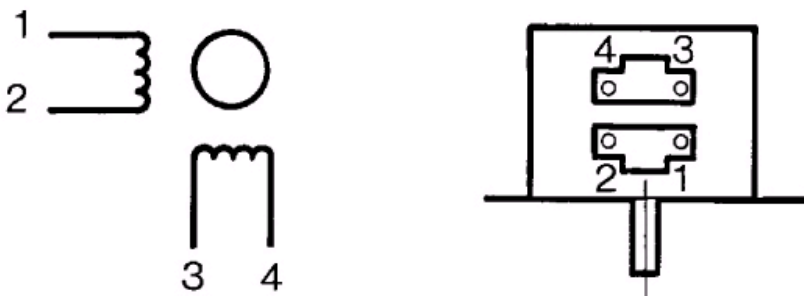
N.B. Measurement conditions : Tam = 25 °C, motor cold

| N° | Legend   |
|----|----------|
| ①  | 2 phases |
| ②  | 4 phases |

**Connections**

2 phases

|   | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| ① | - | + | - | + |
| ② | - | + | + | - |
| ③ | + | - | + | - |
| ④ | + | - | - | + |
| ⑤ | - | + | - | + |



Energisation sequence for clockwise rotation (viewed shaft end)

| N° | Legend |
|----|--------|
| ①  | Step   |

#### Product adaptations



- Special output shafts
- Special supply voltages
- Special cable lengths
- Special connectors