

## 7.5° 5 Watts 2 phases Part number 82910001



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

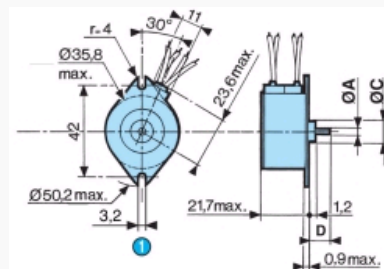
### Part numbers

|                   | Type     | Type     | Electronic controller used | Bearings        |
|-------------------|----------|----------|----------------------------|-----------------|
| <b>82 910 001</b> | 2 phases | 82 910 0 | Bipolar                    | Sintered bronze |

### Specifications

|                                                                       |                   |
|-----------------------------------------------------------------------|-------------------|
| Resistance per phase (Ω)                                              | 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 (°)                                                        | 7,5               |
| Positioning accuracy (%)                                              | 5                 |
| Rotor inertia (gcm <sup>2</sup> )                                     | 4,9               |
| Max. detent torque (mNm)                                              | 3                 |
| Max. coil temperature (°C)                                            | 120               |
| Storage temperature (°C)                                              | -40 → +80         |
| Thermal resistance of coil - ambient air (°C/W)                       | 14                |
| Insulation resistance (at 500 Vcc) (MQ) following NFC 51200 standard  | > 10 <sup>3</sup> |
| 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)

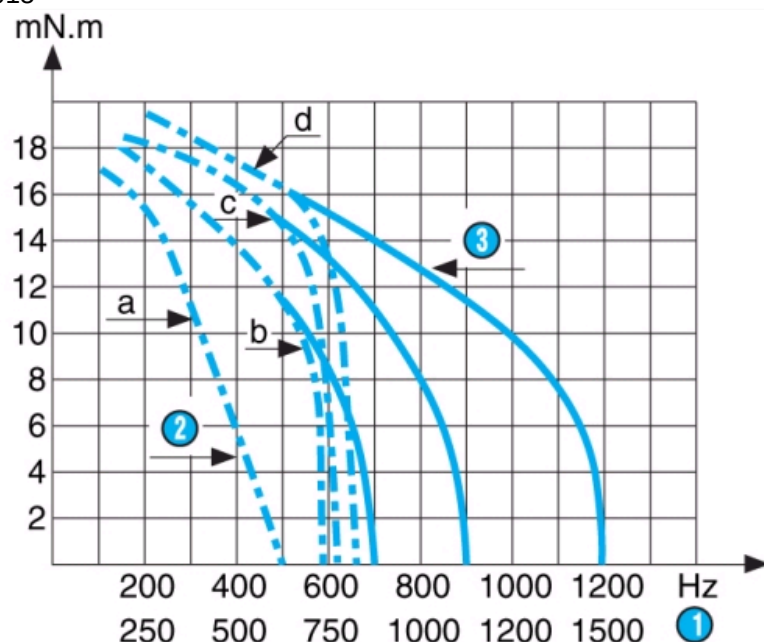


| Axe version | Ø A                                   | Ø C                                      | D |
|-------------|---------------------------------------|------------------------------------------|---|
| Version 1   | 2 <sup>-0,002</sup> <sub>-0,006</sub> | 9 <sup>-0,010</sup> <sub>-0,060</sub>    | 9 |
| Version 2   | 2 <sup>-0,002</sup> <sub>-0,006</sub> | 10 <sup>-0,010</sup> <sub>-0,060</sub>   | 9 |
| Version 3   | 3,17 <sup>0</sup> <sub>-0,006</sub>   | 9,52 <sup>-0,010</sup> <sub>-0,060</sub> | 9 |

| N° | Legend               |
|----|----------------------|
| ①  | 2 fixing holes Ø 3.2 |

### Curves

#### 2 phases

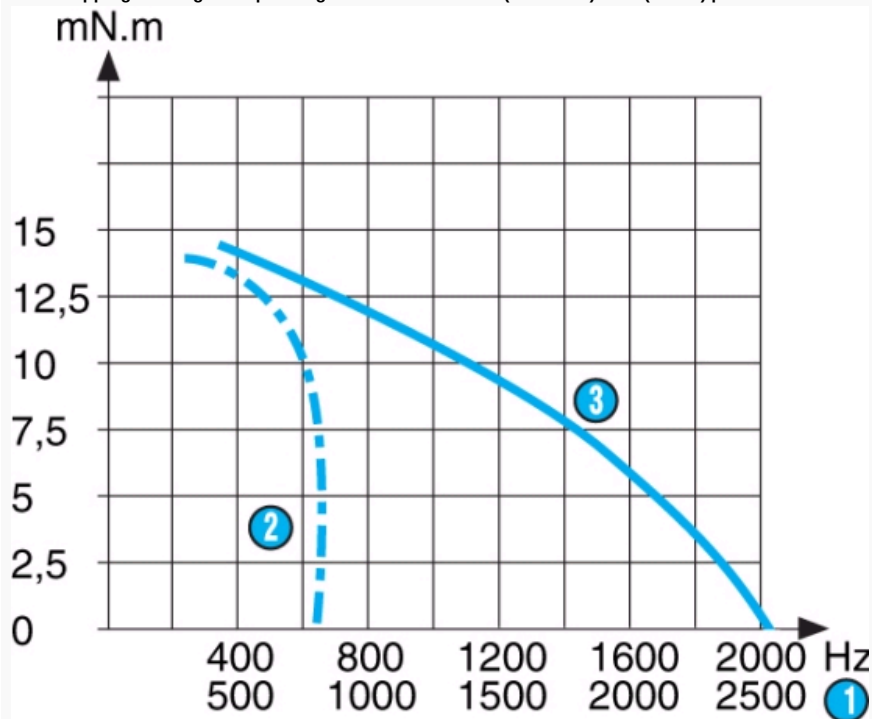


Inertia of measuring chain : 1,5 g.cm<sup>2</sup> a = constant voltage controller with  $R_s$  (resistance in series) = 0 b = constant voltage controller with  $R_s$  (resistance in series) =  $R$  motor c = constant voltage controller with  $R_s$  (resistance in series) =  $2R$  motor d = constant voltage 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  $\Omega$



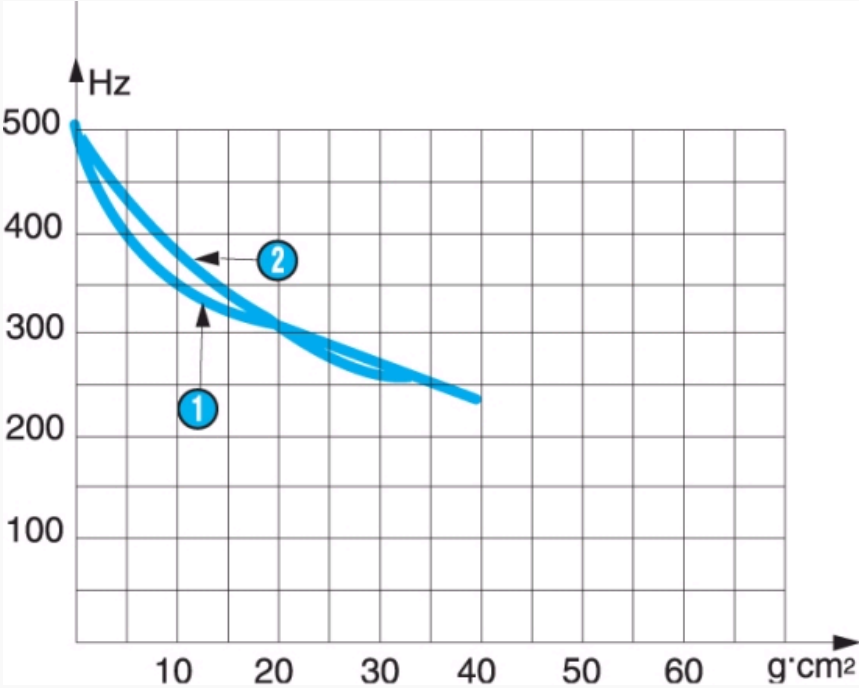
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| N° | Legend |
|----|--------|
| ①  | RPM    |

|   |                               |
|---|-------------------------------|
| 2 | Max. stopping-starting curves |
| 1 | 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



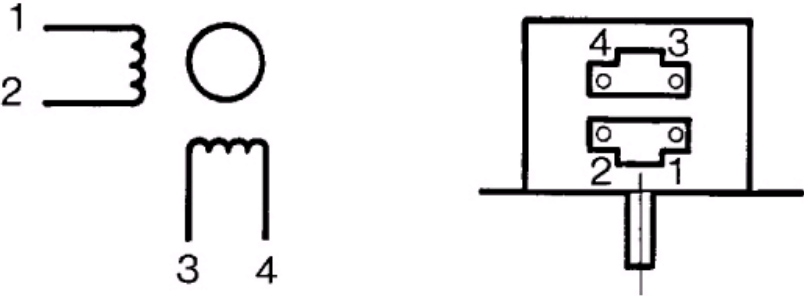
N.B. Measurement conditions : Tam = 25 °C, motor cold

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

Connections

2 phases

|   |   |   |   |   |   |
|---|---|---|---|---|---|
|   |   | 1 | 2 | 3 | 4 |
| 1 | 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