

## 80 W motors with built-in electronic control TNi20 801800 - 0/10 V Part number 80180002



Ideal for motion and positioning applications

- **Flexible** : 4-quadrant variable speed control
- Control of max. torque with "limit reached" indicator
- **Complete** : Brake, encoder and class B EMC-compliant
- **Compact** : Excellent efficiency and high start torque
- 120 W nominal at 32 V DC
- **Open** : Compatible with our logic controller PLCs
- **Versatile** : Compatible with 24 V battery DC

### Part numbers

Type	Speed control	References
80180002 801800 - 0/10 V	0-10 V	Without option

### Specifications

Supply voltage (V)	24 (18 →37)
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#### No-load characteristics

Speed of rotation (rpm)	4200
Absorbed current (A)	0,4

#### Nominal characteristics

Speed (rpm)	3250
Torque (mNm)	240
Absorbed current (A)	4,8

#### Maximum characteristics

Start torque (mNm)	300
Starting current (A)	6,0

#### General characteristics

Conformity to EMC Directive in accordance with (EN 55022)	B
Insulation class (conforming to IEC 85)	B (120 °C)
Casing temperature rise at 40 °C ambient max. (°C)	20
Thermal time constant (mn)	15
Inertia (g.cm <sup>2</sup> )	105
Acoustic pressure at 50 cm (dBA)	50
Service life L10 (h)	20000
Weight (g)	1400
Protection index	IP54

#### 0-10 V speed input characteristics

Input impedance (kΩ)	440
Full scale speed (rpm)	4200

#### PWM speed input characteristics

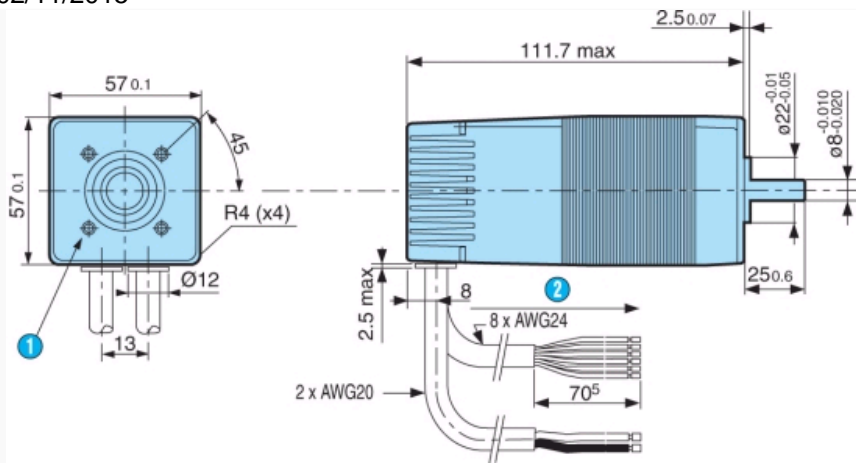
Input impedance (kΩ)	-
Level 0 input voltage (VDC)	-
Level 1 input voltage (V)	-
Frequency range (Hz)	-
Full scale speed (rpm)	-

#### Relay output characteristics

Type of output	PNP
Max. current (mA)	50

### Dimensions (mm)

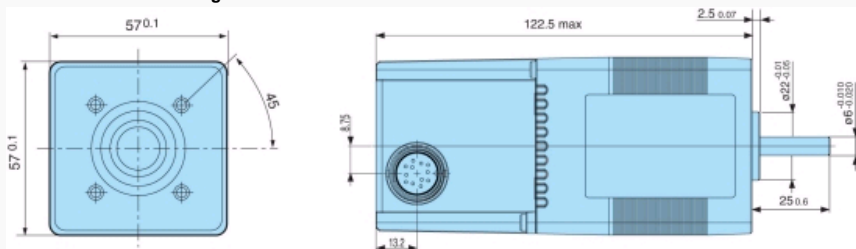
80180002 : TNi20 cable output



N°	Legend
1	4 holes M5 x 0.86 H at 90° over Ø 40 depth of thread 4.5 min.
2	Cable length : 500 ± 15 mm

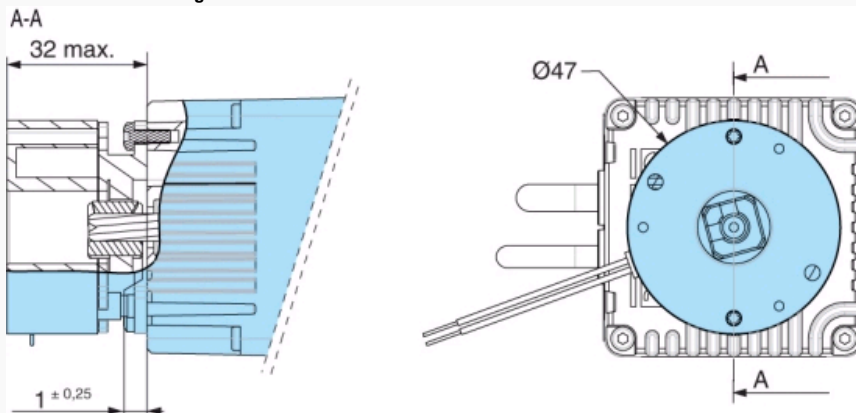
### Dimensions (mm)

#### 80180026 : With C12 integrated connector



### Dimensions (mm)

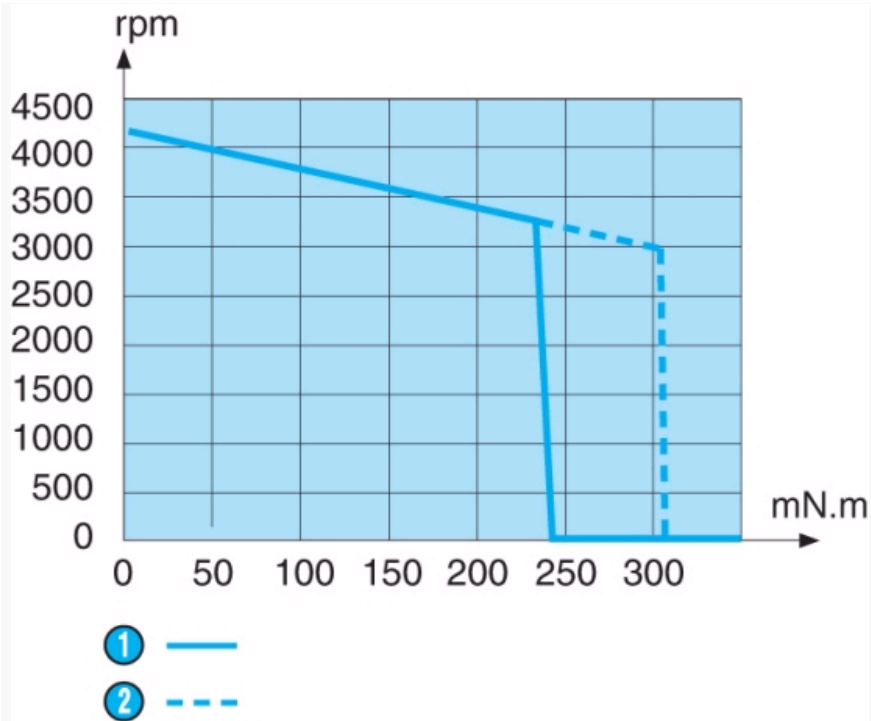
#### 80180025 : With holding brake



Holding brake : At power switch off - 0.5 Nm - 7 W - 24 V ± 10% Weight : 250 g - AWG26 leads - 400 mm

### Curves

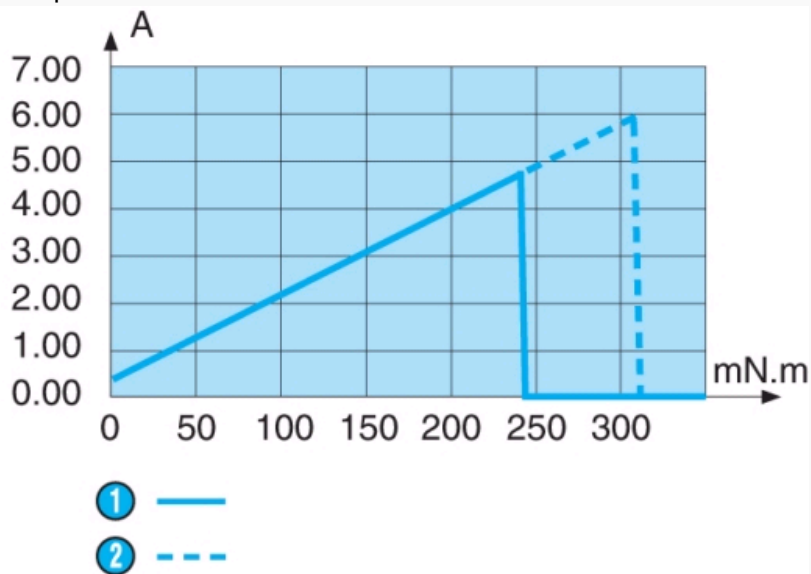
#### Speed/torque



N°	Legend
1	Continuous operation
2	Cyclic operation

### Curves

Current/torque



N°	Legend
1	Continuous operation
2	Cyclic operation

### Connections

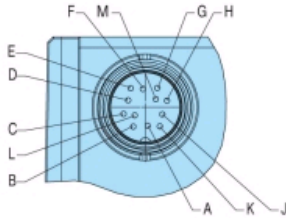
Cable output

Marking on motor	Function	Wire colour	
*a	Power ground supply	Black	1 power cable AWG20
*a	24 V power supply	Brown	2 conductors UL2464
	Signal ground	Black	
	On/off input	Green	
	Direction input	Yellow	
	Speed setpoint	Orange	1 control cable AWG24
*b	12 points/rev encoder output	Brown	8 conductors UL2464
*b	Encoder direction output	Red	
	Torque limiting setpoint	Blue	
*b	Torque saturation output	Purple	

**Connections**

With integrated C12 connector

Légende	Connecteur C12
Masse puissance	G+M
Alimentation 24 V puissance	E+F
Masse signaux	B
Entrée Marche/Arrêt	K
Entrée sens	J
Consigne vitesse	C
Sortie codeurs 12 points/tour	D
Sortie sens codeur	L
Consigne limitation de couple	A
Sortie saturation de couple	H



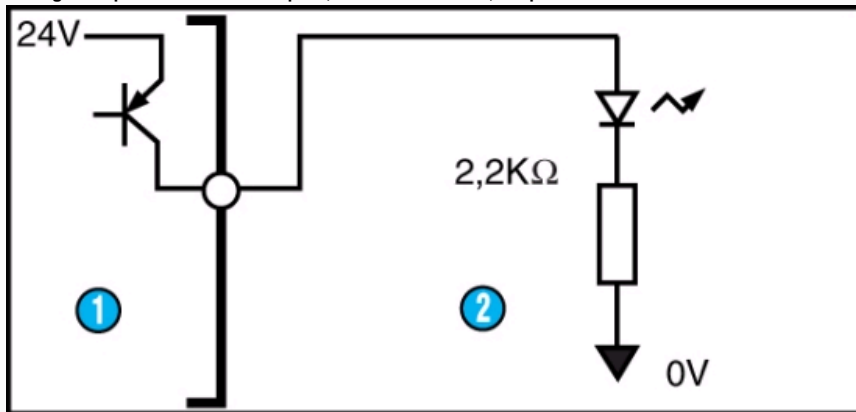
**Precautions for use**

Necessary precautions to avoid damaging the motor

- \*a) Do not reverse the polarity
  - \*b) Do not short-circuit the encoder output, encoder direction and torque saturation (PNP) to earth
- Do not use the motor as a generator

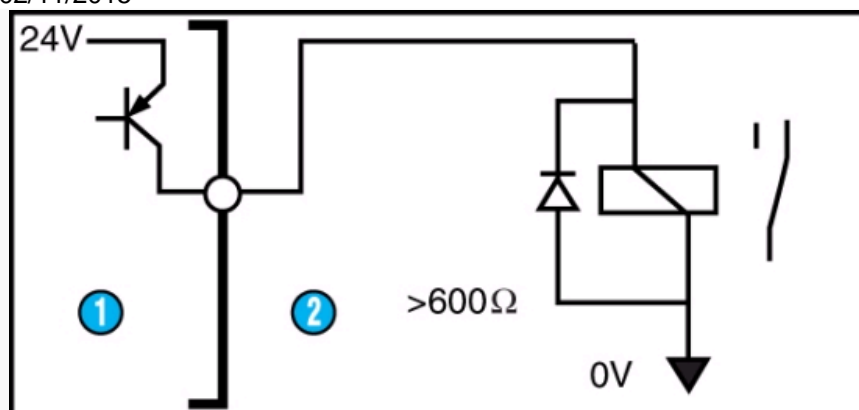
**Applications**

Wiring examples for encoder outputs, encoder direction, torque saturation



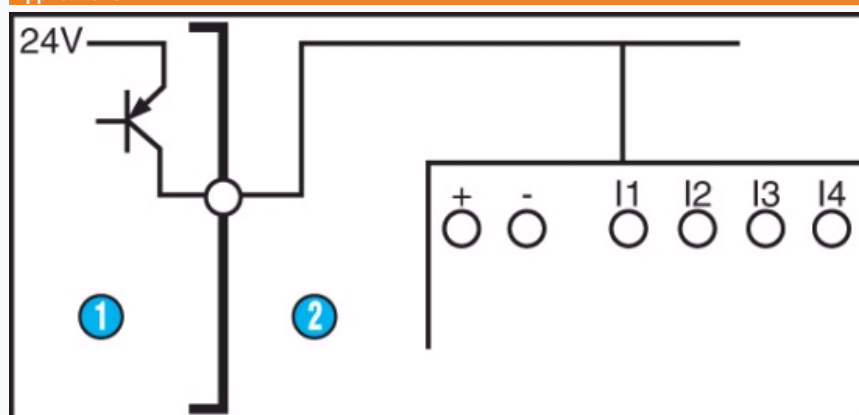
N°	Legend
1	Motor
2	LED load

**Applications**



N°	Legend
1	Motor
2	Relay load

### Applications



N°	Legend
1	Motor
2	Millenium logic controller

### Product adaptations



- 2-quadrant speed regulation, open or closed loop
- Dimensions of motor shaft (Ø 2 to 8 mm, length, pinion sized to shaft, etc.)
- Cable length, with or without connector
- Special software and extensions

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