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80 W motors with built-in electronic control TNi20 801800 - PWM Part number 80180001



- 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
80180001 801800 - PWM	PWM	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 ²)	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)	-
Full scale speed (rpm)	-

PWM speed input characteristics

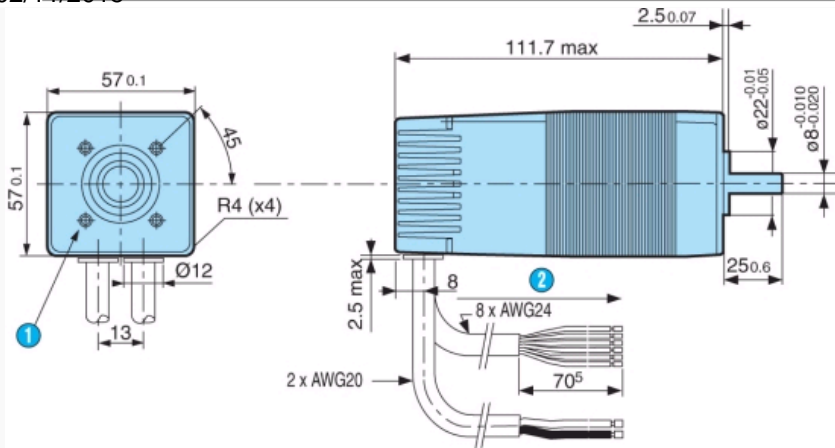
Input impedance (kΩ)	19
Level 0 input voltage (VDC)	< 2,5
Level 1 input voltage (V)	> 11,5
Frequency range (Hz)	150 →1000
Full scale speed (rpm)	4200

Relay output characteristics

Type of output	PNP
Max. current (mA)	50

Dimensions (mm)

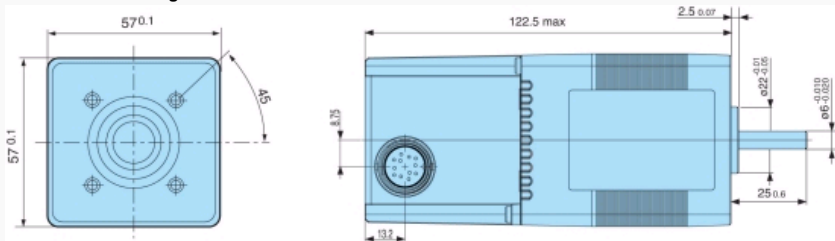
80180001 : TNi20 cable output



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

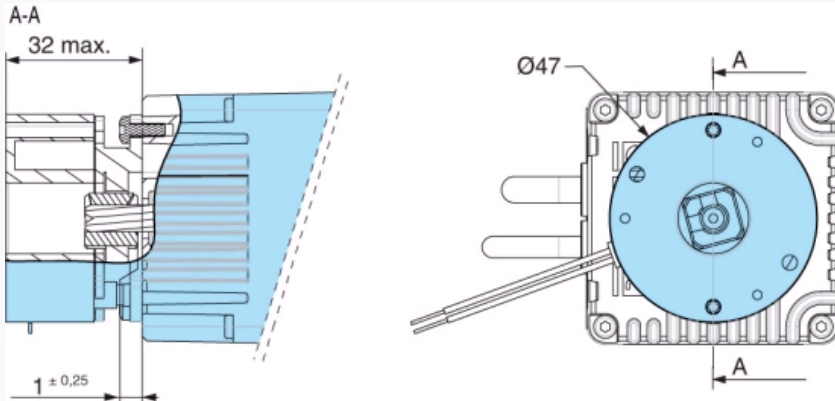
Dimensions (mm)

80180024 : With integrated C12 connector



Dimensions (mm)

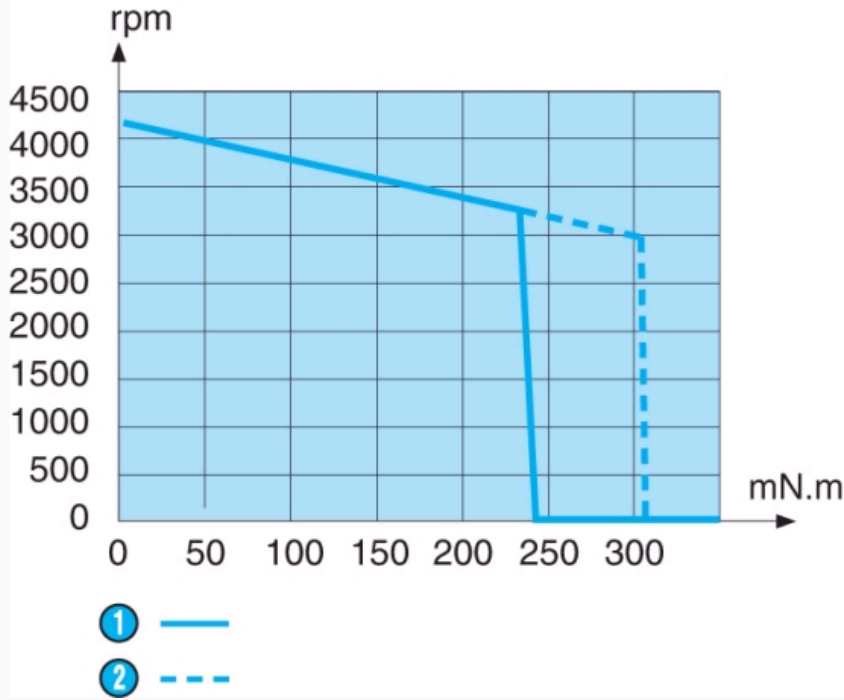
80180023 : With holding brake



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

Curves

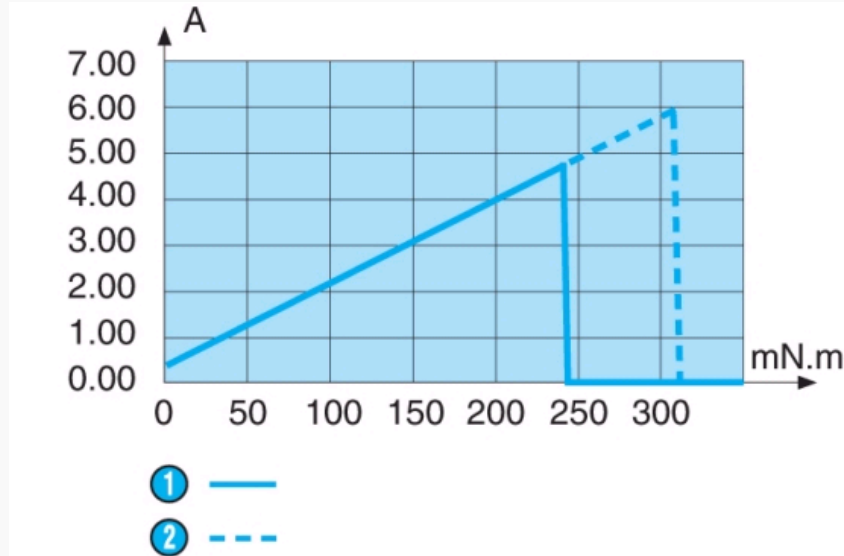
Speed/torque



N°	Legend
①	Continuous operation
②	Cyclic operation

Curves

Current/torque



N°	Legend
①	Continuous operation
②	Cyclic operation

Connections

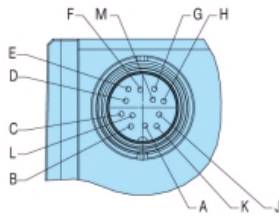
Cable output

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



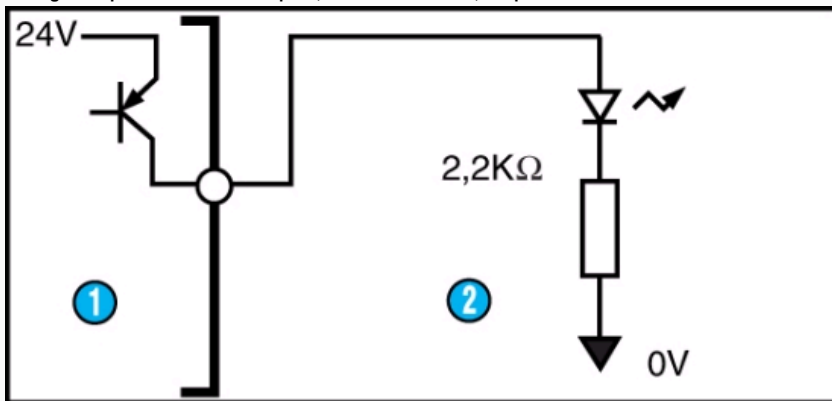
Precautions for use

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

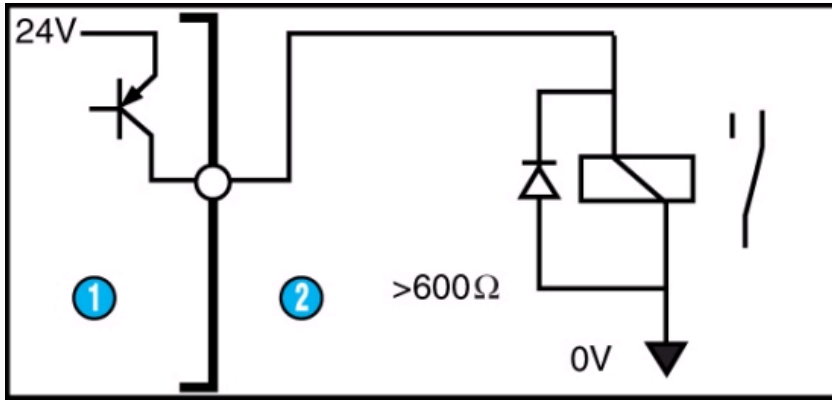
Applications

Wiring examples for encoder outputs, encoder direction, torque saturation



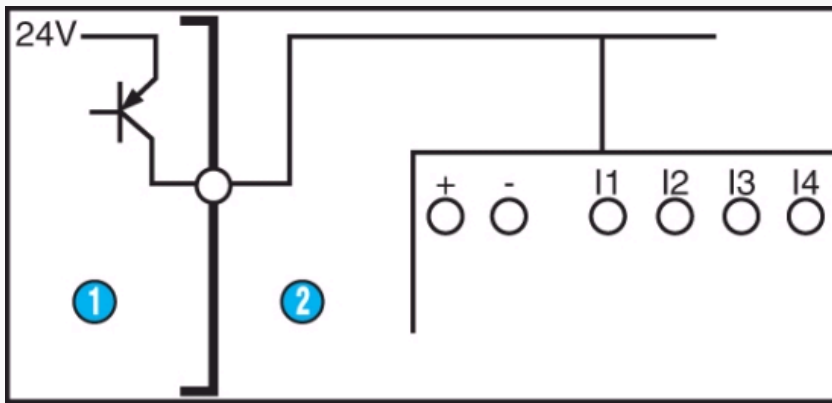
N°	Legend
1	Motor
2	LED load

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