

## CROUZET - BLDC WORM GEARED MOTOR WITH INTEGRATED TNi21 DRIVE

801410XX TNi21

Worm gearmotor 77W 12→32Vdc 80→800rpm 10Nm max

- 12→32 V dc, 77→133 W, 65→800 rpm, 10 Nm max
- Speed & torque control. Easy use
- Reduce control panel space & cabling
- Long life (>20,000 hours)
- IP65 as standard



### PRODUCT DESCRIPTION

The TNi21 integrated drive is ideal for applications where speed and torque control is required.

The long lifetime of the brushless motor (>20,000 hours with rated load) means it is ideal for continuous or long duty applications.

Having the drive integrated into the motor can also save control panel space, reduce cabling and save set-up time.

3 motor sizes available with the same diameter (57mm x 57mm), with increasing motor lengths for more power/torque.

Planetary & worm gearbox options available for reducing the speed & increasing the output torque.

Pre-set I/O mean that the motor can be used immediately without any complex preliminary set-up. It can be controlled via basic switches or by external PLC.

Motor power and logic connections are via cable output or connector options.

The motors are rated to IP65 dust/water protection class as standard.

Options for adaptation to the standard motor include adding an encoder, holding brake, special output shaft, special connectors, upgraded IP protection & special firmware developed according to your specific application requirements.

\* Product datasheets & 3D drawing for 0-10Vdc, cable version attached as an example. Further information for PWM version, brake options & connector version available upon request.

Full documentation & user manuals also available upon request.

### TECHNICAL DATA

<b>Integrated control</b>	TNi21
<b>IP class</b>	IP65
<b>Length</b>	163 mm
<b>Life span</b>	20,000h
<b>Max. torque</b>	10 Nm
<b>Number of pulses per revolution</b>	12
<b>Positioning feedback</b>	Yes
<b>Power</b>	77 W
<b>Ratio</b>	i=5→50:1

Shaft diameter	10 mm
Speed options	80rpm→800rpm
Supply voltage	12 V DC, 24 V DC
Type of gearbox	Worm
Weight	1,65 kg

**GEARBOXES FOR DCmind BRUSHLESS RANGE**

4 to 120 Nm

- Planetary and worm gearboxes
- Shafts on ball bearings
- Long service life
- IP66



**Part numbers**

Gearbox	Planetary 2:1	Planetary 3:1	Planetary 10:1	Worm
Type	P12490	P12491	P12492	P12493
Rated speed	80/160/320	80/160/320	80/160/320	80/160/320
Rated torque	4/8/16	8/16/32	40/80/160	4/8/16
Rated power	0.2/0.4/0.8	0.4/0.8/1.6	2/4/8	0.2/0.4/0.8
Efficiency	0.8	0.8	0.8	0.8
Rated torque (peak)	8/16/32	16/32/64	80/160/320	8/16/32
Rated dynamic load shaft	20/40/80	40/80/160	200/400/800	20/40/80
Operating temperature	-20 to +70	-20 to +70	-20 to +70	-20 to +70
Weight	0.7	1.1	1.6	0.7
Standard reduction ratios	6.75 20 80	5.16 19 100	5 19 100	5 10 20 30 50
	40	160	27	130
	308	46	206	308

**Other ratios possible**

Other ratios possible: 18, 100

⊗ **IP66 planetary gearbox:** Input gears on all stages. IP66 apart from the output shaft.

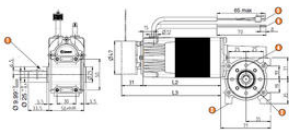
⊗ **IP66 planetary gearbox:** On the first stage, the input gears are made of composite materials which improve efficiency and service life. On the other stages, the input gears turn on needle bearings. IP66 apart from the output shaft.

⊗ **IP66 planetary gearbox:** All gears are metal and turn on needle bearings, resulting in excellent robustness and a very long service life. IP66 apart from the output shaft.

**Worm gearbox:** This gearbox combines a hardened steel worm and a hard bronze helical gear wheel, thus ensuring a long service life. The wheel is coated with grease, ensuring an excellent slip coefficient and good heat dissipation. Outlets and splines are used in combination with a compression spring to create a tight seal at the gearbox output shaft and the motor input shaft. IP66 gearbox.

The casing is made of aluminum to maximize heat exchange with its supporting surface on the machine. However, due to the high gear load that can be transmitted by this gearbox and the low efficiency inherent in large worm gearbox reduction ratios, make sure that the gearbox casing temperature does not exceed 70°C during operation. The output shaft can be placed on the right or left, or can be a double shaft (split output on both sides).

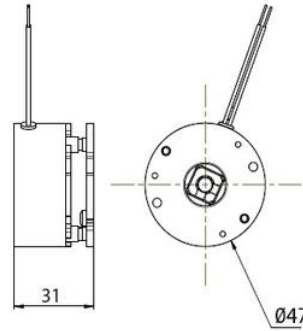
801410 - 801910 - 802010 - TN21 + RAD10 with or without brake



- L2 80140-82 mm.
- L2 80190-82/90-112 mm.
- L3 80140-123 mm.
- L3 80190-82/90-112 mm.
- ⊗ Parallel key 6 x 6 x 20 DIN 6885 A
- ⊗ 4 M6, depth 8 over Ø 30
- ⊗ 4 M8, depth 8
- ⊗ 4 Ø 2.5, depth 10 over Ø 40
- ⊗ Command cable 8 x AWG24 / 500 mm
- ⊗ Power cable 4 x AWG16 / 500 mm

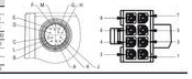
**Options**

**Holding brake 0.5 Nm - 24 V---**



**Connections**

Connector	Cable color
M16	AWG16 Blue
Power supply +12 to +24 V DC	Red
Power ground	Black
Input 1: On/Off	Green
Input 2: Direction	Blue
Input 3: Speed	Yellow
Output 1: Forward	Orange
Output 2: Reverse	White
Output 3: Brake at rest	Black



\* 12 pin, and 24 for 802010 motor