

## CROUZET - BLDC PLANETARY GEARED MOTOR WITH INTEGRATED SMI21 DRIVE

801495XX SMI21  
Planetary 52mm gearmotor 92W 12-48Vdc 13-7578rpm  
25Nm max

- 12-48 V dc, 52-81 mmØ, 25-120 Nm, 9-756 rpm
- Speed, torque & position control
- Reduce control panel space & cabling
- Long life (>20,000 hours)
- IP65 as standard



### PRODUCT DESCRIPTION

The SMI21 integrated drive is ideal for applications where speed, torque & positional control is required.

The motor also incorporates a high resolution 4096ppr incremental encoder ideal for precise positioning applications.

Motion programming, configuring & set-up performed through the dedicated user friendly DCmind-soft PC software. The program can be controlled via basic switches or by external PLC.

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.

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

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

\* Product datasheets & 3D drawing for standard IP65 cable version attached as an example. Further information for braked version available upon request.

Full documentation & user manuals also available upon request.

### TECHNICAL DATA

<b>Diameter</b>	52 mm
<b>Integrated control</b>	SMi21
<b>IP class</b>	IP65
<b>Life span</b>	20,000h
<b>Max. torque</b>	25
<b>Number of pulses per revolution</b>	4096
<b>Positioning feedback</b>	Yes
<b>Power</b>	92 W
<b>Ratio</b>	i=6,75-308:1
<b>Shaft diameter</b>	12 mm

<b>Speed options</b>	13rpm→578rpm
<b>Supply voltage</b>	12 V DC, 24 V DC, 48 V DC
<b>Type of gearbox</b>	Planetary 1→3 stages

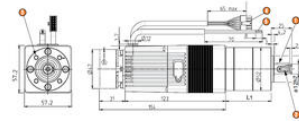
### GEARBOXES FOR DCmind BRUSHLESS RANGE

4 to 120 Nm

- Planetary and worm gearboxes
- Stainless ball bearings
- Long service life
- IP65



80405 - SM21 - P42 with or without brake

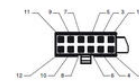


- L1 1 stage: 45.3 ±0.5
- L1 2 stages: 89.9 ±0.5
- L1 3 stages: 93.7 ±0.5

- Parallel key 4 x 4 x 16 DIN 6885 A
- M4 x 10
- 4 x M3 at 90°, depth 10 over 0.45
- Command cable 12 x 480021 / 500mm
- Power cable 2 x AWG16 / 500mm

### Connection

Connector (Molex 0430251206)



Pin	Logic cable		Power cable	
	Description	Wire color	Description	Wire color
1	Input 1 - logic	Green	+12 V <sub>cc</sub> = 48 V <sub>cc</sub>	Brown
2	Input 2 - logic	Yellow	0 V <sub>cc</sub>	Blue
3	Input 3 - logic	White		
4	Input 4 - logic	White-brown		
5	Input 5 - analog	Blue		
6	Input 6 - analog	Orange		
7	0 V <sub>cc</sub>	Black		
8	0 V <sub>cc</sub>	White-black		
9	Output 1 - PWM	Brown		
10	Output 2 - PWM	Purple		
11	Output 3 - logic	Red		
12	Output 4 - logic	Grey		

### Part numbers

Reference	Planetary 01 04	Planetary 01 02	Planetary 01 03	Worm
Type	010405	010406	010407	010410
80405 TNG1	80405 TNG1	80405 TNG1	80405 TNG1	80410 TNG1
80405 TNG2	80405 TNG2	80405 TNG2	80405 TNG2	80410 TNG2
80405 TNG3	80405 TNG3	80405 TNG3	80405 TNG3	80410 TNG3
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**Other notes possible:** 13...100

**01 planetary gearbox:** Metal gears on all stages. IP65 apart from the output shaft.

**02 planetary gearbox:** On the first stage, the planet gears are made of composite materials which improve efficiency and service life. On the other stages, the metal gears turn on needle bearings. IP65 apart from the output shaft.

**03 planetary gearbox:** All gears are metal and turn on needle bearings, resulting in excellent robustness and a very long service life. IP65 apart from the output shaft.

**Worm gearbox:** This gearbox contains a tempered 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. Curings and glands are used in combination with a compression spring to create a tight seal at the gearbox output shaft and the motor input shaft. IP65 gearbox.

The housing is made of aluminum to maximize heat exchanges with its supporting surface on the machine.

However, due to the high power 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 75°C during operation.

The output shaft can be placed on the right or left, or can be a double shaft (input/output on both sides).

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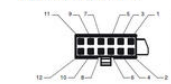
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