CROUZET - BLDC GEARED MOTOR WITH INTEGRATED SMI21 DRIVE & CANOPEN NETWORK

801495XX SMI21 CANOPEN
Planetary 52mm gearmotor 88W 12→48Vdc
12→555rpm 25Nm max

- 12→48 V dc, 10→120 Nm, worm and planetary gears
- Speed, torque & postion control. CANopen network
- Reduce control panel space & cabling
- Long life (>20,000 hours)
- IP65 as standard

PRODUCT DESCRIPTION

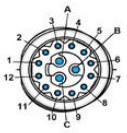
The SMi21 integrated drive is ideal for applications where speed, torque & positional control is required.
The motor also incorporates a high resolution 4096ppr incremental encoder ideal for precise positioning applications.
With CANopen communication the motor can be connected & controlled via the master CANopen control network.
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 adapation 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.

* Full documentation & user manuals available upon request.

TECHNICAL DATA

Diameter	52 mm
Integrated control	SMi21 CANopen
IP class	IP65
Life span	20,000h
Max. torque	25 Nm
Number of pulses per revolution	4096
Positioning feedback	Yes
Power	88 W
Ratio	i=6,75→308:1
Shaft diameter	12 mm
Speed options	12rpm→555rpm
Supply voltage	12 V DC, 24 V DC, 48 V DC
Type of gearbox	Planetary 1→3 stages

Connecting	
Input / Output - M16 - 15 pins	**Pin N°**
Input 1 (digital)	1
Input 2 (digital)	2
Input 3 (digital)	3
Input 4 (digital)	4
Input 5 (analogic)	5
Input 6 (analogic)	6
0V	7
Output 1 (digital - PWM)	8
Output 2 (digital - PWM)	9
Output 3 (digital)	10
Output 4 (digital)	11
Not connected	12
Not connected	A - B - C



Power supply - M16 - 3 pins	**Pin N°**
Non connecté	1
+ 12Vcc -> + 48 Vcc	2
0V	3

Micro-USB B
Monitoring and setting

CAN - M12 - 5 pins	**Pin N°**
Not connected	1
Not connected	2
0V	3
CAN High	4
CAN Low	5

GEARBOXES FOR DCmind BRUSHLESS RANGE

4 to 120 Nm

- Planetary and worm gearboxes
- Shafts on ball bearings
- Long service life
- IP65

Part numbers

Gearboxes	**Planetary Ø 52**			**Planetary Ø 62**			**Planetary Ø 81**			**Worm**
Type	810495			810496			810497			810410
Planetary stages	First stage			First stage			First stage			First stage
80140 TN21	801496 TN21			801496 TN21						801410 TN21
80180 TN21				801896 TN21			801897 TN21			801810 TN21
80280 TN21							802897 TN21			802810 TN21
80140 SMA21	801496 SMA21			801496 SMA21						801410 SMA21
80180 SMA21				801896 SMA21			801897 SMA21			801810 SMA21
80280 SMA21							802897 SMA21			802810 SMA21
Gearbox characteristics										
Stages										
Maximum permitted torque (Nm)	4	12	25	8	25	50	20	60	120	10
Efficiency	0.8	0.75	0.7	0.9	0.8	0.7	0.9	0.8	0.7	0.6 => 0.3
Axial dynamic load (daN)	6	10	15	7	10	15	8	12	20	15
Radial dynamic load (daN)	20	32	45	24	36	52	40	60	100	15
Operating temperature	-20 => +70°C			-20 => +70°C			-20 => +70°C			-20 => +70°C
Weight (kg)	0.7	0.8	1.1	0.8	1.2	1.6	1.8	2.5	3.2	0.7
Standard reduction ratios	6,75	25 46	93 169 308	5,16 6,75	19 27 46	100 139 236 308	5	19 27	100 139 236	5 - 10 - 20 - 30 - 50
Other ratios possible										15 - 100
Comments										

Ø 52 planetary gearbox: Metal gears on all stages. IP65 apart from the output shaft.

Ø 62 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.

Ø 81 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 combines 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. O-rings and lipseals 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 casing is made of aluminium to maximise 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 (shaft output on both sides).