



## SERIES 800 24v Swing Gate Operators Data Sheet

In-ground low voltage irreversible BRUSHLESS electromechanical gear motor for extremely heavy duty use with native on-board encoder complete with anti-crushing safety (inversion on obstacles). Gates up to 4.5 metres per single leaf and a maximum single gate leaf weight of 250 Kg can be automated.

**IMPACT, OBSTACLE DETECTION AND REVERSAL IN TOTAL SAFETY-** Thanks to digital technology we are able to detect an obstacle and reverse the motor instantly, by simply specifying the torque of the motor, the sensitivity, the time and the travel of the reversal. All in full compliance with current safety requirements.

Maximum Gate Leaf Length-	4.5m per single leaf,
Maximum Gate Weight-	maximum leaf weight 250 Kg
Line power supply-	230V AC - 115V AC 50/60Hz +-10%
Brushless Motor Power Supply-	24V
Rated Power-	200W
Frequency of Use-	Super Intensive
Operating Temperature-	-20 +55°C
Degree of Protection-	IP67
Standard Aperture Angle-	105°
Time to Open to 90°-	19 - 29 s
Speed of Operation-	1.66 cm/s
Thrust-	50 - 300 N
Encoder-	Digital Native Encoder
Limit Switch Type-	Adjustable Mechanical Stops
Controller Unit-	B70/2DCHP/BOX, 36V DC
Daily Operation Cycles-	1,300 (open/close- 24 hours non-stop)
Cable Type-	2 metres standard, 3x2.5 mm <sup>2</sup>
Number of Bearings on Idle Shaft-	1 Bearing
Manual Release-	Trilobe Release Lever or Cylinder Lock





### **EXTREMELY LOW ENERGY CONSUMPTION**

A motor that can operate at low voltage in super-intensive use and which can operate in environments with extremely demanding weather conditions while maintaining very low energy consumption and absorption levels. We can move a 600 kg sliding gate and use less than 30W of power.



### **SPEED, ACCELERATION AND DECELERATION WITH EXTREME ELEGANCE**

The automation system with brushless digital technology creates perfect and elegant movements. With a constant force and torque at every point and with the option of varying the speed on deceleration and acceleration the system can be managed with maximum safety.



### **IMPACT, OBSTACLE DETECTION AND REVERSAL IN TOTAL SAFETY**

Thanks to digital technology we are able to detect an obstacle and reverse the motor instantly, by simply specifying the torque of the motor, the sensitivity, the time and the travel of the reversal. All in full compliance with safety requirements.



### **MOTOR FOR SUPER-INTENSIVE USE**

We wanted to surprise our customers with a product that was fundamentally different to any other product on the market. The motor remains permanently cold even after many days of super intensive use.



### **THE DIGITAL SILENCE OF THE MOTOR**

One great impact is the silence or the near absence of noise, generated by the BRUSHLESS motor during all its movements.

## **Cable Grommet with Dual Layer Epoxy Resin Seal**

Innovative three phase technology makes it possible to connect the in-ground brushless motors to the digital controller with a single 3-core cable. All cable grommets and nickel plated brass connector junctions are protected by dual layer epoxy resin seals.

## **Double Lip Oil Seal with Dust Seal**

A dual lip oil seal is installed on the top end of the reduction gear unit idle shaft, ensuring complete protection against contamination caused by from external factors such as water, dust or mud, which would compromise the efficiency of the drive unit.

## **Extremely Robust, Reinforced Aluminium Housing**

The housing of the Brushless BR21 in-ground motor is constructed entirely in die-cast titanium reinforced aluminium. The thicknesses are increased and reinforced in the areas of greatest stress or possible wear. The housing is protected against the weather with a special epoxy powder coat treatment, while all fastener hardware is in stainless steel.

## **Main Gear in Cast Iron**

The main gear is manufactured completely from spherical graphite cast iron. The thickness and diameter of the gear are oversized to create an extremely robust component with superior resistance to mechanical strain and failure

## **Extremely Durable Worm Screw**

The idle shaft drive worm screw is manufactured in steel. The threaded part of the screw is not cut with machine tools but realised with a billet rolling process, to ensure superior durability and extremely quiet operation.

## **Precise, Silent Mechanical Connections**

All mechanical connections between the drive shaft and the mechanical gears of the reduction unit are in ferrous and non-ferrous metals; with cast iron, carbon steel and bronze/ aluminium used in particular. All mechanical connections are extremely precise, as they are realised with highly accurate processes, ensuring the quietness and superior durability of the reduction unit.

## **Dedicated High Efficiency Bearings**

All the bearings using for the motor shaft and in the reduction gear transmission unit are housed on specifically machined seats. The in-ground drive unit is fitted with class 2 ZZ bearings. These are high efficiency components designed for high rotation speeds, with extremely low mechanical friction and protected by dual steel shielding.

## High Efficiency Lubrication

The in-ground drive unit is lubricated with a generous quantity of extremely high performance grease to keep it operating with superior mechanical efficiency. This lithium soap based grease is capable of withstanding the most intense mechanical usage and maintains its physical properties even in extreme heat and cold, effectively minimising friction and preventing increased power absorption over a wide range of temperatures.

## Micro-Controller with DSP SENSORLESS Technology

The digital controller controls the brushless motor via a single 3 core cable, managing your automation system entirely digitally with SENSORLESS motor power control technology

## Multifunction Digital Display

4-quadrant digital display with 6 function keys for navigating through different parameters, changing their values, checking error messages and input statuses and performing all self-acquisition cycles.

## 4 Quadrant Mosfet Digital Inverter

The digital controller of the three-phase sinusoidal brushless motor with field oriented control uses an extremely potent and revolutionary 12 Mosfet, 4 quadrant sinusoidal control digital inverter to control motor power with vector frequency modulation.

## FOUNDATION BOX DIMENSIONS

