

PG Drives Technology

nVR2 BLDC Control System

Brushless DC Motor Powerchair Control

- Suitable for all small BLDC powerchairs
- Simple motor-matching for optimal performance
- Smooth and efficient, closed-loop motor control
- Powerful – 40Arms for 1 minute
- Low off-state current for small batteries (5Ah)
- Compliant with NA, EU and Asian Standards
- FDA Master File (MAF) for 510(k) submissions
- MDR CE-marking documentation pack
- TÜV certified
- NMPA and MFDS documentation packs
- Flexible BDI algorithm for various battery types
- Battery Management System (BMS) Interface
- Compact Joystick Module
- Optional sealing cover

Designed specifically to meet the requirements of small powerchairs fitted with Brushless DC (BLDC) motors, Curtiss-Wright's nVR2 BLDC control system is the ideal choice for international manufacturers. Superb driving performance, via a fully closed-loop control algorithm, is achieved with minimal programming, allowing OEMs to simply match a range of BLDC motors to the control system, quickly and efficiently.

The Power Module, fitted with cost-effective, industry-standard connectors, can supply an impressive 40A rms to each motor at peak power. Consuming minimal current while switched off, the control system easily meets international standards, even when the chair is fitted with small-capacity (5Ah) batteries.

Designed to comply with all relevant international standards and independently certified by TÜV, Curtiss-Wright can provide a Master Access File in support of FDA 510(k) submissions, as well as information for MDR



CE-marking and documentation packs suitable for the NMPA (China) and MFDS (South Korea).

The nVR2 BLDC control system features a flexible BDI algorithm allowing manufactures to effectively set different discharge curves for various battery types. In addition, the Power Module is fitted with a Battery Management System (BMS) interface. As a future-proofing feature, this can be connected to a Li-ion BMS to provide accurate state-of-charge information, as well as exchanging an array of data, such as battery temperature and error codes.

Featuring simple, easy-to-use controls, the Joystick Module, with its sleek and compact design, lends itself perfectly to indoor use.

An optional sealing cover is available if the powerchair is required to be used outdoors.

SPECIFICATIONS

ELECTRICAL

SUPPLY VOLTAGE	24 Vdc nominal
OPERATING VOLTAGE RANGE	16 Vdc to 35 Vdc
PEAK VOLTAGE	40 Vdc
REVERSE BATTERY PROTECTION	-40 Vdc
MOTOR CURRENT	40 Arms for 60 s
PWM FREQUENCY	20 kHz
SOLENOID BRAKE	24 Vdc, 100 mA min., 1 A max.
MAX CHARGING CURRENT	6 Arms (Use only Neutrik NC3MX mating plug)

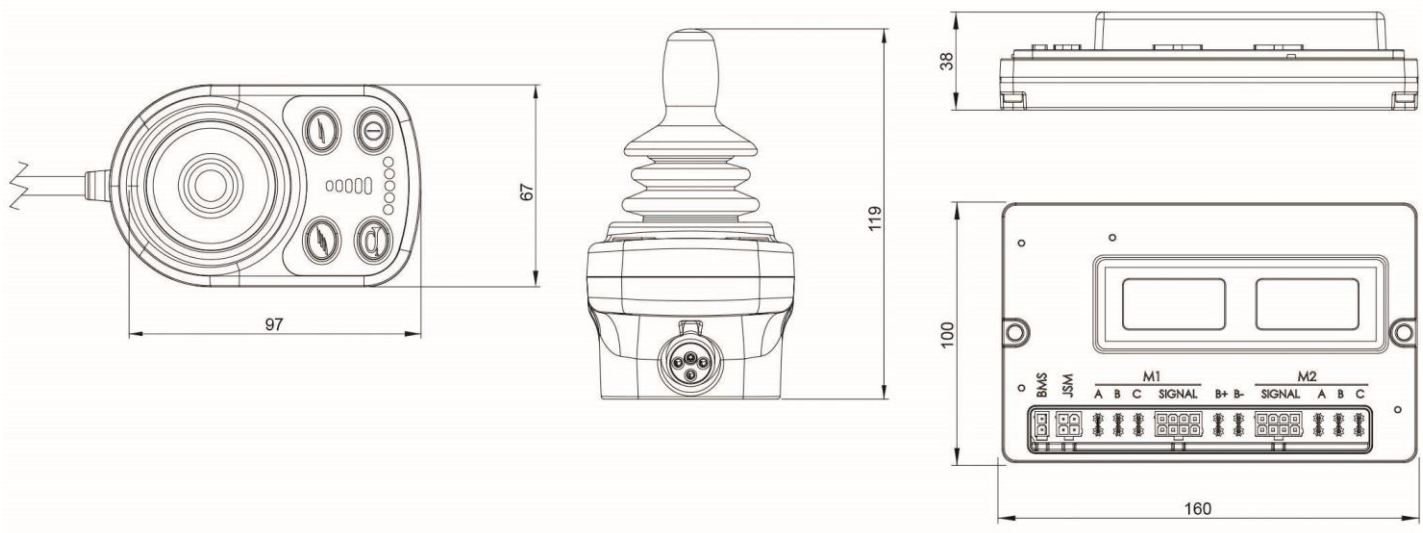
ENVIRONMENTAL

OPERATING TEMPERATURE	-25 °C to 50 °C
STORAGE TEMPERATURE	-40 °C to 65 °C
ENVIRONMENTAL PROTECTION	IPx4
EMC ON SAMPLE POWERCHAIR	Tested to ISO 7176-21
ESD	8 kV
SAFETY	Designed to the relevant requirements of ISO 7176 and EN 12184

PRODUCT CODES

nVR2 BLPM40	Power Module
nVR2 JSM-BL-1.2M	Joystick Module (1.2M)
nVR2 JSM-BL-0.29M	Joystick Module (0.29M)
nVR2 JSM-BL-0.61M	Joystick Module (0.61M)
nVR2 BLPM SEALING KIT	Sealing Kit

DIMENSIONS (MM)



Joystick Module

Power Module

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