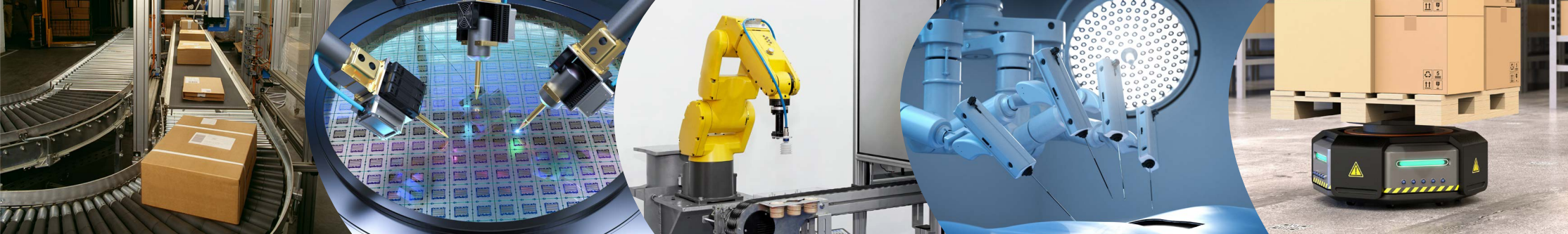


Advanced Servo Drives and Integrated Motors


RoboG4™




a **Nidec**® brand



Enabling a World of Applications

RoboG4™

Roboteq drives have the feature sets that make them well suited in a wide range of advanced motion control applications: precise speed, torque, and position control; exceptional power density, dual-channel, battery operation support, regenerative braking, fieldbus connectivity, rugged construction, Functional Safety (STO), and advanced protection are some of the enabling technologies found in our RoboG4 drives.

- **MEDICAL ROBOTS**
- **MOBILE ROBOTS/AGV**
- **MULTI-ACCESS ROBOTS**
- **ELECTRIC WATERCRAFT**
- **AGRICULTURAL ROBOTS**
- **MATERIAL HANDLING & LOGISTICS**
- **AUTOMATED PRODUCTION & TEST MACHINERY**

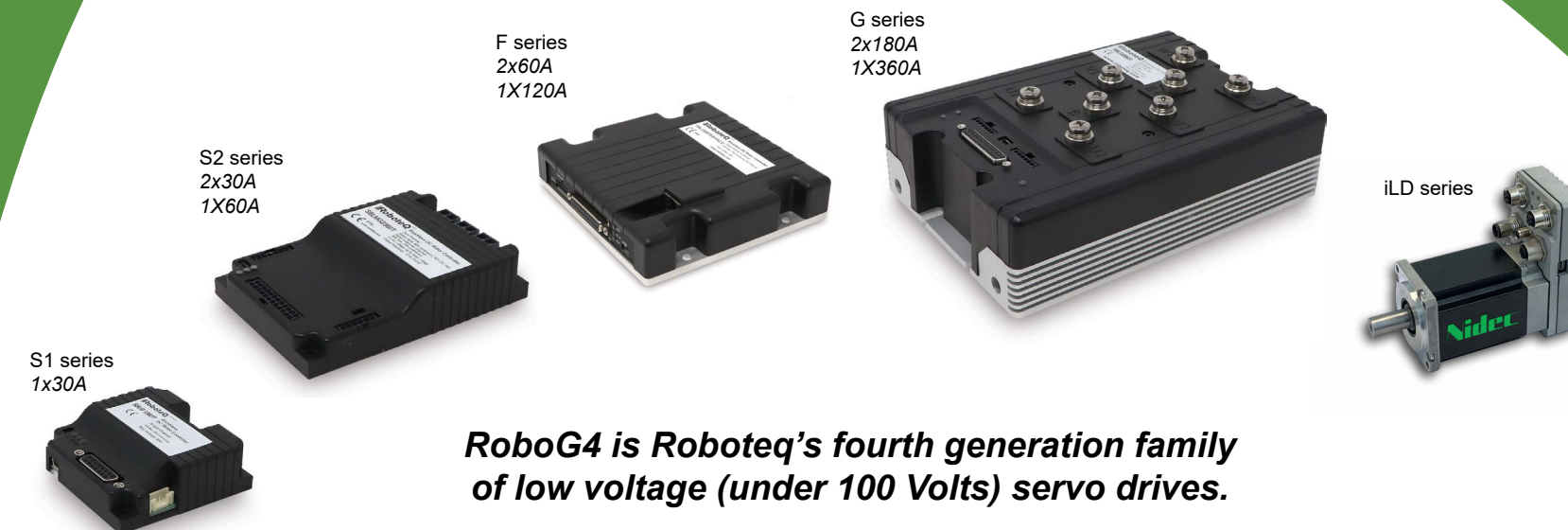


RoboG4™



The RoboG4 range includes three main families of single-channel and dual-channel drives from 1500W to 19kW max. A major new addition is an integrated unit that merges Roboteq's motion control technology with Nidec's servo motor expertise. RoboG4 drives deliver world-class performance, Functional Safety, and exceptional connectivity to all major fieldbuses. All RoboG4 drives are compatible with each other, and so can scale to meet the needs of most applications.

Advanced Servo Drives & Integrated Motors



RoboG4 is Roboteq's fourth generation family of low voltage (under 100 Volts) servo drives.

CANopen
EtherCAT
EtherNet/IP
PROFINET

Engineered for Your Success



Get More Torque & Speed from the Same Motor

RoboG4 drives include automatic field weakening, allowing the motor to reach a significantly higher speed than its maximum rating, or produce additional torque at the motor's rated top speed.



Faster Processing

New, faster and best-in-class motion algorithms.



Adapt Automatically to Load Changes

Adaptive control continuously observes the system's inertia and applies new gains on the fly, resulting in optimal performance at any load point.



Ultimate Precision and Control

Current is measured and adjusted every 62 microseconds to produce smooth and precise torque, while always operating within safe ranges. Three cascaded loops for position, speed and current, each with its own PID and Feed-forward gains, resulting in easier tuning, and optimal performance and system responsiveness.



Overcome Mechanical Constraints

RoboG4 drives incorporate a notch filter which reduces vibration due to mechanical resonance. A mechanism has been added to compensate for the magnetic cogging caused by the rotor teeth and the permanent magnets inside the motor, and smooth out the rotation at very slow speeds.



Stay Ahead of Technology

Protect your investment with our drives and leading-edge motion control technology. Get the most of any motor types. RoboG4 drives have the necessary circuitry and control algorithms for today's most popular motor types: Surface Permanent Magnets (SPM) or Internal Permanent Magnets (IPM) brushless motors, DC brushed motors, and AC Induction motors.



RoboG4™

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Works with any Motor

Wide range of supported rotor sensor types including Hall, Quadrature Encoders, Analog, Sin-Cos, Resolver, and SSI.

Connects to Everything

Drives include traditional RS232/485/USB communication ports compatible with major Fieldbus standards. Can be tightly coupled with other drives, computers, or PLCs in factory installations and robotics systems.

Fast & Automated Setup/Tuning

Free PC Utility cuts development time from hours to minutes! Attach a motor and the drive automatically characterizes it, calibrates the rotor sensor, and tunes the torque and speed control loops. Monitor and troubleshoot with the powerful multichannel chart recorder.

Scripting = Ultimate Flexibility

Think of it as having a PLC built right into the drive, at no extra cost. This Roboteq exclusive feature lets you tailor the drive to meet your most challenging requirements.

Integrated Motor+Drives Also Available

Space-saving, easy-to-install and easy-to-service units come preconfigured and tuned to deliver a true plug and play experience.

Easy Application Integration



RoboG4™

S1-Series Compact Low-Power Single-Channel

SBLG1360T 1x30A



SBLMG1360T 1x40A



	SBLG1360T	SBLMG1360T
Power		
Number of Channels	1	1
Max Amps/ch	30	40
Cont Amps/ch	20	20
Max Voltage	60	60
Power Connections	Screw Terminal	Fast-on
STO	Y	Y
Communication		
RS232	Y	Y
RS485		
CANbus	Y	Y
Ethernet		-P versions
Profinet		-P versions
EthernetIP		-I versions
EtherCAT		-C versions
Rotor Sensor		
Encoder	Y	Y
Hall	Y	Y
Sin/Cos	Y	Y
SSI Single-turn	Y	Y
SSI Multi-turn	Y	Y
Resolver		Y
Sensor Connector	JST-PH	Molex Nanofit
Input/Outputs		
Max Analog Inputs	6	6
Max Digital Inputs	6	6
Max Pulse Inputs	6	6
Max Digital Outputs	2	2
PWM Brake Outputs		1
Brake Resistor Outputs		1
I/O Connector	DSub15	Molex Nanofit
Mechanical		
Dimensions	70x70x27mm	70x70x27mm
Cooling	Conduction	Conduction
IP Rating	IP40	IP40

S2-Series Compact Low-Power Dual-Channel

SBLG2360T 2x30A / 1x60A



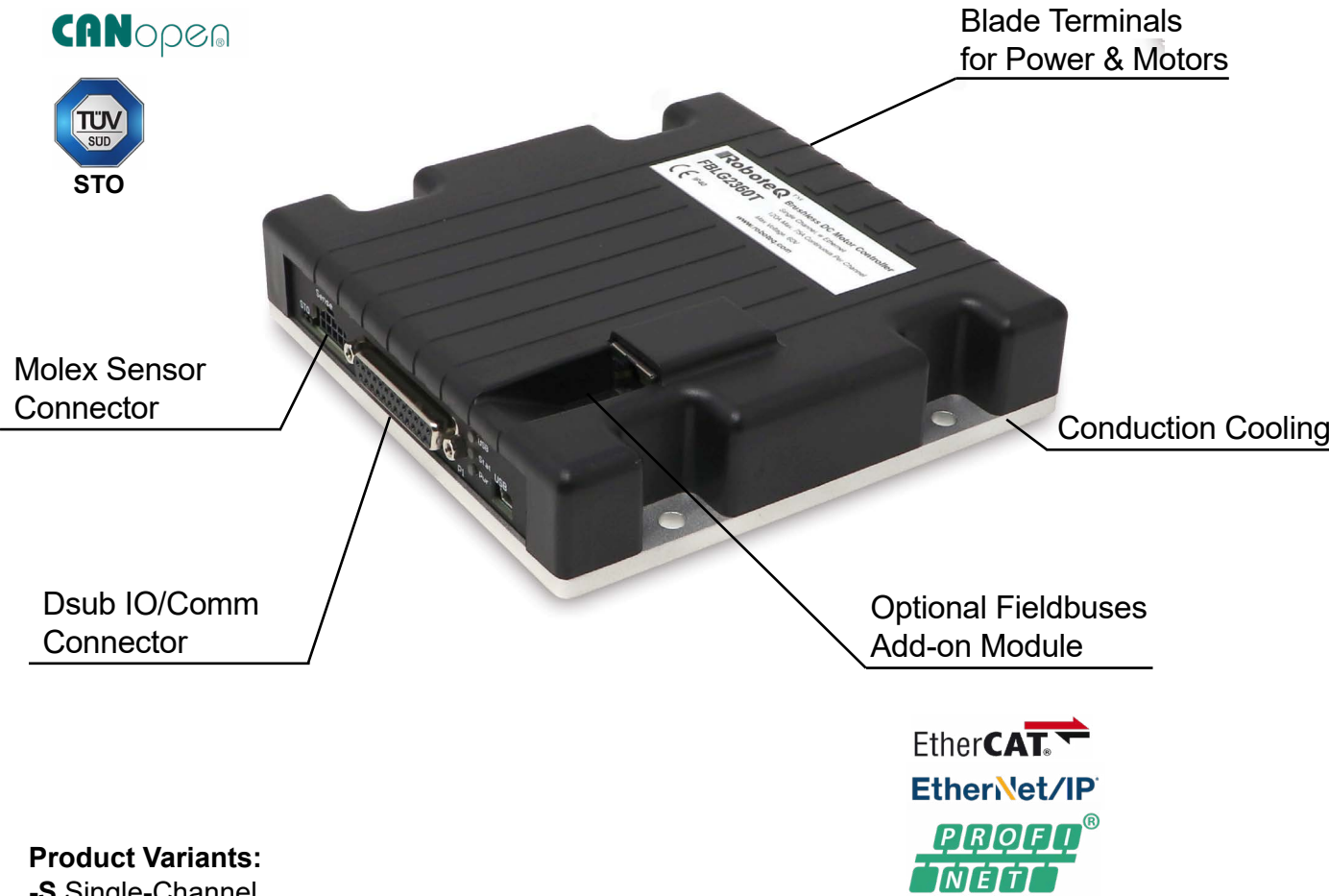
SBLMG2360T 2x30A / 1x60A



	SBLG2360T	SBLMG2360T
Power		
Number of Channels	2 (1)	2 (1)
Max Amps/ch	30 (60)	30 (60)
Cont Amps/ch	20 (40)	20 (40)
Max Voltage	60	60
Power Connections	Screw Terminal	Molex Megafit
STO	Y	Y
Communication		
RS232	Y	Y
RS485	Y	
CANbus	Y	Y
Ethernet		
Profinet		
EthernetIP		
EtherCAT		
Rotor Sensor		
Encoder	Y	Y
Hall	Y	Y
Sin/Cos	Y	Y
SSI Single-turn	Y	Y
SSI Multi-turn	Y	Y
Resolver		
Sensor Connector	Molex Microfit	Molex Microfit
Input/Outputs		
Max Analog Inputs	8	8
Max Digital Inputs	10	10
Max Pulse Inputs	8	8
Max Digital Outputs	4	4
PWM Brake Outputs		2
Brake Resistor Outputs		
I/O Connector	DSub25	Molex Nanofit
Mechanical		
Dimensions	123x83x25mm	123x83x25mm
Cooling	Conduction	Conduction
IP Rating	IP40	IP40

F-Series Mid-Power Dual-Channel

FBLG2360T 2x60A / 1x120A

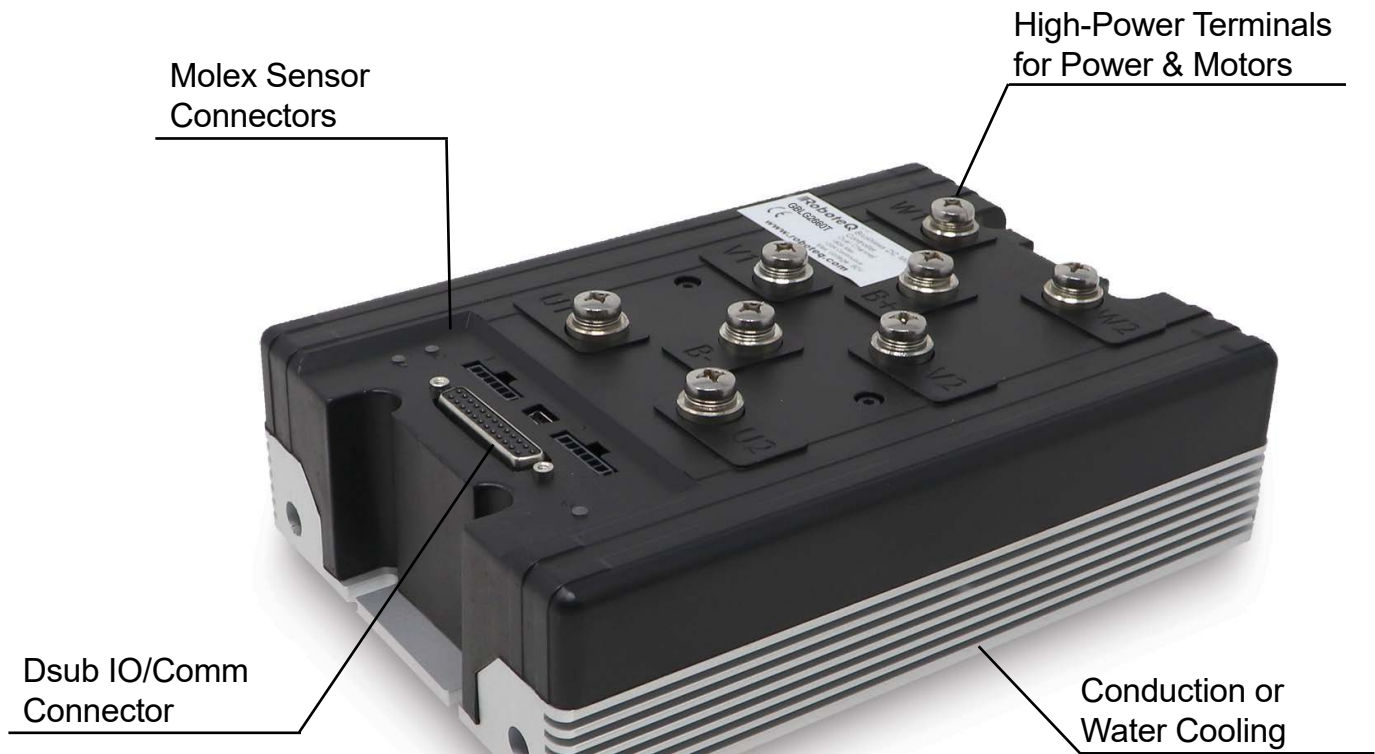


Product Variants:
-S Single-Channel

	FBLG2360T
Power	
Number of Channels	2 (1)
Max Amps/ch	60 (120)
Cont Amps/ch	40 (90)
Max Voltage	60
Power Connections	Fast-on
STO	Y
Communication	
RS232	Y
RS485	Y
CANbus	Y
Ethernet	-E -P versions
Profinet	-P versions
EthernetIP	-I versions
EtherCAT	-C versions
Rotor Sensor	
Encoder	Y
Hall	Y
Sin/Cos	Y
SSI Single-turn	Y
SSI Multi-turn	Y
Resolver	Y
Sensor Connector	Molex Microfit
Input/Outputs	
Max Analog Inputs	10
Max Digital Inputs	8
Max Pulse Inputs	8
Max Digital Outputs	4
PWM Brake Outputs	
Brake Resistor Outputs	
I/O Connector	DSub25
Mechanical	
Dimensions	140x140x25mm
Cooling	Conduction
IP Rating	IP40

G-Series Compact High-Power Dual-Channel

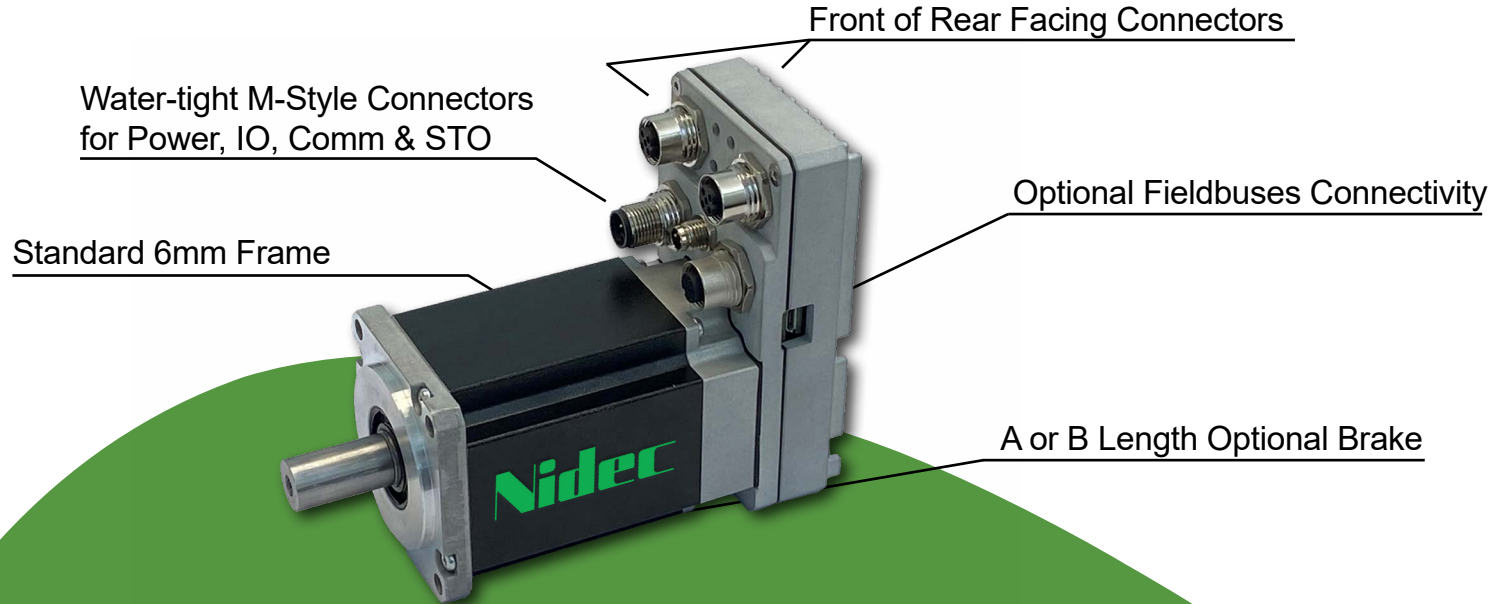
GBLG2660T 2x180A / 1x360A



Product Variants:
-S Single-Channel

	GBLG2660T
Power	
Number of Channels	2 (1)
Max Amps/ch	180 (360)
Cont Amps/ch	120 (240)
Max Voltage	60
Power Connections	Power Terminals
STO	Y
Communication	
RS232	Y
RS485	Y
CANbus	Y
Ethernet	-E version
Profinet	
EthernetIP	
EtherCAT	
Rotor Sensor	
Encoder	Y
Hall	Y
Sin/Cos	Y
SSI Single-turn	Y
SSI Multi-turn	Y
Resolver	Y
Sensor Connector	Molex Microfit
Input/Outputs	
Max Analog Inputs	8
Max Digital Inputs	8
Max Pulse Inputs	8
Max Digital Outputs	4
PWM Brake Outputs	
Brake Resistor Outputs	
I/O Connector	DSub25
Mechanical	
Dimensions	140x200x58mm
Cooling	Conduction (Water)
IP Rating	IP40

iLD Integrated Motors + Drives



Product Variants: 060 iL A 30 5 – S T C S

Motor Frame	060
Motor Type	iL (i – Integrated), (L – 48VDC)
Motor Length	A or B
Motor Shaft Speed	30 rpm
Motor Brake	0,5 (with or without)
Controller	S (GSBL)
STO/PWRC	T (STO), P (Power Control)
Network	C (CAN), P (Profinet) I (Ethernet IP), E (EtherCat)
Encoder	S (Single Turn)

iLD60S

AGV Kits



The kits contain the following: a pair of motors with gearboxes and wheels, a preset and tuned dual-channel drive, and cable assemblies. Kits are available in three sizes of motors and drives for robots weighing up to 500, 1000 and 2000kg.

	AGV060B	AGV089A	AGV142A
Max Robot Weight	500kg	1000kg	2000kg
Motor Frame	60mm	89mm	142mm
Max Motor RPM	3000	3000	2000
Gear Ratio	9:1	9:1	9:1
Wheel Diameter	156mm	156mm	202mm
Brake	No Brake: 01 Suffix w/ Brake: 02 Suffix	No Brake: 01 Suffix w/ Brake: 02 Suffix	No Brake: 01 Suffix w/ Brake: 02 Suffix
Drive Model	SBLG2360T	FBLG2360T	GBLG2660T

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Dual-Channel drives are simpler, cheaper, and easier to integrate and maintain. Motors are coordinated within the drive, resulting in superior and safer drive characteristics compared to two single-channel drives.

Complementary Products



Safety Electric Brake Switch

The SBS1360 is a Functional Safety device that uses redundant solid-state switches for strong electrical braking –stopping the motor up to 10 times faster compared to STO alone.



Shunt Regulators

The SR5K is a protection device for dissipating the regenerative energy when braking. It instantly applies a two-level resistive load in overvoltage conditions to absorb up to 5 kilowatt of excess energy.



Magnetic Charge Contacts

Robopad charge contacts are a two-part system (base + extendable collector) that uses magnetic force to secure a high current charging solution for mobile robots and AGVs.



Scan to view demo video



Magnetic Track Following Sensors

The MGS1600 sensor reports the position of a magnetic field with 1mm accuracy. It is intended for Automatic Guidance, using adhesive magnetic tape to form a guide on the floor.



Scan to view demo video



Founded in 2005, Roboteq established itself as a leader in the field of servo drives, primarily in the fast-growing mobile robot market. In 2020, Roboteq was acquired by Nidec Corporation, the world's most comprehensive maker of electric motors. Roboteq's drive expertise is now augmented by Nidec's global resources. Our growing team of engineers and scientists integrate leading-edge technologies from Nidec's corporate advanced research centers. Investments in design, test and validation tools are combined with rigorous methodologies that further advance the quality and reliability of our drives.

With factories all around the globe, we can satisfy the largest orders at reasonable costs.

USA – Scottsdale, AZ: +1 480 664 6660 • Greece – Athens: +302106021224

sales@roboteq.com
www.roboteq.com



“Excellent Product”

“I’ve worked with a lot of motor controllers and I have to say that so far these are the BEST I’ve worked with. Great job on the design and the software.”

T.K. - USA

“Solid Documentation”

“I’ve been in product development and engineering for quite a few years and I feel this is the best manual I’ve seen in that time. It’s complete, relevant and explanatory. Well done!”

B.B. - Netherlands

“Beyond Product Support”

“The Roboteq team has been with us all along our design efforts, helping with communication to our PLC and advising us on how to best construct our mechanical chassis in order to achieve accurate and steady track following. Thank you!”

R.B. - Canada

“Integration Really is a Snap”

“Roboteq’s sensor, motor controller and software really do come together easily as advertised. Following their documentation and using their sample script was all we needed to make our robot move within hours. Impressive!”

A.G. - Spain

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