Browning®

IntelliGear® Variable Speed Gearmotors & C-Face Motors

EMERSON™
Industrial Automation

EMERSON. CONSIDER IT SOLVED.™

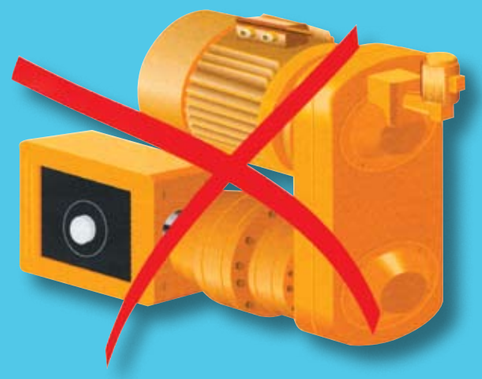
INTELLIGEAR products combine advanced open loop vector technology with the convenience and reliability of a variable frequency drive mounted to the conduit box of a gearmotor or NEMA c-face motor. Each one is factory wired and pre-programmed for optimum performance with the motor.

IntelliGear Advantages Versus Separate Wall Mount Inverters

- No need to learn how to program the drive – factory setup
- Factory wiring minimizes risk of installation errors
- Pre-tested Motor/Drive performance for excellent breakaway torque
- Eliminate cost of wiring between motor and controller
- No cost/time required to mount controller
- Eliminates "standing wave" phenomenon at motor

IntelliGear Advantages Versus Mechanical Variable Speed

- Reduced maintenance cost
- Reduced machine downtime
- 97.5% efficiency means lower operating cost
- Wider constant torque speed range
- Soft starting reduces system wear
- No extra cost for remote control



HWN
Right Angle Helical Wom

CbN
Inline Helical

IRA
Right Angle Worm

OtN
Right Angle Helical Bevel

MbN
Helical Shaft Mount

Washdown
C-Face Motor

TEFC
C-Face Inline Helical

TEFC
C-Face with Worm Gear

DIVERSE SPEED CONTROL OPTIONS

SELECT FROM A VARIETY OF LOCAL AND REMOTE OPTIONS TO MEET YOUR SPECIFIC APPLICATION NEEDS

LOCAL

PD

Digital Keypad

P1

Start/Stop Speed Pot.

P2

Fwd/Rev/Stop Speed Pot.

P3

Speed Pot. On/Off (by others)

P4

Internal Pot. On/Off (by others)

REMOTE

R
0-10 VDC
OR
4-20 ma
Signal Following (by others)

RP
Profibus DP

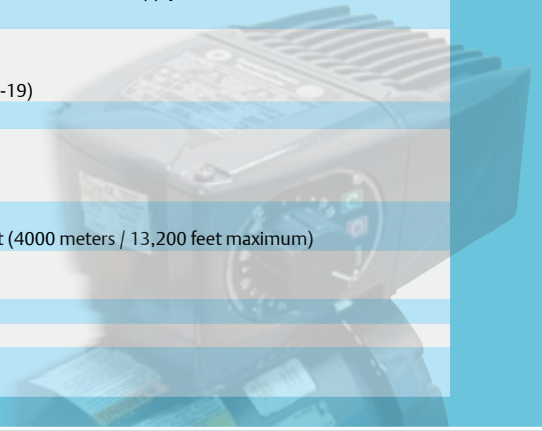
IntelliGear Characteristics and Functions

ELECTRICAL DATA

Input Power Supply	+TS1	115 V ±10%, 50-60 Hz ±2%, 1-Phase
	+TS2	240 V ±10%, 50-60 Hz ±2%, 1-Phase
	+T2	240 V ±10%, 50-60 Hz ±2%, 3-Phase
	+T4	480 V ±10%, 50-60 Hz ±2%, 3-Phase
Supply Short Circuit Capacity	+TS2 or +T2	Maximum 5000 A Symmetrical at 264 VAC RMS
	+T4	Maximum 5000 A Symmetrical at 528 VAC RMS
Phase Voltage Imbalance	Maximum 3% at Input	
Output Voltage	0 V to Input Voltage	
Power-ups/Hour	Single Phase Input: 10 maximum	
	Three Phase Input: 100 maximum	
Efficiency	Electronics 97.5%	
Input Power Supply	+TS1	1/3 – ¾ HP
	+TS2	1/3 – 2 HP
	+T2	1/3 – 5 HP
	+T4	1/3 – 10 HP

CHARACTERISTICS AND FUNCTIONS

	Motor HP	Standard	10:1 Option	15:1 Option
Speed Range	1/3 – ¾ HP	1760-293 RPM	1760-176 RPM	2625-175 RPM
	1 – 1 ½ HP	1750-291 RPM	1750-175 RPM	2620-175 RPM
	2 HP	1750-291 RPM	2585-255 RPM	N/A
	3 HP	1750-291 RPM	2630-263 RPM	N/A
	5 HP	2150-358 RPM	2605-260 RPM	N/A
	7.5 HP	2150-358 RPM	2670-267 RPM	N/A
	10 HP	2100-350 RPM	2600-260 RPM	N/A
Maximum Speed	• Adjustable 0 to 3600 RPM			
Minimum Speed	• Adjustable 0 to Maximum Speed			
Overload	• Allows 150% for up to 60 seconds, 10 times/hour maximum			
Speed Reference	• 2 Analog Inputs individually programmable for 0–10VDC, 4–20mA, 20–4mA, 0–20mA, or 20–0mA • Digital via Keypad Entry (VARMPAD on cover or separate LCD Keypad) • 8 Preset Speeds • Fieldbus			
Run/Stop	• Local operator push buttons (Control options PD, P1, or P2) • Remote contact closure (Control options R, P3 or P4) • Input power contactor (Control options R, P3 or P4) • Fieldbus control word (Control option RP)			
Forward/Reverse	• Local operator push buttons (Control option P2) • Remote contact closure (Control options R, P3 or P4) • Fieldbus control word (Control option RP)			
Stop Mode	• Controlled ramp stop • Coast stop • DC Injection braking • Controlled ramp stop with dynamic braking (optional resistor) • Coast with mechanical DC coil brake (optional ESFR kit)			
Ramps	• Acceleration/Deceleration rates separately adjustable 0.1- 600.0 Seconds/1000 RPM			
Protective Trips	• Undervoltage, Overvoltage, Motor Overload, Motor Short Circuit, Motor Thermister (PTC) Fault, Motor Thermostat (NC), Input or Motor Phase Loss, Brake Resistor Overload, IGBT Thermal Trip, 24 VDC Power Supply Short Circuit, External Fault Interlock Contact			
Fault Reset	• Cycle input power supply off then on • Momentarily open drive enable for IntelliGear 31 or 32 (terminal 11) • Momentarily open drive safety contact for IntelliGear 33 (terminals 18-19)			
Control Enclosure	• NEMA 4 / IP65			
Temperature Ratings	• Storage / Transport -40°C to +70°C • Operating -20°C to +50°C • Derate drive HP rating by 1% per °C above 40°C			
Altitude Rating	• 0-1000 meters / 3300 feet above sea level without derating • Derate by 1% per 100 meters / 330 feet above 1000 meters / 3300 feet (4000 meters / 13,200 feet maximum)			
Maximum Humidity	• Operating Up to 95% non-condensing • Storage Up to 93% at 40°C for 4 days maximum			
RFI Immunity	• Conforming to EN61000-6-2			
RFI Emissions	• Radiated & Conducted conforming to EN50081-2 with internal filter			
Approvals	cULusa UL 508 C (File E211799)			



APPLICATION CONSIDERATIONS

The proper selection and application of power transmission products and components, including the related area of product safety, is the responsibility of the customer. Operating and performance requirements and potential associated issues will vary appreciably depending upon the use and application of such products and components. The scope of the technical and application information included in this publication is necessarily limited. Unusual operating environments and conditions, lubrication requirements, loading supports, and other factors can materially affect the application and operating results of the products and components and the customer should carefully review its requirements. Any technical advice or review furnished by Emerson Power Transmission Corporation and its divisions with respect to the use of products and components is given in good faith and without charge, and Emerson assumes no obligation or liability for the advice given, or results obtained, all such advice and review being given and accepted at customer's risk.

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