



Bronco II Standard Features



Listed



Listed for use in Canada

Speed Regulation

Regulation by armature voltage feedback or tachometer generator feedback (non-reversing models only).

Dual Voltage Input

(115/230 VAC)

Each model can be connected to either of two line voltages 1/4, 1/2, 3/4 and 1HP motors @115VAC input or 1, 1-1/2 and 2 HP motors @ 230VAC.

Circuit Protection

Transient voltage protection by Metal Oxide Varistor (MOV).

Torque Control

Controls motor armature current for applications requiring torque or tension control.

Local or Remote Operator Control

Flexible, compact...fits where you want it.

Open Chassis Unit Availability

For convenient mounting of one or several drives in an enclosure.

Field Programmable Jumpers

Allow the Bronco II to be quickly modified to match available plant line voltage, select motor HP, and to select the feedback signal required.

AC Line Protection Fuse

Fault protection...eliminates a costly replacement.

Full wave power conversion circuit with 2 (SCR) and 3 diodes providing NEMA Code K, DC armature supply

Insures optimum motor performance, cooler motor operation and longer life.

IR Compensation Adjustment

Improves speed regulation in armature voltage feedback mode.

Control Relay with 3-wire Start/Stop Circuit

Prevents automatic restart after power outage for increased safety. (May be reconnected for line start operation if required.)

Jog at Potentiometer Speed

Set the Bronco II speed potentiometer at a desired speed and jog the motor to allow easy set up of the machine process.

Field Supply for Shunt Wound Motors

Permanent magnet field or shunt wound field motors...Bronco II is the right one.

Enclosure

Choice of totally enclosed, cast aluminum enclosures to meet NEMA 4, NEMA 12 and NEMA 4X standards. Incredibly rugged DC drives for the most critical industrial environment—dust tight, oil tight and water resistant.

Maximum and Minimum Speed Adjustments

Limit speeds available at operator's control.

Adjustable Acceleration (1 to 5 seconds)

Easy-to-set for smooth, linear speed control.

Bronco II Washdown Duty

A new standard in adjustable speed DC Drives

Specifically designed for food processing and other industries where the motor and control are constantly exposed to high pressure washdown to maintain cleanliness.

The Bronco II Washdown Duty DC Drives convert single phase AC line voltages of either 115 or 230 VAC to variable DC for armature voltage speed control of permanent magnet or shunt wound DC motors from 1/4 to 2 HP.

- Rugged
- Reliable
- Versatile
- Accurate
- Economically priced



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The white enclosure of the washdown Bronco II is FDA approved and meets NEMA 4X.

- Totally enclosed
- Cast aluminum
- Epoxy coated
- Gasketed cover
- Stainless steel captive screws



Proven Danaher Motion Dependability

- Full wave power conversion circuit with 2 SCR's and 3 diodes with NEMA K configuration allows cooler motor operation.
- IR compensation improves speed regulation in armature voltage feedback mode.
- Control relay with 3-wire start/stop circuit prevents automatic restart after power outage for increased safety. (May be reconnected for line start operation if required.)
- Full two year warranty.



For AC motors, the Bronco VFD line is available. Consult factory or visit our website for details.



Bronco II

Select the model that best fits your application needs.

Input Line Voltage	HP	Run/Stop			Run-Jog Fwd-Rev	Torque Control	External Signal		External Signal Isolation Follower Option Kit
		Chassis	Remote Enclosed	Local Operator			Local Operator	Local Operator	
115 VAC Single Phase	1/4 – 1	B161S	B162 B162WD	B160 B160WD	B163 B163WD	B165 B165WD	B169 B169WD	B168 B168WD	BWC36015
230 VAC	1/2 – 2								

⁽¹⁾Note:

WD = Washdown Duty Broncos provide the same features as non-washdown models with the exception of the epoxy finish and stainless exterior hardware.

Models

Model B160 / B160 WD

NEMA 4/12 enclosure with Start/Stop, Run/Jog switches and Speed potentiometer mounted on enclosure front cover.

Model B161S

Chassis for mounting in customer supplied enclosure.

Model B162 / B162 WD

NEMA 4/12 enclosure for use with a remote operator control.

Model B163 / B163 WD

NEMA 4/12 enclosure with Start/Stop, Run/Jog, Forward/Reverse switches and Speed Potentiometer on enclosure front cover.

Model B165 / B165 WD

NEMA 4/12 enclosure with Start/Stop, Forward/Reverse switches and Torque Potentiometer on enclosure front cover.

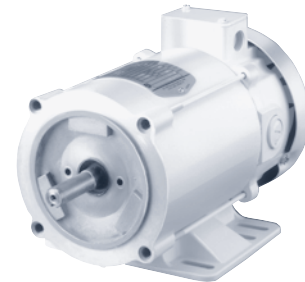
Model B168 / B168 WD

Same features as Model 169 described below, except the front panel mounted Speed Potentiometer trims the speed signal when operated in the automatic mode.

Model B169 / B169 WD

External isolated signal follower in NEMA 4/12 enclosure with Start/Stop and Auto/Manual switches mounted on enclosure front. Controls motor speed from either a grounded or ungrounded signal — 4-20mA, 1-5mA, 0-10 VDC, 0-14 VDC, 0-100 VDC in auto mode, or from the speed potentiometer in manual mode.

WD = Washdown Enclosure



Ratings

Horsepower Range	115 VAC	1/4–1 HP
	230 VAC	1/2–2 HP
AC Line Input Voltage	115 or 230 VAC $\pm 10\%$	
AC Line Frequency	50/60 Hz ± 2 Hz	
115 VAC Supply		
Armature Voltage	0–90 VDC	
Field Voltage	50/100 VDC	
230 VAC Supply		
Armature Voltage	0–180 VDC	
Field Voltage	100/200 VDC	
Service Factor	1.0	
Duty	Continuous	
Maximum Load Capacity	150% for 1 minute	
Line Protection	Fuse	

Operating Conditions

Ambient Temperature	
Chassis Model	0–55°C
Enclosed Models	0–40°C
Relative Humidity	5–95% non-condensing
Altitude	To 3300 feet (1000m)

Performance Characteristics

Speed Range	30:1 with armature voltage feedback 50:1 with tach-generator feedback
Speed Regulation (As % of motor base speed) for 95% load change	
Armature Voltage Feedback	$\pm 2\%$
Tachometer Feedback	1/2–1%

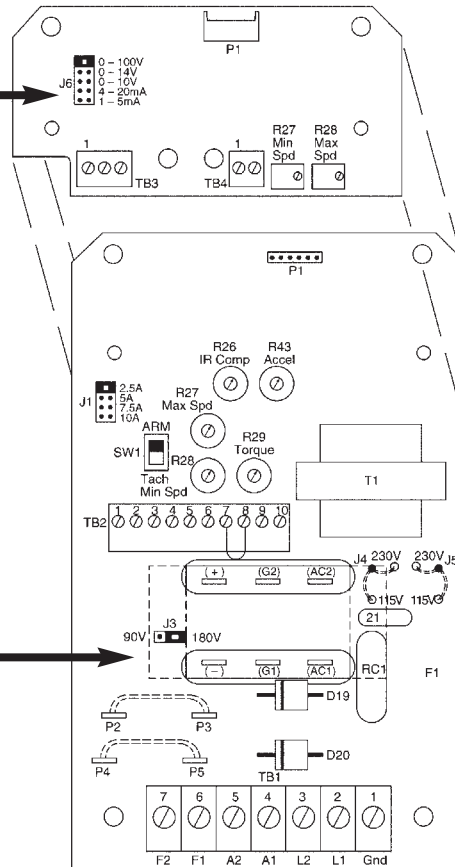
Adjustments

Current Range	2.5, 5, 7.5, 10 Amps DC
Nominal	(Adjustable to 150% of each range)
Maximum Speed	75–110% of motor base speed
Minimum Speed	0–30% of motor base speed
IR Compensation	Adjustable
Acceleration	1–5 seconds (Linear, 0 to top speed)

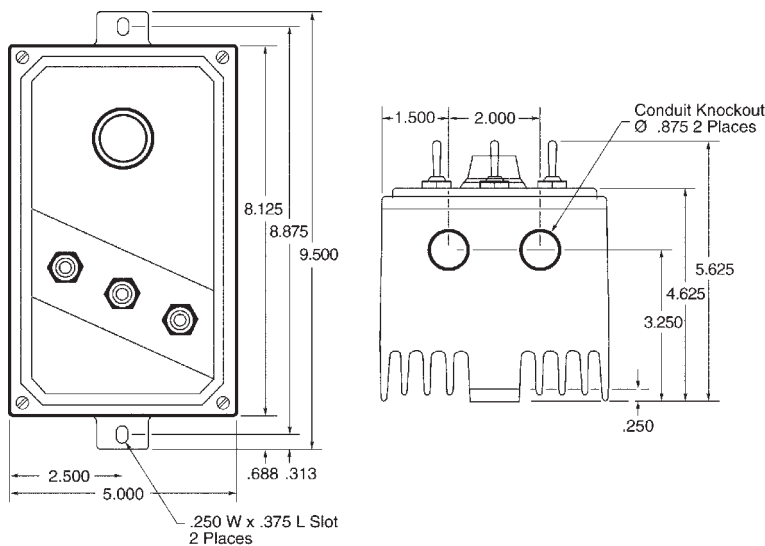
External Signal Isolation Follower Kit (Model BWC 36015) is standard on Models B168 and B169. It can be used for installation on chassis or remote enclosed units. It allows motor speed to be controlled from a grounded or ungrounded external signal: 4-20mA, 1-5mA, 0-10 VDC, 0-14 VDC, or 0-1000 VDC. There is a provision for auto/manual operation if required.

**Model BWC 36015
Process Follower Board**
Standard on Models B168 and B169. Optional for customer installation on models B161S or B162.

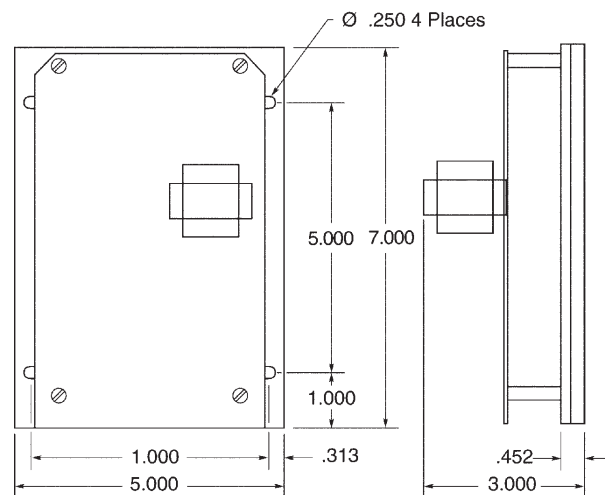
PC Board Assembly
Standard on all Bronco II models



**Enclosed Models B160, B162, B163, B165, B168 & B169
and "WD" versions**



Chassis Model B161S



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