

GSD6 Series DC Drives

GSD6 Introduction



GSD6-240-15C

GSD6 Series DC Drives

Motor Rating Range @ 115/230 VAC_{IN}	1/8 – 3 hp
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Overview

The reliable, versatile, and economical GSD6 DC drive is the most fully-featured IronHorse analog DC drive.

It provides many standard features typically offered as options by other DC drives.

By combining advanced engineering design, quality component selection, and rigorous quality control, the GSD6 DC drive offers an excellent off-the-shelf SCR control device. Its dependable, time-proven circuitry offers performance characteristics previously available only in more costly drives.

Features

- Dual input voltage 115/230 VAC, 50/60 Hz via slide selector switch
- Adjustable horsepower settings
- Barrier terminal strip
- Packaged bridge supply (full wave)
- 1% speed regulation with armature voltage feedback ($\pm 1/2\%$ with tach feedback)
- Adjustable minimum speed
- Adjustable maximum speed
- Adjustable IR compensation
- Adjustable linear acceleration
- Adjustable linear deceleration
- Adjustable current limit
- Line voltage compensation
- 5k Ω speed potentiometer with leads, dial, and knob included
- 50:1 speed range
- Overload capacity: 200% for one minute
- Transient voltage protection
- Voltage following mode or DC tachometer follower by supplying ungrounded analog input signal
- DC tachometer feedback (jumper selectable)
- Inhibit circuit – permits start and stop without breaking AC lines
- Shunt field supply provided
- AC line fuses
- +12 VDC, 12mA power supply, user accessible

Accessories

- Replacement speed potentiometer kit
- Digital potentiometer
- Analog current input card

Detailed descriptions and specifications for GSD accessories are available in the "GSD Series DC Drives Accessories" section.

Typical Applications

- Auger feeders
- Automated door actuators
- Commercial cooking equipment
- Commercial lift
- Food production
- Industrial pumping systems
- Measurement instruments
- Miniature lathes and mills
- Packaging / material-handling equipment
- Printing and labeling machines
- Small shop machine tools
- Spray / print reciprocating head

GSD6 Series DC Drives

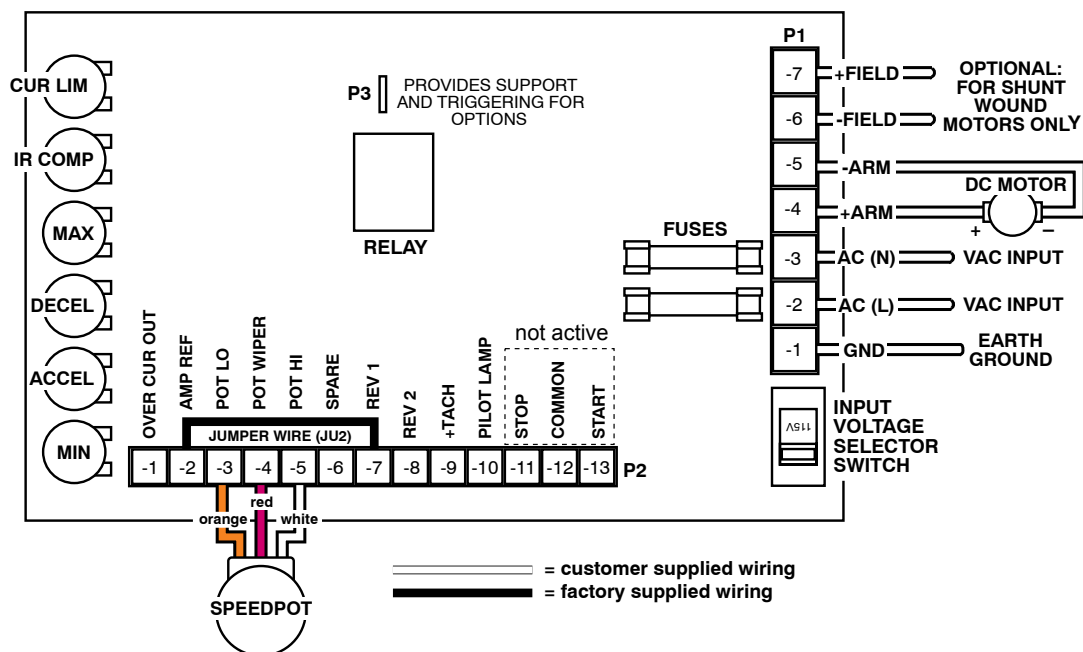
GSD6 Selection and Specifications

GSD6 Series DC Drives – Selection & Specifications		
Model		GSD6-240-15C
Price		\$424.00
Package Configuration		Open frame
Power Quality Form Factor		1.4
Input Voltage (@50/60Hz)		115/230 VAC ±10%
Output Voltage		0–90 @ 115 VAC INPUT / 0 -180 VDC @ 230 VAC input
Shunt Field Voltage		100VDC @ 115VAC input ; 200VDC @ 230VAC input ; (1.5A max)
Motor Rating (hp)		1/8 – 1.5 hp @ 90VDC ; 1/4 – 3 hp @ 180VDC
Output Current (continuous)		15A (DC)
Current Overload Capacity		200% for 60s
Current Limit (adjustable)		2–30A (DC)
Transient Protection		Metal Oxide Varistor (MOV)
I.R. Compensation		Adjustable
Speed Adjustment	Potentiometer	5kΩ 2W potentiometer
	Current	4–20mA with option GSDA-AI-A
	Voltage	n/a
Speed Range		50:1
Speed Regulation		±1% of base speed
Maximum Speed		Adjustable from 60% to 120% of base speed
Minimum Speed		Linear ramp 0–30% of adjustable maximum speed
Acceleration		Linear ramp adjustable 0.3–12s
Deceleration		Adjustable 0.6–12s
Dynamic Braking		No
Plugging Capability **		No
Electrical Connections		Barrier-type terminal strip; 26–12 AWG
Fusing		(2) 20A fuses included (Bussman ABC-20 or Littlefuse 314020 ceramic fuses or equivalent)
Operating Temperature		-10 to 45 °C [14 to 113 °F]
Thermal Protection		Not available
Mounting Orientation		Can be mounted in any orientation
Corrosive Gases		NOT compatible with any corrosive gases
Weight		40 oz [1134g]
Agency Approvals		RoHS
Optional Accessories*		
Replacement Potentiometer		GSDA-5K
Digital Potentiometer		GSDA-DP
Analog Current Input Card		GSDA-AI-A
* For accessories details, refer to the "GSD Series DC Drives Accessories" section.		
** Plugging is a method of rapidly changing motor direction by reversing motor armature polarity, while the motor is still running.		

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GSD6 Wiring Diagrams

GSD6-240-15C Basic Wiring Diagram – (refer to User Manual for more detailed wiring information)



GSD6 Dimensions — dimensions = in [mm]

GSD6-240-15C Dimensions

