

GSD8 Series DC Drives

GSD8 Introduction



GSD8-240-5C



GSD8-240-5C-D



GSD8-240-10N4X-xx



GSD8-240-10C-D

GSD8 Series DC Drives

Motor Rating Range @ 120 VAC _{IN}	1/2 – 1 hp
Motor Rating Range @ 240 VAC _{IN}	1 – 2 hp

Overview

The GSD8 series DC drives are compact, microprocessor-based motor controllers capable of factory or field configurations for a variety of industrial applications. GSD8 DC drives make use of either a pulse accumulation algorithm (GSD8-240-5C) or a velocity PID algorithm (all other GSD8 drives) that can be easily configured for operation as a speed controller, time-based process controller, or follower drive in a master-slave application. Using modular design techniques, the GSD8 drives are perfect for applications that require specialized I/O.

Features

- Microprocessor-based design
- Digital closed-loop algorithm
- Non-volatile memory storage
- Factory or field programmable
- Adjustable parameters
- Programmable alarm output
- Universal power supply accepts 85-265 VAC at 50-60 Hz without switches or jumpers
- Self-contained 5V power supply for external sensor
- Large 4-digit 1/2 inch LED display
- European terminal block
- Standard 1/8 or 1/4 DIN panel mounting
- Meets NEMA 4X standards when used with NEMA 4X enclosures

Accessories

- Hall-effect pickup, single-channel
- Input/Output option card
- Serial communications option card

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

Typical Applications

- Water and wastewater treatment systems
- Conveyor oven controllers
- Synchronized conveyer lines

GSD8 Series DC Drives

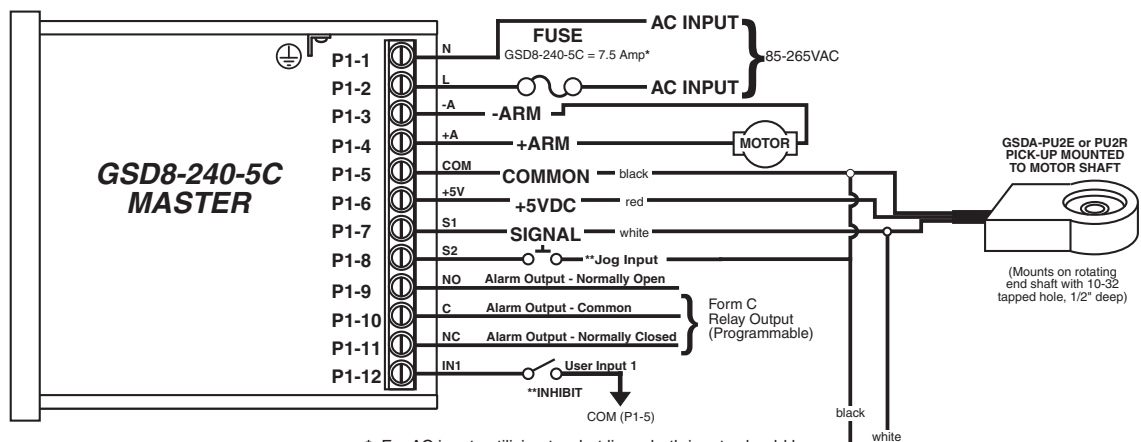
GSD8 Selection and Specifications

GSD8 Series DC Drives – Selection & Specifications								
Model	GSD8-240-5C		GSD8-240-5C-D	GSD8-240-10C-D	GSD8-240-10N4X	GSD8-240-10N4X-A	GSD8-240-10N4X-U	
Price	\$457.00		\$470.00	\$562.00	\$651.00	\$973.00	\$835.00	
Package Configuration	NEMA 4X							
Power Quality Form Factor	1.36							
Input Voltage (@50/60Hz)	85–265 VAC							
Input Frequency	48–62 Hz							
Output Voltage @120VAC (@240VAC)	90VDC (180VDC)							
Max Output hp @120VAC (@240VAC)	½ (1)			1 (2)				
Max Continuous Output Current	5A			10A				
Transient Protection	Metal Oxide Varistor (MOV) and X2 Cap.							
Pickup or Encoder Required	Yes							
Speed Adjustment	Default Mode	Front panel display						
	Current	n/a	4–20 mA with optional accessory GSDA-AI-A8 or -CM8			4–20 mA		
	Voltage	n/a	0–5 VDC with optional accessory GSDA-CM-8				0–5 VDC	
	Potentiometer	n/a	500W to 5kW Pot type, with optional accessory GSDA-CM-8				500W to 5kW	
	Remote Comm	n/a	ASCII with optional accessory GSDA-CM-8				ASCII	
Signal Input Voltage Range	0–5 VDC to 0–24 VDC square wave							
Signal Input Frequency Range	0–50,000 pulses/minute***	0–600,000 pulses/minute @5V square wave						
Speed Regulation	0.1% (sensor PPR/application dependent)							
Maximum Speed	0–100% (max and min speeds are NOT individually adjustable)							
Minimum Speed								
Acceleration	1–9999 (change per second in engineering units, dependent on mode)							
Deceleration	1–9999 (change per second in engineering units, dependent on mode)							
Display Range	0.001–9,999							
Units of Operation	User programmable, any unit							
Sensor/Pickup Power Supply	5V @ 50mA							
Isolated Alarm Relay Output Ratings	250VAC @ 5A							
Average Armature Output Voltage	5A			10A				
Design Overload Capacity	200% for 1 minute							
Display Type	LED, red, 4 digit, 1/2" height							
Connector Style	12-position 5mm European style							
Terminal Block Torque Setting	4.4 in-lb maximum (0.5 N-m)							
Operating Temperature Range	-10°C to 45°C (15°F to 115°F)							
Operating Humidity Range	95%, non-condensing							
Faceplate Material	Polycarbonate with Lexan overlay							
Housing Material	Aluminum							
Weight	13.48 oz (382.14 g)	14.94 oz (423.43 g)	25.78 oz (730.85 g)	27.85 oz (789.53 g)				
Agency Approvals	UL Listed #E333109, RoHS							
Recommended Accessories								
Incremental Encoder***	GSDA-PU2E or GSDA-PU2R							
Analog Module	n/a	GSDA-AI-A8			Included	GSDA-AI-A8		
ASCII Communications Module	n/a	GSDA-CM-8				Included		
Manual Reverse Switch	GSDA-MREV****							
* 500 pulses/minute minimum required for proper operation. Higher frequency possible with internal frequency divisor/prescaler.								
**250 pulses/minute minimum required for proper operation.								
***Hall-Effect pickup, single channel encoder. 1/10/20 PPR								
****To meet NEMA4 requirements, GSDA-MREV requires a user provided external enclosure.								

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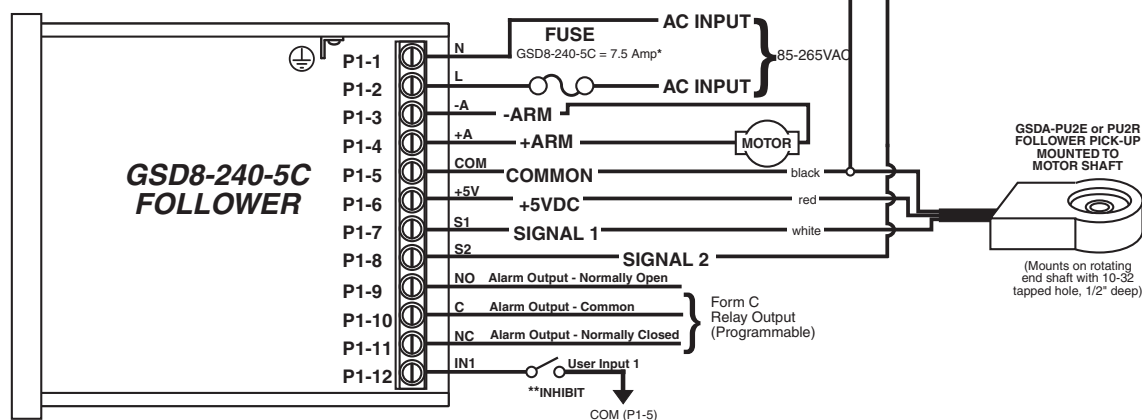
GSD8 Wiring Diagrams

GSD8-240-5C Wiring Diagram



* For AC inputs utilizing two hot lines, both inputs should be protected with appropriately sized fuses or circuit breakers.

** P1-8 & P1-12 user input may be programmed for a number of functions, including jog, inhibit, etc.



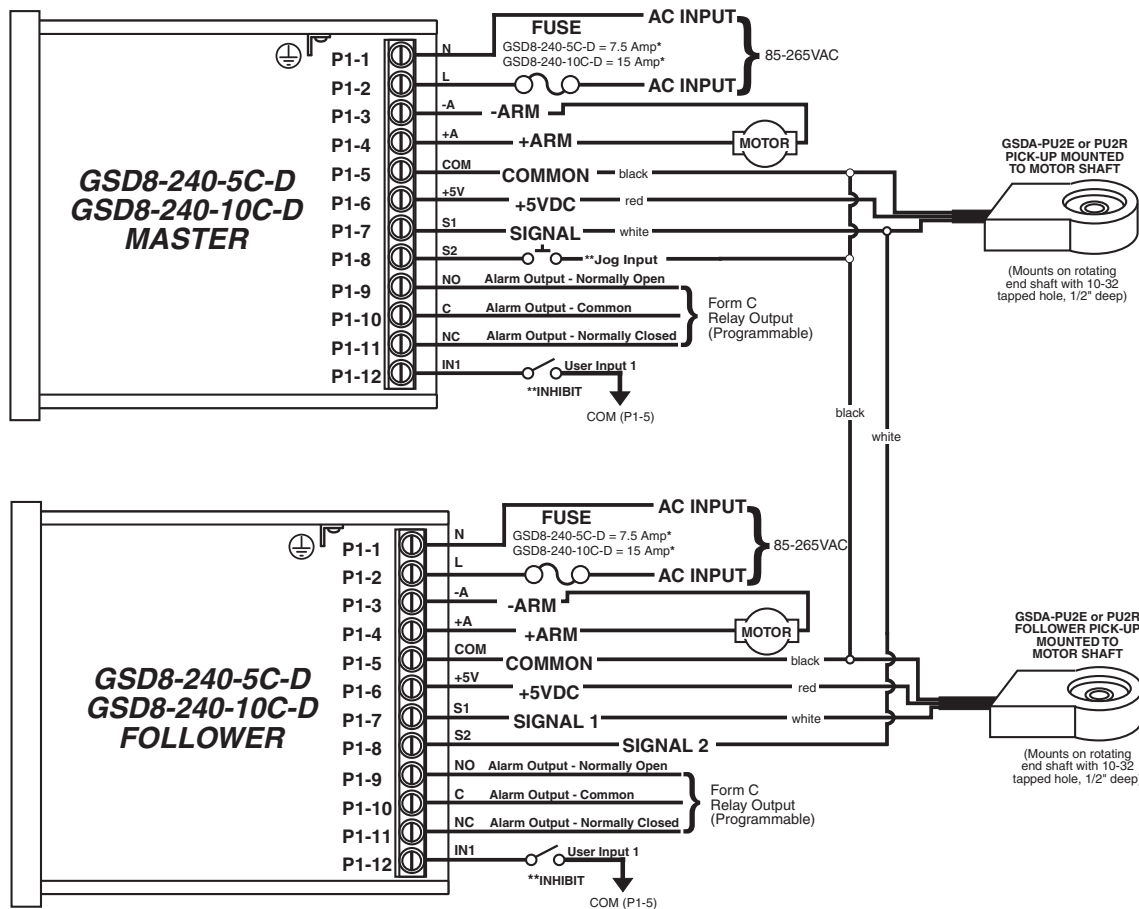
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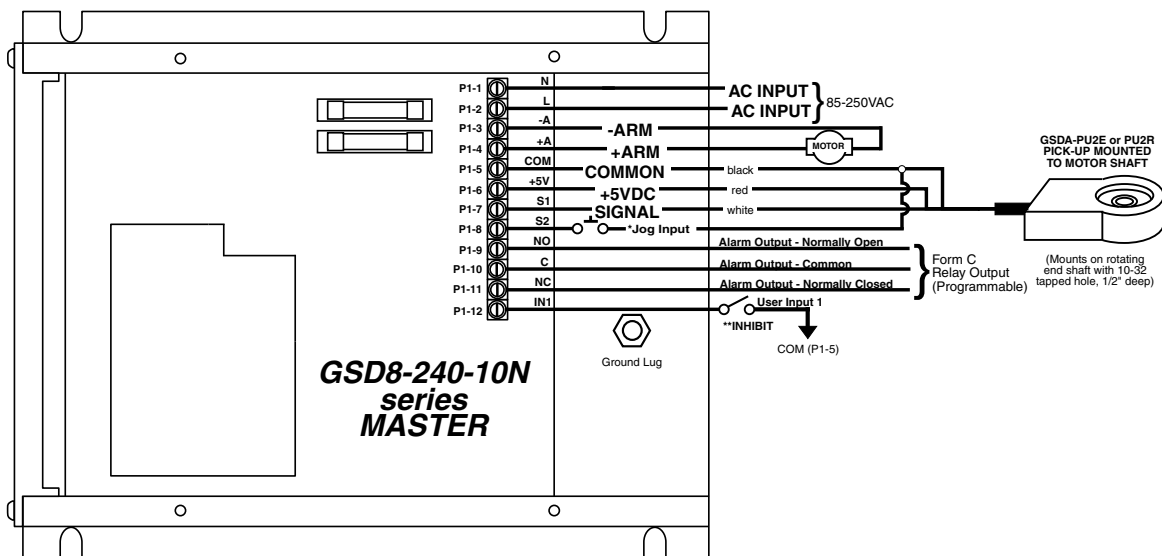
GSD8 Series DC Drives

GSD8 Wiring Diagrams

GSD8-240-5C-D, GSD8-240-10C-D Wiring Diagram



GSD8-240-10N4X, 10N4X-A, 10N4X-U Wiring Diagram



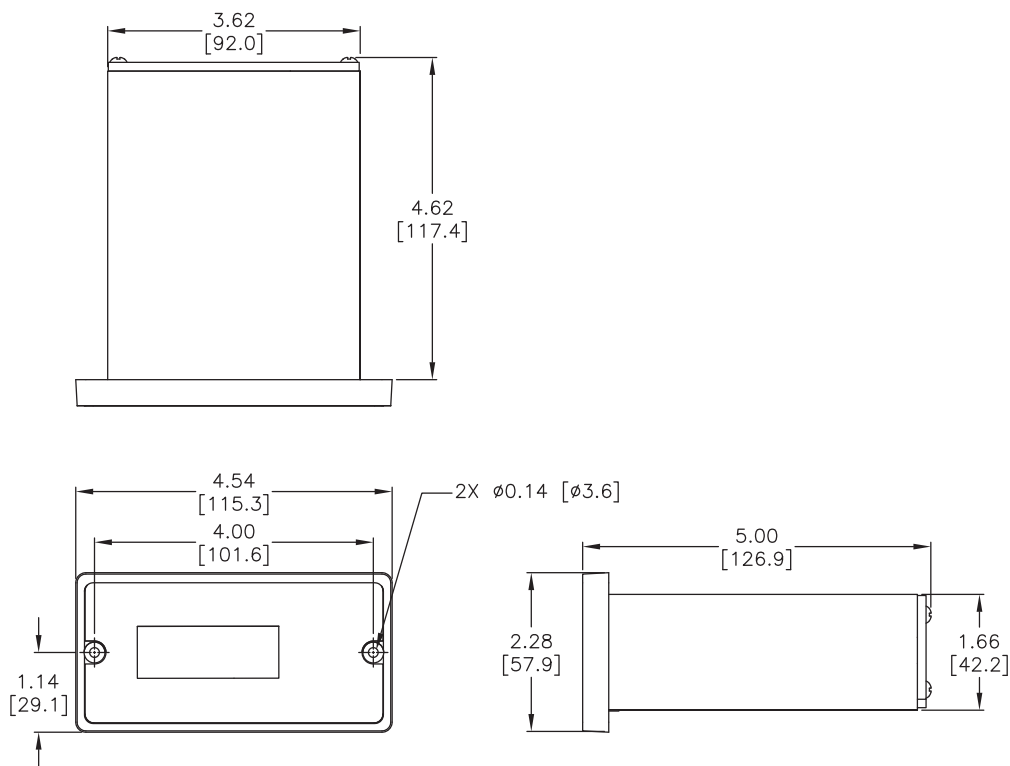
* For AC inputs utilizing two hot lines, both inputs should be protected with appropriately sized fuses or circuit breakers.

** P1-8(Master) & P1-12 user input may be programmed for a number of functions, including jog, inhibit, etc.

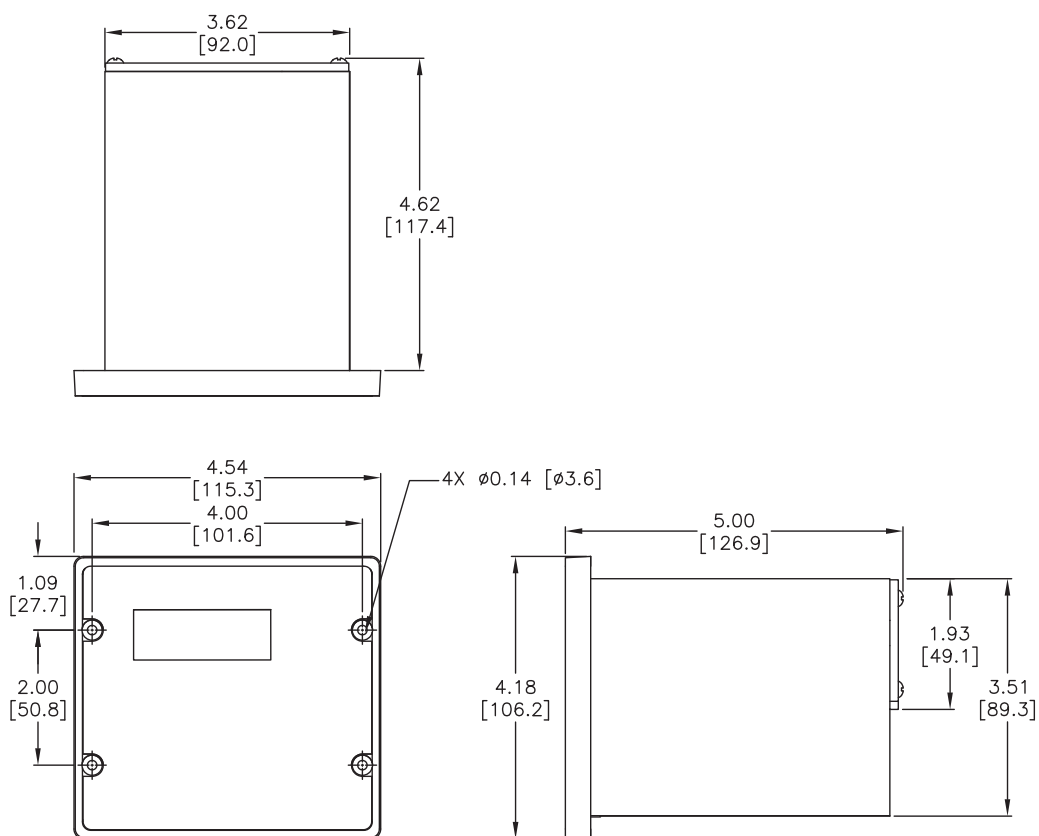
GSD8 Series DC Drives

GSD8 Dimensions — dimensions = in [mm]

GSD8-240-5C(-D) Dimensions



GSD8-240-10C-D Dimensions



GSD8 Series DC Drives

GSD8 Dimensions — dimensions = in [mm]

GSD8-240-10N4X-x Dimensions

