



**SD** SERIES

**VARIABLE FREQUENCY DRIVE**  
Phase Converting



**SD**  
SERIES

**Phase Converting**

- Quick & easy installation and setup

**PERFECT PRESSURE™**

- Setup constant pressure in minutes
- Large backlit graphic display with intuitive menus
- Includes a 0 - 150 psi, 4 - 20 mA transducer

**Made in the USA**

- Industry best lead times
- All steel construction
- Field Serviceable
- Messages in clear English

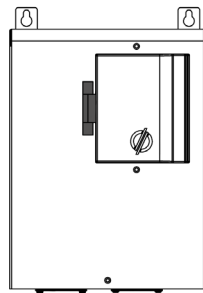
**Superior Heat Rejection**

- Maximizing component life and uptime

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Contents



- 2 HP to 5 HP
- 230 V
- Phase Converting
- NEMA 3R Rated Outdoor Enclosures

Nomenclature

**SD** SERIES Example Part Number SD002R

Model Series	Input / Output Voltage	Rated HP	Enclosure Rating
<b>SD</b> SERIES	<b>0</b> 240V   240V Phase Converting	<b>02</b> - 2 HP <b>03</b> - 3 HP <b>05</b> - 5 HP	<b>R</b> 3R Rated Outdoor Type Rain / Bug Proof

0 - 150 psi transducer included with all models

Technical Specifications

Physical / Environmental	
Operating Temperature Range	-40 °C – 50 °C (-40 °F – 122 °F)
Storage Temperature Range	-40 °C – 57 °C (-40 °F – 135 °F)
Enclosure	NEMA Type 3R: Outdoor   Rainproof
Altitude	Derate by 5 °C every 2000 ft over 5500 ft of elevation
Input Power	
Input Phase	1 phase
Input Voltage	230 V
Input Voltage Range	190 V – 275 V
Input Frequency	60 Hz
Output Power	
Output Phase	3 phase
Nominal Output Voltage	230 V
Output Voltage Range	190 V - 275 V
Output Frequency	5 Hz – 300 Hz
Horsepower	2 HP – 5 HP
Output Power	2.5 – 6 kW
Switching Frequency	2 kHz – 8 kHz
Output	V/f control
Integrated Output Filter	n/a
Electrical	
Short Circuit Withstand Rating	5 kA RMS symmetrical amps
Efficiency	95%
Startup Ramp Time	1 – 120 s
Shutdown Ramp Time	1 – 120 s or Coast to Stop
Overload Capacity	120% for 60 s
Analog Inputs	
Quantity	(2) Programmable
Current Reference	4 – 20 mA, (2) Inputs
Voltage Reference	0 – 5 VDC, (1) Input
Terminal Block Size	26 - 12 AWG
Digital Inputs	
Quantity	(2) Programmable
Ratings	< 5 V, galvanically isolated
Terminal Block Size	26 - 12 AWG
Relay Outputs	
Quantity	(2) Programmable
Rating	Relay 1: 5 VDC, 7 A at 250 VAC Relay 2 : 5 VDC, 7 A at 250 VAC
Terminal Block Size	26 - 12 AWG
Features	
Certification	ETL listed to UL 61800-5-1 and CSA C22.2 No. 274-17
User Interface	Push button membrane keypad with backlit graphic display
Available Feature Sets	AquaPhase™ (pump control)

**Models**

Part Number	HP	Rated Input Current	Rated Output Current Rated   Max	Dimensions (H x W x D)	Weight
<b>SD - 230 V Input Single-Phase   230 V Output Three-Phase</b>					
SD002R	2 HP	20 A	7 A   8 A	13 x 9 x 6 in.	8.7 lbs
SD003R	3 HP	30 A	8 A   10 A	13 x 9 x 6 in.	8.7 lbs
SD005R	5 HP	42 A	15 A   18 A	13 x 9 x 6 in.	8.7 lbs

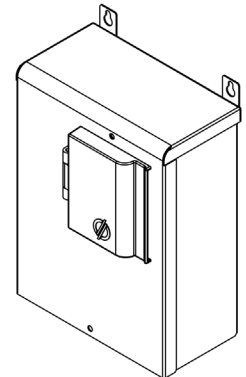
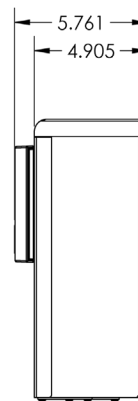
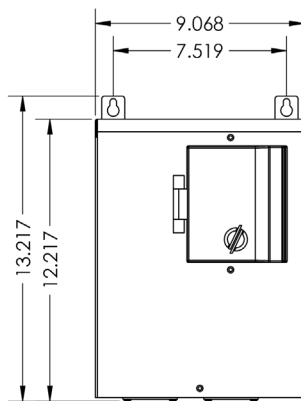
**Recommended Fuse & Breaker Ratings**

Model Number	Horsepower	VFD	
		Recommended Fuse Rating Class J	Recommended Circuit Breaker Rating
<b>SD - 230 V Single-Phase   230 V Output Three-Phase</b>			
SD002R	2 HP	25 A, 600 V	25 A
SD003R	3 HP	40 A, 600 V	40 A
SD005R	5 HP	55 A, 600 V	55 A

**Line Drawings**

**SD**  
SERIES

Model Number
SD002R
SD003R
SD005R



Wiring Diagram

**SD** SERIES *Wiring Diagram*

