

SD 2XD Specifications

SERIES SERIES SD | 2XD Models

Phase Converting VFDs

Designed specifically for pumping

Phase Technologies has designed a simple, phase converting solution for residential and light commercial constant pressure installations (2-10hp). The SD product line offers simple setup, rugged hardware, 3R cabinets, and a top of the line oil filled pressure transducer standard with every package.

Description

Return trips are expensive and can many times lead to a poor customer image of the installation. Phase Technologies has produced a product line specifically to solve this problem, the SD series. With pricing that even the most budget minded customer will appreciate and 3 year warranty the SD series is the best choice for small constant pressure applications.

Demand-driven constant pressure for home wells is now inexpensive, reliable, and a luxury available to all homeowners thanks to Perfect Pressure, standard with all SD and 2XD systems. Perfect Pressure only requires a few minutes of setup time and is capable of controlling the most complicated plumbing systems with ease. With constant pressure, plumbing systems run smoothly with fewer instances of short cycling.



SD-2XD Series Variable Frequency Drives

Features		
<p>NEMA Type 3R Outdoor Enclosure</p> <p>Optional Integrated Output Filters</p> <p>Motor Protection</p> <ul style="list-style-type: none"> • Broken Pipe Detection • Short Cycle Protection • Overcurrent Protection • Dry Well Protection 	<p>Constant Pressure</p> <ul style="list-style-type: none"> • PSI Boost • Pipe Pre-Charge • Duplex Control • Triplex Control Lead Lag/Pump Staging • Multiple Pressure Setpoints 	<p>Automatic Restarts</p> <p>Restart Delay</p> <p>Run/Stop Control</p> <p>Password Protection</p> <p>Programmable Relays</p> <p>Real Time Clock</p> <p>Fault log</p>

Keypad

Our setup is simple for constant pressure with the Perfect Pressure[®] wizard. Our systems have a clear and easy-to-read screen with clear language for alert messages.



SD-2XD Series Variable Frequency Drives Nomenclature

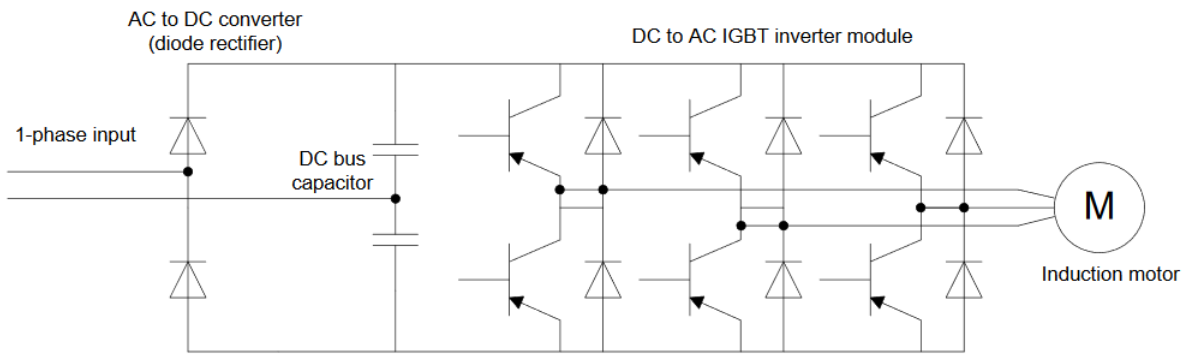
SD Series Part Number Examples: SD002R-S
SD405R-O UL508A Panel Shop
Integrated Options

Series	Input Voltage	Rated HP	Enclosure Rating	Output Filter	Surge Arrestor
SD	0	--	R	--	S
Phase Converting 240V	0 240V	02 - 2 HP 03 - 3 HP 05 - 5 HP 07 - 7.5 HP 10 - 10 HP	3R Rated Outdoor Type Rain / Bug Proof	Not Available	Strikesorb Surge Arrestor *Available Only: SD007 SD010
SD	4	--	R	O	--
Phase Converting 480V	4 480V	05 - 5 HP 07 - 7.5 HP 10 - 10 HP	3R Rated Outdoor Type Rain / Bug Proof	Sine Wave Output Filter	Not Available

2XD SERIES Part Number Example: 2XD205R-OS UL508A Panel Shop
Integrated Options

Series	Input Voltage	Rated HP	Enclosure Rating	Output Filter	Surge Arrestor
2XD	2	05	R	O	S
Phase Converting & Voltage Doubling	2 240V (Voltage Doubling)	05 - 5 HP 07 - 7.5 HP 10 - 10 HP	3R Rated Outdoor Type Rain / Bug Proof	Sine Wave Filter	Strikesorb Surge Arrestor
		15	R	OF	S
		15 - 15 HP	3R Rated Outdoor Type Rain / Bug Proof	dV/dt Filter	Strikesorb Surge Arrestor

Block Diagram



SD-2XD Series Variable Frequency Drives

Current Ratings | Weight | Dimensions

SD Series

Model / Part Number	HP	Input Rated Amps	Output Rated Amps	Weight	Max Dimensions (W x H x D) Inches
240V Input Single-Phase 240V Output Three-Phase					
SD002	2HP	19A	9A	15 lbs	14 x 20 x 7 in.
SD003	3HP	29A	11A	16 lbs	14 x 20 x 7 in.
SD005	5HP	42A	20A	17 lbs	14 x 20 x 7 in.
SD007	7.5HP	58A	27A	17 lbs	19 x 28 x 13 in.
SD010	10HP	69A	33A	19 lbs	19 x 28 x 13 in.
480V Input Single-Phase 480V Output Three-Phase					
SD405	5HP	29A	10A	16 lbs	21 x 33 x 10 in.
SD407	7.5HP	32A	13A	17 lbs	21 x 33 x 10 in.
SD410	10HP	42A	18A	19 lbs	21 x 33 x 10 in.

2XD Series

Model / Part Number	HP	Input Rated Amps	Output Rated Amps	Weight	Max Dimensions (W x H x D) Inches
240V Input Single-Phase 480V Output Three-Phase					
2XD205	5HP	31A	10A	15 lbs	22 x 33 x 13 in.
2XD207	7.5HP	52A	13A	17 lbs	22 x 33 x 13 in.
2XD210	10HP	64A	18A	18 lbs	22 x 33 x 13 in.
2XD215	15HP	87A	24A	25 lbs	22 x 33 x 13 in.

508A Panel Shop Options

Sinewave Filter

dV/dT Filter

SD Series Variable Frequency Drives Line Drawings

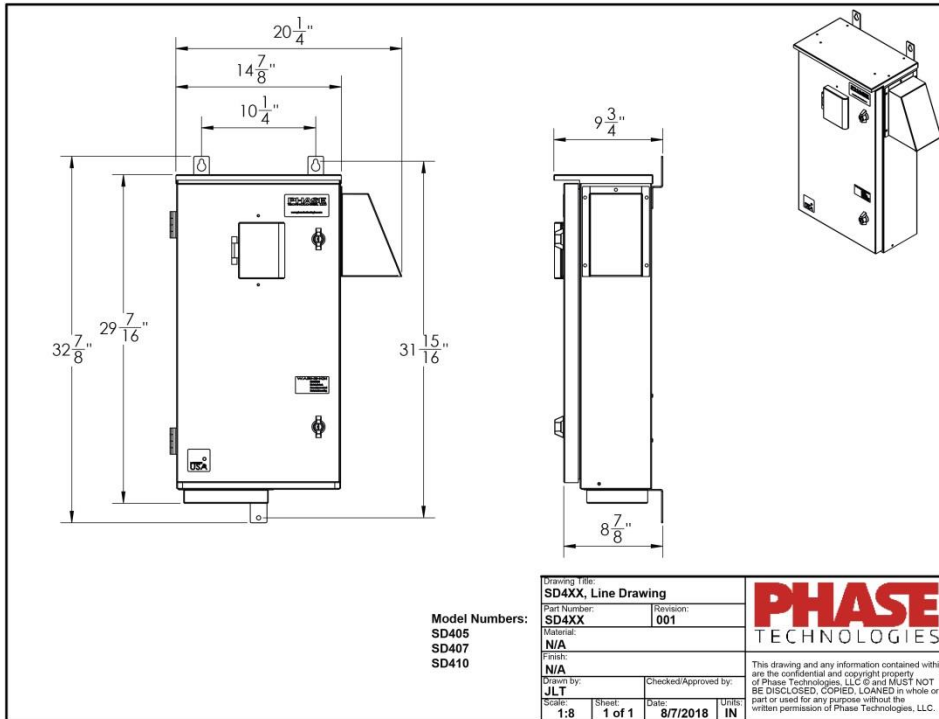
SD Models

Model Numbers: SD002 SD003 SD005	Drawing Title: Line Drawings SD00x			
	Part Number:	Revision:		
	SD00x			004
	Material:			
	Finish:			
Drawn by: AHK		Checked/Approved by:	This drawing and any information contained within are the confidential and copyright property of Phase Technologies, LLC and MUST NOT BE DISCLOSED, COPIED, LOANED in whole or part or used for any purpose without the written permission of Phase Technologies, LLC.	
Scale:	Sheet:	Date:		Units:
1:6	1 of 1	5/2/2017		IN

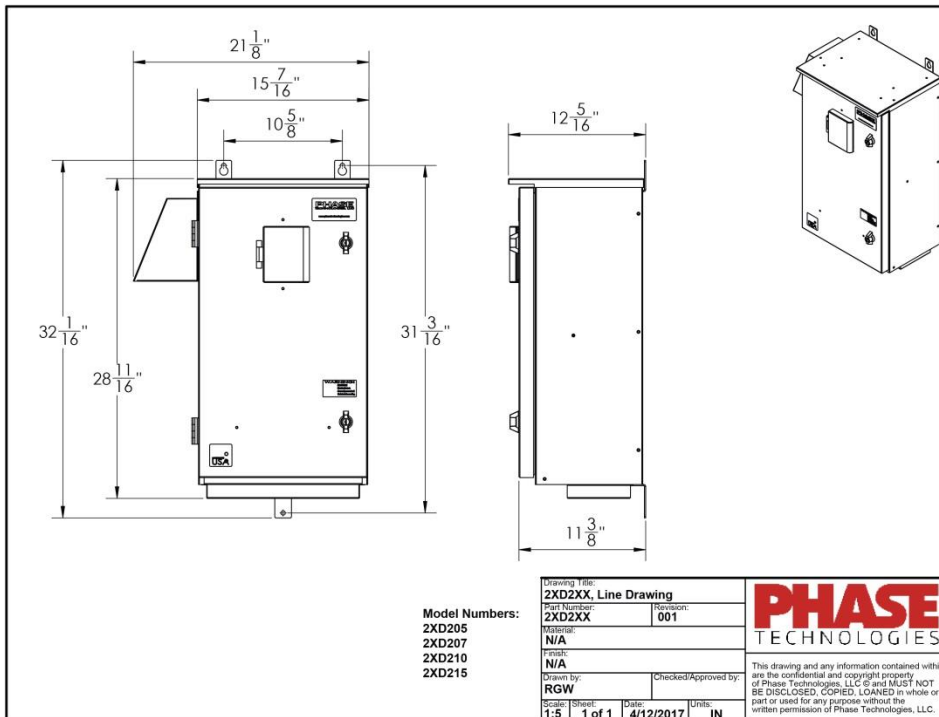
Model Numbers: SD007 SD010	Drawing Title: Line Drawing SD00x			
	Part Number:	Revision:		
	SD00x			001
	Material:			
	Finish:			
Drawn by: JLT		Checked/Approved by:	This drawing and any information contained within are the confidential and copyright property of Phase Technologies, LLC and MUST NOT BE DISCLOSED, COPIED, LOANED in whole or part or used for any purpose without the written permission of Phase Technologies, LLC.	
Scale:	Sheet:	Date:		Units:
1:7	1 of 1	8/7/2018		IN

SD-2XD Series Variable Frequency Drives

SD Models



2XD Models



SD Series Variable Frequency Drives

Specifications

Physical/Environmental	
Operating Temperature Range	-10C to 50C
*Heater in enclosure may be required below -40C, de-rating required above 50 C.	
Ambient Temperature Range	-40C to +50C
Enclosure	NEMA 3R
Altitude	Derate by 5°C every 2000ft over 5500ft of elevation
Input Power	
Input Phase	1 phase
Input voltage range	180-260V or 430-520V
Input frequency	60 Hz
Output Power	
Output Phase	3 phase
Output Frequency	5-300Hz
Output Voltage	240V or 480V
Output	V/F control
Horse Power	2,3,5, 7.5, 10
Switching frequency	2kHz-8kHz
Integrated Output Filter	Optional Sinewave 5-10HP in 480V models
Electrical	
Short Circuit Withstand Rating	5kA RMS symmetrical amperes
Efficiency	95%
Startup Ramp Time	0-120s
Shutdown Ramp Time	0-120s or Coast to Stop
Overload Capacity	150% for 2s
Rated output current for 5-15HP models based on typical full load current for submersible motors.	
Analog Inputs	
Quantity	Three Programmable
Current Reference	4-20mA, Two Inputs
Voltage Reference	0-5VDC, One Input
Terminal Block Size	30-16AWG
Relay Outputs	
Quantity	Two Programmable
Capacity	0-30VDC or 120VAC, <250mA
Terminal Block Size	30-16AWG
Digital Inputs	
Quantity	Two Programmable
Capacity	<5 volts, Galvanically Isolated

SD-2XD Series Variable Frequency Drives

Wiring

SD Wiring Diagram

