

# SD

## GENERAL PURPOSE

VARIABLE FREQUENCY DRIVES



# SD

## VARIABLE FREQUENCY DRIVE

The SD Series VFD is our simple, single-phase to three-phase converting solution for residential and light commercial constant pressure installations requiring 2-5 HP. The SD offers simple setup, rugged hardware, NEMA Type 3R enclosure, and a low noise oil-filled 0 - 150 psi pressure transducer. Enjoy commercial VFD quality in a drive that is easy to configure for home wells, irrigation systems, motor control, and soft start applications.

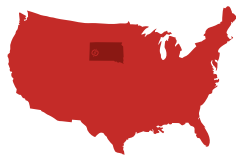
If you're looking for an affordable residential or light commercial, high quality product with three-phase capabilities and constant pressure, regardless of the demand, this is your product.



## GENERAL PURPOSE VARIABLE FREQUENCY DRIVES



**10-DAY**  
AVG. LEAD TIMES



**MADE IN THE  
USA**



## PERFECT FOR ALL APPLICATIONS

- ▶ Constant pressure from source to liquid distribution point
- ▶ Phase Converting capabilities for easy three-phase power
- ▶ Easy Set Up Wizards preprogrammed in your system for quick and simple startup
- ▶ Great for residential and light commercial pumping applications

### Common Applications

|                    |                             |
|--------------------|-----------------------------|
| <b>AGRICULTURE</b> | ▶ Irrigation<br>▶ Livestock |
| <b>RESIDENTIAL</b> | ▶ Pumping                   |

### Nomenclature

**SD005R**

**VFD Series** ——— **HP** ——— **Enclosure Type**

**DXLL, SDX, DXL, DX** = General Purpose      **Blank** = NEMA Type 1  
**LHX, 1LH, 3LH** = Low Harmonic                  **R** = NEMA Type 3R  
**ES, SD, 2XD** = Aqua Phase

**Voltage**

**0** = 208V - 230V  
**2** = Voltage Doubling  
**4** = 460V



## Physical / Environmental

|                             |   |
|-----------------------------|---|
| Operating Temperature Range | -40 °C – 50 °C (-40 °F – 104 °F)<br>*Heater in enclosure may be required below –40 °C, de-rating required above 40 °C |
| Storage Temperature Range   | -40 °C – 57 °C (-40 °F – 135 °F)  |
| Enclosure                   | Nema type 3R : Outdoor  |
| Altitude                    | Altitude Derate by 1% every 400 ft above 3300 ft elevation  |

## Input Power

|                     |               |
|---------------------|---------------|
| Input Phase         | Single-Phase  |
| Input Voltage       | 230 V         |
| Input Voltage Range | 190 V – 275 V |
| Input Frequency     | 60 Hz         |

## Output Power

|                        |               |
|------------------------|---------------|
| Output Phase           | Three-Phase   |
| Nominal Output Voltage | 230 V         |
| Output Voltage Range   | 190 V - 275 V |
| Output Frequency       | 5 Hz – 15 Hz  |
| Horsepower             | 2 HP - 5 HP   |
| Output Power           | 2 – 11 kW     |
| Switching Frequency    | 2 kHz – 8 kHz |
| Output                 | V/f Control   |

## Electrical

|                                |                            |
|--------------------------------|----------------------------|
| Short Circuit Withstand Rating | 25 kA RMS Symmetrical Amps |
| Efficiency                     | > 98%                      |
| Startup Ramp Time              | 1 – 120 s                  |
| Shutdown Ramp Time             | 1 – 120 s or Coast to Stop |
| Overload Capacity              | 110% 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, Expandable |
| 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<br>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)                                |





**DIGITAL PHASE  
CONVERTERS**

**VARIABLE  
FREQUENCY  
DRIVES**

**MOTOR  
PROTECTION**

**STARTER  
PANELS**

## **OUR MISSION**

*Relentlessly seek to provide Uncommon Value, solutions, innovation, and support for the industries that we serve.*

