

Standard Features:

- On/Off AC Line Switch
- Start/Stop Run Switch
- Auto/Manual Selector Switch
- Manual Speed Potentiometer
- Electronic Overload Protection
- Built-in Armature Fusing
- LED Indicator Panel
- Signal Isolation



Specifications	
Voltage Regulation (% Base Speed)	±0.5%
Current Range (ADC)	2.5, 5, 7.5, 10
ACCEL/DECEL Range (seconds)	0.1-15
MIN Speed ranges (% Base Speed)	0-30
MAX Speed ranges (% Base Speed)	60-140
IR COMP Range at 115 VAC (VDC)	0-15
IR COMP Range at 230 VAC (VDC)	0-30
CL Range (% Range Setting)	0-200
TIMED CL Range (seconds)	0.5-15
Following Linearity (% Base Speed)	±0.5%
AC Line Voltage (±10%, 50/60 Hz)	115/230
Horsepower at 155 VAC Line (HP)	¼ to 1
Horsepower at 230 VAC Line (HP)	¼ to 2
Armature Voltage from 115 VAC (VDC) ¹	0-130
Armature Voltage from 230 VAC (VDC) ¹	0-220
Field Voltage from 155 VAC (VDC) ²	50/110
Field Voltage from 230 VAC (VDC) ²	100/200
Ambient Temperature Range (°C)	0-50
Speed Range (ratio)	50:1
Load Regulation ³	±1%
Line Voltage Regulation ⁴	±½%
Notes:	
1. Maximum recommended output is 90 VDC for 115 VAC and 180 VDC for 230 VAC. Exceeding these output voltages may cause a reduction in load regulation performance.	
2. For shunt wound motor with lower voltage field, use L1 and F1 connection.	
3. For Armature Feedback, regulation is % base speed. For Tachometer Feedback, regulation is % set speed.	
4. Regulation is % base speed at full load, 100-130 VAC.	

Specifically designed for use with metering pumps, the NIKKISO HydroDrive™ DC SCR Variable Speed Drive is a NEMA 4X (IP-65) variable speed motor control for shunt wound or permanent magnet motors. Its rugged, die cast aluminum housing is protected with an acrylic coating for the ultimate in corrosion resistance, making it suitable for applications requiring washdown, watertight integrity. All switches are sealed with rubber boots, and the manual speed adjustment potentiometer incorporates a shaft seal.

The HydroDrive electronics are state-of-the-art, and include short circuit and transient protection to provide the ultimate in reliability. Electronic overload protection is also provided, thereby preventing motor burnout and demagnetization of permanent magnet motors. The current range is jumper selectable, eliminating the need for calibration of IR compensation and current limit in most applications. The HydroDrive Variable Speed Drive also contains jumper selections for AC line voltage (115/230 VAC), DC armature voltage (90/180 VDC) and feedback type (armature/tachometer).

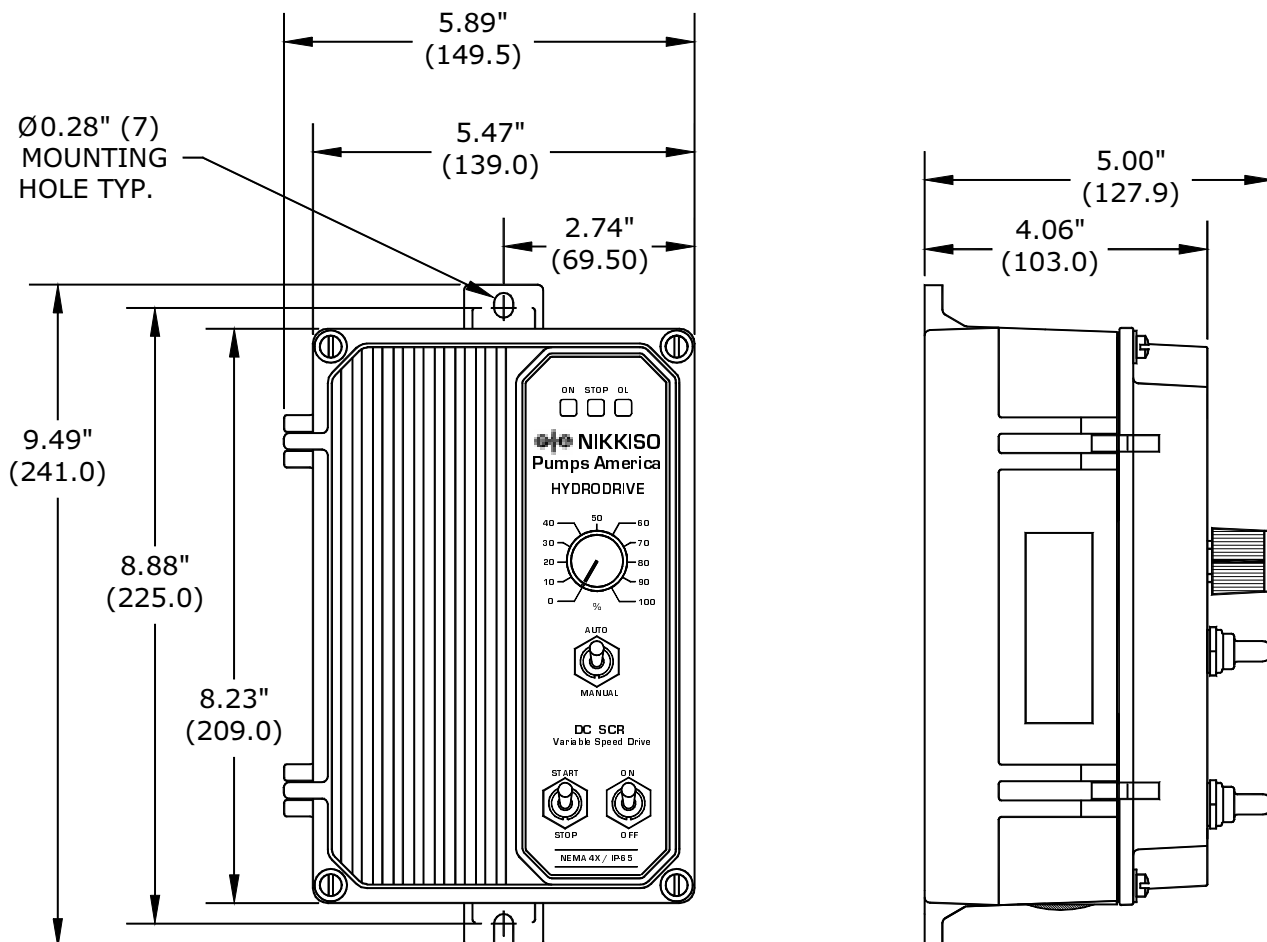
Standard features include electronic start/stop, on/off AC line switch, auto/manual selector switch, manual speed potentiometer, armature fusing, signal isolation, and LED indicator array for power on, stop and overload. Although HydroDrive controls are typically factory preset to a specific metering pump, a variety of trimpots allow easy field adjustment of the following parameters: minimum and maximum speed, acceleration, deceleration, current limit, IR compensation and timed current limit.

NIKKISO HYDRODRIVE™

DC SCR Variable Speed Drive

Jumper Selectable Features	
Control Mode	Speed, Torque
DC Current Output	2.5, 5.0, 7.5, 10 amps
AC Line Voltage	120, 240 VAC
DC Armature Voltage	90, 180 VDC
Feedback Type	Armature , Tachometer
Tachometer Voltage (per 1000 rpm)	7, 20/30, 50 VDC
Timed Current Limit	TCL , NTCL
Bold figures denote standard factory settings	

Dimensions: (inches/meters)



NIKKISO
Pumps America, Inc.

NIKKISO Pumps America, Inc.
6100 Easton Road • Plumsteadville, PA 18949
Phone (215) 766-7867 • Fax (215) 766-8290
email: sales@nikkisopumpsamerica.com
<http://www.nikkisopumpsamerica.com>

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