

# The Altivar Outdoor

The Oil and Gas Pumping Solution from Schneider Electric



Make the most of your energy<sup>SM</sup>

**Schneider**  
Electric™



Maximum flexibility for  
the most demanding  
outdoor applications

# Altivar Outdoor

The Altivar™ Outdoor is a UL Type 3R rated drive designed for pumping solutions in outdoor environments, especially oil & gas. Schneider Electric™ provides a solution meeting both environmental and application needs/constraints.



## Advantages of Altivar Outdoor

Outdoor installations add a whole new set of environmental and thermal challenges to operations. You must consider lightning and surge protection as well as the changes in temperature, both hot and cold — all of which can adversely impact performance.



The Altivar Outdoor has a wide array of power and automation options from 20 to 350 hp to meet your application needs.

Schneider Electric offers solution partnerships that specifically focus on you and your pumping needs.

## Integrated lift solutions for enhanced well production

The Altivar Outdoor offers a field-proven lift platform for the following applications:

- > Rod Pump controls
- > PCP controls
- > ESP controls
- > HPS controls



# Schneider Electric keeps your pumping systems up and running with easy-to-use, reliable drive solutions



## Standard features 20 – 350 hp w/line reactor

14 to 122 °F (-10 to 50 °C)

Door-on-door arrangement

3% line reactor

Cabinet heater

UL508A listed

Non-bypass

Type 1 surge protection  
(40 kA peak per phase)

Assembled in U.S.

UL Type 3R enclosure

Thermostatically controlled  
cooling fans

Service entrance rated

120 volt control power transformer

Hand-off-auto switch with manual  
speed pot

22 mm pilot lights

Power on, tripped, AFC run-pilot lights

Additional space for end user

Forced ventilation with washable filter  
(20 – 100 hp)



Comprehensive  
Engineering &  
Design Support



Flexible lead  
time to meet  
your need



Tested, validated  
and documented

# Available in highly configured solutions



## Options

5% line reactor

30 mm heavy-duty operators

Bypass

Single Phase

240 V/575 V

Type 2 SPD/HWA surge arrestors

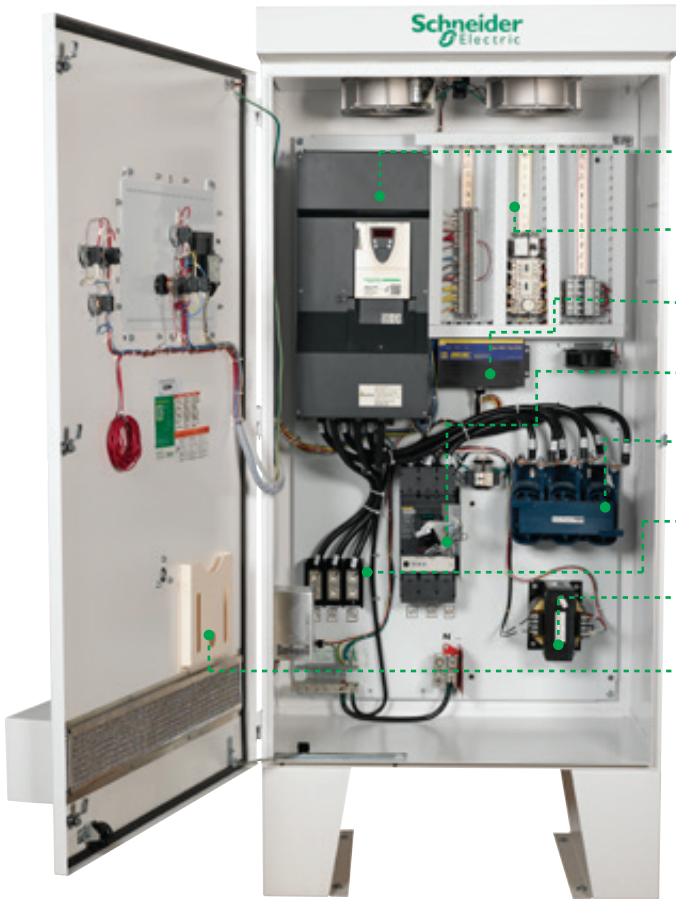
Passive harmonic filter

Floor stand kit

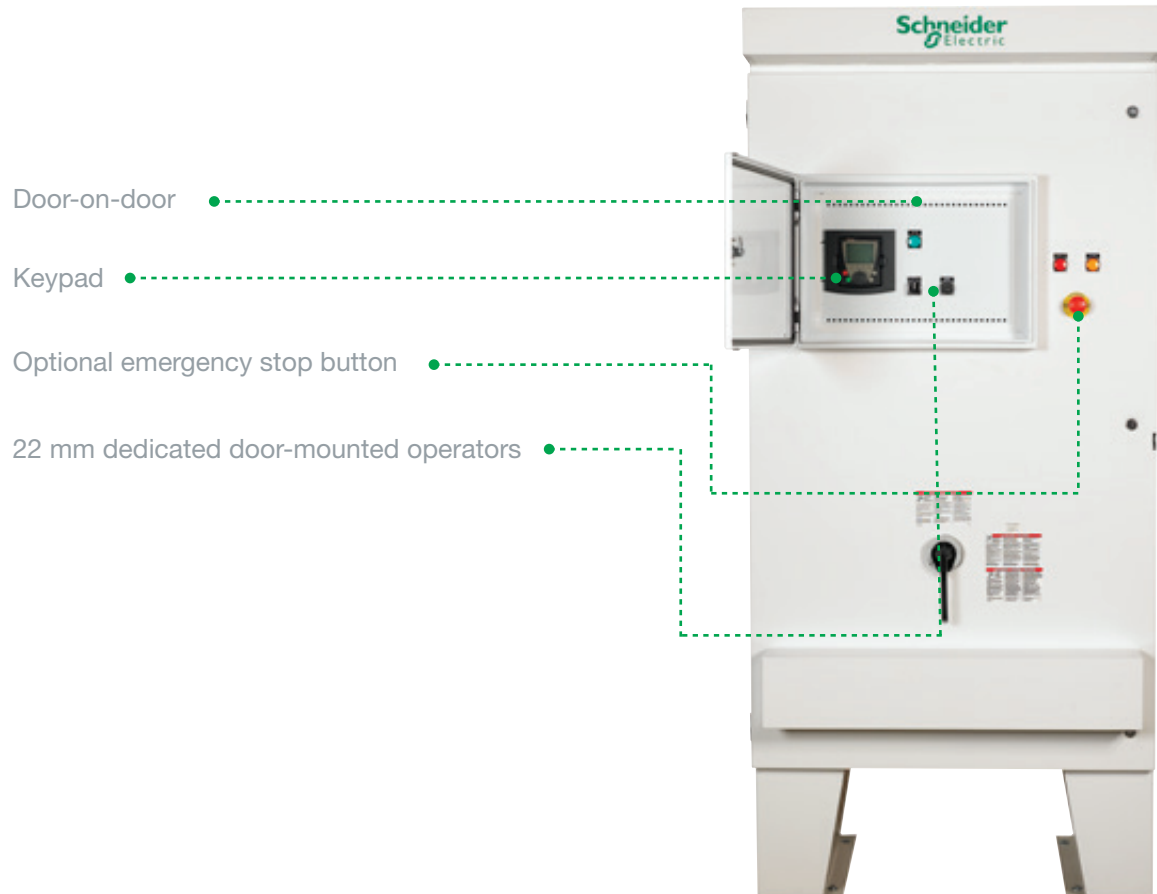
-25 °C

E-Stop, pushbutton

HP	Volts	Height	Width	Depth
20 – 30	460 VAC	50.9"	24"	25.9"
40 – 100	460 VAC	58.9"	36"	26.8"
125 – 150	460 VAC	70.8"	36"	26.8"
200 – 350 Welded feet standard	460 VAC	93.9"	40"	41.3"



- Altivar 61 or 71 power converter
- Customer interface terminal blocks
- Type 1 surge protection
- Circuit breaker disconnect
- 3% line reactor
- Output terminal lug
- 120 V control power transformer
- Document pocket



- Door-on-door
- Keypad
- Optional emergency stop button
- 22 mm dedicated door-mounted operators

# Altivar Outdoor Specifications

<b>Input voltage</b>	460 V +/- 10%
<b>Displacement power factor</b>	98% through speed range
<b>Input frequency</b>	60 Hz ± 1.5%
<b>Output voltage</b>	Three-phase output Maximum voltage equal to input voltage
<b>Galvanic isolation</b>	Galvanic isolation between power and control (inputs, outputs, and power supplies)
<b>Frequency range of power converter</b>	0.1 to 500 Hz (factory setting of 60 Hz)
<b>Torque/overtorque</b>	VT: 110% of nominal motor torque for 60 s CT: 170% of nominal motor torque for 60 s
<b>Current (transient)</b>	VT: 110% of controller rated current for 60 s CT: 150% of controller rated current
<b>Switching frequency</b>	Selectable from 0.5 up to 16 kHz depending on hp rating 1.* Factory settings: VT: 1 – 40 hp @ 460 V; 25 – 125 hp and 50 – 700 hp @ 460 V CT: 4 kHz for 1 – 20 hp and 1 – 40 hp @ 460 V and 2.5 kHz and 50 – 700 hp @ 460V The drive reduces the switching frequency automatically in the event of excessive heatsink temperature.
<b>Speed reference</b>	AI1: 0 to +10 V, Impedance = 30 kΩ. Can be used for speed potentiometer, 1–10 kΩ. AI2: Factory setting: 4 to 20 mA. Impedance = 242 Ω (reassignable, X–Y range with graphic display terminal). Factory modification J10 allows 0 – 10 Vdc reference signal to AI2, Z= 30 kΩ.
<b>Frequency resolution in analog reference</b>	0.1 for 100 Hz (11 bits)
<b>Speed regulation</b>	V/F control: equal to the motor's rated slip SFVC: 10% of the motor's rated slip from 20% to 100% of nominal motor torque
<b>Reference sample time</b>	2 ms +/- 0.5 ms
<b>Acceleration and deceleration ramps</b>	0.1 to 999.9 s (definition in 0.1 s increments)
<b>Drive protection</b>	<ul style="list-style-type: none"> <li>• Thermal protection of power converter</li> <li>• Phase loss of AC mains</li> <li>• Circuit breaker or fuses</li> </ul>
<b>Motor protection</b>	Class 10 electronic overload protection Class 10 electromechanical overload protection with bypass
<b>Graphic display terminal</b>	Self diagnostics with messages in three languages; also refer to the Altivar 61 Programming Manual, supplied with the power converter on CD-ROM W817574030111 or the Altivar 71 Programming Manual, supplied with the power converter on CD-ROM W817555430117A07.2
<b>Temperature</b>	Storage: -13 to +149 °F (-25 to +65 °C). Evaluated at: 14 to 122 °F (-25 to 50 °C).
<b>Humidity (power converter)</b>	95% with no condensation or dripping water, conforming to IEC 60068-2-3
<b>Altitude (power converter)</b>	3,300 ft (1000 m) maximum without derating; derating of the current by 1% for each additional 330 ft (100 m)
<b>Enclosure</b>	Type 3R: all controllers, white color
<b>Pollution degree</b>	Type 3R: pollution degree 2 per NEMA ICS-1 Annex A and IEC 60664-1
<b>Operational test vibration (Power Converter)</b>	1 – 100 hp 460 V, 1 – 60 hp 230 V Conforming to IEC/EN 60068-2-6 1.5 mm peak to peak from 3 to 13 Hz 1 g from 13 to 200 Hz 125 – 700 hp 460 V, 75 – 125 hp 230 V Conforming to IEC/EN 60068-2-6 1.5 mm peak to peak from 3 to 10 Hz 1 g from 10 to 200 Hz
<b>Transit test to shock</b>	Conforming to National Safe Transit Association and International Safe Transit Associate test for packages
<b>Operational shock (power converter)</b>	15 g, 11 ms
<b>Codes and standards</b>	UL Listed per UL 508A. Service entrance rating. Conforms to applicable NEMA ICS, NFPA, and IEC standards. Manufactured under ISO 9001 standards.

\*On 1 - 100 HP VT controllers, above 8 kHz, select the next largest size drive.

**Schneider Electric**  
8001 Knightdale Blvd.  
Knightdale, NC 27545  
<http://www.schneider-electric.com>

Document Number 998-1265569\_US



*This document has been  
printed on recycled paper*

March 2015

© 2015 Schneider Electric. All rights reserved. Schneider Electric, Altivar, and Make the most of your energy are trademarks and the property of Schneider Electric SE, its subsidiaries and affiliated companies. All other trademarks are the property of their respective owners. • [www.schneider-electric.com](http://www.schneider-electric.com) • 998-1265569\_US