

# ODL-3-420460-342SB0

Optidrive Elevator Core VFD Datasheet

**11 kW (15 HP), 46 A, 200-240 V, 3PH**  
IP20 Variable Frequency Drive with EMC Filter



## Input Ratings

Supply Voltage	200-240 V
Input Phases	3
Supply Current Continuous	A
Supply Fuse or MCB (Type B)	A

## Output Ratings

Motor Output Rating	11 kW (15 HP)
Output Voltage	0 – Supply Voltage
Output Current	46 A

## Cable Information

Max Supply Cable Size	–
Max Motor Cable Size	–
Max Motor Cable Length	100 m (328 ft)

## Factory Build Options

EMC Filter	Internal EMC
Brake Transistor	Internal
Enclosure	IP20
Display	LED
PCB Coating	Full Conformal

## Dimensions

Size	4
Height	459 mm (18.07 in)
Width	173 mm (6.81 in)
Depth	255 mm (10.04 in)
Weight	-
Fixings	

## Packaged Dimensions

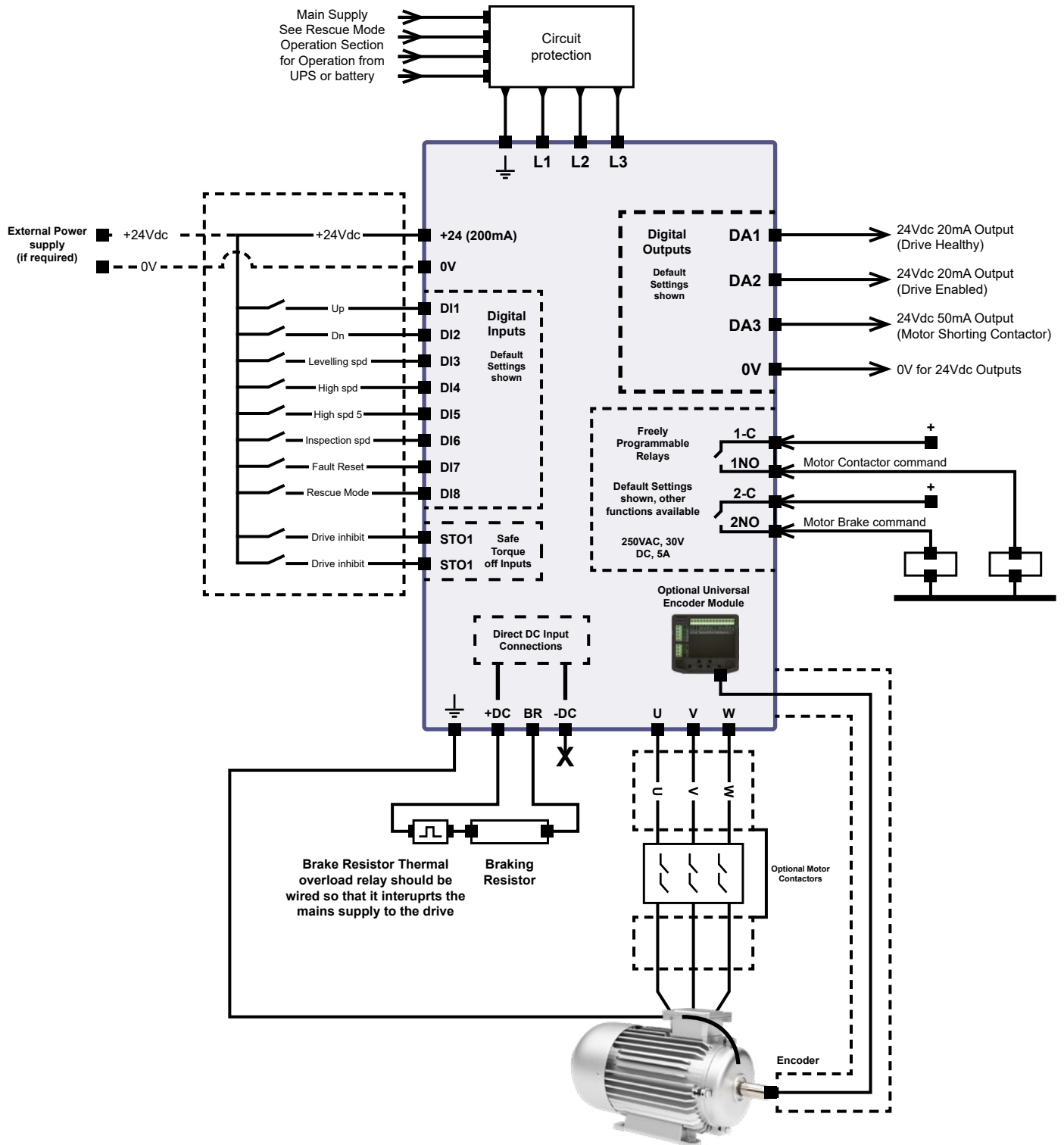
Height	0 mm (0 in)
Width	0 mm (0 in)
Depth	0 mm (0 in)
Weight	0 kg (0 lbs)



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The following document provides a summary of the Elevator Core drive's compliance, protection and feature set supported.



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## Drive Specification & Features

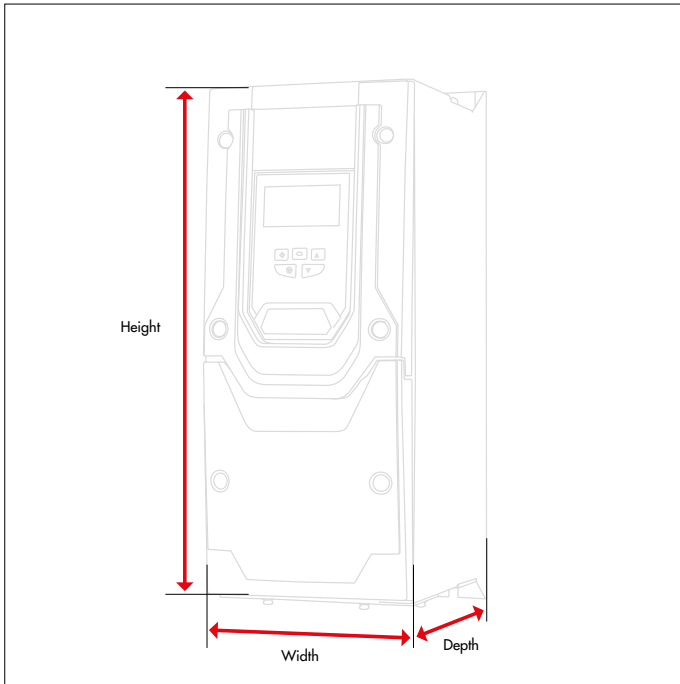
Compliance and Certifications	<ul style="list-style-type: none"> <li>European product certification EN 61800-5-1</li> <li>European product certification UL 61800-5-2 (Functional Safety)</li> <li>European EMC standards EN61800-3:2004</li> <li>USA product certification UL 61800-5-1</li> <li>USA product certification UL 61800-5-2 (Functional Safety)</li> <li>*USA Lift standard ASME A17</li> <li>Dual Safe Torque input according to EN 61800-5-2, SIL 3 *certification by TÜV</li> <li>Brake Contact Monitoring (Unintended Car Movement) EN 81-20:2014+A3 certification by Lift Institute</li> <li>Without Motor contactor conformity using Safe Torque Off inputs according to parts of EN 81-20:2014 and EN 81-50:2014 *certification by Lift Institute</li> </ul>	Elevator Drive Software Features	<ul style="list-style-type: none"> <li>Elevator industry menu structure</li> <li>200% overload capability</li> <li>Frequencies up to 10 kHz @50°C (full load no de-rating throughout travel curve)</li> <li>Roped static Autotune.</li> <li>PC Tool support &gt; Programming, Setup, Monitoring, Backup, Scope, Trip Eliminator</li> <li>USB C connection and mobile device/PC APP support</li> <li>Analogue and Digital control (NPN/PNP Logic)</li> <li>Control terminal assignment macro system or user definable to match elevator controller.</li> <li>Trip log time stamping</li> <li>Fault detection suppression.</li> <li>Built in flight recorder</li> <li>Analogue, Binary, Priority control, Control word</li> <li>Analogue follower mode.</li> <li>User adjustable Contactor sequencing</li> <li>Full travel profile setting and user stop profile configuration</li> <li>Floor sensor correction</li> <li>Multiple speed and current loop gains</li> <li>Current loop and Encoder speed feedback filters</li> <li>Anti-rollback compensation (DC Injection, Position Lock, Load-Cell Input)</li> <li>Smooth Start function.</li> <li>Creep to Floor operation</li> <li>Short Floor Operation</li> <li>*Direct to Floor operation</li> <li>Multiple speed and current loop gains</li> <li>Current loop and speed feedback filters</li> <li>Jerk Adjustments</li> <li>Low voltage Battery operation from 36Vdc up to drive rated Vdc</li> <li>Load measurement for rescue operation (Light Load Detection), Torque test, last run memory.</li> <li>Gravity Mode</li> <li>User Unit Selections</li> <li>Overspeed Governor Test</li> <li>Early Door Opening</li> <li>Anti-Stall Protection</li> <li>Travel Counter</li> <li>Rope-wear Counter</li> <li>User customisable Cooling Fan Control</li> <li>Output Phase Sequence swap.</li> <li>DC Bus connection support of regenerative units</li> <li>OEM Defaults.</li> </ul>	Environmental Ratings	<ul style="list-style-type: none"> <li>Minimum Temperature -10°C</li> <li>Maximum Temperature (No Derating Factor) (UL Approved) 50°C</li> <li>Minimum Storage Temperature -40°C</li> <li>Maximum Storage Temperature 60°C</li> <li>Maximum Altitude (No Derating Factor) 1000 m</li> <li>Maximum Altitude (Derating Factor of 1% per 100m after 1000m) UL Approved 2000 m</li> <li>Maximum Altitude (Derating Factor of 1% per 100m after 1000m) Non-UL Approved 4000 m</li> <li>IP Class IP20</li> <li>Relative Humidity &lt;95% non-condensing</li> <li>Long life fans</li> </ul>
Elevator Motor Control	<ul style="list-style-type: none"> <li>Open and Closed Loop Geared motors</li> <li>Closed Loop Gearless motors</li> <li>Open Loop Gearless (Encoder Fault finding, Commissioning only)</li> <li>Built-in full rated Braking transistor throughout all ratings.</li> </ul>				
Elevator Drive Protection	<p>The following protection and monitoring features are built into the Optidrive Elevator Core drive as standard.</p> <ul style="list-style-type: none"> <li>Motor Contactor Closing delay time</li> <li>Motor Contactor feedback state check</li> <li>Brake channel over current</li> <li>Brake resistor thermal overload software protection.</li> <li>Brake resistor thermal switch support.</li> <li>Motor short circuit protection in all situations.</li> <li>Motor thermal overload protection.</li> <li>Output phase loss detection.</li> <li>Drive reverse powering protection. (mains power connected to drive output).</li> <li>Over voltage on DC bus</li> <li>Under voltage on DC bus</li> <li>Input phase loss trip</li> <li>Input Phase imbalance (DC Bus Ripple)</li> <li>Over temperature</li> <li>Under temperature</li> <li>Ambient Temperature too High</li> <li>Multiple on-board thermistors, Within Power device, Control circuit, Power circuit.</li> <li>Motor PTC monitoring.</li> <li>Motor KTY monitoring.</li> <li>External trip input</li> <li>Control signal loss detection</li> <li>Communications loss Fault detection</li> <li>Heatsink Cooling Fan fault detection</li> <li>Safe Torque off circuit Error detection</li> <li>Encoder Feedback Faults</li> <li>Autotune Error detection</li> <li>Factory Default parameters have been loaded</li> <li>Brake Release Monitoring</li> <li>Brake Release Monitoring Lockout</li> <li>Modbus comms fault</li> <li>CAN Open comms trip</li> <li>Service Timer</li> </ul>		Encoder support		
			<ul style="list-style-type: none"> <li>Universal Encoder module.</li> <li>Encoder wire break detection.</li> <li>Encoder direction swap.</li> <li>Encoder offset real-time feedback.</li> <li>Encoder Feedback shaft copy, simulated Encoder output.</li> <li>Incremental HTL, TTL single and quadrature type Encoders.</li> <li>Absolute Encoder support, Endat, SinCos *Biss.</li> </ul>		



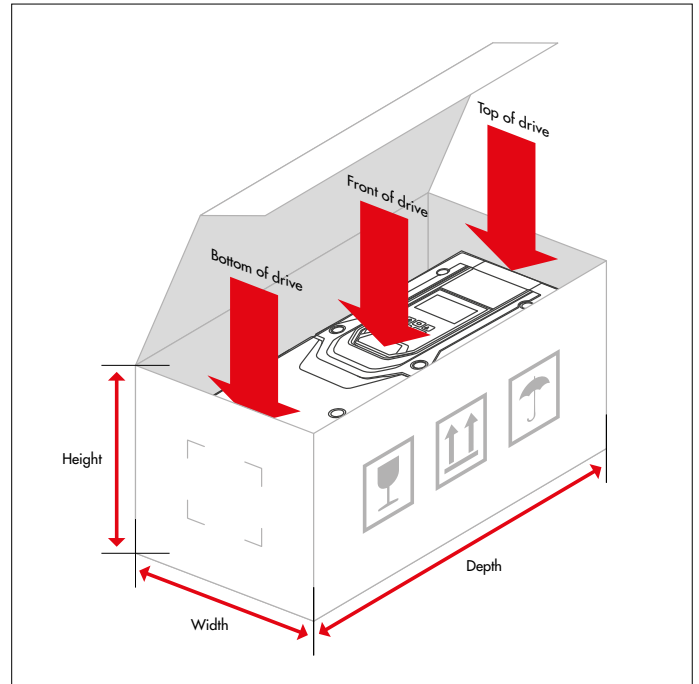
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# How we measure our drives and packaging



Drive Dimensions



Packaging Dimensions



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