

# S100

Variable Frequency Drive

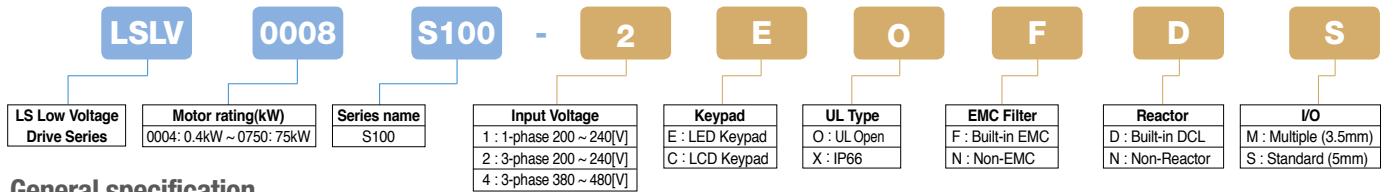
## High Performance Standard VFD

1 phase 0.4~2.2kW(0.5~3HP), 200~240V  
 3 phase 0.4~15kW(0.5~20HP), 200~240V  
 3 phase 0.4~75kW(0.5~100HP), 380~480V



- Selectable V/f, Sensorless vector control
- Built-in EMC Filter
- Side by Side Installation
- Enhanced Size Competitiveness
- PLC Function(Simple Sequence Operation)
- Compliance with Open Field Networks
  - Profibus-DP, CANopen, EtherNet
- IP66 Enclosure (0.4~22kW)
- PM Sensorless Control
- P2P I/O Share Function
- Capacitor/Fan Life Cycle Management Function
- Smart Copier Option  
(Able to copy parameter and download drive main OS)

### Model Number



### General specification

| Model number: LSLV □□□□ S100-1 □□□□ | 0004   | 0008      | 0015      | 0022      | Model number: LSLV □□□□ S100-2 □□□□              | 0004 | 0008 | 0015 | 0022 | 0037 | 0040 | 0055 | 0075 | 0110 | 0150 |
|-------------------------------------|--|-----------|-----------|-----------|--|------|------|------|------|------|------|------|------|------|------|
| <b>Motor rating</b>                 | Heavy [HP] 0.5                                   | 1.0       | 2.0       | 3.0       | Heavy [HP] 0.5                                   | 1.0  | 2.0  | 3.0  | 5.0  | 5.5  | 7.5  | 10.0 | 15.0 | 20.0 | 20.0 |
|                                     | Duty(HD) [kW] 0.4                                | 0.75      | 1.5       | 2.2       | Duty(HD) [kW] 0.4                                | 0.75 | 1.5  | 2.2  | 3.7  | 4.0  | 5.5  | 7.5  | 11.0 | 15.0 | 15.0 |
|                                     | Normal [HP] 1.0                                  | 2.0       | 3.0       | 5.0       | Normal [HP] 1.0                                  | 2.0  | 3.0  | 5.0  | 5.4  | 7.5  | 10.0 | 15.0 | 20.0 | 25.0 | 25.0 |
|                                     | Duty(HD) [kW] 0.75                               | 1.5       | 2.2       | 3.7       | Duty(HD) [kW] 0.75                               | 1.5  | 2.2  | 3.7  | 4.0  | 5.5  | 7.5  | 11.0 | 15.0 | 15.0 | 18.5 |
| <b>Output rating</b>                | Capacity Heavy Duty(HD) 1.0                      | 1.9       | 3.0       | 4.2       | Capacity Heavy Duty(HD) 1.0                      | 1.9  | 3.0  | 4.2  | 6.1  | 6.5  | 9.1  | 12.2 | 17.5 | 22.9 | 22.9 |
|                                     | [kVA] Normal Duty(ND) 1.2                        | 2.3       | 3.8       | 4.6       | [kVA] Normal Duty(ND) 1.2                        | 2.3  | 3.8  | 4.6  | 6.9  | 6.9  | 11.4 | 15.2 | 21.3 | 26.3 | 26.3 |
|                                     | Rated Heavy Duty(HD) 2.5                         | 5.0       | 8.0       | 11.0      | Rated Heavy Duty(HD) 2.5                         | 5.0  | 8.0  | 11.0 | 16.0 | 17.0 | 24.0 | 32.0 | 46.0 | 60.0 | 60.0 |
|                                     | Current Normal Duty(ND) 3.1                      | 6.0       | 9.6       | 12.0      | Current Normal Duty(ND) 3.1                      | 6.0  | 9.6  | 12.0 | 18.0 | 18.0 | 30.0 | 40.0 | 56.0 | 69.0 | 69.0 |
|                                     | Frequency [Hz] 0~400Hz (IM Sensorless:0~120[Hz]) |           |           |           | Frequency [Hz] 0~400Hz (IM Sensorless:0~120[Hz]) |      |      |      |      |      |      |      |      |      |      |
|                                     | Voltage [V] 3-phase 200~240V                     |           |           |           | Voltage [V] 3-phase 200~240V                     |      |      |      |      |      |      |      |      |      |      |
| <b>Input rating</b>                 | Voltage [V] 1-phase 200 ~ 240VAC (-15%~+10%)     |           |           |           | Voltage [V] 3-phase 200 ~ 240VAC (-15%~+10%)     |      |      |      |      |      |      |      |      |      |      |
|                                     | Frequency [Hz] 50 ~ 60Hz (±5%)                   |           |           |           | Frequency [Hz] 50 ~ 60Hz (±5%)                   |      |      |      |      |      |      |      |      |      |      |
|                                     | Rated Heavy Duty(HD) 4.4                         | 9.3       | 15.6      | 21.7      | Rated Heavy Duty(HD) 2.2                         | 4.9  | 8.4  | 11.8 | 17.5 | 18.5 | 25.8 | 34.9 | 50.8 | 66.7 | 66.7 |
|                                     | Current(A) Normal Duty(ND) 5.8                   | 11.7      | 19.7      | 24.0      | Current(A) Normal Duty(ND) 3.0                   | 6.3  | 10.8 | 13.1 | 19.4 | 19.4 | 32.7 | 44.2 | 62.3 | 77.2 | 77.2 |
| <b>Weight[kg] (Built-in EMC)</b>    | 0.9(1.14)  | 1.3(1.76) | 1.5(1.76) | 2.0(2.22) | 0.9  | 0.9  | 1.3  | 1.5  | 2.0  | 2.0  | 3.3  | 3.3  | 4.6  | 7.1  | 7.1  |

| Model number: LSLV □□□□ S100-4 □□□□ | 0004   | 0008      | 0015      | 0022      | 0037      | 0040      | 0055 | 0075 | 0110 | 0150 | 0185 | 0220 | 0300 | 0370 | 0450  | 0550  | 0750  |
|-------------------------------------|--|-----------|-----------|-----------|-----------|-----------|------|------|------|------|------|------|------|------|-------|-------|-------|
| <b>Motor rating</b>                 | Heavy [HP] 0.5                                   | 1.0       | 2.0       | 3.0       | 5.0       | 5.5       | 7.5  | 10.0 | 15.0 | 20.0 | 25.0 | 30.0 | 40.0 | 50.0 | 60.0  | 75.0  | 100.0 |
|                                     | Duty(HD) [kW] 0.4                                | 0.75      | 1.5       | 2.2       | 3.7       | 4.0       | 5.5  | 7.5  | 11.0 | 15.0 | 18.5 | 22.0 | 30.0 | 37.0 | 45.0  | 55.0  | 75.0  |
|                                     | Normal [HP] 1.0                                  | 2.0       | 3.0       | 5.0       | 5.4       | 7.5       | 10.0 | 15.0 | 20.0 | 25.0 | 30.0 | 40.0 | 50.0 | 60.0 | 75.0  | 100.0 | 120.0 |
|                                     | Duty(HD) [kW] 0.75                               | 1.5       | 2.2       | 3.7       | 4.0       | 5.5       | 7.5  | 11.0 | 15.0 | 18.5 | 22.0 | 30.0 | 37.0 | 45.0 | 55.0  | 75.0  | 90.0  |
| <b>Output rating</b>                | Capacity Heavy Duty(HD) 1.0                      | 1.9       | 3.0       | 4.2       | 6.1       | 6.5       | 9.1  | 12.2 | 18.3 | 22.9 | 29.7 | 34.3 | 46.5 | 57.2 | 69.4  | 83.8  | 115.8 |
|                                     | [kVA] Normal Duty(ND) 1.5                        | 2.4       | 3.9       | 5.3       | 7.6       | 7.6       | 12.2 | 17.5 | 22.9 | 29.0 | 33.5 | 44.2 | 57.2 | 69.4 | 81.5  | 108.2 | 128.8 |
|                                     | Rated Heavy Duty(HD) 2.3                         | 2.5       | 4.0       | 5.5       | 8.0       | 9.0       | 12.0 | 16.0 | 24.0 | 30.0 | 39.0 | 45.0 | 61.0 | 75.0 | 91.0  | 110.0 | 152.0 |
|                                     | Current Normal Duty(ND) 1.0                      | 3.1       | 5.1       | 6.9       | 10.0      | 10.0      | 16.0 | 23.0 | 30.0 | 38.0 | 44.0 | 58.0 | 75.0 | 91.0 | 107.0 | 142.0 | 169.0 |
|                                     | Frequency [Hz] 0~400Hz (IM Sensorless:0~120[Hz]) |           |           |           |           |           |      |      |      |      |      |      |      |      |       |       |       |
|                                     | Voltage [V] 3-phase 380 ~ 480V                   |           |           |           |           |           |      |      |      |      |      |      |      |      |       |       |       |
| <b>Input rating</b>                 | Voltage [V] 3-phase 380 ~ 480VAC (-15%~+10%)     |           |           |           |           |           |      |      |      |      |      |      |      |      |       |       |       |
|                                     | Frequency [Hz] 50 ~ 60Hz (±5%)                   |           |           |           |           |           |      |      |      |      |      |      |      |      |       |       |       |
|                                     | Rated Heavy Duty(HD) 1.1                         | 2.4       | 4.2       | 5.9       | 8.7       | 9.8       | 12.9 | 17.5 | 26.5 | 33.4 | 43.6 | 50.7 | 56.0 | 69.0 | 85.0  | 103.0 | 143.0 |
|                                     | Current(A) Normal Duty(ND) 2.0                   | 3.3       | 5.5       | 7.5       | 10.8      | 10.8      | 17.5 | 25.4 | 33.4 | 42.5 | 49.5 | 65.7 | 69.0 | 85.0 | 100.0 | 134.0 | 160.0 |
| <b>Weight[kg] (Built-in EMC)</b>    | 0.9(1.18)  | 1.9(1.18) | 1.3(1.77) | 1.5(1.80) | 2.0(2.23) | 2.0(2.23) | 3.3  | 3.4  | 4.6  | 4.8  | 7.5  | 7.5  | 25.8 | 34.4 | 34.4  | 41.8  | 43.8  |

|                      |                            |  |
|----------------------|----------------------------|--|
| <b>Control spec</b>  | Control method             | V/f, Slip compensation, Sensorless vector  |
|                      | Speed reference resolution | Digital command: 0.01Hz / Analog command: 0.06Hz (Maximum frequency : 60Hz)  |
|                      | Frequency accuracy         | 1% of the maximum output frequency   |
|                      | V/f curve                  | Linear, Squared, User V/f  |
| <b>Operation</b>     | Overload capacity          | HD: 150% 1minute, ND: 120% 1minute   |
|                      | Torque boost               | Manual/Automatic torque boost  |
|                      | Keypad display             | 4 digit, 7 segment LED keypad  |
|                      | Operation method           | Keypad / Terminal / Communication option selectable  |
| <b>Input signal</b>  | Frequency setting          | Analog: -10 ~ 10[V] / 0 ~ 10[V], 420[mA] / Digital: Keypad, Pulse train input  |
|                      | Operation function         | PID, Up/Down, 3-Wire, DC braking, Frequency limit, Frequency jump, 2nd function, Slip compensation, Anti reverse rotation, Automatic restart, Commercial power change, Auto-tuning, Flying start, Energy buffering operation, Power braking, Flux braking, Leakage reduction operation   |
|                      | Multi-function terminal    | NPN(Sink) / PNP(Source) selectable   |
|                      | Multiple I/O(7points)      | Function: Forward run, Reverse run, Reset, External trip, Emergency stop, Jog operation, Multi-step frequency-high, middle, low, Multi-step acceleration/deceleration-high, middle, low, DC braking at stop, 2nd motor select, Frequency up/down, 3-wire operation, Change into normal operation during PID operation, Change into main body operation during option operation, Analog command frequency fixing, Acceleration/deceleration stop etc. selectable        |
| <b>Output signal</b> | Pulse train                | 0Hz~32Hz, Low level: 0~0.8V, High level: 3.5~12V   |
|                      | Open collector terminal    | Fault output and drive operation status output   |
|                      | Multi-function relay       | (N.O., N.C.) less than AC 250V 1A, less than DC30V 1A  |
|                      | Analog output              | 0 to 10Vdc (4~20mA): Frequency, Output current, Output voltage, DC stage voltage etc. selectable   |
| <b>Protection</b>    | Drive trip                 | Overcurrent / Overvoltage / Undervoltage / External trip / Ground fault current detection / Drive overheat / Motor overheat / Input-Output phase open / Overload protection / Light load protection / Communication error / Frequency command loss / Hardware fault / Cooling fan fault / Pre-PID motion failure / No motor trip / External brake trip / Option fault / Safety contact fault / Drive temperature sensor fault / Parameter write error / IO board fault |
|                      | Drive alarm                | Stall prevention / Overload / Light load / Cooling fan fault / Frequency command loss / DB duty cycle / Rotor time constant tuning fault / Capacitor / Fan life time up  |
|                      | Enclosure                  | IP20, UL Type1, IP66   |
|                      | Option                     | Keypad<br>Graphic LCD keypad(IS7)<br>Communication<br>Profibus-DP, EtherNet-IP, Modbus-TCP, CANopen  |