

Fact Sheet

VLT® Integrated Servo Drive ISD® 510



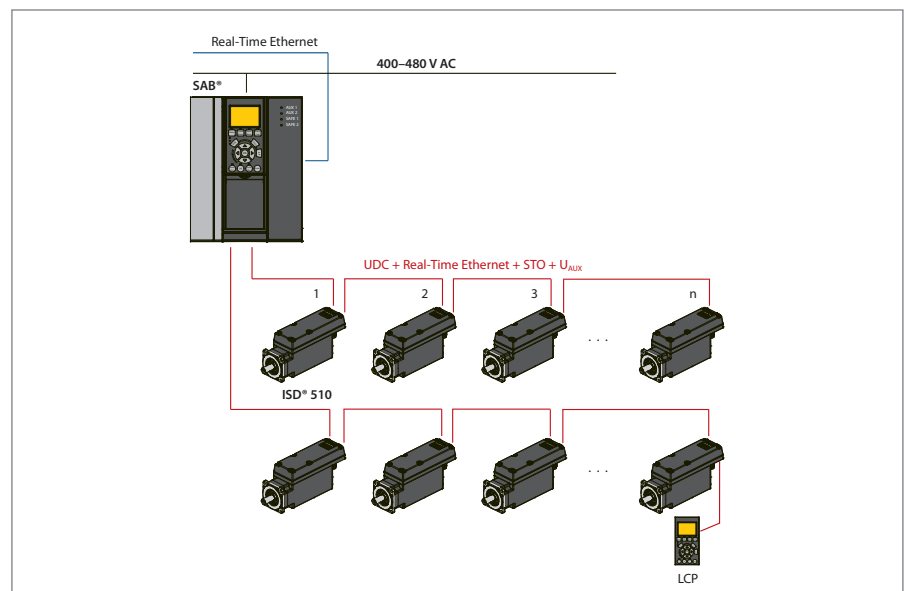
VLT® Servo Access Box SAB®

The SAB® generates a 600 V DC power supply and guarantees high power density. It has a removable Local Control Panel (LCP) and is based on the proven quality of a Danfoss frequency converter. The SAB® delivers an output of 7.5 kW and 15 A.

1.5-13 Nm torque

range gives you more design flexibility in your decentralized system plans

VLT® Integrated Servo Drive ISD® 510 is a high-performance decentral servo motion solution, developed specifically for the Food & Beverage and Packaging industries. The servo system comprises a central power supply SAB®, drive modules and cabling infrastructure. The decentralization of the drive unit offers benefits in mounting, installation, and operation. Depending on the application, the SAB® can power up to 64 drives in a servo drive system. The open system supports both EtherCAT® and Ethernet POWER-LINK®.



Servo Drive

The motion control is integrated into the drive so that the motion sequences can take place independently. This releases the central PLC and offers a highly flexible drive concept. The master can be programmed via IEC 61131-3 and hybrid cables are used to connect the servo drives, making installation fast and simple.

The perfect solution for:

- Packaging machines
- Food & Beverage machines
- Pharmaceutical machines

| Feature | Benefit |
|---|--|
| Dynamic servo performance | Fast, accurate, and energy-efficient |
| Compact and decentral servo drive | Reduced costs and high flexibility |
| 64 standard servo drive variants in sizes 1 and 2 | Selection of most suitable drive for the application's torque and power requirements |
| Real-time systems EtherCAT® and Ethernet POWERLINK® | Fast process communication |
| Control via IEC 61131-3 | Open system |
| System setup performance | Simple and fast configuration of several drives |
| Hybrid cables in daisy-chain concept | Easy and fast installation, reduced number of cables |
| Removable Local Control Panel (LCP) | Direct connection to the servo drives for fast commissioning, diagnosis, and service |
| LEDs on servo drive and SAB® | Fast and effective monitoring |
| Standard and advanced servo drive variants | Cost-effective solution |

Available Options

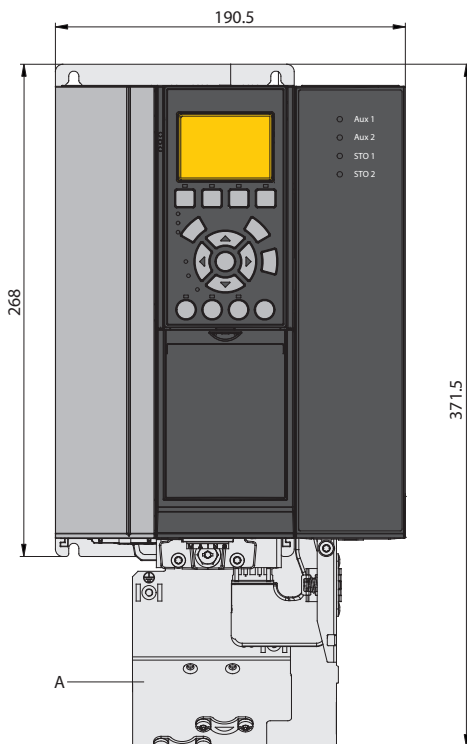
- Mechanical holding brake
- Feedback:
 - Resolver
 - Single-turn
 - Multi-turn
- Customized flange on request
- Shaft seal
- Flexible hybrid cable

Specifications

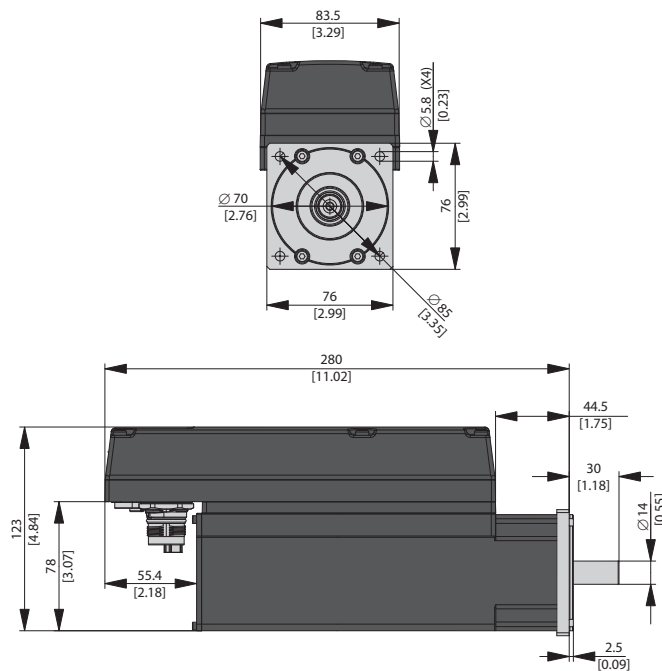
| ISD® 510 | | |
|------------------------------------|-----------------|---|
| Rated voltage | $U_{DC\ link}$ | DC 565 V |
| Rated torque | M_N | 1.5-3.8 Nm |
| Maximum torque | M_{0max} | 6.1-13 Nm |
| Rated current | I_N | 1.4-1.8 A |
| Maximum current | I_{0max_rms} | 5.7-6.4 A |
| Rated speed | n_N | 2400-4600 rpm |
| Rated power | P_N | 0.72-0.94 kW |
| Inertia (without mechanical brake) | J | 0.85 / 1.45 / 2.09 / 2.73 kgcm ² |
| Shaft diameter | | 14/19 mm |
| Protection rating | | IP54/IP67 (shaft IP65) |
| Safety rating | | STO (Safe Torque Off) |

| Servo Access Box | | |
|------------------|-----------|-----------------------------------|
| Input voltage | U_{IN} | 400-480 V AC $\pm 10\%$, 3-phase |
| Input current | I_{IN} | 11.14 A @ 400 V / 9.3 A @ 480 V |
| Output voltage | U_{OUT} | 565-680 V DC $\pm 10\%$ |
| Rated power | P_N | 7.5 kW |
| Rated current | I_N | 15 A |
| Enclosure | | IP20 |

Dimensions



A = decoupling plates



| Servo Drive ISD® 510 | Dimensions [mm] | | | | | | | | | |
|-------------------------|-----------------|----|----|-------|------|----|----|-----|----|-----|
| | A | B | C | D | E | F | G | H | I | J |
| Size 1 (1.5 Nm) | 85 | 70 | 76 | 280 | 39.5 | 30 | 14 | 2.5 | 70 | 115 |
| Size 2 (2.1 Nm) | 100 | 80 | 84 | 252.5 | 15 | 40 | 19 | 3.0 | 84 | 129 |
| Size 2 (2.9 Nm) | 100 | 80 | 84 | 281.5 | 44.5 | 40 | 19 | 3.0 | 84 | 129 |
| Size 2 (3.8 Nm) | 100 | 80 | 84 | 310.5 | 73.5 | 40 | 19 | 3.0 | 84 | 129 |

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