# DIAS Drive

## SDD 1600

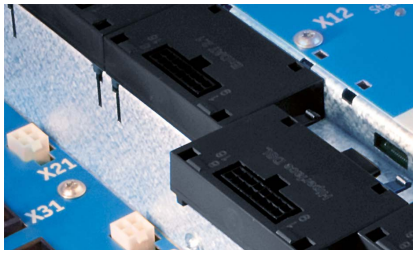
With the DIAS Drive SDD 1000 series, the term „compact multi-axis servo drive“ is raised to a new level. Dynamics, precision and the price/performance ratio of this series are convincing. The DIAS Drives 1000 are designed for dynamic multi-axis applications, which are often seen for example, in handling and robotic applications. The fan-based concept and internal intermediate circuit system ensure efficient energy use and distribution respectively. The energy generated while braking is used to power the other components.

**Additional Characteristics:**

- 6 drive regulators per drive, which share the control, DC-link and heat sink
- Real-time Ethernet VARAN interface
- Minimum controller cycle times of only 62.5 µs
- Current, speed and position controller, including splined interpolation
- 24 V supply integrated, which is fed by the DC-link and during power-down, supplies energy over a short period of time for a controlled standstill.
- Integrated power filter
- Safety functions SBC „Safe Brake Control“, STO „Safe Torque Off“ and SS1 „Safe Stop 1“ integrated (SIL 3, PL e, Cat. 4)
- Control of servo and asynchronous motors
- Encoder interface for resolver, EnDat®, Hiperface DSL®
- Extensive motion control functions in the LASAL drive library

| | | SDD 1600-HHHDDD | SDD 1600-LLLHHH |
|---|---|---|---|
| **Rated Values** | | | |
| Rated input voltage (symmetrical opposed to ground) max. 5000 A eff. (L1, L2, L3) | $V_{AC}$ | 3x 380 $V_{-10\%}$ - 480 $V^{10\%}$, 50-60 Hz | |
| Rated power | kVA | 14 | |
| Rated DC-link volage | $V_{DC}$ | 538 | |
| Over voltage protection value limit for DC-link voltage | $V_{DC}$ | adjustable via software | |
| Max. holding brake current per axis | $A_{DC}$ | 2 | |
| Rated current for axis 1 (eff. +/- 3 %) | $A_{RMS}$ | 10 | 20 |
| Rated current for axis 2 (eff. +/- 3 %) | $A_{RMS}$ | 10 | 20 |
| Rated current for axis 3 (eff. +/- 3 %) | $A_{RMS}$ | 10 | 20 |
| Rated current for axis 4 (eff. +/- 3 %) | $A_{RMS}$ | 5 | 10 |
| Rated current for axis 5 (eff. +/- 3 %) | $A_{RMS}$ | 5 | 10 |
| Rated current for axis 6 (eff. +/- 3 %) | $A_{RMS}$ | 5 | 10 |
| Max. total continuous current of all axes | $A_{RMS}$ | 45 | 90 |
| Peak output current of axis 1 for max. 5 s (eff. +/- 3 %) | $A_{RMS}$ | 20 | 40 |
| Peak output current of axis 2 for max. 5 s (eff. +/- 3 %) | $A_{RMS}$ | 20 | 40 |
| Peak output current of axis 3 for max. 5 s (eff. +/- 3 %) | $A_{RMS}$ | 20 | 40 |
| Peak output current of axis 4 for max. 5 s (eff. +/- 3 %) | $A_{RMS}$ | 10 | 20 |
| Peak output current of axis 5 for max. 5 s (eff. +/- 3 %) | $A_{RMS}$ | 10 | 20 |
| Peak output current of axis 6 for max. 5 s (eff. +/- 3 %) | $A_{RMS}$ | 10 | 20 |
| Output frequency of the power output stage | kHz | 8 | |
| DC-link voltage UZWK Achse 1-6 | V | 0-850 | |
| Output power S per axis: 1-3 | kVA | 6 | 12 |
| Output power S per axis: 4-6 | kVA | 3 | 6 |
| DC-link capacity | µF | 115 | |
| Neutral point | | grounded | |
| Elko charging current | A | < 15 | |
| Elko loading time | sek | < 2 | |

| | | SDD 1600-HHHDDD | SDD 1600-LLLHHH |
|---|---|---|---|
| **External Braking Unit** | | | |
| Brake output current | A | 1.5 | |
| Over current limit | A | 5 | |
| External regen resistance | Ω | 25 | |
| **External Connection** | | | |
| Output DC2, 4 $I_{MAX}$ (not short-circuit proof) | A | 4 | |
| Output DC3 $I_{MAX}$ (hort-circuit proof) | A | 2 | |
| Maximum total current of all outputs incl. brake | A | 9 | |
| **External Fan (Model ebm-papst 8412 N/2G)** | | | |
| Output power | W | 1,8 | |
| Maximum fan voltage | V | 12 | |
| **Interfaces** | | | |
| VARAN | | 1x VARAN-In<br>1x VARAN-Out | |
| **Dimensions** | | | |
| WxHxD | mm | 212 x 585 x 217 | |
| Weight | kg | 18.8 | |
| **Article Numbers** | | | |
| | | 09-620-1600-HHHDDD | 09-620-1600-LLLHHH |




**Externally connectible encoder systems**

External plug-in encoder systems provide flexibility. resolver, EnDat 2.1 and Hiperface DSL are currently available. The various feedback modules or new encoder variants can be easily added or exchanged. The feedback system used is recognized by the drive automatically.

| **Encoder Systems** | |
|---|---|
| EnDat 2.1 | 09-621-031 |
| Hiperface DSL | 09-621-021 |
| Resolver | 09-621-011 |

# Notes