DIAS Drive

SDD 215

The SDD 215 is a 2-axis unit designed for midrange power applications. One axis can operate with 10 A continuous and 20 A peak current, the other with 15 A nominal and 30 A peak current. This allows a varying number of axes as well as motor combinations with different capacity ranges to be implemented.

The VARAN bus interface provides fast, hard real-time capable and nearly jitter-free communication.

Additional Characteristics:

- various feedback systems (Resolver, EnDAT, Hiperface and Sin/Cos)
- reduction of power loss through a PWM process
- integrated class A power filter
- intermediate circuit is accessible for the coupling of additional devices
- spline interpolation implemented in addition to position control
- automatic scaling function
- integrated Safety functions „Safe Torque Off" STO and „Safe Stop 1" SS1

Rated Values		
Rated mains voltage (symmetrically to ground) 5000 A eff. (L1, L2, L3)	V_{AC}	3x 230 $V_{-10\%}$ – 480 $V^{10\%}$, 45-65 Hz
Max. peak current in starting torque (limited by inrush current)	A	2.5
Rated power in S1 mode	kVA	8 (230 V) - 14 (400-480 V)
Rated DC-link voltage	V_{DC}	290-680
Over voltage protection - limit for the intermediate circuit	V_{DC}	450-900
Auxiliary supply voltage +24 V	V_{DC}	22-30
+24 V auxiliary supply power	W	35
Holding brake supply voltage +24 V-BR	V_{DC}	25-27
Max. holding brake current per axis	A_{DC}	2
Holding brake-voltage reduction with a +24 V-BR load	V_{DC}	max. 1 (at 3x 2 A holding brake current)
Max. holding brake switching energy	mJ	100
Rated output current for axis 1 (eff. +/- 3 %)	A_{RMS}	10
Max. standstill current axis 1 from 500 ms	A_{RMS}	7
Rated output current for axis 3 (eff. +/- 3 %)	A_{RMS}	15
Max. standstill current axis 2 from 500 ms	A_{RMS}	10.5
Max. continuous sum current of all axis (heat sink)	A_{RMS}	20
Peak output current of axis 1 for a max. of 5 sec. (eff. +/- 3 %)	A_{RMS}	20
Peak output current of axis 2 for a max. 5 sec. (eff. +/- 3 %)	A_{RMS}	30
Power stage loss	W/A_{RMS}	10
Output frequency of the power output stage	kHz	8
Maximum leakage current	mA	15
PWM frequency	kHz	8
Regulator frequency	kHz	16
Regen Circuit		
Capacitance of the intermediate circuit voltage	µF	700
External brake resistance	Ω	25
Internal regen resistor value	Ω	25-50
Rated power of the internal regen resistor	W	200

G-VMAINS = 230 (rated mains voltage = 230 V)		
Start-up limit	V_{DC}	420
Switch-off level	V_{DC}	400
Over voltage protection	V_{DC}	450
Max. rated power of the external regen resistor	W	750
Peak power of the internal brake resistor (max. 1 s)	kW	6.5

G-VMAINS = 400 (rated mains voltage = 400 V)		
Start-up limit	V_{DC}	730
Switch-off level	V_{DC}	690
Over voltage protection	V_{DC}	800
Max. rated power of the external regen resistor	W	1200
Peak power of the internal brake resistor (max. 1 s)	kW	21

G-VMAINS = 480 (rated mains voltage = 480 V)		
Start-up limit	V_{DC}	850
Switch-off level	V_{DC}	810
Over voltage protection	V_{DC}	900
Max. rated power of the external regen resistor	W	1500
Peak power of the internal brake resistor (max. 1 s)	kW	27

Internal Fuse		
Auxiliary supply 24 V (+24 V to BGND)		electronic fuse
Holding brake supply 24 V-BR (+24 V-BR to BGND)		electronic protection
Regen resistor		electronic protection

Resolver Specifications		
Exciter frequency f_{err}	kHz	8
Exciter voltage U_{Ref}	U_{eff}	4
Number of poles m	-	2, 4, 6, .., 32
Resolver voltage $U_{sin/cos, max}$	U_{eff}	2.2

Connector Types		
Auxiliary supply (X1A)		Combicon 5, 3-pin
Power supply (X1B)		Power Combicon 7.62, 8-pin, 4 mm²
Feedback (X6, X7, X8)		D-Sub 25-pin (female)
Motor (X3, X4, X5)		Power Combicon 7.62, 6-pin, 4 mm²

Dimensions		
Height with/without plugs	mm	472/378
Width	mm	158
Depth	mm	240
Weight	kg	10

Article Number	
with fan unit	09-501-152-23