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)	Α	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

Start-up limit	G-VMAINS = 230 (rated mains voltage = 230 V)		
Over voltage protection V occ 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) Vocc 730 Switch-off level Vocc 690 Over voltage protection Vocc 800 Max. rated power of the internal brake resistor (max. 1 s) kW 21 G-VMAINS = 480 (rated mains voltage = 480 V) Vocc 850 Switch-off level Vocc 810 Over voltage protection Vocc 810 Peak power of the internal brake resistor (max. 1 s) Vocc 810 Peak power of the internal brake resistor Wocc 1500 Peak power of the internal brake resistor Wocc 27 Internal Fuse Vocc 810 8 Auxiliary supply 24 V-P	Start-up limit	V _{DC}	420
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) V _∞ 730 Switch-off level V _∞ 690 Over voltage protection V _∞ 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) ** 850 Switch-off level V _∞ 850 Over voltage protection V _∞ 810 Over voltage protection V _∞ 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 Resolver Specifications Exciter requency f _{err} kHz 8 Exciter voltage U _{spec} U _{eff} 4 <td>Switch-off level</td> <td>V_{DC}</td> <td>400</td>	Switch-off level	V _{DC}	400
Peak power of the internal brake resistor (max. 1 s) G-VMAINS = 400 (rated mains voltage = 400 V) Start-up limit V tot Switch-off level V vot V tot V	Over voltage protection	V DC	450
(max. 1 s) G-VMAINS = 400 (rated mains voltage = 400 V) Start-up limit V _{0C} Switch-off level V _{0C} Over voltage protection V _{0C} Reak power of the external regen resistor (max. 1 s) G-VMAINS = 480 (rated mains voltage = 480 V) Start-up limit V _{0C} Store Switch-off level V _{0C} Start-up limit V _{0C} Store Suiton-off level Store Suiton-off	Max. rated power of the external regen resistor	W	750
Crated mains voltage = 400 V	·	kW	6.5
Switch-off level			
Over voltage protection V occ 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) 850 Switch-off level V occ 850 Over voltage protection V occ 810 Over voltage protection V occ 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 ferr kHz 8 Exciter frequency fleer Veff 4 Number of poles m - 2, 4, 6,, 32 Resolver voltage U _{sin/cos, max} Veff 2.2 Connector Types Auxiliary supply (X1A) Combicon 5, 3-pin Power combicon 7,62, 8-pin, 4 mm² Feedback (X6, X7, X8) D-Sub 25-pin (female)	Start-up limit	V _{DC}	730
Max. rated power of the external regen resistor Peak power of the internal brake resistor (max. 1 s) G-VMAINS = 480 (rated mains voltage = 480 V) Start-up limit V _{DC} Switch-off level V _{DC} W Switch-off level V _{DC} W Switch-off level V _{DC} W Switch-off level V _{DC} Switch-off level Swi	Switch-off level	V _{DC}	690
Peak power of the internal brake resistor (max. 1 s) G-VMAINS = 480 (rated mains voltage = 480 V) Start-up limit V _{DC} Switch-off level V _{DC} 850 Over voltage protection V _{DC} Peak power of the external regen resistor W 1500 Peak power of the internal brake resistor (max. 1 s) Internal Fuse Auxiliary supply 24 V (+24 V to BGND) Regen resistor Resolver Specifications Exciter frequency f _{err} kHz Resolver Voltage U _{Ref} Number of poles m - 2, 4, 6,, 32 Resolver Voltage U _{Sin/cos, max} U _{eff} Logical Supply (X1A) Power Supply (X1B) Power Combicon 7,62, 8-pin, 4 mm² Feedback (X6, X7, X8) P-Sub 25-pin (female)	Over voltage protection	V DC	800
(max. 1 s) G-VMAINS = 480 (rated mains voltage = 480 V) Start-up limit V _{DC} Start-up limit Start-up limit V _{DC} Start-up limit Start Start up limit Start Start Start up limit Start S	Max. rated power of the external regen resistor	W	1200
Crated mains voltage = 480 V	·	kW	21
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) 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)			
Over voltage protection Max. rated power of the external regen resistor Peak power of the internal brake resistor (max. 1 s) Internal Fuse Auxiliary supply 24 V (+24 V to BGND) Regen resistor Regen resistor Resolver Specifications Exciter frequency f _{err} kHz Exciter voltage U _{Ref} Number of poles m - 2, 4, 6,, 32 Resolver Ueff Connector Types Auxiliary supply (X1A) Power supply (X1B) Feedback (X6, X7, X8) Posub 25-pin (female)	Start-up limit	V _{DC}	850
Max. rated power of the external regen resistor Peak power of the internal brake resistor (max. 1 s) Internal Fuse Auxiliary supply 24 V (+24 V to BGND) Regen resistor Regen resistor Resolver Specifications Exciter frequency f _{err} kHz Exciter voltage U _{Ref} Number of poles m - 2, 4, 6,, 32 Resolver Ueff Auxiliary supply (X1A) Power Supply (X1B) Power Combicon 7.62, 8-pin, 4 mm² Feedback (X6, X7, X8) EXCITER 1500 RW 27 Logo Resolver 27 Logo Relations Relectronic fuse electronic protection electronic protection 8 8 8 Lectronic protection electronic protection 2	Switch-off level	V _{DC}	810
Peak power of the internal brake resistor (max. 1 s) Internal Fuse Auxiliary supply 24 V (+24 V to BGND) Holding brake supply 24 V-BR (+24 V-BR to BGND) Regen resistor Resolver Specifications Exciter frequency f _{err} kHz Exciter voltage U _{Ref} Number of poles m - 2, 4, 6,, 32 Resolver Voltage U _{sin/cos, max} U _{eff} 2.2 Connector Types Auxiliary supply (X1A) Power Supply (X1B) Feedback (X6, X7, X8) P-Sub 25-pin (female)	Over voltage protection	V _{DC}	900
Internal Fuse Auxiliary supply 24 V (+24 V to BGND) Regen resistor Resolver Specifications Exciter frequency f _{err} kHz Exciter voltage U _{sin/cos, max} Resolver Voltage U _{sin/cos, max} U _{eff} Auxiliary supply (X1A) Power supply (X1B) Feedback (X6, X7, X8) Relectronic fuse electronic protection electronic protection 8 8 8 27 4 Leff 4 Leff 4 Leff 4 Leff 4 Combicon 5, 3-pin Power Combicon 7.62, 8-pin, 4 mm² Feedback (X6, X7, X8) D-Sub 25-pin (female)	Max. rated power of the external regen resistor	W	1500
Auxiliary supply 24 V (+24 V to BGND) Regen resistor Resolver Specifications Exciter frequency f _{err} Number of poles m Auxiliary supply (X1A) Connector Types Auxiliary supply (X1B) Feedback (X6, X7, X8) Relectronic fuse electronic protection electronic protection 8 8 8 4 Number of potential and a supply (X1B) Power Combicon 5, 3-pin Power Combicon 7.62, 8-pin, 4 mm² P-Sub 25-pin (female)	·	kW	27
Holding brake supply 24 V-BR (+24 V-BR to BGND) Regen resistor Resolver Specifications Exciter frequency ferr kHz Exciter voltage URef Number of poles m - 2, 4, 6,, 32 Resolver voltage USin/cos, max Ueff Connector Types Auxiliary supply (X1A) Power Supply (X1B) Feedback (X6, X7, X8) Resolver voltage USin/Cos, max Posub 25-pin (female)	Internal Fuse		
Regen resistor 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)	Auxiliary supply 24 V (+24 V to BGND)		electronic fuse
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)	Holding brake supply 24 V-BR (+24 V-BR to BGND)		electronic protection
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)	Regen resistor		electronic protection
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)	Resolver Specifications		
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)	Exciter frequency f _{err}	kHz	8
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)	Exciter voltage U _{Ref}	U_{eff}	4
Connector TypesAuxiliary supply (X1A)Combicon 5, 3-pinPower supply (X1B)Power Combicon 7.62, 8-pin, 4 mm²Feedback (X6, X7, X8)D-Sub 25-pin (female)		-	2, 4, 6,, 32
Connector TypesAuxiliary supply (X1A)Combicon 5, 3-pinPower supply (X1B)Power Combicon 7.62, 8-pin, 4 mm²Feedback (X6, X7, X8)D-Sub 25-pin (female)	Resolver voltage U _{sin/cos, max}	U_{eff}	2.2
Power supply (X1B) Power Combicon 7.62, 8-pin, 4 mm ² Feedback (X6, X7, X8) D-Sub 25-pin (female)			
Power supply (X1B) Power Combicon 7.62, 8-pin, 4 mm ² Feedback (X6, X7, X8) D-Sub 25-pin (female)	Auxiliary supply (X1A)		Combicon 5, 3-pin
Motor (X3, X4, X5) Power Combicon 7.62, 6-pin, 4 mm ²	Feedback (X6, X7, X8)		D-Sub 25-pin (female)
	Motor (X3, X4, X5)		Power Combicon 7.62, 6-pin, 4 mm ²

mm	472/378
mm	158
mm	240
kg	10
	09-501-152-23
	mm