

Technical data

Servo drive series ARS 2000

ARS 2100

Features	ARS 2102	ARS 2105	ARS 2108
Supply voltage	1 x 100...230 VAC [$\pm 10\%$], 50...60 Hz		
Alternative DC supply	60...380 VDC		60...320 VDC
Control voltage	24 VDC [$\pm 20\%$] (0,55 A) ¹⁾	24 VDC [$\pm 20\%$] (0,65 A) ¹⁾	
DC link voltage	360...380 VDC ²⁾ / 310...320 VDC ³⁾		310...320 VDC
Clock frequency	Variable clock frequencies up to 20 kHz, data for operation at 1 x 230 VAC [$\pm 10\%$], 50 Hz		
Output power	0,5 kVA	1,0 kVA	1,5 kVA
Max. output power for 5 s	1,0 kVA	2,0 kVA	3,0 kVA
Rated output current	2,5 A _{eff}	5 A _{eff}	8 A _{eff}
Max. output current for 5 s	5 A _{eff}	10 A _{eff}	16 A _{eff}
Max. output current for 0,5 s	10 A _{eff}	20 A _{eff}	32 A _{eff} (f _{el} \geq 3 Hz) ⁴⁾
Current derating from	12 kHz		10 kHz
Internal brake resistor	60 Ω		37 Ω
Continuous power / pulse power	10 W / 2,8 kW	20 W / 2,8 kW	25 W / 3,9 kW
External brake resistor	$\geq 50 \Omega$		$\geq 25 \Omega$
Holding brake	24 VDC, max. 1 A		
Dimensions servo drive H x W x D ⁵⁾	200 x 54 x 200 mm		
Weight	2,0 kg	2,1 kg	1,8 kg

¹⁾ Plus current consumption of a possibly connected holding brake and I/Os ²⁾ With active PFC ³⁾ Without PFC

⁴⁾ Shorter times for lower electrical rotational frequencies (f_{el}) ⁵⁾ Without mounting plate, fan and connectors

Features	Values
EMC directive	2014/35/EC verified by application of the harmonised standard EN 61800-3
Low-voltage directive	2014/30/EC verified by application of the harmonised standard EN 61800-5-1
cULus certification	UL 508C, C22.2 No. 274-13
Admissible temperature ranges	Storage temperature: -25 °C to +70 °C, operating temperature: 0 °C to +40 °C +40 °C to +50 °C at reduced power 2,5 % / K
Admissible installation height	Mounting height max. 2000 m above msl, above 1000 m above ms with power reduction 1 % per 100 m
Humidity	Relative humidity up to 90 %, not bedewing
Protection degree	IP20
Protection class	I
Pollution degree	2
Inputs	10 x digital in (24 VDC), 3 x analogue in (± 10 VDC, 2 x 10 Bit, 1 x 16 Bit)
Outputs	4 x digital out (24 VDC), 1 x digital out (24 VDC) for holding brake, 2 x analogue out (± 10 VDC, 9 Bit)
Interfaces	Standard: USB 2.0, Ethernet, RS232 / RS485, CAN-Bus (CANopen DSP 402) Optional: EtherCAT, PROFIBUS-DP, PROFINET, digital IO extension module EA88
Encoder evaluation	Universal encoder interface for motors with: resolver, analogue and digital incremental encoder with/without commutation signals, SinCos encoder (single-turn/multi-turn) with HIPERFACE®, HIPERFACE DSL®, high-resolution Heidenhain encoders, absolute encoders with EnDat 2.1 and 2.2

FLEXIBILI

Technical data ARS 2300

Features	ARS 2302	ARS 2305	ARS 2310
Supply voltage	3 x 230...480 VAC [$\pm 10\%$], 50...60 Hz		
Alternative DC supply	60...700 VDC		
Control voltage	24 VDC [$\pm 20\%$] (1 A) ¹⁾		
DC link voltage	560...570 VDC		
Clock frequency	Variable clock frequencies up to 16 kHz, data for operation at 3 x 400 VAC [$\pm 10\%$], 50 Hz		
Output power	1,5 kVA	3,0 kVA	6,0 kVA
Max. output power for 5 s	3,0 kVA	6,0 kVA	12,0 kVA
Rated output current	2,5 A _{eff}	5 A _{eff}	10 A _{eff}
Max. output current for 5 s	5 A _{eff} (7,5 A _{eff} für 2 s)	10 A _{eff} (15 A _{eff} für 2 s)	20 A _{eff}
Max. output current for 0,5 s	10 A _{eff}	20 A _{eff} (f _{el} \geq 20 Hz) ²⁾	40 A _{eff} (f _{el} \geq 20 Hz) ²⁾
Current derating from	12,5 kHz		5 kHz
Internal brake resistor	68 Ω		
Continuous power / pulse power	110 W / 8,5 kW		
External brake resistor	$\geq 40 \Omega$		
Holding brake	24 VDC, max. 2 A		
Dimensions servo drive H x W x D ³⁾	250 x 69 x 240 mm		
Weight	3,7 kg		

¹⁾ Plus current consumption of a possibly connected holding brake and I/Os

²⁾ Shorter times for lower electrical rotational frequencies (f_{el}) ³⁾ Without mounting plate, fan and connectors

Features	Values
EMC directive	2014/35/EU verified by application of the harmonised standard EN 61800-3
Low-voltage directive	2014/30/EU verified by application of the harmonised standard EN 61800-5-1
cULus certification	UL 508C, C22.2 No. 274-13, 2320/2340 in prep. acc. to UL 61800-5-1, C22.2 No. 274-13
Admissible temperature ranges	Storage temperature: -25 °C to +70 °C, operating temperature: 0 °C to +40 °C +40 °C to +50 °C at reduced power 2,5 % / K
Admissible installation height	Mounting height max. 2000 m above msl, above 1000 m above msl with power reduction 1 % pro 100 m
Humidity	Relative humidity up to 90 %, not bedewing
Protection degree	IP20
Protection class	I



Features	ARS 2320	ARS 2340
Supply voltage	3 x 230...480 VAC [$\pm 10\%$], 50...60 Hz	
Alternative DC supply	60...700 VDC	
Control voltage	24 VDC [$\pm 20\%$] (1 A) ¹⁾	
DC link voltage	560 VDC	
Clock frequency	Variable clock frequencies up to 16 kHz, data for operation at 3 x 400 VAC [$\pm 10\%$], 50 Hz	
Output power	12 kVA	20 kVA
Max. output power for 3 s	25 kVA	50 kVA
Rated output current	20 A _{eff}	40 A _{eff}
Max. output current for 3 s	50 A _{eff}	100 A _{eff}
Current derating from	5 kHz	
Internal brake resistor	30 Ω	15 Ω
Continuous power / Pulse power	80 W/18 kW	160 W/35 kW
External brake resistor	15 $\Omega \leq R_{\text{Extern}} \leq 50 \Omega$	15 $\Omega \leq R_{\text{Extern}} \leq 50 \Omega$
Holding brake	24 VDC, max. 2 A	
Dimensions servo drive H x W x D ²⁾	350 x 90 x 256 mm	350 x 162 x 256 mm
Weight	8 kg	13,5 kg

¹⁾ Plus current consumption of a possibly connected holding brake and I/Os

²⁾ Without mounting plate, screw heads and connectors

Features	Values
Pollution degree	2
Inputs	10 x digital in (24 VDC), 3 x analogue in (± 10 VDC, 2 x 10 Bit, 1 x 16 Bit)
Outputs	4 x digital out (24 VDC), 1 x digital out (24 VDC) for holding brake, 2 x analogue out (± 10 VDC, 9 Bit)
Interfaces	Standard: USB 2.0, Ethernet, RS232 / RS485, CAN-Bus (CANopen DSP 402) Optional: EtherCAT, PROFIBUS-DP, PROFINET, Digital terminal extension EA88
Encoder evaluation	Universal encoder interface for motors with: resolver, analogue and digital incremental encoder with/without commutation signals, SinCos encoder (single-turn/ multi-turn) with HIPERFACE®, HIPERFACE DSL®, high-resolution Heidenhain encoders, absolute encoder with EnDat 2.1 and 2.2