

2.4 ACOPOS 1022, 1045, 1090

2.4.1 ACOPOS 1022

2.4.1.1 Order data

Model number	Short description	Figure
Servo drives		
8V1022.00-2	ACOPOS servo drive, 3x 400-480 V, 2.2 A, 1 kW, line filter, integrated braking resistor and electronic secure restart inhibit	
8V1022.001-2	ACOPOS servo drive, 3x 400-480 V, 2.2 A, 1 kW, coated, line filter, integrated braking resistor and electronic secure restart inhibit	
Optional accessories		
Plug-in modules		
8AC110.60-2	ACOPOS plug-in module, CAN interface	
8AC114.60-2	ACOPOS plug-in module, POWERLINK V2 interface	
8AC120.60-1	ACOPOS plug-in module, EnDat encoder and sine incremental encoder interface	
8AC121.60-1	ACOPOS plug-in module, HIPERFACE interface	
8AC122.60-3	ACOPOS plug-in module, resolver interface 10 kHz	
8AC123.60-1	ACOPOS plug-in module, incremental encoder and SSI absolute encoder interface	
8AC125.60-1	ACOPOS plug-in module, BiSS encoder interface 5 V	
8AC125.60-2	ACOPOS plug-in module, BiSS encoder interface 5V, baud rate 6.25 Mbit/s	
8AC125.61-2	ACOPOS plug-in module, BiSS encoder interface 12V, baud rate 6.25 Mbit/s	
8AC126.60-1	ACOPOS plug-in module, EnDat 2.2 encoder interface	
8AC130.60-1	ACOPOS plug-in module, 8 digital I/O configurable in pairs as 24 V input or as output 400/100 mA, 2 digital outputs 2 A, order TB712 terminal block separately.	
8AC131.60-1	ACOPOS plug-in module, 2 analog inputs ±10 V, 2 digital I/O points which can be configured as a 24 V input or 45 mA output, order TB712 terminal block separately.	
8AC132.60-1	ACOPOS plug-in module, 2 analog inputs ±10 V	
8AC140.60-3	ACOPOS plug-in module, CPU, x86 100 MHz Intel compatible, 32 MB DRAM, 32 kB SRAM, removable application memory: CompactFlash, 1 CAN interface, 1 Ethernet interface 100 Base-T, 1 PROFIBUS DP slave interface, 1 RS232 interface, 3 digital I/O can be configured as 24 VDC input or 500 mA output, 1 analog input ±10 V, order program memory and 0TB708 terminal block separately.	
8AC140.61-3	ACOPOS plug-in module, CPU, ARNC0, x86 100 MHz Intel compatible, 32 MB DRAM, 32 kB SRAM, removable application memory: CompactFlash, 1 CAN interface, 1 Ethernet interface 100 Base-T, 1 PROFIBUS DP slave interface, 1 RS232 interface, 3 digital I/O can be configured as 24 VDC input or 500 mA output, 1 analog input ±10 V, order program memory and 0TB708 terminal block separately.	
8AC141.60-2	ACOPOS plug-in module, CPU, x86 100 MHz Intel compatible, 16 MB DRAM, 32 kB SRAM, removable application memory: CompactFlash, 2 CAN interfaces, 1 Ethernet interface 100 Base-T, 1 RS232 interface, 1 X2X Link Master interface, 3 digital I/O can be configured as 24 VDC input or output 500 mA, 1 analog input ±10 V, order program memory and 0TB704 and 0TB708 terminal blocks separately	
8AC141.61-3	ACOPOS plug-in module, CPU, ARNC0, x86 100 MHz Intel compatible, 32 MB DRAM, 32 kB SRAM, removable application memory: CompactFlash, 2 CAN interfaces, 1 Ethernet interface 100 Base-T, 1 RS232 interface, 1 X2X Link Master interface, 3 digital I/O can be configured as 24 VDC input or output 500 mA, 1 analog input ±10 V, order program memory and 0TB704 and 0TB708 terminal blocks separately	
Shielding component sets		
8X0010.00-1	ACOPOS shielding components set for 8V1022.xxx-x up to 8V1090.xxx-x	
Terminal sets		
8X0001.00-1	ACOPOS accessories, plug set for 8V1010.00 and 8V1090.00 (3 phase)	

Table 27: 8V1022.00-2, 8V1022.001-2 - Order data

2.4.1.2 Technical data

Product ID	8V1022.00-2	8V1022.001-2
General information		
B&R ID code	0x1284	0xA099
Slots for plug-in modules	4	
Certification c-UL-us	Yes	
Power mains connection		
Permissible power mains forms	TT, TN ¹⁾	
Mains input voltage	3x 400 VAC to 480 VAC ±10%	
Frequency	50 / 60 Hz ±4%	
Installed load	Max. 3 kVA	
Starting current at 400 VAC	4 A	
Switch-on interval	>10 s	
Integrated line filter in accordance with EN 61800-3, Category C3 ²⁾	Yes	
Power loss at max. device power without braking resistor	Approx. 120 W	
DC bus connection		
DC bus capacitance	235 µF	
24 VDC supply		
Input voltage ³⁾	24 VDC ±25%	
Input capacitance	8200 µF	
Power consumption ⁴⁾	Max. 2.5 A + current for motor holding brake	
Motor connection		
Quantity	1	
Continuous current ⁵⁾	2.2 A _{eff}	
Reduction of continuous current depending on the ambient temperature Mains input voltage: 400 VAC Switching frequency 5 kHz Switching frequency 10 kHz Switching frequency 20 kHz Mains input voltage: 480 VAC Switching frequency 5 kHz Switching frequency 10 kHz Switching frequency 20 kHz	No reduction No reduction No reduction ⁶⁾ No reduction No reduction 0.13 A _{eff} per °C (starting at 51°C) ⁶⁾	
Reduction of continuous current depending on the altitude Starting at 500 m above sea level	0.22 A _{eff} per 1000 m	
Peak current	14 A _{eff}	
Nominal switching frequency	20 kHz	
Possible switching frequencies	5 / 10 / 20 kHz	
Electrical stress of the connected motor in accordance with IEC TS 60034-25	Limit value curve A	
Max. motor line length	25 m	
Protective measures Overload protection Short circuit and ground fault protection	Yes Yes	
Max. output frequency	600 Hz ⁷⁾	
Motor holding brake connection		
Max. output current	1 A	
Max. number of switching cycles	Unlimited since handled electronically	
Braking resistors		
Peak power output	3.5 kW	
Continuous power	130 W	
Limit switch and reference inputs		
Quantity	3	
Wiring	Sink	
Electrical isolation Input - ACOPOS Input - Input	Yes No	
Input voltage Nominal Maximum	24 VDC 30 VDC	
Switching threshold Low High	<5 V >15 V	
Input current at nominal voltage	Approx. 4 mA	
Switching delay	Max. 2.0 ms	
Modulation compared to ground potential	Max. ±38 V	
Enable inputs		
Quantity	1	
Wiring	Sink	

Table 28: 8V1022.00-2, 8V1022.001-2 - Technical data

Product ID	8V1022.00-2	8V1022.001-2
Electrical isolation Input - ACOPOS	Yes	
Input voltage Nominal Maximum	24 VDC 30 VDC	
Input current at nominal voltage	Approx. 30 mA	
Switching threshold Low High	<5 V >15 V	
Switching delay Enable 0 -> 1, ready for PWM Enable 1 -> 0, PWM off	Max. 100 µs Max. 2.0 ms	
Modulation compared to ground potential	Max. ±38 V	
Trigger inputs		
Quantity	2	
Wiring	Sink	
Electrical isolation Input - ACOPOS Input - Input	Yes No	
Input voltage Nominal Maximum	24 VDC 30 VDC	
Switching threshold Low High	<5 V >15 V	
Input current at nominal voltage	Approx. 10 mA	
Switching delay Positive edge Negative edge	52 µs ±0.5 µs (digitally filtered) 53 µs ±0.5 µs (digitally filtered)	
Modulation compared to ground potential	Max. ±38 V	
Operating conditions		
Permitted mounting orientations Hanging vertically Lying horizontally Standing horizontally	Yes Yes No	
Installation at altitudes above sea level Nominal Maximum ⁸⁾	0 to 500 m 2000 m	
Degree of pollution in accordance with EN 60664-1	2 (non-conductive pollution)	
Overvoltage category in accordance with IEC 60364-4-443:1999	II	
EN 60529 protection	IP20	
Environmental conditions		
Temperature Operation Nominal Maximum ⁹⁾ Storage Transport	5 to 40°C 55°C -25 to 55°C -25 to 70°C	
Relative humidity Operation Storage Transport	5 to 85% 5 to 95% Max. 95% at 40°C	
Mechanical characteristics		
Dimensions Width Height Depth	70.5 mm 375 mm 235.5 mm	
Weight	4.0 kg	

Table 28: 8V1022.00-2, 8V1022.001-2 - Technical data

- 1) In the USA, TT and TN power mains are commonly referred to as "Delta/Wye with grounded Wye neutral".
- 2) Limit values from CISPR11, group 2, class A (second environment).
- 3) The permissible input voltage range is reduced when using motor holding brakes. The input voltage range should be selected so that the proper supply voltage for the motor holding brake can be maintained.
- 4) The current requirements depend on the configuration of the ACOPOS servo drive.
- 5) Valid in the following conditions: 400 VAC mains input voltage, nominal switching frequency, 40°C ambient temperature, installation altitude <500 m above sea level.
- 6) Value for the nominal switching frequency.
- 7) The module's electrical output frequency (SCTRL_SPEED_ACT * MOTOR_POLEPAIRS) is monitored to protect against dual use in accordance with EC 428/2009 | 3A225. If the electrical output frequency of the module exceeds the limit value of 600 Hz uninterrupted for more than 0.5 s, then the current movement is aborted and error 6060 is output (power unit: limit speed exceeded).
- 8) Continuous operation of ACOPOS servo drives at altitudes ranging from 500 m to 2000 m above sea level is possible (taking the specified continuous current reductions into consideration). Requirements that go above and beyond this need to be arranged with B&R.
- 9) Continuous operation of ACOPOS servo drives at ambient temperatures ranging from 40°C to max. 55°C is possible (taking the specified continuous current reductions into consideration), but this will result in a shorter service life.