

## B&R drives – Driving innovation

### Complete solution

B&R's holistic approach to Generic Motion Control combines single-axis positioning, gear, cam profile, CNC and robotic functions. Complemented by network-based safety technology with fast response times, this makes entirely new machine concepts possible.

### Perfect modularity

Ready-made technology functions for tension control, registration mark control and cross cutters allow machine manufacturers to concentrate on their core areas of expertise. Advanced software and hardware architectures support modular machine concepts perfectly.

### Drives for every application

B&R drive technology includes compact drives (ACOPOSmicro), single-axis systems (ACOPOS), multi-axis systems (ACOPOSmulti) and distributed drive systems with IP65 protection (ACOPOSremote) for especially harsh environmental conditions.

### ACOPOS highlights

- Power range from 500 W to 64 kW
- Compact and scalable
- Integrated technology functions
- PLCopen motion function blocks
- Integrated safety technology

### ACOPOSmulti highlights

- Energy regeneration and savings
- Power range from 1.4 to 120 kW
- Compact and scalable
- Modular cooling design
- Integrated technology functions
- PLCopen motion function blocks
- Integrated safety technology and SafeMC

### ACOPOSremote highlights

- Seamless integration in the ACOPOSmulti drive system
- High continuous power up to 4 kW
- Integrated connections for I/O nodes
- Flexible topology (tree or daisy chain)

Integrated automation  
Global presence  
Solid partnership



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## Drives System overview

PERFECTION IN AUTOMATION  
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Compact  
drive  
system



	80VD100	80SD100	X67SM2436/4320	X20SM1426/1436
Features	Integrated connection for motor holding brake and temperature sensors	256 microsteps Encoder interface Integrated motor detection	256 microsteps Digital inputs for incremental encoder Integrated motor detection	
Channels	1 / 2	1 / 2	2 / 4	1
Mounting options	Wall mounting (heat spreader)	Wall mounting (heat spreader or heat sink)	Wall mounting DIN rail mounting	DIN rail mounting
Power mains connection	18 - 80 VDC	18 - 80 VDC	18 - 48 VDC / 24 VDC	24 VDC / 18 - 48 VDC
24 VDC power supply	External	External	External	Internal via backplane / External
Motor connector	Continuous current 2 x 8 A Peak current 2 x 15 A Peak current (LinMot®) 1 x 15 A / 2 x 12.5 A	Continuous current 1 / 2 x 10 A Peak current 1 / 2 x 15 A	Continuous current 2 x 3 A / 4 x 1 A Peak current 2 x 5 A / 4 x 1.5 A	Continuous current 1 x 1 A / 1 x 3 A Peak current 1 x 1.2 A / 1 x 3.5 A
I/O connections	2 trigger inputs 1 output 24 VDC 1 enable input Motor holding brake Temperature sensors	2 trigger inputs 1 output 24 VDC 1 enable input	6 x digital inputs can be configured as incremental encoder (X67SM2436)	4 x digital inputs can be configured as incremental encoder
Encoder interface	EnDat 2.2 Resolver LinMot®	Incremental SSI Hiperface	Incremental	
Variations	Also available with additional digital inputs / outputs			-
Dimensions [mm]	Width: 65 Height: 134 Depth: 103 (heat spreader)	Width: 65 Height: 134 Depth: 103 (heat spreader) Depth: 145 (heat sink)	Width: 53 Height: 85 Depth: 42	Width: 12.5/25 Height: 99 Depth: 75



## ACOPOS single-axis drive system



## ACOPOSmulti multi-axis drive system



## ACOPOSremote distributed drive system



	8V1010/1016	8V1022/1045/1090	8V1180/1320	8V1640/128M
<b>Features</b>	Integrated line filter Integrated braking resistor Integrated electronic restart inhibit		Integrated line filter Integrated braking resistor Integrated electronic restart inhibit Integrated DC bus power supply	
<b>Mounting options</b>	Wall mounting			
<b>Power mains connection</b>	3x 400 VAC to 480 VAC ±10 % 50/60 Hz			
<b>Installed load</b>	Max. 1.35/2.1 kVA	Max. 3/5/10 kVA	Max. 17/30 kVA	Max. 54/98 kVA
<b>24 VDC power supply</b>	External		External and integrated DC bus power supply	
<b>Motor connector</b>	Continuous current 1/1.6 A <sub>eff</sub> Peak current 2.8/5 A <sub>eff</sub> Short circuit/ground fault protection	Continuous current 2.2/4.4/8.8 A <sub>eff</sub> Peak current 1.4/2.4/4 A <sub>eff</sub> Short circuit/ground fault protection	Continuous current 19/34 A <sub>eff</sub> Peak current 50/80 A <sub>eff</sub> Short circuit/ground fault protection	Continuous current 64/128 A <sub>eff</sub> Peak current 200/300 A <sub>eff</sub> Short circuit/ground fault protection
<b>I/O connections</b>	2 trigger inputs 2 limit switch inputs and 1 reference input 1 enable input (Cat. 4 EN ISO 13849-1)		2 trigger inputs 2 limit switch inputs and 1 reference input 1 enable input (Cat. 4 EN ISO 13849-1) 1 output 24 V	
<b>Additional connections</b>	Motor holding brake Temperature sensors		Motor holding brake Temperature sensors External braking resistor	
<b>Optional plug-in modules</b>	CAN interface [8AC110.60-2] POWERLINK V2 interface [8AC114.60-2] EnDat encoder interface [8AC120.60-1] Resolver interface [8AC122.60-3] SSI and incremental encoder interface [8AC123.60-1] BISS encoder interface [8AC125.60-1] Digital mixed module [8AC130.60-1] Mixed module [8AC131.60-1] CPU modules [8AC140.60-2 / 8AC140.61-3 / 8AC141.60-2 / 8AC141.61-3]			
<b>Slots for plug-in modules</b>	3	4	4	4
<b>Variations</b>	For power mains connection 1x 110 VAC to 230 VAC ±10 % (3x 110 VAC to 230 VAC ±10 %)		-	-
<b>Dimensions [mm]</b>	Width: 58.5 Height: 257 Depth: 220	Width: 70.5 Height: 375 Depth: 235.5	Width: 200 Height: 375 Depth: 234	Width: 276/402 Height: 460 Depth: 295

	8BOP0110	8BOP0220/0440	8BVP0220/0440	8BVP0880/1650	8BVI0014/0028/0055/0110	8BVI0220/0330/0440	8BVI0660/0880/1650	8B0C0160/0320
<b>Features</b>	Passive power supply module Integrated control supply (max. 90 W) Integrated line filter Integrated braking resistor	Passive power supply modules	Power supply modules Regeneration possible Power Factor Correction (PFC)	Power supply modules Regeneration possible Power Factor Correction (PFC)	Inverter modules Uncontrolled and safe stops integrated Integrated connections for motor holding brake and temperature sensor	Inverter modules Uncontrolled and safe stops integrated Integrated connections for motor holding brake and temperature sensor	Inverter modules Uncontrolled and safe stops integrated Integrated connections for motor holding brake and temperature sensor	Control supply modules Extensive protective measures
<b>Mounting options</b>	Wall mounting Cold plate mounting Feed-through mounting	Wall mounting Cold plate mounting Feed-through mounting	Wall mounting Cold plate mounting Feed-through mounting	Wall mounting Cold plate mounting Feed-through mounting	Wall mounting Cold plate mounting Feed-through mounting	Wall mounting Cold plate mounting Feed-through mounting	Wall mounting Cold plate mounting Feed-through mounting	Wall mounting Cold plate mounting Feed-through mounting
<b>Power mains connection</b>	3x380 to 3x500 VAC ±10% 50/60 Hz	3x380 to 3x500 VAC ±10% 50/60 Hz	3x 220 VAC to 3 x 480 VAC ±10 % 50/60 Hz	3x 220 VAC to 3 x 480 VAC ±10 % 50/60 Hz	Supply via backplane	Supply via backplane	Supply via backplane	Supply via backplane
<b>Installed load</b>	Max. 7.3 kVA	Max. 15.6/30.4 kVA	Max. 15.6/31.1 kW	Max. 62/124 kW	Max. 1.5/2.9/5.6/11.2 kW	Max. 16.2/24.4/32.5 kW	Max. 48.8/65/130 kW	Max. 0.45/0.88 kW
<b>24 VDC power supply</b>	Internal via backplane External via 24 V input	Internal via backplane	Internal via backplane	Internal via backplane	Internal via backplane	Internal via backplane	Internal via backplane	Internal via backplane
<b>DC bus connection</b>	Continuous power 4 kW Peak power 12 kW Short circuit/ground fault protection	Continuous power 8/16 kW Peak power 24/48 kW Short circuit/ground fault protection	Continuous power 15/30 kW Peak power 37.5/60 kW Short circuit/ground fault protection	Continuous power 60/120 kW Peak power 120/240 kW Short circuit/ground fault protection	-	-	-	-
<b>Motor connector</b>	-	-	-	-	Continuous power 1.4/2.8/5.5/11 kW Continuous current 1.9/3.8/7.6/15.1 A <sub>eff</sub> Peak current 4.7/9.5/18.9/37.7 A <sub>eff</sub> Short circuit /ground fault protection	Continuous power 16/24/32 kW Continuous current 22/33/44 A <sub>eff</sub> Peak current 55/83/88 A <sub>eff</sub> Short circuit /ground fault protection	Continuous power 48/64/120 kW Continuous current 66/88/165 A <sub>eff</sub> Peak current 132/176/330 A <sub>eff</sub> Short circuit /ground fault protection	-
<b>24 VDC internal</b>	Continuous power 90 W	-	-	-	-	-	-	Continuous power 400/800 W Continuous current 16/32 A
<b>I/O connections</b>	1 auxiliary supply module - enable output	1 auxiliary supply module - enable output	2 trigger inputs 2 outputs 24 V 1 auxiliary supply module - enable output	2 trigger inputs 2 outputs 24 V 1 auxiliary supply module - enable output	2 trigger inputs 2 outputs 24 V 2 enable inputs per axis (Cat. 4 EN ISO 13849-1)	2 trigger inputs 2 outputs 24 V 2 enable inputs per axis (Cat. 4 EN ISO 13849-1)	2 trigger inputs 2 outputs 24 V 2 enable inputs per axis (Cat. 4 EN ISO 13849-1)	1 auxiliary supply module - enable input
<b>Additional connections</b>	POWERLINK External braking resistor	POWERLINK External braking resistor	POWERLINK Temperature sensors Filter fans	POWERLINK Temperature sensors Filter fans	POWERLINK Temperature sensors Motor holding brake	POWERLINK Temperature sensors Motor holding brake	POWERLINK Temperature sensors Motor holding brake	-
<b>Optional plug-in modules</b>	-	-	EnDat 2.1 encoder interface [8BAC0120.000-1] / EnDat 2.2 encoder interface [8BAC0120.001-1] / Resolver interface [8BAC0122.000-1] / Incremental/SSI encoder interface [8BAC0123.000-1] / Incremental encoder interface 24V / [8BAC0123.002-1] / SinCos encoder interface [8BAC0124.000-1] / DI0 interface [8BAC0130.000-1] / 4xAI interface [8BAC0132.000-1]		-	-	-	-
<b>Slots for plug-in modules</b>	-	-	2	2	2	2	2	-
<b>Variations</b>	-	-	-	-	Also available as dual-axis module	Also available as dual-axis module [8BVI0220]	-	8B0C0160: 2x 24 V / 2x 42 V Out 8B0C0320: 2x 24 V Out 8B0C0320Hx00.00A-1: 1x 24 V In / 2x 24 V Out
<b>Dimensions [mm]</b>	Width: 53 Height: 317 Depth: 263 (wall mounting) 212 (cold plate mounting) 209 (feed-through mounting)	Width: 106.5 Height: 317 Depth: 263 (wall mounting) 212 (cold plate mounting) 209 (feed-through mounting)	Width: 106.5 Height: 317 Depth: 263 (wall mounting) 212 (cold plate mounting) 209 (feed-through mounting)	Width: 213.5/427.5 [8BVP1650] Height: 317 Depth: 263 (wall mounting) 212 (cold plate mounting) 209 (feed-through mounting)	Width: 53 Height: 317 Depth: 263 (wall mounting) 212 (cold plate mounting) 209 (feed-through mounting)	Width: 106.5 Height: 317 Depth: 263 (wall mounting) 212 (cold plate mounting) 209 (feed-through mounting)	Width: 213.5/427.5 [8BVI1650] Height: 317 Depth: 263 (wall mounting) 212 (cold plate mounting) 209 (feed-through mounting)	Width: 53 Height: 317 Depth: 263 (wall mounting) 212 (cold plate mounting) 209 (feed-through mounting)

	8CVI045/088
<b>Features</b>	IP65 inverter modules Uncontrolled and safe stops integrated Integrated connections for motor holding brake and temperature sensor
<b>Mounting options</b>	Cold plate mounting
<b>Power mains connection</b>	750 VDC
<b>Installed load</b>	In preparation
<b>24 VDC power supply</b>	External via hybrid cable
<b>DC bus connection</b>	In preparation
<b>Motor connector</b>	Continuous power 1.5/4 kW Continuous current 4.5/8.8 A <sub>eff</sub> Peak current 13.5/24.5 A <sub>eff</sub> Short circuit /ground fault protection
<b>24 VDC internal</b>	-
<b>I/O connections</b>	2 trigger inputs 1 24 V output 2 enable inputs per axis (Cat. 4 EN ISO 13849-1)
<b>Additional connections</b>	POWERLINK Temperature sensors Motor holding brake
<b>Optional plug-in modules</b>	-
<b>Slots for plug-in modules</b>	-
<b>Variations</b>	EnDat 2.1 encoder [8CVI0xxE1xxxx.xx-x] HIPERFACE encoder [8CVI0xxH1xxxx.xx-x] SinCos encoder [8CVI0xxS1xxxx.xx-x]
<b>Dimensions [mm]</b>	Width: 137 Height: 287.2 Depth: 131