

# 30 V Power Supplies, 1 phase

30 V power supplies, 1 phase

4 A, 8 A or 16 A

LED operation indicator




Suitable for Safety and standard Masters/Gateways with the option  
 "1 Gateway, 1 Power Supply for 2 AS-i networks, inexpensive power supplies"

Optimized for use in ASi-5 networks



(figure similar)



Figure	Power supply <sup>(1)</sup>	Operating voltage	Output voltage	Output current	Nominal power	Data decoupling <sup>(2)</sup>	Protection rating	Article No.
	30 V power supply, optimized for ASi-5/ASi-3	100 ... 240 VAC, 1 phase	30 ... 31.2 VDC	4 A	120 W	integrated in the gateway	IP20	<b>BW4218</b>
	30 V power supply, optimized for ASi-5/ASi-3	100 ... 240 VAC, 1 phase	30 ... 31.2 VDC	8 A	240 W	integrated in the gateway	IP20	<b>BW4219</b>
	30 V power supply, optimized for ASi-5/ASi-3	100 ... 240 VAC, 1 phase	30 ... 31.2 VDC	16 A	480 W	integrated in the gateway	IP20	<b>BW4221</b>

**(1) ASi power supply:**

Special power supplies with integrated data decoupling unit for use in ASi-3 only networks. Suitable for all Bihl+Wiedemann ASi-3 gateways and safety monitors.

**30 V power supply:**

Inexpensive standard power supplies, suitable as an alternative for use with ASi gateways and safety monitors with integrated data decoupling unit (version "1 power supply, 1 gateway for 2 ASi networks, inexpensive power supplies") and with all 24 Volt ASi gateways.

**30 V power supply, optimized for ASi-5/ASi-3:**

Inexpensive standard power supplies, optimized for use with ASi-5/ASi-3 gateways and safety monitors with integrated data decoupling unit (version "1 power supply, 1 gateway for 2 ASi networks, inexpensive power supplies") and with all 24 Volt ASi-5/ASi-3 gateways.

**In order to avoid interferences in ASi-5 communication, Bihl+Wiedemann recommends the use of power supplies optimized for ASi-5/ASi-3.**

**(2) Integrated in the power supply:**

Data decoupling is performed in the special ASi power supply with an integrated data decoupling unit. ASi gateways and safety monitors missing their own, integrated data decoupling unit require a special ASi power supply for each ASi network.

**Integrated in the gateway:**

Bihl+Wiedemann ASi gateways and safety monitors with integrated data decoupling unit (version "1 power supply, 1 gateway for 2 ASi networks, inexpensive power supplies") can be operated with an inexpensive 30 V standard power supply.

# 30 V Power Supplies, 1 phase

Article No.	BW4218	BW4219	BW4221
<b>Input</b>			
Nominal voltage	100 ... 240 V <sub>AC</sub>		
Voltage range	85 ... 264 V <sub>AC</sub>		
Voltage derating	-2.5%/V <sub>AC</sub> < 97 V <sub>AC</sub>	-2.5%/V <sub>AC</sub> < 100 V <sub>AC</sub>	
Frequency range	47 ... 63 Hz		
Nominal current (nominal load)	2.30 A at 100 V <sub>AC</sub> ; 1.24 A at 230 V <sub>AC</sub>	2.74 A at 100 V <sub>AC</sub> ; 1.25 A at 230 V <sub>AC</sub>	5.56 A at 100 V <sub>AC</sub> ; 2.23 A at 230 V <sub>AC</sub>
Inrush current limitation	< 20 A, NTC	< 20 A, NTC active	
Turn-on time	0.25 s at 100 V <sub>AC</sub> ; 0.20 s at 230 V <sub>AC</sub>	1.30 s at 100 V <sub>AC</sub> ; 0.25 s at 230 V <sub>AC</sub>	0.45 s at 100 V <sub>AC</sub> ; 0.20 s at 230 V <sub>AC</sub>
Mains buffer time	10 ms at 100 V <sub>AC</sub> ; 80 ms at 230 V <sub>AC</sub>	15 ms at 100 V <sub>AC</sub> ; 17 ms at 230 V <sub>AC</sub>	8 ms at 100 V <sub>AC</sub> ; 20 ms at 230 V <sub>AC</sub>
Internal fuse	4 AT	6.3 AT	10 AT
Recommended power circuit breaker (characteristics)	6 A, 10 A, 16 A (B, C)	10 A, 16 A (B, C)	
Surge voltage protection (varistor)	yes		
<b>Output</b>			
Nominal voltage	31.0 V <sub>DC</sub>		
Voltage range	30 ... 31.2 V <sub>DC</sub>		
Direct current	4 A	8 A	16 A
Nominal power	120 W	240 W	480 W
Current limitation (typical)	4.5 A, short-circuit and open-circuit proof	8 ... 9 A, short-circuit and open-circuit proof	17 A, short-circuit and open-circuit proof
Parallel operation	yes		
Serial operation	yes		
Power losses (stand-by/nominal load)	1.2 W/1.6 W at 230 V <sub>AC</sub>	6.6 W/24.4 W at 230 V <sub>AC</sub>	7.2 W/42.4 W at 230 V <sub>AC</sub>
Max. power losses	19.4 W at 100 V <sub>AC</sub> /30.5 V/4 A	31.3 W at 100 V <sub>AC</sub> /30.5 V/8 A	68.3 W at 100 V <sub>AC</sub> /30.5 V/16 A
Efficiency (typical)	89%	91%	92%
Ripple (typical)	< 30 mV <sub>SS</sub>	< 50 mV <sub>SS</sub>	< 70 mV <sub>SS</sub>
Resistance to reverse feed	max. 35 V <sub>DC</sub>		
Protection against internal surge voltage	max. 41 V <sub>DC</sub>	max. 40 V <sub>DC</sub>	
<b>Display</b>			
LED POWER (green)	U <sub>out</sub> > 28.5 V <sub>DC</sub> , relay contact "DC OK" closed		
<b>Connection</b>			
Input/output	push-in terminals		
Nominal cross section input	0.2 ... 2.5 mm <sup>2</sup> (AWG 24 ... 12)		
Nominal cross section output	0.2 ... 2.5 mm <sup>2</sup> (AWG 24 ... 12)	0.75 ... 8 mm <sup>2</sup> (AWG 20 ... 8)	
Nominal cross section DC OK	0.2 ... 2.5 mm <sup>2</sup> (AWG 24 ... 12)		

Article No.	BW4218	BW4219	BW4221
<b>Environment</b>			
Applied standards	EN 61010-1, UL 61010-1 EN 61010-2-201, UL 61010-2-201 IEC 60364-4-41 (DIN VDE 0100-410) EMV acc. EN 61204-3 CE acc. 2014/30/EU		
	EN 60335-1	-	
UL reference number	PC-0130-040-0	PC-0130-080-0	PC-0130-160-0
Operating altitude	max. 2000 m		
Ambient temperature	-25 °C ... +70 °C (no condensation permitted)		
Storage temperature	-25 °C ... +85 °C		
Housing	aluminum, cover plastic, for DIN rail mounting		
Required mounting distance (left/right)	-		
Required mounting distance (over/under)	50 mm		
Protection class acc. EN 61140	I		
Overvoltage category	III		
Pollution degree	2		
Protection category acc. EN 60529	IP20		
Weight	590 g	930 g	1600 g
Dimensions (W / H / D in mm)	42 / 127 / 126	55 / 127 / 160	95 / 127 / 158

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