

D.6 Electrical data - BM441X basic unit

FOR SALE IS:
BM4414-ST0-01300-03

	BM4414-STx ⁹⁾	BM4414-CTx ⁸⁾⁹⁾	
Input rated power ¹⁾	5.1 kVA	6.9 kVA	
Input rated current ¹⁾ (I _{eff})	7.3 A	10.0 A	
Distortion factor of the input current ¹⁾ (THD _I)	109%	113%	
Input current max. (I _{eff})	20.0 A	20.0 A	
DC-link rated voltage ¹⁾ (U _{DC})	540 V _{DC}		
DC link capacity (internal)	330 μF	330 μF	
DC link discharging time (internal DC link capacity)	240 s	240 s	
DC link capacity (external), permitted	see ►Figure 61◄ on page 170		
Delay time mains off ⇒ mains on ¹²⁾	at least 60 s		
Output voltage ¹⁾ (U _{AC})	3 x 0 V to 3 x 370 V		
Output frequency	0 Hz to 450 Hz		
Output rated current ¹⁾⁴⁾⁵⁾⁶⁾ (I _{AC})	at 4 kHz ³⁾	max. 5.5 A	max. 7.5 A
Output rated current ¹⁾⁴⁾⁵⁾⁶⁾ (I _{AC})	at 8 kHz ³⁾	max. 5.0 A	max. 5.0 A
Output peak current ¹⁾⁴⁾⁵⁾⁷⁾ (I _{AC})	at 4 kHz ³⁾	max. 20.0 A	max. 20.0 A
Output peak current ¹⁾⁴⁾⁵⁾⁷⁾ (I _{AC})	at 8 kHz ³⁾	max. 12.0 A	max. 12.0 A
Max. peak current time ⁷⁾	max. 1 s		
Output power DC link terminals ¹⁰⁾	max. 3.0 kW	max. 4.3 kW	
Chopper current permissible (Î)	max. 12.0 A		
Chopper resistor external	≥ 65 Ω		
Chopper start-up voltage (Û)	780 V		
Chopper peak power	9.4 kW	9.4 kW	
Permissible chopper continuous power	3.0 kW	3.0 kW	
Power loss referring to mains voltage	80 W	102 W	
Power loss referring to control voltage	max. 60 W		
Current of the integrated brake interface	max. 1.0 A		

¹⁾ All rated values refer to a mains input voltage of 400 V/50 Hz and a control voltage of 24 V.

²⁾ The output voltage is a pulsed d.c. voltage. The operating range refers to the RMS of the fundamental wave.

³⁾ Switching frequency of the inverter (adjustable).

⁴⁾ RMS at an environmental temperature of 40 °C.

The type key has the form: BM4XXX - XXX - XXXXX[Ryy] - XX. Directly behind the type key is the design code (-XXXX - X - XXX - XXX).

In the following table the type key is explained.

BM4414-ST0-01300 - 03

BM4XXX - XXX - XXXXX[Ryy] - XX	Device generation
BM4 ⁴ XX - XXX - XXXXX[Ryy] - XX	Controller type
	4: Vector controller with and without encoder feedback (closed loop / open loop)
BM4X ¹ XX - XXX - XXXXX[Ryy] - XX	Size of cabinet
	1 to 7 (from cabinet size 1 there are two different wide versions)
BM4XX ⁴ - XXX - XXXXX[Ryy] - XX	Current grading (output rated current)
	2 to 6 (current value is dependent on the cabinet size), see appendix D
BM4XXX - ^S XXX - XXXXX[Ryy] - XX	Cooling type
	S: air-cooled with air supply and with air outlet in the control cabinet A: air-cooled with air supply and with air outlet outside the control cabinet Z: water-cooled with water cooler in the control cabinet F: water-cooled with water cooler outside the control cabinet C: (cold plate) cooling via mounting wall of the control cabinet
BM4XXX - ^T XX - XXXXX[Ryy] - XX	Mains type
	T: T for ST-trails T: T for ST-trails T: T for ST-trails
BM4XXX - ⁰ XX - XXXXX[Ryy] - XX	Safety relay
	0: no module 1: Module with one relay and high power current contacts 2: Module with two relays and high power current contacts 3: Module with one relay and low current contacts 4: Module with two relays and low current contacts
BM4XXX - XXX - ⁰ XXXX[Ryy] - XX	Hardware type/power unit type
	0: Rectifier and inverter with chopper resistor transistor $U_{DC} = 540\text{ V}$ 1: Rectifier and inverter with chopper resistor transistor $U_{Mains} = 230\text{ V} \pm 10\%$, $U_{DC} = 310\text{ V}$ 2: Power module (only output sided inverter). Operation as power module, $U_{DC} = 540\text{ V}$
BM4XXX - XXX - ¹ XXXX[Ryy] - XX	Hardware type/controller unit versions
	1: Module in slots A to H pluggable 2: Modules in slots A to M pluggable
BM4XXX - XXX - XX ³⁰⁰ XX[Ryy] - XX	Hardware type (internal information via Baumüller Nürnberg GmbH.)
	0XX: Controller without 7-segment display (RS 485 interface) 1XX: Controller without 7-segment display (RS 485 interface) 2XX: Controller with 7-segment display (RS 485 interface) 3XX: Controller with 7-segment display (Ethernet interface)