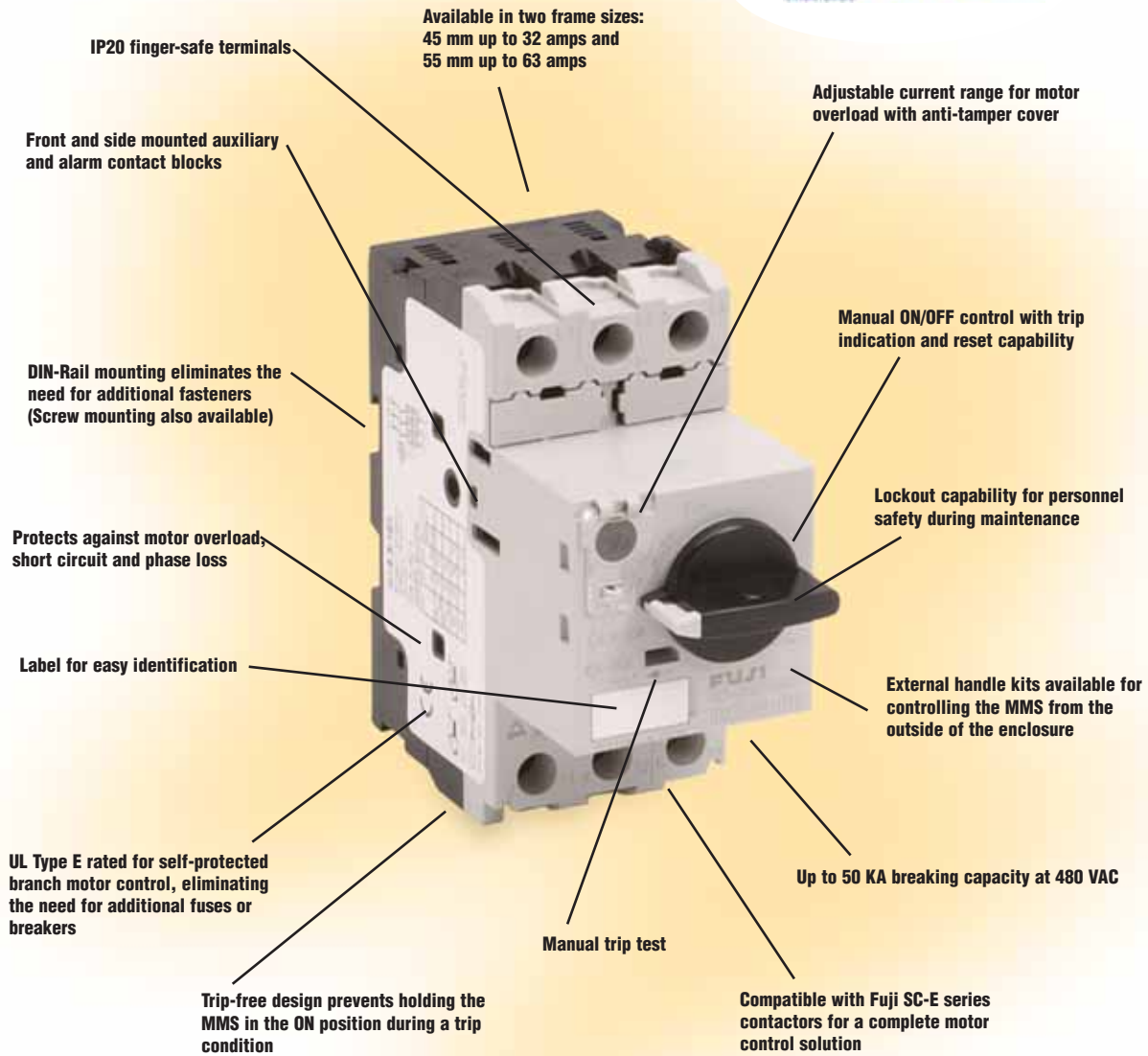


Fuji Duo Series Manual Motor Starters

The manual motor starter is a protective device for motor use that provides optimal protection by integrating the functions of a molded case circuit breaker and thermal overload relay into a compact unit. Since Fuji's MMS is UL listed for Category E self-protected motor control, it can be used for motor branch circuit protection without the need for additional protection such as fuses or molded case circuit breakers. The MMS is available in a 32A version with

a 45 mm frame width, and a 63A version with a 55 mm frame width. Both MMS versions have high breaking capacities, up to 100,000A in some ranges. A wide range of accessories is available, including shunt trips and undervoltage releases.



Auxiliary and alarm contact blocks



Shunt trips and undervoltage releases



MMS external handles



MMS Busbars

Accessories

Fuji Duo Series Manual Motor Starters

General Information

Features

- Adjustable thermal-magnetic trip
- Available in two frame sizes, 45 mm width and 55 mm width
- A wide motor capacity range up to 40 hp, 3-phase (440/480 VAC, 63A); 60 hp @ 600 V
- Rotary handle operators
- On/Off and trip state indicators for all frames
- Max. breaking capacity of 100 kA (240 VAC)
- Common accessories to reduce inventory
- A wide rated operational current range of up to 32A for the 45 mm wide and 63A for the 55 mm wide starters
- ON/OFF and trip indicators for instant status recognition
- Accessories such as auxiliary contact blocks, shunt trip devices, and undervoltage trip devices are compatible with the 45 mm and 55 mm wide frame sizes
- External operating handles are available as optional accessories
- Lockout/tagout feature

Standards

- UL listed, file E163944, Standard UL 508
- cUL listed, file E163944, CSA C22.2 No.14
- TÜV, CE
- cULus listed for group installation per NEC 430-53(c)



BM3RHB-xxx Models (45mm wide)

Rated current: 0.16 to 32A

Rated insulation voltage: 690V

Operation handle: Rotary

Short circuit current rating:

- 100 kA at 240 VAC
- 50 kA at 480 VAC

NOTE: When using BM3RHB-xxx MMS in a UL Type E application, you must also use part numbers BZOTKUAB (short-circuit contact block) and BZOTCRE (line side terminal cover).



BM3VHB-xxx Models (55mm wide)

Rated current: 10 to 63A

Rated insulation voltage: 1000V

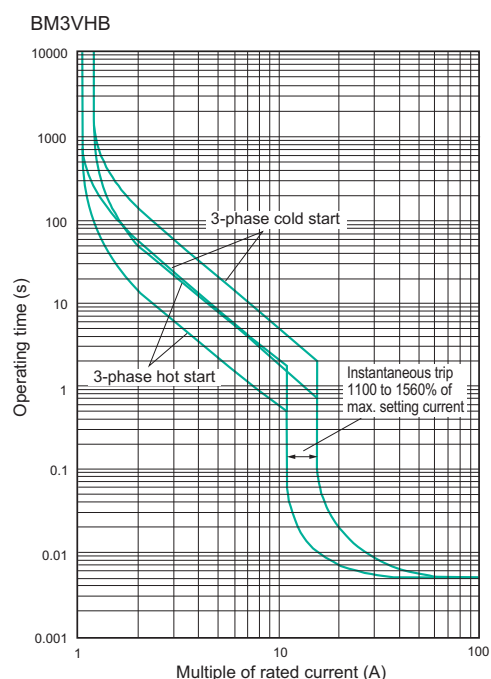
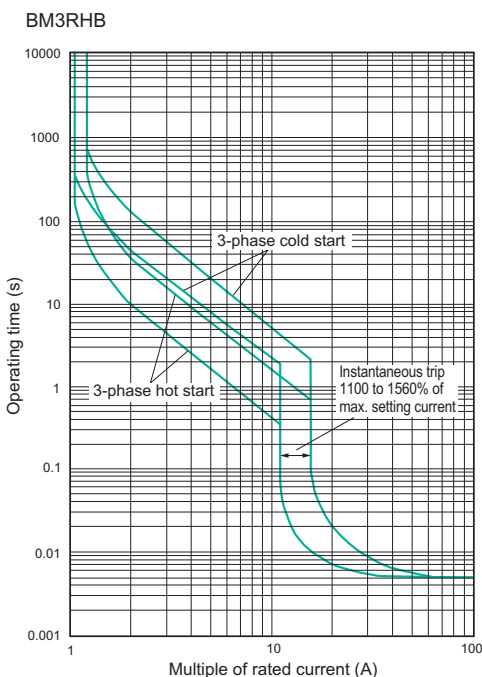
Operation handle: Rotary

Short circuit current rating:

- 100 kA at 240 VAC
- 50 kA at 480 VAC

NOTE: When using BM3VHB-xxx MMS in a UL Type E application, you must also use part number BZOTKUAB (short-circuit contact block).

Characteristic curves



Fuji Duo Series Manual Motor Starters

BM3RHB-xxx Specifications



General Specifications: 45 mm Frame Width - BM3RHB-XXX Series											
Part Number	Price	Adjustable Current Range <i>I_e</i> : Min.-Max. (A)	UL/CSA 3-Phase HP Rating ¹				Instantaneous Trip Current (A)	UL/CSA Short Circuit Current Rating (kA) ²			Max. Listed Branch Circuit Protection - Fuse or MCCB (A) ²
			200-208VAC	220-240VAC	440-480VAC	550-600VAC		240VAC	480VAC	600VAC	
BM3RHB-P16	<-->	0.1-0.16	Rated to motor full-load amperage		In accordance with motor full-load current		2.1	100	50	10	500
BM3RHB-P25	<-->	0.16-0.25					3.3	100	50	10	500
BM3RHB-P40	<-->	0.25-0.4					5.2	100	50	10	500
BM3RHB-P63	<-->	0.4-0.63					8.2	100	50	10	500
BM3RHB-001	<-->	0.63-1					13	100	50	10	500
BM3RHB-1P6	<-->	1-1.6					1/2	100	50	10	500
BM3RHB-1P6	<-->	1-1.6	3/4	3/4	20.8	100	50	10	500		
BM3RHB-2P5	<-->	1.6-2.5	1/2	1/2	1	1-1/2	32.5	100	50	10	500
BM3RHB-004	<-->	2.5-4	3/4	3/4	2	3	52	100	50	10	500
BM3RHB-6P3	<-->	4-6.3	1	1-1/2	3	5	81.9	100	50	10	500
BM3RHB-010	<-->	6.3-10	2	3	5	7-1/2	130	100	50	10	500
BM3RHB-013	<-->	9-13	3	3	7-1/2	10	169	100	50	10	500
BM3RHB-016	<-->	11-16	3	5	10	10	208	100	50	10	500
BM3RHB-020	<-->	14-20	5	5	10	15	260	100	50	10	500
BM3RHB-025	<-->	19-25	7-1/2	7-1/2	15	20	325	100	50	10	500
BM3RHB-032	<-->	24-32	10	10	20	30	416	100	50	10	500

Note 1: BM3RHB-xxx are cUL listed as HP rated motor controllers.

Note 2: BM3RHB-xxx are cUL listed for group installation per NEC430-53(C).

General Specifications: 45 mm Frame Width - BM3RHB-XXX Series - continued		
Features	Adjustable thermal-magnetic trip type	
Number of Poles	3	
Handle Type	Rotary	
Rated Current <i>I_e</i> (A)	0.16 to 32	
Rated Operational Voltage <i>U_e</i> (V)	200 to 690	
Rated Frequency (Hz)	50/60	
Rated insulation Voltage <i>U_i</i> (V)	690	
Rated Impulse Withstand Voltage <i>U_{imp}</i> (kV)	6	
Utilization	IEC 60947-2 Circuit Breaker	
Category	IEC 60947-4-1 Motor Starter	
Trip Class IEC 60947-4-1	10	
Instantaneous Trip Characteristic	13 x <i>I_e</i> max.	
Power Loss (total of 3-pole)	7W: <i>I_n</i> =0.16 to 25A 8.5W: <i>I_n</i> =32A	
Mechanical Durability (operations)	100,000: <i>I_n</i> =0.16 to 25A 70,000: <i>I_n</i> =32A	
Electrical Durability (operations)	100,000: <i>I_n</i> =0.16 to 25A 70,000: <i>I_n</i> =32A	
Max. Operations per Hour (motor start-up)	25	
Phase-loss Protection	Provided	
Trip Indicator	Provided	
Test Trip Function	Provided	
Dimensions (mm) WxHxD	45x90x79	
Weight (oz/g)	13.05 / 370	
Optional Accessories	Auxiliary Contact Block	Yes
	Alarm Contact Block	Yes
	Auxiliary and Alarm Contact Block	Yes
	Short-Circuit Alarm Contact Block	Yes
	Shunt Trip Device	Yes
	Undervoltage Trip Device	Yes
External Operating Handle	Yes	
Standards & Agency Approvals	IEC 60947-1, 60947-2, 60947-4-1, UL 508 file E163944, CSA C22.2 No.14 file 20479	



Fuji Duo Series Manual Motor Starters

BM3VHB-xxx Specifications

General Specifications: 55 mm Frame Width - BM3VHB-XXX Series											
Part Number	Price	Adjustable Current Range <i>I_e</i> : Min.-Max. (A)	UL/CSA 3-Phase hp Rating ¹				Instantaneous Trip Current (A)	UL/CSA Short Circuit Current Rating (kA) ²			Max. Listed Branch Circuit Protection - Fuse or MCCB (A) ²
			200-208VAC	220-240VAC	440-480VAC	550-600VAC		240VAC	480VAC	600VAC	
BM3VHB-010	<-->	6.3-10	2	3	5	7-1/2	130	100	50	10	600
BM3VHB-013	<-->	9-13	3	3	7-1/2	10	169	100	50	10	600
BM3VHB-016	<-->	11-16	3	5	10	10	208	100	50	10	600
BM3VHB-020	<-->	14-20	5	5	10	15	260	100	50	10	600
BM3VHB-025	<-->	19-25	7-1/2	7-1/2	15	20	325	100	50	10	600
BM3VHB-032	<-->	24-32	10	10	20	30	416	100	50	10	600
BM3VHB-040	<-->	28-40	10	10	30	30	520	100	50	10	600
BM3VHB-050	<-->	35-50	15	15	30	40	650	100	50	10	600
BM3VHB-063	<-->	45-63	20	20	40	60	819	100	50	10	600

Note 1: BM3VHB-xxx are cUL listed as HP rated motor controllers. **Note 2:** BM3VHB-xxx are cUL listed for group installation per NEC430-53(C).

General Specifications: 55 mm Frame Width - BM3VHB-XXX Series - continued		
Features	Adjustable thermal-magnetic trip type	
Number of Poles	3	
Handle Type	Rotary	
Rated Current <i>I_e</i> (A)	10 to 63	
Rated Operational Voltage <i>U_e</i> (V)	200 to 690	
Rated Frequency (Hz)	50/60	
Rated Insulation Voltage <i>U_i</i> (V)	1,000	
Rated Impulse Withstand Voltage <i>U_{imp}</i> (kV)	8	
Utilization Category	IEC 60947-2 Circuit Breaker IEC 60947-4-1 Motor Starter	
Trip Class IEC 60947-4-1	Cat. A AC-3	
Instantaneous Trip Characteristic	10	
Power Loss (total of 3-pole)	11W: <i>I_n</i> = 10 to 32A 15W: <i>I_n</i> = 40 to 50A 17W: <i>I_n</i> = 63A	
Mechanical Durability (operations)	13 x <i>I_e</i> max.	
Electrical Durability (operations)	50,000	
Max. Operations per Hour (motor start-up)	25,000	
Phase-Loss Protection	25	
Trip Indicator	Provided	
Test Trip Function	Provided	
Dimensions (mm) WxHxD	Provided	
Weight (oz/g)	55x110x96	
Optional Accessories	Auxiliary Contact Block	27.51 / 780
	Alarm Contact Block	Yes
	Auxiliary and Alarm Contact Block	Yes
	Short-Circuit Alarm Contact Block	Yes
	Shunt Trip Device	Yes
	Undervoltage Trip Device	Yes
	External Operating Handle	Yes
Standards & Agency Approvals	IEC 60947-1, 60947-2, 60947-4-1, UL 508 file E163944, CSA C22.2 No.14 file 20479	

Fuji Duo Series Manual Motor Starters

DIN-rail mounting

The MMS can be mounted to a 35 mm DIN rail. Secure the rail with screws at mounting pitch of less than 400 mm for the BM3R type and less than 300 mm for the BM3V type.

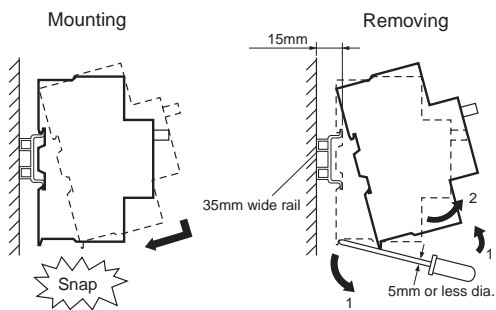
Applicable rail:

Use a 15 mm-high DIN rail, such as our DN-R35HS1, which conforms to EN-50022 and IEC715.

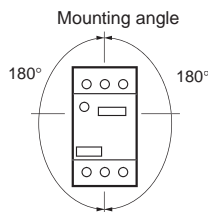
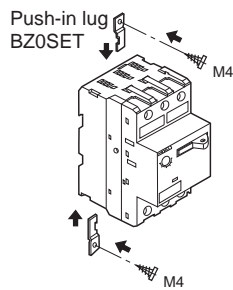
The standard DIN rail mounting direction is horizontal. When using the MMS on vertically mounted DIN rail, use end clamps.

Screw mounting

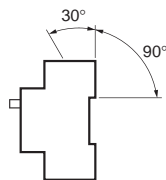
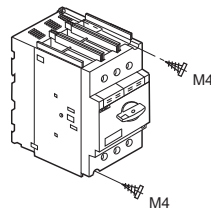
The separately sold push-in lug (BZOSET) is required for screw mounting the BM3R frame. The BM3V frame can be screw mounted directly to the panel.



BM3RHB-xxx



BM3VHB-xxx



Wiring

While pressing the wire with a screwdriver, tighten the screw to the specified tightening torque.

Environmental Specifications

Ambient Temperature	Operating: -5 to +55°C Storage: -40 to +65°C	No sudden temperature changes resulting in condensation or icing.
Humidity	45 to 85%RH	
Altitude	2000m or lower	
Atmosphere	No excessive dust, smoke, corrosive gases, flammable gases, steam or salt.	
Vibration	10 to 55Hz 15m/s ²	No abnormal shock or vibration.
Shock	50m/s ²	

Wiring Specifications

Wire Size and Tightening Torque

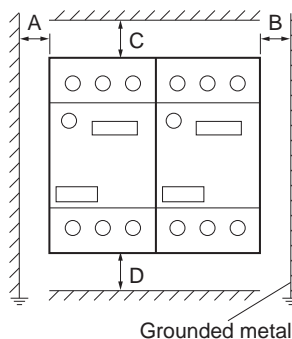
Type	BM3RHB-XXX	BM3VHB-XXX	BZO Accessories
Solid Wire (mm)	1.6 to 2.6 dia.	1.6 to 2.6 dia.	1 to 1.6 dia.
Stranded Wire (mm²)	Single-wire	1 to 10	0.5 to 2.5
	2-wire	1 to 6	0.5 to 2.5
AWG	Single-wire	18 to 8	18 to 14
	2-wire	18 to 10	18 to 14
Sheath Stripping Length (mm)	Approx.10	Approx.13	Approx.10
Terminal Screw	Pan head screw (PZ2) M4	Pan head screw (PZ2) M6	Pan head screw (PZ2) M3.5
Tightening Torque (N·m)	2	4	0.8

Note: There is no need for a crimp terminal or any other terminal on the end of the connection wire.

Arc Space Requirements

Arc Space Requirements

Part Number	Rated operational voltage U _e	Minimum distance to grounded metal (mm)	
	(V)	A,B	C,D
BM3RHB-XXX	Up to 500	15	30
	Up to 690	40	50
BM3VHB-XXX	Up to 500	15	40
	Up to 690	40	50



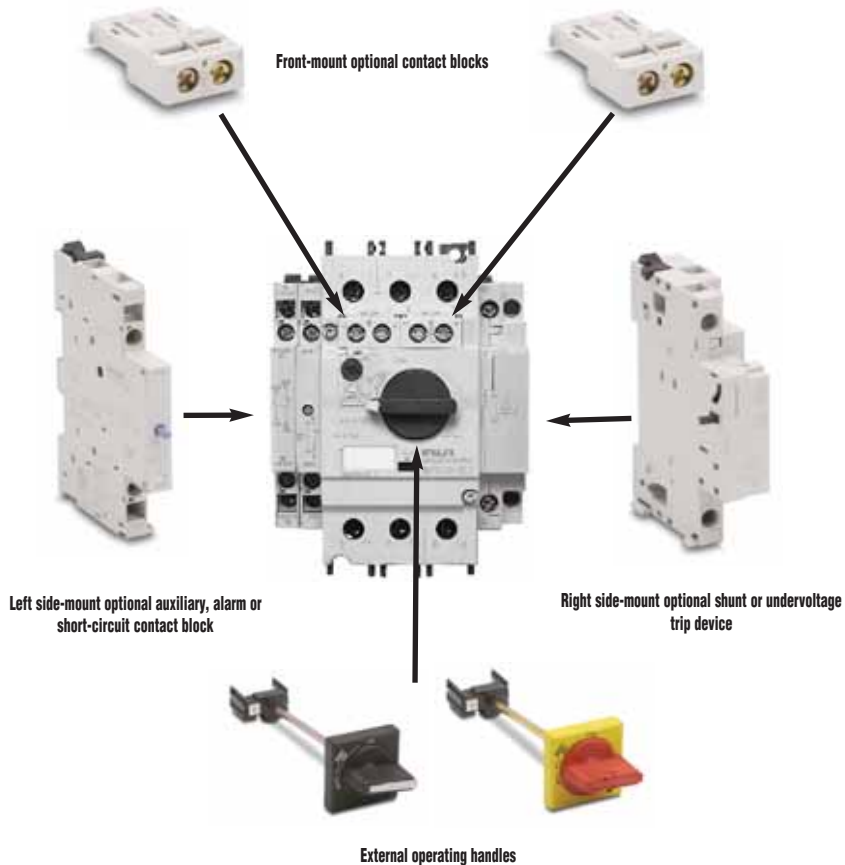
When frames are mounted side-by-side, operating conditions such as a high ambient temperature or using the maximum setting for continuous carrying current may cause slight changes in operating characteristics due to temperature rises. Under such conditions, it is recommended that the frames be separated by at least 5mm.

Fuji Duo Series Manual Motor Starters Accessories

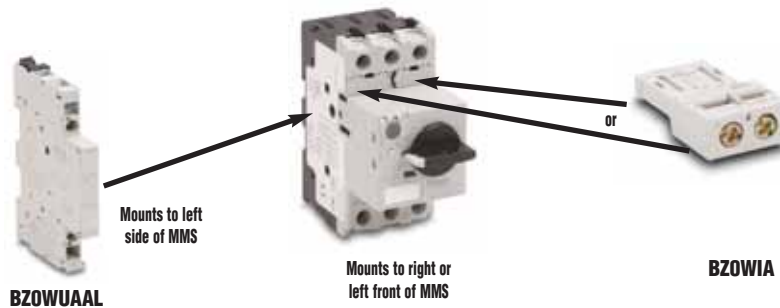
Optional accessories

- All accessories can be used with BM3R (45 mm wide) and BM3V (55 mm wide) frames
- Accessories are easily mounted
- Internally-mountable auxiliary contact blocks and alarm contact blocks can be front mounted
- Side-mountable auxiliary contact blocks can be mounted on the left side
- Shunt trip and undervoltage trip devices are available in a wide operating coil voltage range and mount on the right side
- Standard and emergency external handles are available
- IP20 terminal cover helps prevent accidental contact with electrically charged parts
- Optional front mounted contact and alarm blocks eliminate horizontal space needed with the DIN rail

Installation of optional contact blocks and trip devices



Auxiliary contact blocks



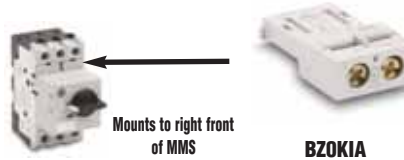
Auxiliary Contact Blocks						
Part Number	Price	Description	Starter Type	Mounting	Contact Arrangement	Weight (g/lb)
BZOWIA	<-->	These contact blocks do not discriminate between OFF, overload, phase-loss, or short circuit. The blocks are linked to the ON/OFF operation of the MMS, and also operate in the event of an overload, phase-loss, or short circuit. Up to two contact blocks can be mounted to the right/left front, and up to two contact blocks can be mounted to the left sides.	BM3RHB-XXX BM3VHB-XXX	Front	1NO	9/0.02
BZOWIB	<-->				1NC	
BZOWUAAL	<-->			Left side	2NO	45/0.1
BZOWUABL	<-->				1NO + 1NC	
BZOWUBBL	<-->				2NC	

Fuji Duo Series Manual Motor Starters Accessories

Accessories (continued)

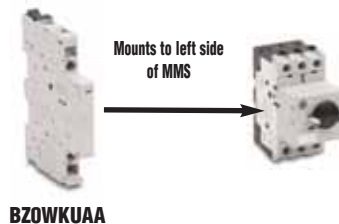


Alarm contact blocks



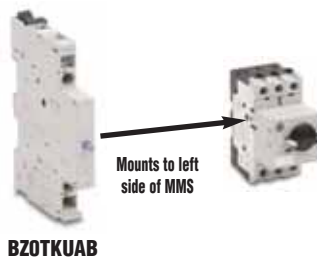
Alarm Contact Blocks						
Part Number	Price	Description	Starter Type	Mounting	Contact Arrangement	Weight (g/lb)
BZOKIA	<--->	<ul style="list-style-type: none"> This block operates when the MMS trips due to overload, phase-loss, or short-circuit. It is not linked to the ON/OFF operation of the MMS. 	BM3RHB-XXX BM3VHB-XXX	Front (Right side only)	1NO	9/0.02
BZOKIB	<--->	Note: Operation can be checked with the test trip function.			1NC	

Auxiliary and alarm contact blocks



Combination Auxiliary/Alarm Contact Blocks						
Part Number	Price	Description	Starter Type	Mounting	Contact Arrangement	Weight (g/lb)
BZOWKUAA	<--->	<ul style="list-style-type: none"> This contact block combines an auxiliary contact and an alarm contact that operates in the event of an overload, phase loss, or short-circuit. Alarm contact is not linked to the ON/OFF operation of the MMS. An alarm is displayed in the contact block's indicator when the alarm contact operates. Note: Operation can be checked with the test trip function.	BM3RHB-XXX BM3VHB-XXX	Left	1NO (Aux.) + 1NO (Alarm)	45/0.1

Short-circuit alarm contact blocks



Note 1: Required when using MMS in a UL Type E application.

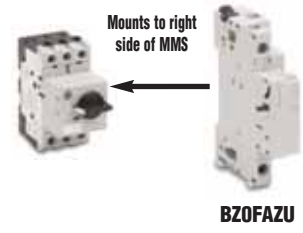
Note 2: Do not configure this with an auxiliary contact block; the contact will only close when a short circuit occurs.

Short-Circuit Alarm Contact Block						
Part Number	Price	Description	Starter Type	Mounting	Contact Arrangement	Weight (g/lb)
BZOTKUAB	<--->	<ul style="list-style-type: none"> The contacts operate only when the MMS has tripped due to a short-circuit (cannot be checked with trip test function). When these contacts operate, the blue reset button extends out, and a trip indication is displayed. The power to the MMS can be turned ON after pressing the reset button. Note: Be sure to press the reset button before mounting to the MMS. 	BM3RHB-XXX BM3VHB-XXX	Left	1NO + 1NC	45/0.1

Fuji Duo Series Manual Motor Starters Accessories

Accessories (continued)

Shunt trip devices



Shunt Trip Devices						
Part Number	Price	Description	Starter Type	Mounting	Contact Arrangement	Weight (g/lb)
BZOFAZU	<--->	This device is used to remotely trip the MMS.	BM3RHB-XXX BM3VHB-XXX	Right	24V 50/60Hz	115/0.25
BZOFDZU	<--->	Notes: • This device cannot be used together with an undervoltage trip device. • When the MMS has been tripped with the shunt trip device, press the reset button before turning ON the power.			110-127V 50Hz/120V 60Hz	
BZOFKZUD	<--->				24-60VDC (time rating of coil is 5s)	

Undervoltage trip devices



Undervoltage Trip Devices						
Part Number	Price	Description	Starter Type	Mounting	Contact Arrangement	Weight (g/lb)
BZORA2ZU	<--->	This device automatically trips the MMS when the control circuit voltage drops below the specified value. Notes: This device cannot be used together with a shunt trip device. When the MMS has been tripped with the undervoltage trip device, press the reset button before turning ON the power.	BM3RHB-XXX BM3VHB-XXX	Right	24V 60Hz	115/0.25
BZORDZU	<--->				110-127V 50Hz/120V 60Hz	
BZOR4ZU	<--->				415-440V 50Hz/460-480V 60Hz	

Push-in lug



Push-in Lug				
Part Number	Price	Description	Starter type	Weight (g/lb)
BZOSET	<--->	Push-in mounting lug. Required for screw mounting of MMS; qty: 10/pkg Note: See page 17-32 for installation instructions	BM3RHB-XXX	2.0/0.04

Terminal Cover



Terminal Cover			
Part Number	Price	Description	Starter Type
BZOTCRE	<--->	Line side terminal cover. Note: BZOTCRE required only when using BM3RHB-xxx MMS in a UL Type E application (along with short circuit alarm contact block BZOTKUAB).	BM3RHB-XXX

Fuji Duo Series Manual Motor Starters Accessories

Accessories (continued)

External operating handles



BZ0VBBL

BZ0VYRL



External Operating Handles					
Part Number	Price	Description	Starter Type	Handle Type	Weight (g/lb)
BZ0VBBL	<--->	<ul style="list-style-type: none"> Used to operate an MMS installed inside a panel, from the outside of the panel. Equipped with an interlock mechanism that prevents someone from mistakenly opening the panel door when the MMS is in the ON state. The shaft can be cut to match the distance between the MMS and the panel door. Door interlock function OFF lock function Can be locked OFF with up to three padlocks. Note: Padlocks are to be provided by the customer. Release screw allows the door to be opened with the handle in the ON position. IP54 enclosure 	BM3RHB-XXX	Standard (black)	160/0.35
BZ0VYRL	<--->			Emergency (red/yellow)	160/0.35
BZ0VBBL	<--->		BM3VHB-XXX	Standard (black)	160/0.35
BZ0VYRL	<--->			Emergency (red/yellow)	160/0.35

NOTE: Premade MMS enclosures are currently not available.

Accessory specifications

Trip Device Specifications			
Accessory Type and Part Number		Shunt trip device	Undervoltage device
		BZ0Fxxx	BZ0Rxxx
Standard		IEC 60947-1, UL 508	
Rated Insulation Voltage (VAC)	IEC 60947	690	
	UL 508	600	
No. of ON-OFF Operations		5000	
Operating Time (ms)		20	
Power Consumption	Inrush (VA/W)	21/12	
	Sealed (VA/W)	8/1.2	
Voltage Range	Tripping Voltage (V)	0.7 to 1.1 Ue	0.35 to 0.7 Ue
	Closing Voltage (V)	-	0.85 to 1.1 Ue
Time Rating of Coil (s)	AC: Continuous	AC: Continuous	
	DC: 5		

Fuji Duo Series Manual Motor Starters Accessories

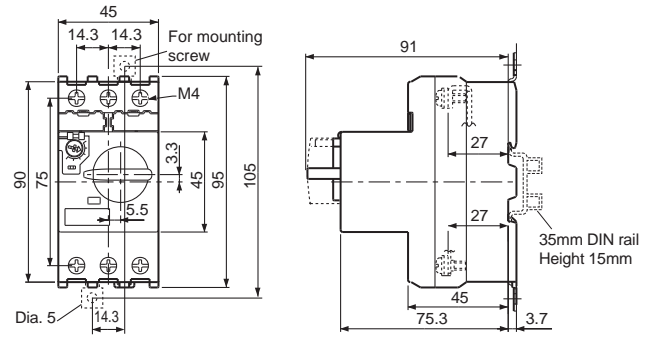
Accessory specifications (continued)

Contact Block Specifications						
Accessory Type and Part Number		Auxiliary contact block/front	Auxiliary contact block/side	Alarm contact block	Aux. and alarm contact block	Short-circuit alarm contact block
		BZOWIA, BZOWIB <i>(note 3)</i>	BZOWUAAL, BZOWUABL, BZOWUBBL	BZOKIA, BZOKIB <i>(note 3)</i>	BZOWKUAA	BZOTKUAB
Standard		IEC 60947-5-1, UL 508				
Rated Operational Current (A)	48VAC AC-15 <i>(note 2)</i>	5	6	5	6	6
	125VAC	3	4	3	4	4
	230VAC	1.5	4	1.5	4	4
	400VAC	<i>(note 3)</i>	2.2	<i>(note 3)</i>	2.2	2.2
	500VAC		1.5		1.5	
	690VAC		0.6		0.6	
	48VDC DC-13 <i>(note 2)</i>	1.38	5	1.38	5	5
	110VDC	0.55	1.3	0.55	1.3	1.3
220VDC	0.27	0.5	0.27	0.5	0.5	
Contact Rating Code UL 508 <i>(note 1)</i>	AC	B300	A600	B300	A600	A600
	DC	Q300	P300	Q300	P300	P300
Min. Voltage and Current		17V / 5mA				
<p>Note 1: NEMA ICS 5-2000. For more information, refer to Control Circuit Contact Electrical Ratings, page 17-77.</p> <p>Note 2: IEC utilization category. For more information, refer to page 17-78.</p> <p>Note 3: The indicated contacts should not be used in control circuits higher than 300V.</p>						

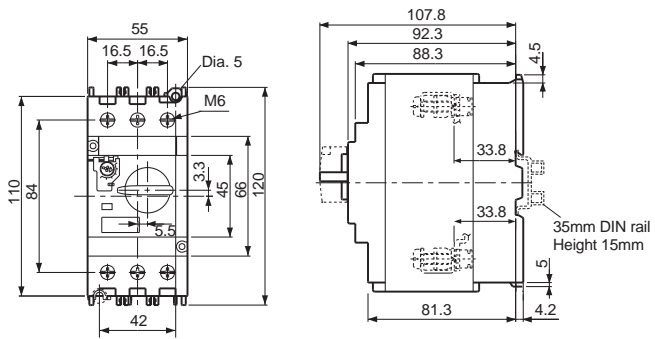
Dimensions (mm)

Manual motor starters

Rotary handle types BM3RHB-xxx



Rotary handle types BM3VHB-xxx



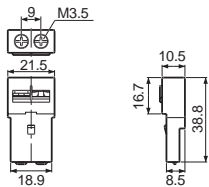
Fuji Duo Series Manual Motor Starters Accessories

Dimensions
(continued - mm)

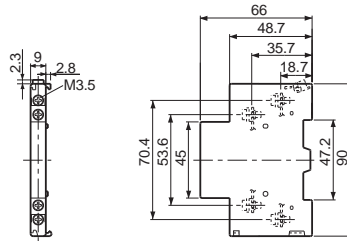


Accessories

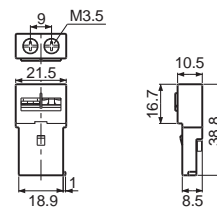
Auxiliary contact blocks, front mounting
BZ0WIA, BZ0WIB



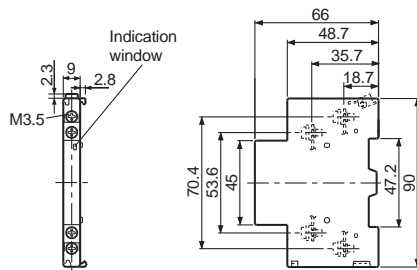
Auxiliary contact blocks, side mounting
BZ0WUAAL, BZ0WUABL, BZ0WUBBL



Alarm contact blocks, front mounting
BZ0KIA, BZ0KIB

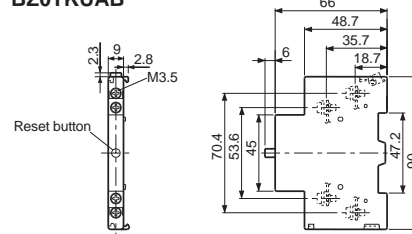


Auxiliary and alarm contact blocks
BZ0WKUAA



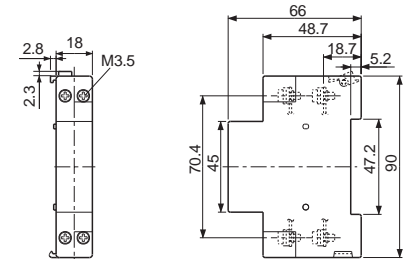
Short-circuit alarm contact block

BZ0TKUAB



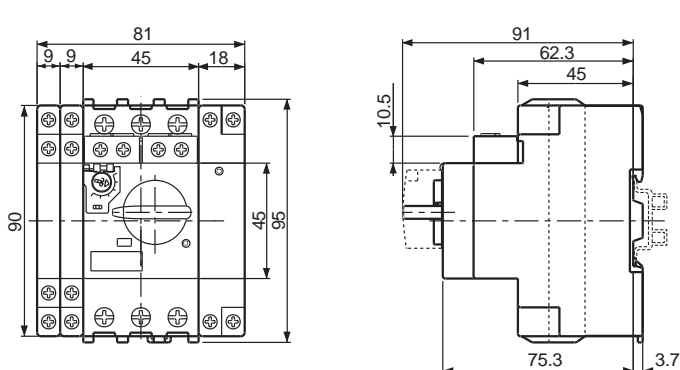
Shunt trip devices BZ0Fxxxx

Undervoltage trip devices BZ0Rxxxx

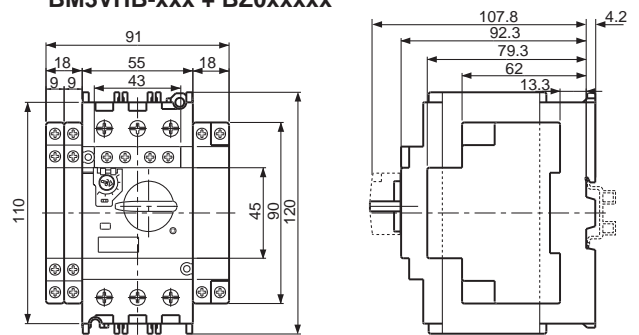


MMS with accessories

BM3RHB-xxx + BZ0xxxxx



BM3VHB-xxx + BZ0xxxxx

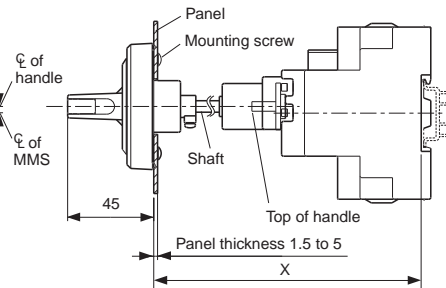
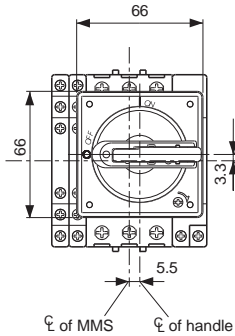


Fuji Duo Series Manual Motor Starters Accessories

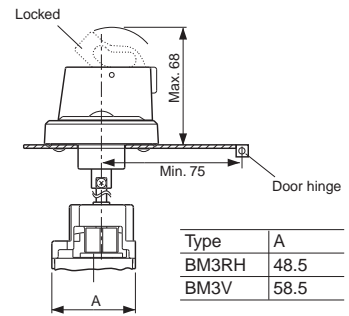
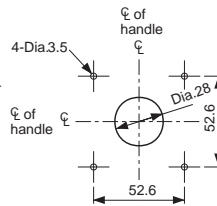
Dimensions (continued - mm)

External operation handle dimensions and panel drilling

External operation handle BZ0Vxxx



Panel drilling

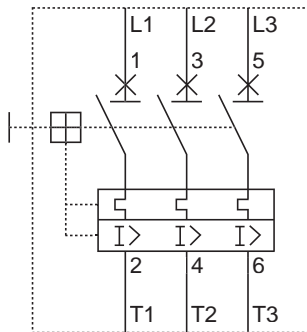


Type	X min.	X max.
BZ0VBBL, BZ0VYRL	139 ±2	289 ±2
BZ0VBBM, BZ0VYRM	156 ±2	306 ±2

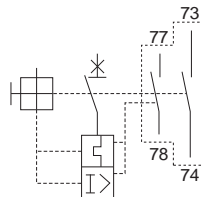
Type	A
BM3RH	48.5
BM3V	58.5

Wiring diagrams

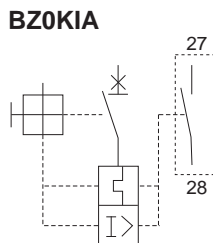
MMS



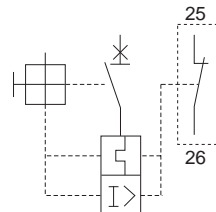
Auxiliary and alarm contact blocks BZ0WKUAA



Alarm contact blocks Front mounting BZ0KIA



BZ0KIB



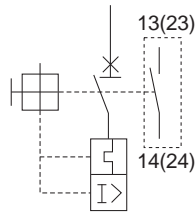
Fuji Duo Series Manual Motor Starters Accessories

Wiring diagrams (continued)

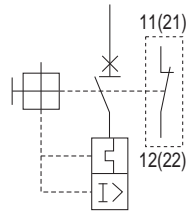
Auxiliary contact blocks

Front mounting

BZ0WIA

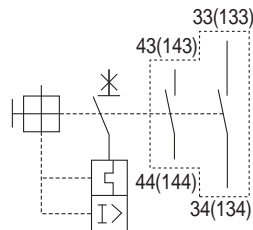


BZ0WIB

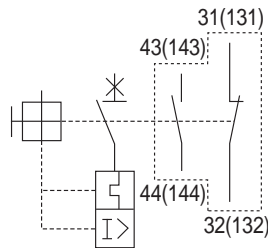


Side mounting

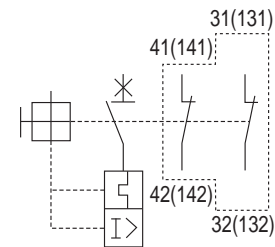
BZ0WUAAL



BZ0WUABL

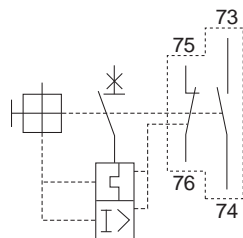


BZ0WUBBL



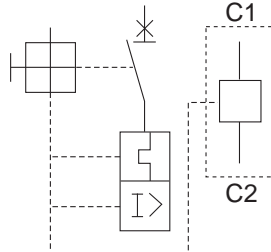
Short-circuit alarm contact blocks

BZ0TKUAB



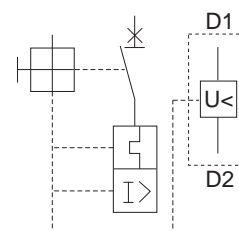
Shunt trip devices

BZ0Fxxxx



Undervoltage trip devices

BZ0Rxxxx

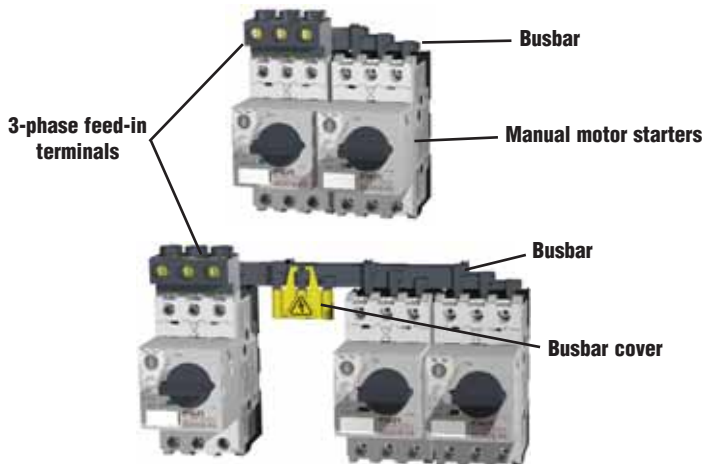


Fuji Duo Series Manual Motor Starters Accessories

Busbar system

Features

- The busbar system reduces wiring time and saves floor space.
- The busbar makes it easy to power from 2 to 5 manual motor starters, with no wiring needed.
- The 3-phase feed-in terminals are used to connect the wire for the power supply circuit.
- The busbar cover guards against accidental touching of nonconnected busbar terminals (charged parts).



Note: Busbar photos continued on next page.



BZOBFRA



BZOBFVA



BZOBV12A



BZOBBCRA

Busbar System Components and Ratings							
Part Number	Price	Description	Used with	Specifications	Weight (g)		
BZOBRO2A	<-->	Busbar	BM3R	Continuous current: 64A max. pin connection	2-BM3R, modular space: 45mm	30	
BZOBRO3A	<-->				3-BM3R, modular space: 45mm	50	
BZOBRO4A	<-->				4-BM3R, modular space: 45mm	70	
BZOBRO5A	<-->				5-BM3R, modular space: 45mm	90	
BZOBRO12A	<-->				BM3R+ 1 external accessory, 9mm wide	2-BM3R, modular space: 54mm	30
BZOBRO13A	<-->		3-BM3R, modular space: 54mm	55			
BZOBRO14A	<-->		4-BM3R, modular space: 54mm	80			
BZOBRO15A	<-->		5-BM3R, modular space: 54mm	105			
BZOBV02A	<-->		BM3V	Continuous current: 126A max. pin connection		2-BM3V, modular space: 55mm	140
BZOBV03A	<-->				3-BM3V, modular space: 55mm	240	
BZOBV04A	<-->				4-BM3V, modular space: 55mm	340	
BZOBV12A	<-->				BM3V + 1 external accessory, 9mm wide	2-BM3V, modular space: 64mm	150
BZOBV13A	<-->					3-BM3V, modular space: 64mm	270
BZOBV14A	<-->		4-BM3V, modular space: 64mm	380			
BZOBFRA	<-->		3-phase feed-in terminal	BM3R	Continuous current: 64A max. Applicable cable size: 25mm ² max.	40	
BZOBFVA	<-->	BM3V		Continuous current: 126A max. Applicable cable size: 50mm ² max.	170		
BZOBBCRA	<-->	Busbar cover	BZOBR	For pin connection NOTE: Some fine tuning and fitting adjustments may be needed.	10		
BZOBBCVA	<-->		BZOBV		5		

Fuji Duo Series Manual Motor Starters Accessories

Busbar system (continued)



BZ0BV04A

BZ0BV12A

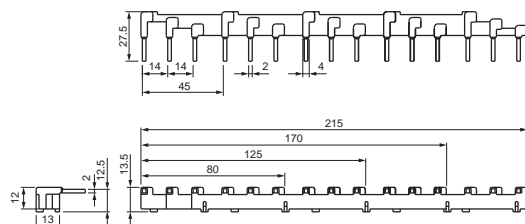
BZ0BV13A

BZ0BV14A

Dimensions (mm)

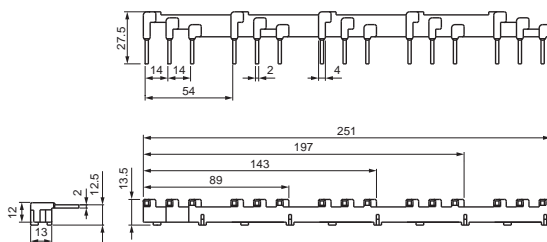
For BM3RHB-xxx

BZ0BR0xx Without external accessory



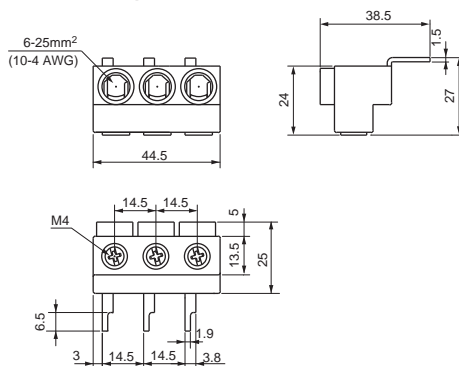
BZ0BR02A: 80 mm
BZ0BR03A: 125 mm
BZ0BR04A: 170 mm
BZ0BR05A: 215 mm

BZ0BR1xx With 1 external accessory



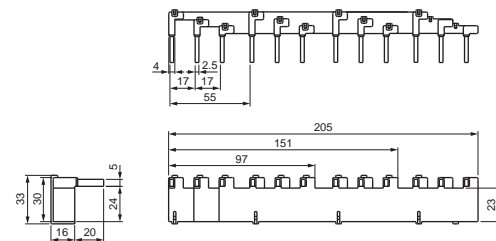
BZ0BR12A: 89 mm
BZ0BR13A: 143 mm
BZ0BR14A: 197 mm
BZ0BR15A: 251 mm

BZ0BFRA 3-phase feed-in terminals



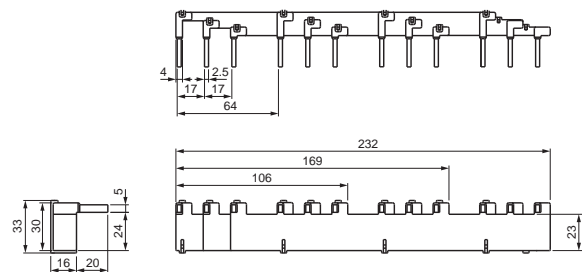
For BM3VHB-xxx

BZ0BV0xx Without external accessory



BZ0BV02A: 97 mm
BZ0BV03A: 151 mm
BZ0BV04A: 205 mm

BZ0BV1xx With 1 external accessory, 9mm wide



BZ0BV12A: 106 mm
BZ0BV13A: 169 mm
BZ0BV14A: 232 mm

BZ0BFVA

