

## General Info MMP type MS116

- Suitable for 3phase motors up to 10 HP @ 480V
- AMP range from 0.16-16A
- UL listed & CSA certified for Group Motor Installation
- Wide range of accessories
- Small width (45mm)Arguments
- Save space
- High short circuit capacity
- Adjustable Overload protection
- Short circuit protection
- Phase failure detection



### Technical data

Rated current: 0.16-16A  
 Rated operating voltage:  
 max. 600V  
 Tripping class:10  
 Max. kA IC @ 600V 30kA  
 Mechanical Life Time:  
 100,000 switches

### Accessories

- Auxiliary contacts (side & front)
- Under-voltage release
- Shunt trips
- Bell alarm
- Locking device
- Through the door operator
- Enclosures
- Direct contactor mounting adapter
- Suitable for Smissline busbar system up to 200A
- Busbar system

## General Info MMP type MS325

- Suitable for 3phase motors up to 15 HP @ 480V
- AMP range from 0.16-25A
- UL listed & CSA certified for Group Motor Installation
- Wide range of accessories
- Save space
- High short circuit capacity
- Adjustable Overload protection
- Short circuit protection
- Phase failure detection
- UL508 (type E) listing available

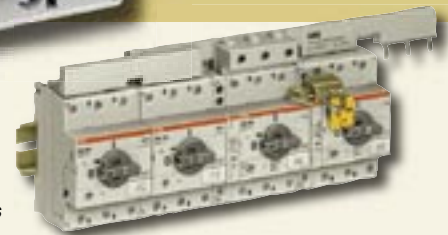


### Technical data

Rated current:  
 0.16-25A  
 Rated operating voltage:  
 max. 600V  
 Tripping class: 10  
 Max. kA IC @ 600V 50kA  
 Mechanical Life Time:  
 100,000 switches

### Accessories

- Auxiliary contacts (side & front)
- Under-voltage release
- Shunt trips
- Bell alarm
- Locking device
- Through the door operator
- Enclosures
- Direct contactor mounting adapter
- Suitable for Smissline busbar system up to 200A
- Busbar system



## General Info MMP type MS45x

- Suitable for 3phase motors up to 40 HP @ 480V
- AMP range from 11-50A
- UL listed & CSA certified for Group Motor Installation
- Wide range of accessories
- Save space
- High short circuit capacity
- Adjustable Overload protection
- Short circuit protection
- Phase failure detection
- UL508 (type E) listing available



### Technical data

Rated current: 11-50A  
Rated operating voltage:  
max. 600V  
Tripping class:10/20  
Max. kA IC @ 600V 50kA  
Mechanical Life Time:  
100,000 switches

### Accessories

- Auxiliary contacts (side & front)
- Under-voltage release
- Shunt trips
- Locking device
- Through the door operator
- Enclosures
- Direct contactor mounting adapter
- Suitable for Smisline busbar system up to 200A
- Busbar system

## General Info MMP type MS49x

- Suitable for 3phase motors up to 75 HP @ 480V
- AMP range from 11-100A
- UL listed & CSA certified for Group Motor Installation
- Wide range of accessories
- Save space
- High short circuit capacity
- Adjustable Overload protection
- Short circuit protection
- Phase failure detection
- UL508 (type E) listing available



### Technical data

Rated current:  
11-100A  
Rated operating voltage:  
max. 600V  
Tripping class: 10/20  
Max. kA IC @ 600V 100kA  
Mechanical Life Time:  
100,000 switches

### Accessories

- Auxiliary contacts (side & front)
- Under-voltage release
- Shunt trips
- Locking device
- Enclosures
- Direct contactor mounting adapter
- Suitable for Smisline busbar system up to 200A

# Manual Motor Protector MS116



MS116, BEA16/116, A12-30-10-84



MS116, BEA7/116, B7C-1



HK1-11



HKF1-11



UA1-120



AA1-110



BEA7/116



12644

Thermal setting range (Amps)	3-phase horsepower ratings			Catalog Number
	240V	480V	600V	
0.10 - 0.16	-	-	-	MS116-0.16
0.16 - 0.25	-	-	-	MS116-0.25
0.25 - 0.40	-	-	-	MS116-0.40
0.40 - 0.63	-	-	-	MS116-0.63
0.63 - 1.0	-	1/2	1/2	MS116-1.0
1.0 - 1.6	-	3/4	3/4	MS116-1.6
1.6 - 2.5	-	1	1.5	MS116-2.5
2.5 - 4.0	1/8	2	3	MS116-4.0
4.0 - 6.3	1/4	3	5	MS116-6.3
6.3 - 10	1/2	5	7.5	MS116-10
8.0 - 12	1/2	7.5	10	MS116-12
10.0 - 16	1	10	10	MS116-16

## ACCESSORIES FOR MS116

DESCRIPTION	Catalog Number
1 NO & 1 NC Auxiliary contact blocks, side mount	HK1-11
2 NO Auxiliary contact blocks, side mount	HK1-20
2 NC Auxiliary contact blocks, side mount	HK1-02
1 NO & 1 NC Auxiliary contact blocks, front mount	HKF1-11
1 NO & 1 NC Bell alarm contact blocks	SK1-11
2 NO Bell alarm contact blocks	SK1-20
2 NC Bell alarm contact blocks	SK1-02
24VAC Undervoltage trip	UA1-24
48VAC Undervoltage trip	UA1-48
60VAC Undervoltage trip	UA1-60
120VAC Undervoltage trip	UA1-120
230VAC Undervoltage trip	UA1-230
400VAC Undervoltage trip	UA1-400
415VAC Undervoltage trip	UA1-415
24VAC Shunt trip	AA1-24
110VAC Shunt trip	AA1-110
200 - 240VAC Shunt trip	AA1-230
350 - 415VAC Shunt trip	AA1-400
Busbar for direct mounting of contactors B6/B7	BEA7/116
Busbar for direct mounting of contactors A9/A12/A16	BEA16/116
Busbar for direct mounting of contactors A26	BEA26/116
Gray Enclosure with black handle, IP64	OTPA116L2P1
Gray Enclosure with red handle, IP64	OTPA116A2P1
Gray Enclosure with clear cover, 4 poles, IP55	12644
Gray Enclosure with clear cover, 6 poles, IP55	12646

# Manual Motor Protector MS325

## Thermal setting range (Amps)

## 3-phase horsepower ratings

## Catalog Number



MS325

UL 580 Type E



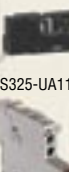
MS325, BEA26/325, A26-30-10-84, S3-M3, CK-11



MS325-HK11



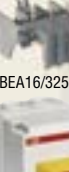
MS325-HK10



MS325-UA110



MS325-AS



BEA16/325



OTPA116A2P1

Thermal setting range (Amps)	3-phase horsepower ratings			Catalog Number
	240V	480V	600V	
0.10 - 0.16	-	-	-	MS325-0.16
0.16 - 0.25	-	-	-	MS325-0.25
0.25 - 0.40	-	-	-	MS325-0.40
0.40 - 0.63	-	-	-	MS325-0.63
0.63 - 1.0	-	1/2	1/2	MS325-1.0
1.0 - 1.6	-	3/4	3/4	MS325-1.6
1.6 - 2.5	1/2	1	1.5	MS325-2.5
2.5 - 4.0	1	2	3	MS325-4.0
4.0 - 6.3	1.5	3	5	MS325-6.3
6.3 - 9.0	2.5	5	7.5	MS325-9.0
9.0 - 12.5	3	7.5	10	MS325-12.5
12.5 - 16	5	10	10	MS325-16
16 - 20	5	10	15	MS325-20
20 - 25	7.5	15	20	MS325-25

### ACCESSORIES FOR MS325

DESCRIPTION	Catalog Number
1 NO & 1 NC Auxiliary contact blocks, side mount	MS325-HK11
2 NO Auxiliary contact blocks, side mount	MS325-HK20
2 NC Auxiliary contact blocks, side mount	MS325-HK02
1 NO & 1 NC Auxiliary contact blocks, front mount	MS325-HKF11
2 NO Auxiliary contact blocks, front mount	MS325-HKF20
1 NO Bell alarm contact blocks	MS325-SK10
1 NC Bell alarm contact blocks	MS325-SK01
24VAC Undervoltage trip	MS325-UA24
48VAC Undervoltage trip	MS325-UA48
60VAC Undervoltage trip	MS325-UA60
120VAC Undervoltage trip	MS325-UA110
230VAC Undervoltage trip	MS325-UA230
400VAC Undervoltage trip	MS325-UA400
415VAC Undervoltage trip	MS325-UA415
480VAC Undervoltage trip	MS325-UA480
110 - 240VAC/DC Shunt trip	MS325-ST110
24 - 60VAC/DC Shunt trip	MS325-ST24
Busbar for direct mounting of contactors B6/B7	BEA7/325
Busbar for direct mounting of reversing contactors VB6/VB7	MS325-VB7
Busbar for direct mounting of contactors A9/A12/A16	BEA16/325
Busbar for direct mounting of contactor A26	BEA26/325
Gray Enclosure with black handle, IP64	OTPA325B2P1
Gray Enclosure with red handle, IP64	OTPA325A2P1
Gray Enclosure with clear cover, 4 poles, IP55	12644
Gray Enclosure with clear cover, 6 poles, IP55	12646
Line Side infeed block - required for UL508 type E	S3-M3
Short circuit trip signal - required for UL 508 type E	CK-11

## Manual Motor Protectionm MS45x / MS49x

Thermal setting range (Amps)	3-phase horsepower ratings			Catalog Number
	230V	480V	575V	
11 - 16	5	10	15	MS450-16
14 - 20	7.5	15	20	MS450-20
18 - 25	10	20	25	MS450-25
22 - 32	10	25	30	MS450-32
28 - 40	15	30	40	MS450-40
36 - 45	15	30	40	MS450-45
40 - 50	20	40	50	MS450-50
11 - 16	5	10	15	MS497-16
14 - 20	7.5	15	20	MS497-20
18 - 25	10	20	25	MS497-25
22 - 32	10	25	30	MS497-32
28 - 40	15	30	40	MS497-40
36 - 50	20	40	50	MS497-50
45 - 63	25	50	60	MS497-63
57 - 75	25	60	75	MS497-75
70 - 90	30	75	100	MS497-90
80 - 100	40	75	100	MS497-100

### ACCESSORIES FOR MS45x / MS49x

DESCRIPTION	Catalog Number
1 NO & 1 NC Auxiliary contact blocks, side mount	HKS4-11
2 NO Auxiliary contact blocks, side mount	HKS4-20
2 NC Auxiliary contact blocks, side mount	HKS4-02
1 NO & 1 NC Auxiliary contact blocks, front mount	HK4-11
1 CHANGEOVER Auxiliary contact blocks, front mount	HK4-W
110 - 120VAC Undervoltage trip	UA4-120
208VAC Undervoltage trip	UA4-208
230 - 240VAC Undervoltage trip	UA4-240
400VAC Undervoltage trip	UA4-400
480VAC Undervoltage trip	UA4-480
Voltage continuous 50 - 60 Hz	Voltage 5 sec. Max.50 - 60 Hz, DC
20 - 24 Shunt trip	20 - 70 Shunt trip
30 - 110	70 - 190
210 - 240	190 - 330
350 - 415	330 - 500
MS450 Busbar for direct mounting of contactors A30/A40	BEA40/450
MS450 Busbar for direct mounting of contactor A50	BEA50/450
MS497 Busbar for direct mounting of contactors A50/A63/A75	BEA75/495
MS497 Busbar for direct mounting of contactors A95/A110	BEA110/495
Short circuit trip 1NO & 1NC - required for UL508 Type E applications	SK4-11
MS49x Type E Terminal - required for UL508 Type E applications	DX495



MS495, BEA110/495, A95-30-11-84



HKS4-11



HK4-11



UA4-120



AA4-110



BEA75/495



SK4-11

## Type MS116 Accessories

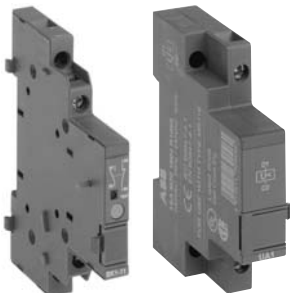
5



HK1-11



HKF1-11



SK1-11

UA1-120



OTPA116



12644

### Auxiliary contact blocks for Type MS116 (side mount)

Contact configuration	Catalog number	List price
1 NO & 1 NC 2 NO 2 NC	HK1-11 HK1-20 HK1-02	<b>\$ 33</b>

### Auxiliary contact blocks for Type MS116 (front mount)

Contact configuration	Catalog number	List price
1 NO & 1 NC	HKF1-11	<b>\$ 33</b>

### Bell alarm contact blocks for Type MS116

Contact configuration	Catalog number	List price
1 NO & 1 NC 2 NO 2 NC	SK1-11 SK1-20 SK1-02	<b>\$ 33</b>

### Undervoltage trip for Type MS116

Voltage (VAC)	Catalog number	List price
24 48 60 120 230 400 415	UA1-24 UA1-48 UA1-60 UA1-120 UA1-230 UA1-400 UA1-415	<b>\$ 82.50</b>

### Undervoltage trip with 1NO & 1NC auxiliary contact for Type MS116

Voltage (VAC)	Catalog number	List price
24 48 60 120 230 400 415	UA1-HK-24 UA1-HK-48 UA1-HK-60 UA1-HK-120 UA1-HK-230 UA1-HK-400 UA1-HK-415	<b>\$ 97.50</b>

### Locking device for Type MS116

Description	Catalog number	List price
Adaptor for padlock Type SA1	MS325-SA1	<b>\$ 15</b>
Complete padlock locking kit (adaptor, padlock & 3 keys)	MS325-SA3	<b>37.50</b>

### Molded plastic enclosures for Type MS116

Item description	Protection level	Catalog number	List price
Gray enclosure with black handle	IP64	OTPA116L2P1	<b>\$ 75</b>
Yellow enclosure with red handle	IP64	OTPA116A2P1	<b>75</b>
Gray enclosure with clear cover, 4 module	IP55	12644	<b>84</b>
Gray enclosure with clear cover, 6 module	IP55	12646	<b>98</b>

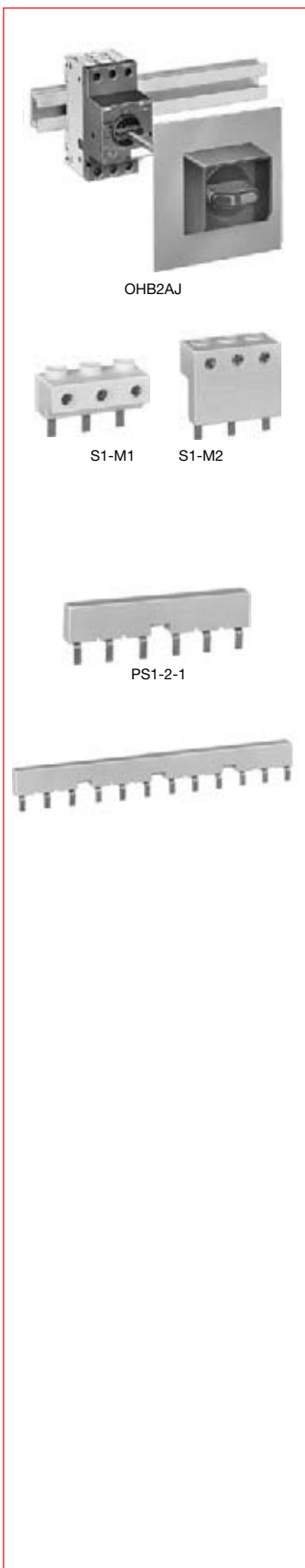
### Plastic adaptors for enclosures for Type MS116

Description	Catalog number	List price
PG16 to 1/2NPT	PG16-1/2NPT	<b>\$ 10</b>

### Shunt trip for Type MS116

Voltage (VAC)	Catalog number	List price
24V 110V 200 – 240V 350 – 415V	AA1-24 AA1-110 AA1-230 AA1-400	<b>\$ 75</b>

# Type MS116 Accessories



## Door mounting hardware for for Type MS116 ①

Description	Catalog number	List price
Shaft coupler	MSMN	\$ 15
NEMA 1, 3R, 12 Black selector handle	1SCA022384R6940	30
NEMA 1, 3R, 12 Red, yellow selector handle	1SCA022384R7080	30
4.1" length shaft	1SCA022347R3650	4
7.1" length shaft	1SCA022353R4620	6

## Power feed terminal blocks for Type MS116

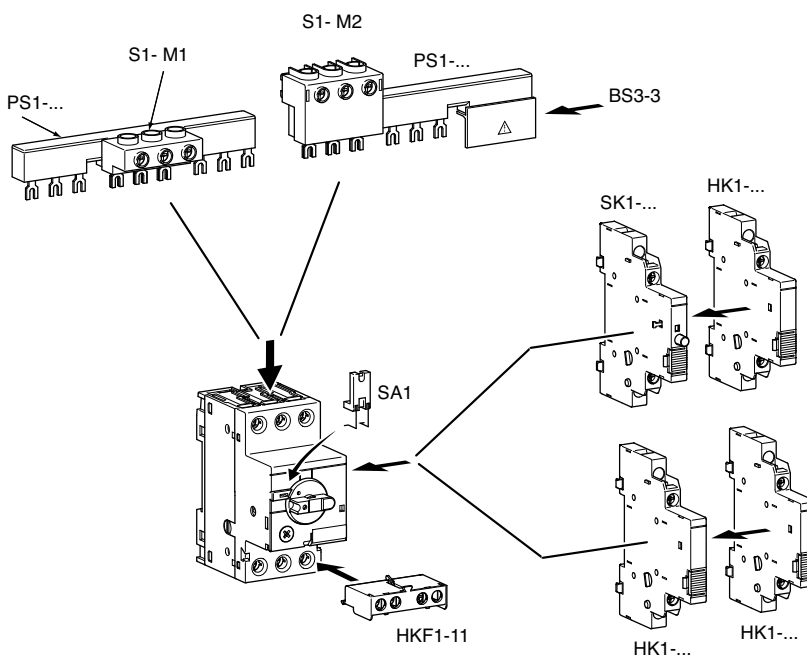
Description	Catalog number	List price
Flush w/bus bar Extends over busbar	S1-M1 S1-M2	\$ 24

## Busbars for Type MS116 (63A max.)

Description	Catalog number	List price
for 2 devices without auxiliary contacts	PS1-2-0	\$ 24
for 3 devices without auxiliary contacts	PS1-3-0	30
for 4 devices without auxiliary contacts	PS1-4-0	36
for 5 devices without auxiliary contacts	PS1-5-0	42
for 2 devices with 1 auxiliary contact	PS1-2-1	24
for 3 devices with 1 auxiliary contact	PS1-3-1	30
for 4 devices with 1 auxiliary contact	PS1-4-1	36
for 5 devices with 1 auxiliary contact	PS1-5-1	42
for 2 devices with 2 auxiliary contacts	PS1-2-2	24
for 3 devices with 2 auxiliary contacts	PS1-3-2	30
for 4 devices with 2 auxiliary contacts	PS1-4-2	36
for 5 devices with 2 auxiliary contacts	PS1-5-2	42
Busbar cover	BS3-3	9

## Busbar/Close coupling adapter for direct mounting of contactors

Description	Catalog number	List price
B6/B7	BEA7/116	\$ 12
A9/A12/A16	BEA16/116	13.50
A26	BEA26/116	15
AL9 - AL16	BEA16/116AL	13.50



① Must have shaft coupler, handle and shaft for through-the-door operation.  
② Consult factory.