



Type MBS25  
OPEN STYLE CIRCUIT  
PROTECTOR

Type MBS25  
COMBINATION MANUAL  
MOTOR CONTROLS



Type MBS25 S4  
OUTDOOR DUST  
TIGHT ENCLOSURE

# MOTOR CIRCUIT PROTECTOR

(MANUAL STARTER)



SINGLE AND THREE PHASE

**AEG** COMPONENT  
CONTROLS

## MOTOR CIRCUIT PROTECTOR TYPE MBS 25

25 Amp max. 600 Volt

- 1 Phase 115V 2HP  
230V 3HP
- 3 Phase 230V 7<sup>1/2</sup>HP  
460V 15HP  
600V 20HP

## TYPE MBS 25 GROUP MOUNTING SYSTEMS

- Bus Bar System  
90 Amp  
230 Amp
- Rail Mounting  
Contactors

## ENCLOSURES

- Type S4 SARLEX  
Outdoor / Dust Tight  
Water Tight (Hose Test)  
(IP55)

## ACCESSORIES

- Pilot Light
- Undervoltage
- Shunt Trip
- Extra Auxiliaries
- Indoor / Outdoor Enclosure
- Current Limiter





## TYPE MBS 25



MBS 25 with UV Trip

## TYPE MBS 25 APPLICATION DATA

### Manual Disconnect with Short Circuit Trip

**MBS 25** A Manual Disconnect and Starter, Type MBS, can fulfill the function of a Breaker/Disconnect in a combination starter. In such applications, instantaneous short circuit trip is usually desired. Type MBS standard instantaneous short circuit trip has higher interruption capability. Combination units with MBS 25 were tested to IC5,000 A Amp 600V.

## TYPE MBS 25 APPLICATION FEATURES

- Used as a manual motor starter, with the high short-circuit fault breaking capacity of a circuit breaker, in accordance with VDE 0600, IEC 292, and IEC 157-1.
- Single phase sensitivity and ambient temperature compensated thermal overload trip. (NEMA Class 10)
- Main switch and emergency disconnect switch properties (Emergency stop with mushroom head activator optional).
- Switch position indication with positive separation.
- Current limiter, type ID 50 option, add-on accessory. The rated breaking capacity with this combination, increases to 50 kA, 3 phase, 380 V.

### Cost Effectiveness

- Economical and space saving, in a compact design with small dimensions (1<sup>3/4</sup>" wide).
- Standardized cover sized for use in distribution applications for world wide use.

### Safety

- High operational safety factor. Compliance to VDE 0160 T 100, finger touch safety, and general safety standards of handling.

### Quality

- Reliable AEG standards of quality. Proven in the most difficult application conditions. Standard quality check includes 100% cycle test and heater calibration check.

### Flexibility

- Modular field assembly systems with plug-on auxiliary contacts.
- Designed to include field plug-on shunt or undervoltage trip within the switch unit frame.

### Mounting

- Panel mount or DIN rail mount standard.
- Terminals are in the vertical plane, readily accessible from the front for easy wiring. Designed for the power screwdriver application and finger touch safety.



MBS 25-S4 Enclosure

## Dual Application Description UL Listed

Type MBS Circuit Protectors have two protective elements, one to provide magnetic instantaneous trip and the other to provide inverse time thermal trip. Because of this dual instantaneous and thermal trip, Type MBS Protectors have been successfully applied in protective circuits in thousands of applications throughout the world.

## CONTINUOUS CURRENT RATINGS

Type MBS 25 to 25 Amp

### Thermal Trip for Motor Protection

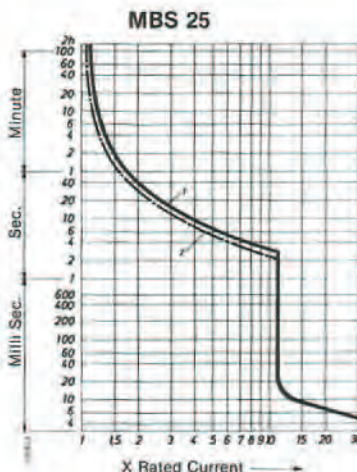
A Thermal Trip for motor protection is also included with each Type MBS. In a combination starter application, then, a duplicate overload is not necessary. (See Trip Curve B).

To apply, select the proper Type MBS to match the motor horse power, and set dial at exact motor full load current. Each Type MBS includes a three pole direct heated bimetallic overload which covers a wide range and is equivalent to many old style separate heaters. A key advantage is the ability to set at exact motor full load current and thereby provide more precision motor protection.

### Mounting

Type MBS can be panel mounted or rail mounted (MBS 25). For external operation, cutouts can be made in panel doors. Additionally, through the door operating handles with door interlocks are available on certain units.

Type MBS 25 UL Listed/CSA.



Typical MBS Trip Curve B



MBS 25-S4F Flush Plate



### MBS-25 Three Phase 3 Pole 600 Volt MCP + Manual Starter

Three Phase Horse Power			Thermal Overload Relay Adjustment Range (AMP)*	Basic Catalog No.	OPEN -O	Outdoor Dust Tight Hose Test Water Tight -S4 ▶	IC 5,000 AMP (480V) Group Fuse (UL) or Max CB Max Amps	High Fault Interrupting Current				
200V	230V	460V						575V	IC	Fuse	IC	CB
			0.25-0.4	MBS 25-D	\$69	\$101	1200	50kA	1200A	50kA	1200A	
			0.4-.63	MBS 25-E	69	101	1200	50kA	1200A	50kA	1200A	
	1/4	1/2	1/2	.63-1.0	MBS 25-F	69	101	1200	50kA	1200A	50kA	1200A
1/4	1/3	3/4	1	1.0-1.6	MBS 25-G	69	101	1200	50kA	1200A	50kA	1200A
1/2	1/2	1	1-1/2	1.6-2.5	MBS 25-H	69	101	1200	25kA	150A	10kA	125A
3/4	1	2	3	2.5-4	MBS 25-I	69	101	1200	25kA	150A	10kA	125A
1-1/2	1-1/2	3	5	4-6	MBS 25-K	69	101	1200	25kA	150A	10kA	125A
2	3	5	7-1/2	6-10	MBS 25-L	80	112	1200	25kA	150A	10kA	125A
3	5	10	10	10-16	MBS 25-M	80	112	1200	25kA	150A	10kA	125A
5	7-1/2	15	15	16-20	MBS 25-N	90	122	1200	25kA	150A	10kA	125A
-	7-1/2	15	20	20-25	MBS 25-O	90	122	1200	25kA	150A	10kA	125A

Also includes fixed instantaneous magnetic trip  
Lower current ratings are available to 0.1 Amp.

\* See bottom of page for current limiter module.

### MBS-25 Single Phase 2 Pole 600 Volt

One Phase Horse Power		Overload Relay Adjustment Range (AMP)*	Basic Catalog No.	OPEN -O	Outdoor Dust Tight Hose Test Water Tight -S4 ▶
115V	230V				
Smaller sizes available to 0.1 Amps					
	1/3	2.5-4	MBS 25-2P-I	\$69	\$101
1/4	1/2	4-6	MBS 25-2P-K	69	101
1/2	1-1/2	6-10	MBS 25-2P-L	80	112
1	2	10-16	MBS 25-2P-M	80	112
1-1/2	3	16-20	MBS 25-2P-N	90	122
2		20-25	MBS 25-2P-O	90	122

#### ORDER EXAMPLE:

3 HP 460V Enclosed with Red Pilot Light and 120V UV Trip (undervoltage trip)  
1-MBS-25-K Motor Circuit Protector  
1-MBS-25-S4 Enclosure  
1-MBS-25-PL-A-R Red Pilot Light Kit  
1-MBS-25-100-A UV Trip Kit



MBS-25

▶ Type S4 Series Enclosures are non-metal outdoor completely dust tight. Sarlex Enclosures have been widely used throughout the world in dust tight, hose pressure water tight, and corrosion proof applications. (IP55)



Mounting Options

#### Current Limiter Rapid module type Id 50

$I_t = 600V$ ,  $I_u = 32A$  for combination with Mbs 25  
Suitable for mounting in any position.

For increasing of the fault breaking capacity of Mbs 25 up to 50 kA/3 - 380V max.  
For single and group back up protection.

Rapid module type id 50 for single and group back up protection. Suitable for mounting in any position.

MBS25-140 \$50 LIST  
Type ID 50

**Current Limiter**  
Increases Interruption capacity to 50KA (380V)

Module Dimensions  
L-3,15", W-1,77", Depth 1.65"

## ENCLOSURES & ACCESSORIES

Catalog No.	List Price
MBS25-S4	\$32
MBS25-S4F	\$16
MBS25-S4-116	\$8
MBS25-114	\$7
MBS25-105	\$18
PG16-1/2	\$5.80
MBS25-106	\$30
MBS25-107	\$61
MBS25-108	\$19
HS9.11	\$20
HS9.20	\$15
HS9V.11	\$25
HS9V.20	\$17
HS10.11	\$20
HS10R10	\$20
HS10R01	\$20
MBS25-101-*	\$48
MBS25-100-*	\$48
MBS25-206	\$15
MBS 25-140	\$50



MBS 25-105 Lock Off Kit

### MBS 25 Accessories

Pilot Light for above enclosures. Specify color \*\* and voltage \*

Catalog No.	List Price
MBS25-PL- * - **	\$16



\* Voltage Suffix \*\*Color Suffix

- A 120V
- C 220V
- D 380V
- E 480V

- G green
- R red
- Example:  
MBS25-PL-A-R

Enclosure Type S4 IP55 Dust/Watertight

Flush Plate with Gasket IP55 Dust/Watertight  
Replacement Start/Stop Boot

Neutral Link for mounting above enclosures

Padlock Accessories for enclosures for up to 3 padlocks use.

PG Adaptor to 1/2" NPT  
Red Mushroom Operator for above enclosure IP55

- Latch Type MR
- Key Release MR
- Momentary MR

Auxiliary Contacts Side Mount

- 1 N.O., 1 N.C.
- 2 N.O.
- 1 N.O., 1 N.C. Early Activating
- 2 N.O. Early Activating

Auxiliary Contacts Inside Mount 1 N.O., 1 N.C.  
TRIP Alarm Aux. Switch Inside mount

- 1 N.O.
- 1 N.C.

SHUNT TRIP KIT \* specify voltage

- \* -A 120V 60 Hz 110V 50 Hz
- C 240V 60 Hz 220V 50 Hz
- D 380V 50 Hz
- E 480V 60 Hz
- G 24V 60 Hz

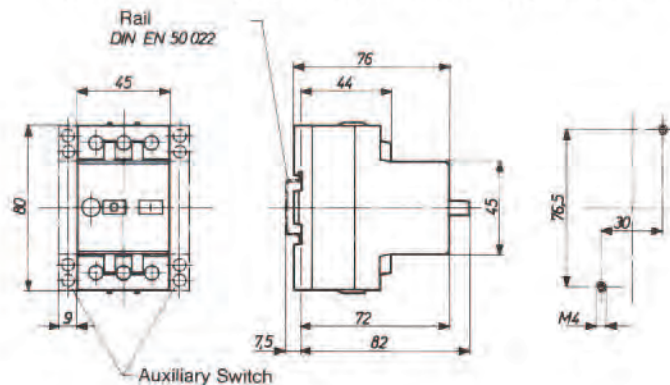
UNDERVOLTAGE TRIP \* specify voltage  
see above

Combination Rail Mounting Brackets  
Includes 2 DIN Rails to mount MBS25 and LS contactors

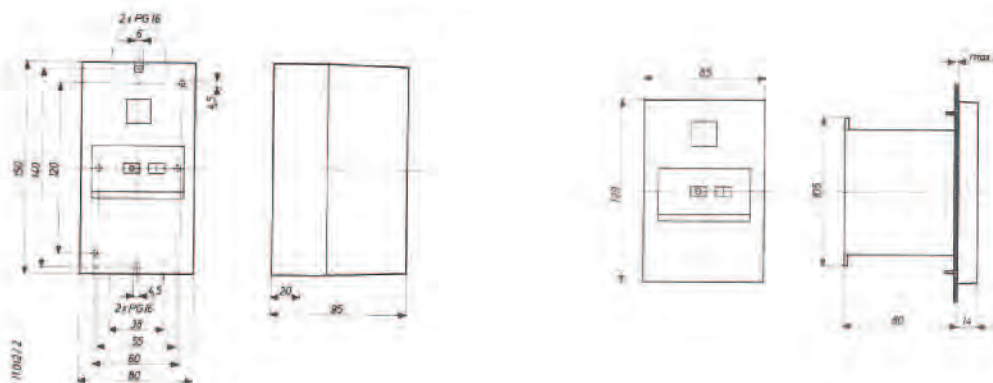
Current Limiter Rapid Module

For increasing fault current breaking capacity of MBS 25 up to 50 KA/3 380V max.

### MBS 25 - Open / Enclosed Dimensions



**MBS 25 (Open)**







<b>Starter carrier type pl 54</b> for snap-on to DIN rail	with 2 integral DIN rails for mounting of motor starter and contactor	<b>MBS 25-206</b>	\$15.00
<b>3 phase busbar block type d</b> fully isolated, $U_i = 660V$ , $I_U = 80A$	with 2 connections, length 99 mm with 3 connections, length 155 mm with 4 connections, length 208 mm with 5 connections, length 262 mm	<b>MBS 25-210</b> <b>MBS 25-240</b> <b>MBS 25-207</b> <b>MBS 25-208</b>	\$16.00 \$16.00 \$22.00 \$25.00
<b>Protection cover 3 pole</b>	for unused busbar terminations	<b>MBS 25-211</b>	\$ 2.00
<b>Supply block type db</b> fully isolated, $U_i = 660V$ , $I_U = 80A$	3 pole for 3 phase busbar block type d	<b>MBS 25-209</b>	\$16.00

## COMBINATION MANUAL MOTOR CONTROLS

(Din Rail or Screw Mount)

### Three Phase 3 Pole 600 Volt

Three Phase Horse Power				Thermal Overload Relay Adjustment Range (AMP)*	Basic Catalog No.	OPEN LIST
200V	230V	460V	575V			
				0.25-0.4	MBS 25-D-L5K-*	\$182
				0.4-.63	MBS 25-E-L5K-*	182
	1/4	1/2	1/2	.63-1.0	MBS 25-F-L5K-*	191
1/4	1/3	3/4	1	1.0-1.6	MBS 25-G-L5K-*	191
1/2	1/2	1	1-1/2	1.6-2.5	MBS 25-H-L5K-*	191
3/4	1	2	3	2.5-4	MBS 25-I-L5K-*	191
1-1/2	1-1/2	3	5	4-6	MBS 25-K-L5K-*	191
2	3	5	7-1/2	6-10	MBS 25-L-L5K-*	191
3	5	10	10	10-16	MBS 25-M-L5K-*	202
5	7-1/2	15	15	16-20	MBS 25-N-L7K-*	205
-	7-1/2	15	20	20-25	MBS 25-O-L11K-*	230

\* Specify voltage suffix

- A 120V 60Hz 110V 50Hz
- C 240V 60Hz 220V 50Hz
- D 380V 50Hz
- E 480V 60Hz
- G 24V 60Hz

**Combination Rail Mounting Brackets**  
Includes 2 DIN Rails to mount MBS25 and LS contactors MBS 25-206.



- Combination Manual Motor Controls are an ideal way of having short circuit protection provided with Magnetic Instantaneous trip as well as inverse time thermal protection built into one compact package.

- To increase short circuit protection to 50KA add option ID50 - current limiter (380 Vac) max.

- The combination allows you to utilize all MBS 25 options including Remote Shunt Trip, Undervoltage Trip and additional auxiliaries if required. (Found on page 96.)