**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 7.5HP
- 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
MOTOR CIRCUIT PROTECTOR
(MANUAL STARTER)

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 over-
  load 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" wide).
- Standardized 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 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 func-
tion of a Breaker/Disconnect in a com-
bination starter. In such applications, instant-
naneous short circuit trip is usually
desired. Type MBS standard instan-
taneous short circuit trip has higher inter-
ruption capability. Combination units
with MBS 25 were tested to IC5,000
A Amp 800V.

Type MBS 25 UL Listed/CSA.

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 ther-
al trip, Type MBS Protectors have been suc-
cessfully 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 in-
cluded 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.
# ECONOMICAL MOTOR CIRCUIT

## MBS25 PROTECTOR

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

<table>
<thead>
<tr>
<th>Horse Power</th>
<th>Overload Relay Adjustment AMP*</th>
<th>Basic Catalog No.</th>
<th>Outdoor Dust Tight Hose Test Water Tight</th>
<th>IC 5,000 AMP (480V) Group Fuse (UL) or Max CB Max Amps</th>
</tr>
</thead>
<tbody>
<tr>
<td>200V</td>
<td>0.25-0.4</td>
<td>MBS 25-D</td>
<td>5101</td>
<td>1200</td>
</tr>
<tr>
<td>230V</td>
<td>0.4-63</td>
<td>MBS 25-E</td>
<td>101</td>
<td>1200</td>
</tr>
<tr>
<td>460V</td>
<td>1/2</td>
<td>MBS 25-F</td>
<td>101</td>
<td>1200</td>
</tr>
<tr>
<td>575V</td>
<td>3/4</td>
<td>MBS 25-G</td>
<td>101</td>
<td>1200</td>
</tr>
<tr>
<td>1/4</td>
<td>1/2</td>
<td>MBS 25-H</td>
<td>101</td>
<td>1200</td>
</tr>
<tr>
<td>1/3</td>
<td>1/2</td>
<td>MBS 25-I</td>
<td>101</td>
<td>1200</td>
</tr>
<tr>
<td>1/2</td>
<td>1/2</td>
<td>MBS 25-J</td>
<td>101</td>
<td>1200</td>
</tr>
<tr>
<td>1-1/2</td>
<td>1-1/2</td>
<td>MBS 25-L</td>
<td>101</td>
<td>1200</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>MBS 25-M</td>
<td>101</td>
<td>1200</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>MBS 25-N</td>
<td>101</td>
<td>1200</td>
</tr>
<tr>
<td>3</td>
<td>7-1/2</td>
<td>MBS 25-O</td>
<td>101</td>
<td>1200</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Overload Relay Adjustment Range (AMP)*</th>
<th>Basic Catalog No.</th>
<th>Outdoor Dust Tight Hose Test Water Tight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/3</td>
<td>MBS 25-2P-I</td>
<td>$69</td>
</tr>
<tr>
<td>1/2</td>
<td>MBS 25-2P-K</td>
<td>69</td>
</tr>
<tr>
<td>1/2</td>
<td>MBS 25-2P-L</td>
<td>80</td>
</tr>
<tr>
<td>1/2</td>
<td>MBS 25-2P-M</td>
<td>80</td>
</tr>
<tr>
<td>1-1/2</td>
<td>MBS 25-2P-N</td>
<td>90</td>
</tr>
<tr>
<td>2</td>
<td>MBS 25-2P-O</td>
<td>90</td>
</tr>
</tbody>
</table>

Smaller sizes available to 0.1 Amps.

* Type 54 Series Enclosures are non-metal; outdoor completely dust tight. Series Enclosures have been widely used throughout the world in dust tight, hose pressure water tight, and corrosion proof applications. (IP65)

### 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-25-54 Enclosure
- 1-MBS-25-P1-A-R Red Pilot Light Kit
- 1-MBS-25-100-A UV Trip Kit

## Mounting Options

**Current Limiter** Rapid module type ID 50

- **U1 = 600V**
- **I P = 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 (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-17", Depth 1.65"
## ENCLOSURES & ACCESSORIES

<table>
<thead>
<tr>
<th>Enclosure Type</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>S4 IP55 Dust/Watertight</td>
<td><strong>$32</strong></td>
</tr>
<tr>
<td>Flush Plate with Gasket IP55 Dust/Watertight</td>
<td><strong>$16</strong></td>
</tr>
<tr>
<td>Replacement Start/Stop Boot</td>
<td><strong>$8</strong></td>
</tr>
<tr>
<td>Neutral Link for mounting above enclosures</td>
<td><strong>$7</strong></td>
</tr>
<tr>
<td>Padlock Accessories for enclosures for up to 3 padlocks use</td>
<td><strong>$18</strong></td>
</tr>
<tr>
<td>PG Adaptor to 1/2&quot; NPT Red Mushroom Operator for above enclosure IP55 Latch Type MR Key Release MR Momentary MR</td>
<td><strong>$5.80</strong></td>
</tr>
</tbody>
</table>

### 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
- **Inside Mount**
  - 1 N.O.
  - 1 N.C.
  - TRIP Alarm Aux. Switch Inside mount

### SHUNT TRIP KIT
*specify voltage*
- **A** 120V 60 Hz
- **C** 240V 60 Hz
- **D** 380V 50 Hz
- **E** 480V 60 Hz
- **G** 240V 50 Hz

### UNDERVOLTAGE TRIP
*specify voltage*
- A 120V 60 Hz
- C 240V 60 Hz
- D 380V 50 Hz
- E 480V 60 Hz
- G 240V 50 Hz

### Pilot Light
For above enclosures. Specify color **"** and voltage *.*

### MBS 25 Accessories
- Catalog No. | List Price |
- MBS25-105 | **$15** |
- MBS25-106 | **$30** |
- MBS25-107 | **$81** |
- MBS25-108 | **$19** |
- HS9 11 | **$20** |
- HS9 20 | **$15** |
- HS9V 11 | **$25** |
- HS9V 20 | **$17** |
- HS10 11 | **$20** |
- HS10R 10 | **$20** |
- HS10R 01 | **$20** |
- MBS25-101-* | **$48** |

### MBS 25 - Open / Enclosed Dimensions

![MBS 25 Dimensions Diagram](image)

**MBS 25 (Open)**

For increasing fault current breaking capacity of MBS 25 up to 50 KA/3 360V max.
MBS25 Motor / Circuit Protector Accessories

Starter carrier type pl 54
for snap-on to DIN rail
with 2 integral DIN rails for mounting of motor
starter and contactor
MBS 25-205 $15.00

3 phase busbar block type d
fully isolated, \( U_I = 660V \), \( I_I = 80A \)
with 2 connections, length 99 mm
MBS 25-210 $16.00
with 3 connections, length 155 mm
MBS 25-240 $16.00
with 4 connections, length 208 mm
MBS 25-207 $22.00
with 5 connections, length 262 mm
MBS 25-208 $25.00
for unused busbar terminations
MBS 25-211 $2.00

Protection cover 3 pole
3 pole for 3 phase busbar block type d
MBS 25-209 $16.00

Supply block type db
fully isolated, \( U_I = 660V \), \( I_I = 80A \)
MBS 25-107 Mushroom Key Release Kit
MBS 25-105 Lock Off Kit

Combination Manual Motor Controls
(Din Rail or Screw Mount)

Three Phase 3 Pole 600 Volt

<table>
<thead>
<tr>
<th>Three Phase Horse Power</th>
<th>Thermal Overload Relay Adjustment Range (AMP)*</th>
<th>Basic Catalog No.</th>
<th>OPEN LIST</th>
</tr>
</thead>
<tbody>
<tr>
<td>200V</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/4</td>
<td>0.25-0.4</td>
<td>MBS 25-D-L5K*</td>
<td>$182</td>
</tr>
<tr>
<td>1/3</td>
<td>0.4-0.63</td>
<td>MBS 25-E-L5K*</td>
<td>192</td>
</tr>
<tr>
<td>1/2</td>
<td>0.6-1.0</td>
<td>MBS 25-F-L5K*</td>
<td>191</td>
</tr>
<tr>
<td>3/4</td>
<td>1.0-1.6</td>
<td>MBS 25-G-L5K*</td>
<td>191</td>
</tr>
<tr>
<td>1-1/2</td>
<td>1.2-2.5</td>
<td>MBS 25-H-L5K*</td>
<td>191</td>
</tr>
<tr>
<td>2</td>
<td>3-5</td>
<td>MBS 25-I-L5K*</td>
<td>191</td>
</tr>
<tr>
<td>3</td>
<td>5-10</td>
<td>MBS 25-M-L5K*</td>
<td>202</td>
</tr>
<tr>
<td>5</td>
<td>10-16</td>
<td>MBS 25-N-L7K*</td>
<td>205</td>
</tr>
<tr>
<td>-</td>
<td>15-20</td>
<td>MBS 25-O-L11K*</td>
<td>230</td>
</tr>
</tbody>
</table>

* 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

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

Discount Schedule ST