

Manual Motor Starters

Technical Information

Manual Motor Controller (UL508)

• MMS 32H

| Rated operational current I _e [A] | | 0.16 | 0.25 | 0.4 | 0.63 | 1 | 1.6 | 2.5 | 4 | 6 | 8 | 10 | 13 | 17 | 22 | 26 | 32 | 40 | |
|--|------|------|------|-----|------|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Max. short-circuit current | | | | | | | | | | | | | | | | | | | |
| 240V | [kA] | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| 480V | [kA] | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 30 | 30 | 30 | 30 | 30 | 30 |
| 600V | [kA] | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Motor load | | | | | | | | | | | | | | | | | | | |
| 1 Phase | 115V | [HP] | - | - | - | - | - | - | 1/8 | 1/4 | 1/3 | 1/2 | 1/2 | 1 | 1½ | 2 | 2 | 3 | 3 |
| | 230V | [HP] | - | - | - | - | - | 1/10 | 1/6 | 1/3 | 1/2 | 1 | 1½ | 2 | 3 | 3 | 5 | 7½ | 10 |
| 3 Phase | 200V | [HP] | - | - | - | - | - | 1/2 | 3/4 | 1 | 2 | 2 | 3 | 3 | 5 | 7½ | 7½ | 10 | 10 |
| | 230V | [HP] | - | - | - | - | - | 1/2 | 3/4 | 1½ | 2 | 3 | 3 | 5 | 7½ | 7½ | 10 | 10 | 10 |
| | 460V | [HP] | - | - | - | - | 3/4 | 1 | 2 | 3 | 5 | 5 | 7½ | 10 | 15 | 15 | 20 | 30 | 30 |
| | 575V | [HP] | - | - | - | - | 1/2 | 3/4 | 1½ | 3 | 5 | 5 | 7½ | 10 | 15 | 20 | 20 | 30 | 30 |
| Max. fuse size | | [A] | 1 | 1 | 1 | 1 | 3 | 6 | 10 | 15 | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 125 | 150 |
| Max. breaker size | | [A] | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 125 | 150 | 150 |

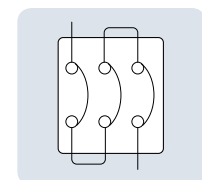
• MMS 63H

| Rated operational current I _e [A] | | 10 | 13 | 17 | 22 | 26 | 32 | 40 | 50 | 63 | 65 |
|--|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Max. short-circuit current | | | | | | | | | | | |
| 240V | [kA] | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| 480V | [kA] | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| 600V | [kA] | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Motor load | | | | | | | | | | | |
| 1 Phase | 115V | [HP] | 1/2 | 1/2 | 1 | 1½ | 2 | 2 | 3 | 3 | 5 |
| | 230V | [HP] | 1½ | 2 | 3 | 3 | 3 | 5 | 7½ | 10 | 10 |
| 3 Phase | 200V | [HP] | 2 | 3 | 3 | 5 | 7½ | 7½ | 10 | 15 | 20 |
| | 230V | [HP] | 3 | 3 | 5 | 7½ | 7½ | 10 | 15 | 20 | 20 |
| | 460V | [HP] | 5 | 7½ | 10 | 15 | 15 | 20 | 30 | 30 | 40 |
| | 575V | [HP] | 7½ | 10 | 15 | 20 | 20 | 30 | 30 | 40 | 60 |
| Max. fuse size | | [A] | 40 | 50 | 60 | 80 | 100 | 125 | 150 | 200 | 250 |
| Max. breaker size | | [A] | 40 | 50 | 60 | 80 | 100 | 125 | 150 | 200 | 250 |

• MMS 100H

| Rated operational current I _e [I _e] | | 17 | 22 | 26 | 32 | 40 | 50 | 63 | 75 | 90 | 100 |
|--|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Max. short-circuit current | | | | | | | | | | | |
| 240V | [kA] | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| 480V | [kA] | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| 600V | [kA] | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Motor load | | | | | | | | | | | |
| 1 Phase | 115V | [HP] | 1 | 1½ | 2 | 2 | 3 | 3 | 5 | 5 | 7½ |
| | 230V | [HP] | 3 | 3 | 3 | 5 | 7½ | 10 | 10 | 15 | 20 |
| 3 Phase | 200V | [HP] | 3 | 5 | 7½ | 7½ | 10 | 15 | 20 | 20 | 25 |
| | 230V | [HP] | 5 | 7½ | 7½ | 10 | 10 | 15 | 20 | 25 | 30 |
| | 460V | [HP] | 10 | 15 | 15 | 20 | 30 | 30 | 40 | 50 | 60 |
| | 575V | [HP] | 15 | 20 | 20 | 30 | 30 | 40 | 60 | 60 | 75 |
| Max. fuse size | | [A] | 60 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 |
| Max. breaker size | | [A] | 60 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 400 |

In case of 1-phase use in series as shown below



Type '2' coordination according to IEC 947-4-1

- Short-circuit current $I_q = 50\text{kA}$
Voltage : 400/415V, 50/60Hz

| Standard motors AC-3 at 400/415V 1500rpm | | Manual motor starter | | | Contactor | |
|---|------|-------------------------|---|---|----------------|-------|
| [kW] | [A] | Circuit breaker Type | Thermal overload release setting range [A] | Magnetic release response current [A] | | |
| - | - | MMS-32S 0.16A | 0.1-0.16 | 2.08 | GMC-6M / GMC-9 | 6 / 9 |
| 0.06 | 0.2 | MMS-32S 0.25A | 0.16-0.25 | 3.25 | GMC-6M / GMC-9 | 6 / 9 |
| 0.09 | 0.3 | MMS-32S 0.4A | 0.25-0.4 | 5.2 | GMC-6M / GMC-9 | 6 / 9 |
| 0.12 | 0.4 | MMS-32S 0.63A | 0.4-0.63 | 8.19 | GMC-6M / GMC-9 | 6 / 9 |
| 0.18 | 0.6 | MMS-32S 0.63A | 0.4-0.63 | 8.19 | GMC-6M / GMC-9 | 6 / 9 |
| 0.25 | 0.8 | MMS-32S 1A | 0.63-1 | 13 | GMC-6M / GMC-9 | 6 / 9 |
| 0.37 | 1.1 | MMS-32S 1.6A | 1-1.6 | 20.8 | GMC-6M / GMC-9 | 6 / 9 |
| 0.55 | 1.5 | MMS-32S 1.6A | 1-1.6 | 20.8 | GMC-6M / GMC-9 | 6 / 9 |
| 0.75 | 1.9 | MMS-32S 2.5A | 1.6-2.5 | 32.5 | GMC-12 | 12 |
| 1.1 | 2.7 | MMS-32S 4A | 2.5-4 | 52 | GMC-18 | 18 |
| 1.5 | 3.6 | MMS-32S 4A | 2.5-4 | 52 | GMC-18 | 18 |
| 2.2 | 5.2 | MMS-32S 6A | 4-6 | 78 | GMC-18 | 18 |
| 3 | 6.8 | MMS-32S 8A | 5-8 | 104 | GMC-18 | 18 |
| 4 | 9 | MMS-32S 10A | 6-10 | 130 | GMC-18 | 18 |
| 5.5 | 11.5 | MMS-32H 13A | 9-13 | 169 | GMC-22 | 22 |
| 7.5 | 15.5 | MMS-32H 17A | 11-17 | 221 | GMC-22 | 22 |
| 10 | 20 | MMS-32H 22A | 14-22 | 286 | GMC-32 | 32 |
| 11 | 22 | MMS-32H 26A | 18-26 | 338 | GMC-32 | 32 |
| 15 | 29 | MMS-32H 32A | 22-32 | 416 | GMC-32 | 32 |
| 18.5 | 35 | MMS-63H 40A | 28-40 | 520 | GMC-50 | 50 |
| 22 | 41 | MMS-63H 50A | 34-50 | 650 | GMC-50 | 50 |
| 30 | 55 | MMS-63H 63A | 45-63 | 819 | GMC-65 | 65 |
| 37 | 67 | MMS-100S 75A | 55-75 | 975 | GMC-75 | 75 |
| 45 | 80 | MMS-100S 100A | 80-100 | 1300 | GMC-85 | 85 |

Definition type '2' coordination according to IEC 947-4-1 :

- The contactor or the starter must not endanger persons or systems in the event of a short-circuit.
- The contactor or the starter must be suitable for further use.
- No damage to the overload relay or other parts may occur with the exception of welding of the contactor or starter contacts provided that these can be easily separated without significant deformation (such as with a screwdriver).