

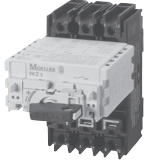







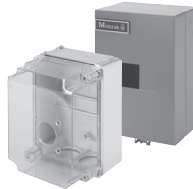
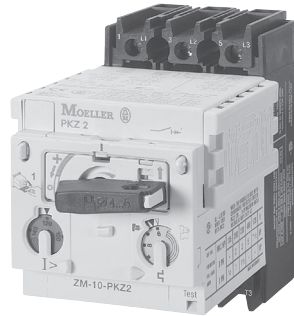


PKZ2 Manual Motor Controllers Overview

| Device | Description | Range | Pages | Device | Description | Range | Pages |
|---|--|---|----------------------------|--|---------------------------|-------------------------------------|-------|
| Manual Motor Controllers | | | | Releases | | | |
|  | With Interchangeable Trip Module | 0.4 – 42 Amps | C48 – C49 |  | Shunt Release | 24 – 250 V DC 24 – 600 V AC | C54 |
|  | Main Switch Component | – | C50 |  | Undervoltage Release | 24 V DC 48 V DC 24 – 440 V AC | C54 |
|  | Trip Module Components | 0.4 – 42 Amps | C50 | Remote Operators | | | |
| Auxiliary Contacts | | | |  | Remote Operator | 24 – 240 V DC 24 – 415 V DC | C55 |
|  | Side-mounted Standard Auxiliary Contacts | 1 NO / 1 NC 2 NO / 2 NC | C53 | Accessories | | | |
|  | Trip-indicating Auxiliary Contacts | 1 NO / 1 NC | C53 |  | Miscellaneous Accessories | | C56 |
| Current Limiter | | | | Enclosures | | | |
|  | Current Limiter | $U_e = 690\text{ V}$ to 100 kA / 500 V | $I_u = 40\text{ A}$ C51 |  | Enclosures | | C57 |

- > Interchangeable trip module makes changing tripping characteristics a snap, even after wiring
- > Adjustable thermal *and* magnetic trip settings
- > Overcurrent, short-circuit protection and motor switching functions are combined in one compact unit; all functions are ambient compensated and phase failure sensitive
- > Worldwide approvals, including UL 508/CSA 22.2 No. 14
- > One frame size simplifies engineering and reduces stocking cost



See Next Page for
UL/CSA Application
Ratings Guide

Manual motor controller with adjustable magnetic and thermal standard trip module

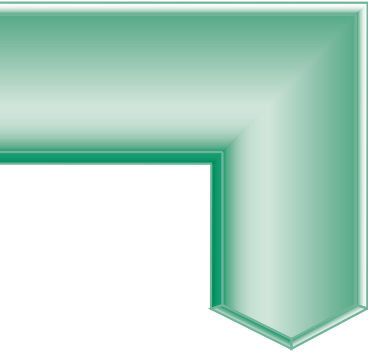
| UL/CSA Short-circuit current rating kA RMS sym @ | | Adjustable thermal range set to motor FLC ① | Adjustable trip setting current of magnetic trips ① | "Typical" Maximum Horsepower | | | | | | | | Auxiliary Contacts | | Catalog Number | Price |
|--|----------|---|---|------------------------------|------|-------|--------------------------|-------|------|-------|----|--------------------|------------|----------------|-------|
| | | | | Typical Single Phase [HP] | | | Typical Three Phase [HP] | | | | | | | | |
| 480 V AC | 600 V AC | [A] | [A] | 115V | 200V | 240V | 200V | 240V | 480V | 600V | NO | NC | | | |
| 65 | 42 | 0.4 – 0.6 | 5 – 8 | <i>See note below</i> | | | | | | | | 0 | 0 | PKZ2/ZM-0,6 | 480 |
| 65 | 42 | 0.6 – 1 | 8 – 14 | | | | | | | | | 0 | 0 | PKZ2/ZM-1 | 480 |
| 65 | 42 | 1 – 1.6 | 14 – 22 | | | | | | | | | 0 | 0 | PKZ2/ZM-1,6 | 488 |
| 65 | 42 | 1.6 – 2.4 | 20 – 35 | | | | | | | | | 0 | 0 | PKZ2/ZM-2,4 | 488 |
| 65 | 42 | 2.4 – 4 | 35 – 55 | 1/8 | 1/4 | 1/2 | 1 | 1 | 2 | 3 | 0 | 0 | PKZ2/ZM-4 | 488 | |
| 65 | 42 | 4 – 6 | 50 – 80 | 1/4 | 1/2 | 1/2 | 1 1/2 | 1 1/2 | 3 | 5 | 0 | 0 | PKZ2/ZM-6 | 488 | |
| 65 | 42 | 6 – 10 | 80 – 140 | 1/2 | 1 | 1 1/2 | 2 | 3 | 5 | 7 1/2 | 0 | 0 | PKZ2/ZM-10 | 488 | |
| 65 | 42 | 10 – 16 | 130 – 220 | 1 | 2 | 2 | 3 | 5 | 10 | 10 | 0 | 0 | PKZ2/ZM-16 | 488 | |
| 65 | 42 | 16 – 25 | 200 – 350 | 2 | 3 | 3 | 5 | 7 1/2 | 20 | 25 | 0 | 0 | PKZ2/ZM-25 | 552 | |
| 65 | 42 | 24 – 32 | 275 – 425 | 2 | 5 | 5 | 10 | 10 | 20 | – | 0 | 0 | PKZ2/ZM-32 | 680 | |
| 65 | 42 | 32 – 42 | 350 – 500 | 3 | 5 | 7 1/2 | 10 | 15 | 30 | – | 0 | 0 | PKZ2/ZM-40 | 780 | |

Horsepower ratings shown in the table are for reference only.
The final selection of the manual starter depends on the actual motor full load current and service factor on the motor nameplate.
Overload should be set at motor FLA full load current and is calibrated to 1.15 S.F. Specified values to NEC table 430-150.

Ordering Instructions

- 1 Determine the motor FLA and Service Factor.
- 2 Use the application rating guide on next page.
- 3 Locate the desired manual motor controller.
- 4 See pages C51 – C56 for auxiliaries and accessories.

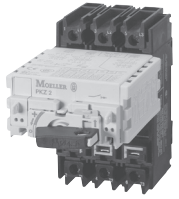
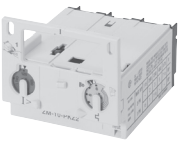
① All types have adjustable dial for setting motor full load current. Trip current is 125% of set value. For motors with a service factor (SF) of 1.0, set dial to 90% of motor full load current.



UL/CSA Application Ratings Guide for PKZ2/ZM

| Catalog Number | Maximum short circuit current [kA] when used as . . . | | | | | | |
|----------------|---|------|------|---|------|---------------|--------------------------|
| | Manual Motor Starter | | | Manual Controller in Group Installation | | Max. Fuse [A] | Max. Circuit Breaker [A] |
| | 240V | 480V | 600V | 480V | 600V | | |
| PKZ2/ZM-0,6 | 100 | 65 | 42 | 65 | 42 | 500 | 600 |
| PKZ2/ZM-1 | 100 | 65 | 42 | 65 | 42 | 500 | 600 |
| PKZ2/ZM-1,6 | 100 | 65 | 42 | 65 | 42 | 500 | 600 |
| PKZ2/ZM-2,4 | 100 | 65 | 42 | 65 | 42 | 500 | 600 |
| PKZ2/ZM-4 | 100 | 65 | 42 | 65 | 42 | 500 | 600 |
| PKZ2/ZM-6 | 100 | 65 | 42 | 65 | 42 | 500 | 600 |
| PKZ2/ZM-10 | 100 | 65 | 42 | 65 | 42 | 500 | 600 |
| PKZ2/ZM-16 | 100 | 65 | 42 | 65 | 42 | 500 | 600 |
| PKZ2/ZM-25 | 100 | 65 | 42 | 65 | 42 | 500 | 600 |
| PKZ2/ZM-32 | 100 | 65 | 42 | 65 | 42 | 500 | 600 |
| PKZ2/ZM-40 | 100 | 65 | 42 | 65 | 42 | 500 | 600 |

Basic Components

| Module | Description | Adjustable thermal range set to motor FLC ① | Adjustable trip setting current of magnetic trips ① | "Typical" Maximum Horsepower | | | | Contacts | | For use with... | Catalog Number | Price | | |
|--|---|---|---|--|------|------|------|----------|----|------------------------|----------------|-------|-------------|-----|
| | | | | Typical Three Phase [HP] | | | | NO | NC | | | | | |
| | | [A] | [A] | 200V | 240V | 480V | 600V | | | | | | | |
| Base Module | | | | | | | | | | | | | | |
|  | Maximum continuous motor load current 42A | | | As per the trip module inserted (see below for selection) | | | | 0 | 0 | all other PKZ2 devices | PKZ2 | 320 | | |
| Standard Trip Module | | | | | | | | | | | | | | |
|  | Standard trip module for PKZ2 Adjustable thermal and magnetic trips Includes a manual test feature and tamper-preventive settings cover | 0.4 – 0.6 | 5 – 8 | <i>see note below</i> | | | | 0 | 0 | PKZ2 PKZ2/S-SP | ZM-0,6-PKZ2 | 160 | | |
| | | 0.6 – 1 | 8 – 14 | | | | | ½ | ½ | | 0 | 0 | ZM-1-PKZ2 | 160 |
| | | 1 – 1.6 | 14 – 22 | | | | | ¾ | 1 | | 0 | 0 | ZM-1,6-PKZ2 | 168 |
| | | 1.6 – 2.4 | 20 – 35 | ½ | ½ | 1 | 1½ | 0 | 0 | | ZM-2,4-PKZ2 | 168 | | |
| | | 2.4 – 4 | 35 – 55 | 1 | 1 | 2 | 3 | 0 | 0 | | ZM-4-PKZ2 | 168 | | |
| | | 4 – 6 | 50 – 80 | 1½ | 1½ | 3 | 5 | 0 | 0 | | ZM-6-PKZ2 | 168 | | |
| | | 6 – 10 | 80 – 140 | 2 | 3 | 5 | 7½ | 0 | 0 | | ZM-10-PKZ2 | 168 | | |
| | | 10 – 16 | 130 – 220 | 3 | 5 | 10 | 10 | 0 | 0 | | ZM-16-PKZ2 | 168 | | |
| | | 16 – 25 | 200 – 350 | 7½ | 7½ | 20 | 25 | 0 | 0 | | ZM-25-PKZ2 | 232 | | |
| | | 24 – 32 | 275 – 425 | 10 | 10 | 20 | 30 | 0 | 0 | | ZM-32-PKZ2 | 360 | | |
| | | 32 – 42 | 350 – 500 | 10 | 15 | 30 | 30 | 0 | 0 | | ZM-40-PKZ2 | 460 | | |
| | | <p>Horsepower ratings shown in the table are for reference only. The final selection of the manual starter depends on the actual motor full load current and service factor on the motor nameplate. Overload should be set at motor FLA full load current and is calibrated to 1.15 S.F. Specified values to NEC table 430-150.</p> | | | | | | | | | | | | |


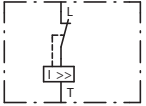
Manual Motor Controllers

Ordering Instructions


- 1 Determine the motor FLA and Service Factor.
- 2 Locate the desired trip module.
- 3 Order trip module and base module separately.
- 4 See pages C51 – C56 for auxiliaries and accessories.

① All types have adjustable dial for setting motor full load current. Trip current is 125% of set value. For motors with a service factor (SF) of 1.0, set dial to 90% of motor full load current.

Current Limiter ①

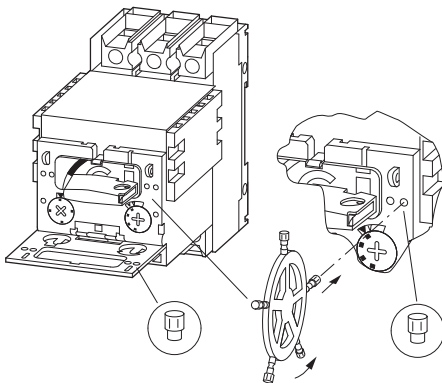
| Module | Description | Schematic | For use with... | Catalog Number | Price |
|---|--|---|-----------------|----------------|-------|
| Current Limiter | | | | | |
|  | <p>Max. rated operational voltage $U_e = 690\text{ V}$ Rated uninterrupted current $I_u = 40\text{ A}$ Can be fitted to controller with mounting plate C-PKZ2, or can be fitted individually with mounting base EZ-PKZ2 See page C65 for capacity ratings</p> |  | PKZ2 PKZ2/ZM | CL-PKZ2 | 436 |

Tamper-preventive coding pins ②

| Accessory | Description | For use with... | Catalog Number | Price |
|---|---|-----------------|----------------|-------|
| Coding Pins | | | | |
|  | <p>Tamper-preventive feature used to pair proper trip module with base module. Once inserted, coding pins are not removable. Deters tampering or an accidental incorrect insertion during maintenance. Unique coding for up to 6 different trip modules.</p> | PKZ2 + ZM | CS-PKZ2 | 6.90 |

Easy to use Coding Pins

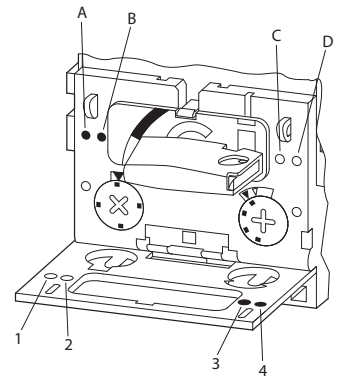
Just snap pins off into intended slots ②



Example of unique coding for up to 6 different trip modules

(see diagram on right)

| If you have this controller (examples) | Code the base module | | Then code all trip modules of this type with same coding | |
|--|----------------------|----------------------------|--|----------------------------|
| | Base module | Break off pins in slots on | Trip module from example | Break off pins in slots on |
| PKZ2/ZM-0,6 | PKZ2 | C, D | ZM-0,6-PKZ2 | 1, 2 |
| PKZ2/ZM-1 | PKZ2 | B, D | ZM-1-PKZ2 | 1, 3 |
| PKZ2/ZM-1,6 | PKZ2 | B, C | ZM-1,6-PKZ2 | 1, 4 |
| PKZ2/ZM-2,4 | PKZ2 | A, D | ZM-2,4-PKZ2 | 2, 3 |
| PKZ2/ZM-4 | PKZ2 | A, C | ZM-4-PKZ2 | 2, 4 |
| PKZ2/ZM-6 | PKZ2 | A, B | ZM-6-PKZ2 | 3, 4 |



① Device is not approved by UL or CSA.

② Once inserted, coding pins are not removable.