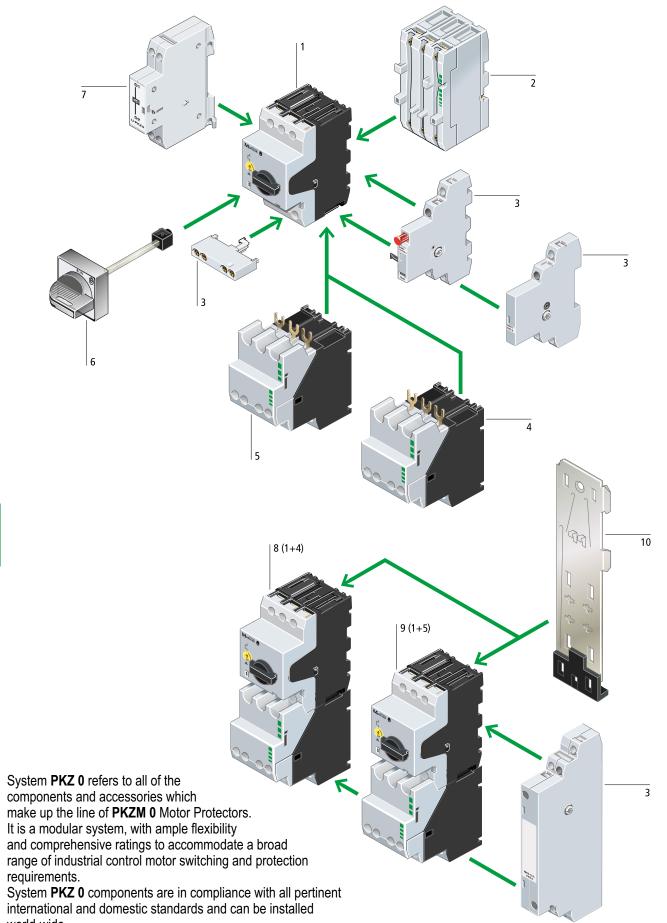
Manual Motor Protectors, Motor Protectors with Contactor Motor Starter Combinations

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		7.

7

Manual Motor Protectors, Motor Protectors with Contactor Motor Starter Combinations



world-wide. Maximum ratings: 25 Amps, 600 V AC

Moeller



6

7

1 Manual Motor Protector

Thermal-Magnetic Motor Protector Rated up to 25 Amps Maximum 3 Phase HP rating: 15/ 20 @ 460/ 575 V AC UL Listed for Group installations per NEC 430-53 CSA Certified for Group installations per CEC Part 1, 28-206 High Short Circuit Rating: Up to 50 kA @ 600 V AC UL Listed, CSA Certified, in Conformity with IEC/EN 60 947 CE Marked Type: **PKZM 0-...**

2 Current Limiter Module

Increases short circuit current rating of the **PKZM 0**. Fuseless, current limiting set of contacts housed in a module.

Mounts directly beneath or ahead of the **PKZM 0**. Type: **CL-PKZ 0**

3 Auxiliary Contact Modules

Signals ON/OFF status of **PKZM 0** Motor Protector and Motor Protector + Contactor combination. Trip indicating contacts which differentiate between overload and short circuit tripping. Early-Make contacts for use with undervoltage trips. Type: **NHI-..., AGM-..., VHI-...**

4 Magnetic Contactor Module

AC or DC operated versions. Supplied with 1 N.O./1N.C. or 2 N.O. contacts. Plugs into the load side of the **PKZM 0** protector or can be separately mounted. Rated 7 1/2 HP @ 460 V AC/ 10 HP @ 575 V AC UL Listed with **PKZM 0** Motor Protector for Group installations per NEC 430-53. CSA Certified with **PKZM 0** Motor Protector for Group installations per CEC 28-206. IEC 60 947-4-1 rated for Type 1 co-ordination. Type: **SE 00-...**

5 High Capacity Magnetic Contactor Module

Same approvals & features as Type **SE00** above except: Internal current limitation feature to increase short circuit current rating and self-protection characteristics per IEC/EN 60 947. IEC 60 947-4-1 rated for Type 2 co-ordination. Type: **S 00**

Door Mounted Handle

Rated IP 65/ NEMA/UL 12, 3R. 3 Positions- ON, OFF, Tripped. Door interlocking feature and padlockable with up to 3 padlocks. (Also available without door interlocking or padlockable feature.) Plug-in extension shaft to accommodate various mounting depths. Black, or Red/Yellow for E-Stop function Type: **(R)H-PKZ 0, HSOV-PKZ 0**

Voltage trips

Undervoltage trip module Shunt trip module Mounts to the side of the **PKZM 0**. Type: **U-PKZ0, A-PKZ0**

8(1+4) Magnetic Motor Protector Combination

Thermal-Magnetic Motor Protector (1) combined with the Magnetic Contactor Module (4) on a clip plate, suitable for DIN rail mounting (EN 50 022). Maximum rating: 7 1/2 HP @ 460 V AC/ 10 HP @ 575 V AC UL Listed for Group installations per NEC 430-53. CSA Certified for Group installations per CEC 28-206. High Short Circuit Rating: Up to 50 kA @ 600 V AC UL Listed, CSA Certified, in Conformity with IEC/EN 60 947 IEC 60 947-4-1 rated for Type 1 co-ordination. CE Marked Type: **PKZM 0-.../SE 00**

9(1+5) Magnetic Motor Protector Combination with High Capacity Contactor

Thermal-Magnetic Motor Protector (1) combined with the High Capacity Magnetic Contactor Module (5) on a clip plate, suitable for DIN rail mounting (EN 50 022). Maximum rating: 7 $1/_2$ HP @ 460 V AC/ 10 HP @ 575 V AC UL Listed for Group installations per NEC 430-53 CSA Certified for Group installations per CEC 28-206. High Short Circuit Rating: Up to 50 kA @ 600 V AC UL Listed, CSA Certified, in Conformity with IEC/EN 60 947 IEC 60 947-4-1 rated for Type 2 co-ordination. CE Marked

Type: **PKZM 0-.../S 00**

10 Mounting/Wiring

Clip plate, onto which the compact motor protector combinations **PKZM 0-.../S(E) 00** are mounted. Suitable for DIN rail mounting (EN 50 022). Other Mounting/Wiring Hardware:

Adapters for direct busbar feeds in control panels.
 Mounting and Wiring system Type MVS-... to combine PKZM 0 protectors with Type DIL...M magnetic contactors. (Refer to Section 3 for DIL...M info.) Refer to pages 7/16-18 for additional details on these mounting and wiring accessories.

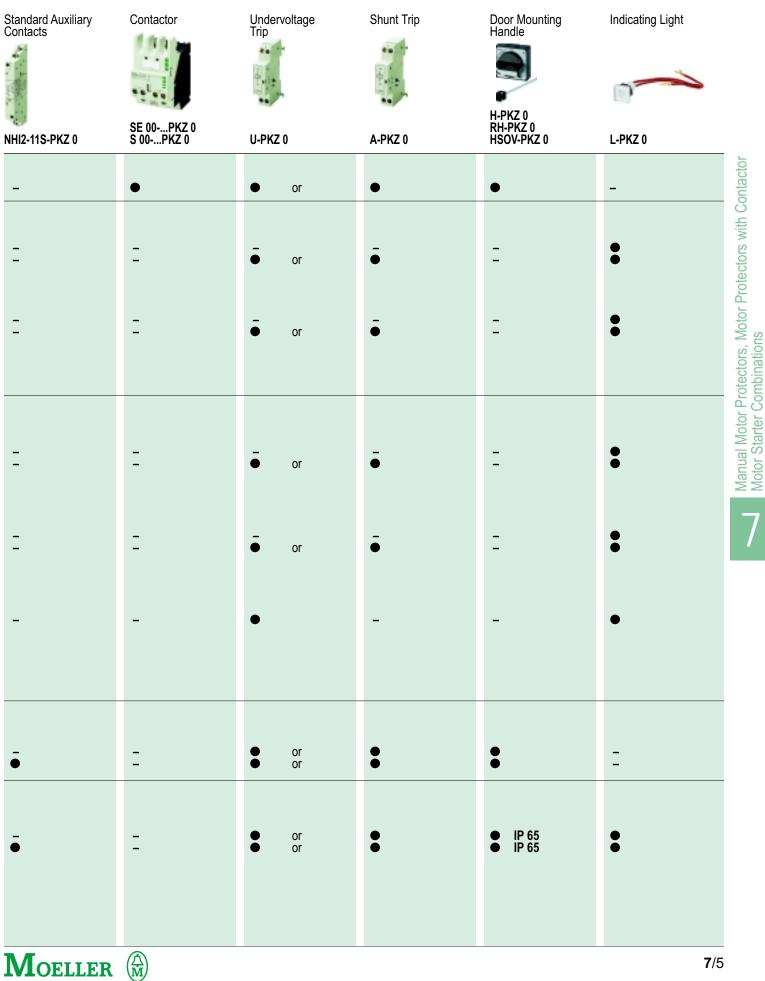


System PKZ 0- Motor Protector Overview of Combinations

	The possible combinations of open	Open Devices, Enclosure	S	Contacts and Mod	ules		
	and enclosed motor protectors with various			Standard Auxiliary Contacts	Standard Auxiliary Contacts	Early Make Auxiliary Contacts	Trip Indicating Contacts
	accessories is indicated by a dot ● in each shaded row.						
	Туре	Туре	Degree of Protection	NHI 11-PKZ 0 NHI 21-PKZ 0 NHI 12-PKZ 0	NHI-E-11-PKZ 0 NHI-E-10-PKZ 0	VHI 20-PKZ 0	AGM 2-10-PKZ 0 AGM 2-01-PKZ 0
Mar	Manual Motor P	rotector					
nual	PKZM 0	-	IP 20	•	• or	•	•
Manual Motor Protectors, Motor Protectors with Contactor Motor Starter Combinations		Insulated Enclosure for Flush Mounting E-PKZ 0	Front IP 40	•	Ξ	Ξ	-
, Motor Protecto Motor Start		E-PKZ 0-G(R)	Front IP 55	•	:	Ξ	•
rs with (ter Corr		Insulated Enclosure for Surface Mounting					
Contactor Ibinations		CI-PKZ 0	IP 40 UL/NEMA 1	•	Ξ	Ξ	Ξ
/		CI-PKZ 0-G(R)	IP 55 UL/NEMA 12	•	:	Ξ	•
		CI-PKZ 0-G(R)V	IP 55 UL/NEMA 12	-	-	•	-
	Motor Protecto	r					
	Combination PKZM 0/S(E) 00	-	IP 20	•	• or • or	:	•
		Insulated Enclosure for Surface Mounting Cl 23X -125-NA	IP 65 UL/NEMA 12	•	• or • or	•	•

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System PKZ 0- Motor Protector Overview of Combinations



System PKZ 0 Manual Motor Protectors Type PK7M 0

UL/CSA/IEC/CE

1	2	3				4	5
	Circuit Diagram	UL/CS 3 Pha	SA ise HP Ra	atings		Туре	Price
		(Singl & IEC see p	le phase i kW Ratii ages 7 /44	ratings ngs, 1 & 7 /45)			
		200 V					\$
Janual Mot	or Protectors	200 V	200 V	400 1	010 1		
			In this rar			PKZM 0-0.16	
4444			Motor Pro accordan			PKZM 0-0.25	
	┝╌┝╌╌┝┯┯┯┥╸╲╵		Motor na	neplate		PKZM 0-0.4	
			Full Load	Current.		PKZM 0-0.63	
				1/2	1/2	PKZM 0-1	
	Т			3/4	1	PKZM 0-1.6	
		1/2	1/2	1	11/ ₂	PKZM 0-2.5	
		1	1	2	3	PKZM 0-4	
		1 1/ ₂	1 1/ ₂	3	5	PKZM 0-6.3	
		3	3	7 1/2	10	PKZM 0-10	
		3	5	10	10	PKZM 0-16	
		5	5	10	15	PKZM 0-20	
		5	71/ ₂	15	20	PKZM 0-25	
anual Mot	or Protectors						e List
or more induct	tive loads-Higher inrush curre		this rang			PKZM 0-0.16-T	
			otor Prote cordance		•	PKZM 0-0.25-T	
	ŀ+··	M	otor name	eplate		PKZM 0-0.4-T	
		Fi	ull Load C	urrent.		PKZM 0-0.63-T	
	- <u>I></u>			1/2	1/2	PKZM 0-1-T	
	тт			3/4	1	PKZM 0-1.6-T	
		1/2	1/2	์ 1	1 1/ ₂	PKZM 0-2.5-T	
		1	1	2	3	PKZM 0-4-T	
		1 1/ ₂	1 1/ ₂	3	5	PKZM 0-6.3-T	
		3	3	7 1/2	10	РКZМ 0-10-Т	
		3	5	10	10	PKZM 0-16-T	
		5	5	10	15	PKZM 0-20-T	

The PKZM 0...(-T) is a 3 phase thermal-magnetic motor protective device incorporating adjustable bimetal trips for motor overload protection and magnetic trips to de-energize the motor circuit in case of a short circuit. The **PKZM 0-...-T** has its magnetic trip set at a higher response level to provide better protection against nuisance tripping in circuits with higher current inrush ratings e.g. in circuits employing control circuit transformers. The **PKZM 0-...** and the **PKZM 0-...** T are UL listed and CSA certified as HP rated motor controllers which provide motor running overload protection. In addition, they are UL listed and CSA certified for group applications as per NEC 430-53(c) and CEC part 1, Rule 28-206. This means that a group of motors, each protected and controlled by a **PKZM 0-...** or a **PKZM 0-...T** can be combined under a single branch circuit short circuit and ground fault protective device, the maximum rating of which is marked on each PKZM 0 motor protector. (See columns 8-10 for UL/CSA short circuit current and backup overcurrent protection ratings.)

Features:

Ratings: 25 Amp, 600 V AC - 15 HP @ 460 V, 20 HP @ 575 V max. Approved for world markets = UL, CSA, IEC/EN 60 947, CE Marked

Phase failure sensitive & ambient compensated. Adjustable thermal trips set to motor FLC or nameplate current.

Fixed instantaneous magnetic trip response. Open or door mounted handle, padlockable, with 3 position indication (ON, OFF, Trip). See Accessories on page 7/15

'Finger Safe' construction.

35 mm DIN rail or panel mounting.

Ordering Information:

Specify Type from column 4. Example: PKZM0-10



UL / CSA / IEC / CE

System PKZ 0 Manual Motor Protectors Type PKZM 0...

6	7	8	9	10	11
Adjustable Thermal Range	Response Current of Magnetic Trips	UL/CSA Short Circuit Current Rating @ 600 V AC.	Maximum Listed Branch Circuit Protective Fuse	Maximum Listed Branch Circuit Protective Breaker	Remarks
A	A	kA	A	A	
0.1 - 0.16	2.2	50	600	600	[] []
0.16 - 0.25	3.4	50	600	600	
0.25 - 0.4	5.6	50	600	600	
0.4 - 0.63	8.8	50	600	600	
0.63 - 1	14	50	600	600	
1 - 1.6	22	50	600	600	
1.6 - 2.5	35	50	600	600	
2.5 - 4	56	50	600	600	
4 - 6.3	88	50	600	600	
6.3 - 11	140	22 ¹⁾	150	125	
10 - 16	224	10 ¹⁾	150	125	
16 - 20	280	10 ¹⁾	150	125	1 - PKZM 0(-T) Motor Protector 7 /6
20 - 25	350	10 ¹⁾	150	125	2 - Side-mounted Auxiliary Contact 7/10
					 - 3 - Top-mounted Auxiliary Contact 7/10 4 - Trip Indicating Auxiliary Contact 7/11
0.1 - 0.16	2.4	50	600	600	5 - Shunt Trip
0.16 - 0.25	4.25	50	600	600	Undervoltage Trip 7/11 6 - Magnetic Contactor Module* 7/12
0.25 - 0.4	6.8	50	600	600	7 - Clip Plate 7/15
0.4 - 0.63	11.97	50	600	600	- Accessories 7/10 - 7/19
0.63 - 1	20	50	600	600	
1 - 1.6	32	50	600	600	* Note:
1.6 - 2.5	50	50	600	600	The PKZM 0T cannot be combined with the
2.5 - 4	84	50	600	600	high capacity contactor module (Type S 00).
4 - 6.3	141	50	600	600	
6.3 - 11	224	22 ¹⁾	150	125	
10 - 16	358	10 ¹⁾	150	125	
16 - 20	380	10 ¹⁾	150	125	

System PKZ 0 Motor Protectors in Group Motor Applications

PKZM 0 motor protectors are UL listed and CSA certified for group applications as per the intent of NEC 430-53 and CEC part 1, Rule 28-206. This eliminates the need for individual motor branch circuit overcurrent protective devices for each motor, thus greatly reducing the cost and space requirements of industrial control panels and assemblies.

In group installations involving a number of PKZM 0 motor protectors, the maximum rating of the group branch circuit overcurrent protective device is based on the lowest backup overcurrent rating marked on each motor protector in the group, combined with applicable NEC installation rules.

Please refer to the UL/CSA short circuit current and backup overcurrent protection ratings in columns 8-10 for selection guidelines on PKZM 0 Motor protectors.

Higher short circuit ratings can be obtained by use of the **CL-PKZ0** accessory: (See page **7**/11). - **PKZM 0-... + CL-PKZ0**: 50 kA @ 600 V AC, for 10 A and 16 A models - **PKZM 0-... + CL-PKZ0**: 18 kA @ 600 V AC, for 20 A and 25 A models 1)



System PKZ 0

UL/CSA/IEC/CE

	2	3			4	5
	Circuit Diagram	UL/CSA 3 Phase HP Ra	tingo		Туре	Price
	Contactors supplied standard with 1 N.O.		U U			
	& 1 N.C. Auxiliary contacts.	(Single phase i & IEC kW Ratii see pages 7 /44	aungs ngs, & 7 /45)			
		200 V 230 V	460 V	575 V		
lagnetic Moto	or Protector Combination				Specify Coil Voltage	List
L/CSA Group inst	tallations	•			Specify Coil Voltage from page 7/39 when ordering ()	
EC/EN 60 947-4-1	"Type 1" co-ordination level	In this wa			PKZM 0-0.16/SE 00-11 ()	
	, ,	In this ra Motor Pr	nge selec otector in		PKZM 0-0.25/SE 00-11 ()	
			ice with th	ne	PKZM 0-0.4/SE 00-11 ()	
Marine B.		Motor na Full Load	meplate I Current.			
: Si 					PKZM 0-0.63/SE 00-11 ()	
100			1/ ₂	1/ ₂	PKZM 0-1/SE 00-11 ()	
			3/4	1	PKZM 0-1.6/SE 00-11 ()	
Moitin & tons I		1/ ₂ 1/ ₂	1	1 1/ ₂	PKZM 0-2.5/SE 00-11 ()	
		1 1	2	3	PKZM 0-4/SE 00-11 ()	
. UN	[<u>T</u>]	1 1/ ₂ 1 1/ ₂	3	5	PKZM 0-6.3/SE 00-11 ()	
1 m².		2 3	7 1/ ₂	10	PKZM 0-10/SE 00-11 ()	
agnetic Moto	or Protector Combination	า				st See st See
IL/CSA Group inst					Specify Coil Voltage	
EC/EN 00 947-4-1	"Type 2" co-ordination level	In this ra		+	PKZM 0-0.16/S 00-11 ()	
		In this ra Motor Pr	otector in		PKZM 0-0.16/S 00-11 () PKZM 0-0.25/S 00-11 ()	
.	⊦⊹╂╂┨╌\		ice with th	ne	• •	
AND'S -L		Motor na Full Load	meplate I Current.		PKZM 0-0.4/S 00-11 ()	
à 👝 🗄 🗖					PKZM 0-0.63/S 00-11 ()	
			1/ ₂	1/2	PKZM 0-1/S 00-11 ()	
-						
			3/ ₄	1	PKZM 0-1.6/S 00-11 ()	
		1/2 1/2	3/ ₄ 1	1 1¹/ ₂	PKZM 0-1.6/S 00-11 () PKZM 0-2.5/S 00-11 ()	
		1/ ₂ 1/ ₂ 1 1				
			1	1 1/ ₂	PKZM 0-2.5/S 00-11 ()	

The PKZM 0-.../SE 00 and PKZM 0-.../S 00 are motor protector combinations made up of PKZM 0-... manual motor protectors (see page 7/6) and System PKZ 0 magnetic contactors (Types SE 00 and S 00).

These Motor Protector combinations are UL listed and CSA certified as assemblies which provide motor controller functions and running overload protection. In addition, they are UL listed and CSA certified for group applications as per NEC 430-53(c) and CEC part 1, Rule 28-206. This means that a group of motors, each protected and controlled by a **PKZM 0-.../S(E) 00**, can be combined under a single branch circuit short circuit and ground fault protective device, the maximum rating of which is perfect on the performance of th which is marked on each PKZM 0 motor protector. (See columns 8-10 for UL/CSA short circuit current and backup overcurrent protection ratings.)

Features:

- Ratings: 11 Amp, 600 V AC 7 1/2 HP @ 460 V, 10 HP @ 575 V max. Approved for world markets = UL, CSA, IEC/EN 60 947, CE Marked Conformity with "Type 1" and "Type 2" co-ordination levels

- Phase failure sensitive & ambient compensated.
- Adjustable thermal trips set to motor FLC or nameplate current.
- Fixed instantaneous magnetic trip response.
- Open or door mounted handle, padlockable, with 3 position indication (ON, OFF, Trip). See Accessories on page 7/15
- 'Finger Safe' construction.
- Assembled on clip plate for 35 mm DIN rail or panel mounting.

Ordering Information: Specify Type from column 4 and add desired control voltage. Example: PKZM 0-10/SE 00-11 (120V, 60Hz)



-		-	-		
6 Adjustable Thermal Range (Set to Motor FLC)	7 Response Current of Magnetic Trips	8 UL/CSA Short Circuit Current Rating RMS Sym @ 600 V AC.	9 Maximum Listed Branch Circuit Protective Fuse	10 Maximum Listed Branch Circuit Protective Circuit Breaker	11 Remarks
A	A	kA	А	A	
					System PKZ 0 Motor Protector Combinations & Accessories
0.1 - 0.16	2.2	50	600	600	
0.16 - 0.25	3.4	50	600	600	
0.25 - 0.4	5.6	50	600	600	
0.4 - 0.63	8.8	50	600	600	
0.63 - 1	14	50	600	600	Contraction of the second
1 - 1.6	22	50	600	600	
1.6 - 2.5	35	50	600	600	
2.5 - 4	56	50	600	600	3 🛛 🗁 7
4 - 6.3	88	50	600	600	1 - PKZM 0/S(E) 00-11
6.3 - 11	140	22	150	125	Motor Protector Combination 2 - Side Mounted Auxiliary Contact 7/10 3 - Top Mounted Auxiliary Contact 7/10
					 4 - Side Mounted Auxiliary Contact to fit over entire starter 5 - Trip Indicating Auxiliary Contact 6 - Shunt Trip Undervoltage Trip 7/11
0.1 - 0.16	2.2	50	600	600	7 - Clip Plate 7 /12
0.16 - 0.25	3.4	50	600	600	
0.25 - 0.4	5.6	50	600	600	Additional Accessories 7/10 - 7/1
0.4 - 0.63	8.8	50	600	600	Note:
0.63 - 1	14	50	600	600	
1 - 1.6	22	50	600	600	DC operated versions come standard with built-i surge suppressors.
1.6 - 2.5	35	50	600	600	Surge Suppressors available for AC versions as
2.5 - 4	56	50	600	600	an option. See page 7/12
4 - 6.3	88	50	600	600	
6.3 - 11	140	22	150	125	

Group Motor Applications

UL / CSA / IEC / CE

PKZM 0-.../S(E) 00 Motor Protector combinations are UL listed and CSA certified for group applications as per the intent of NEC 430-53 and CEC part 1, Rule 28-206. This eliminates the need for individual motor branch circuit overcurrent protective devices for each motor, thus greatly reducing the cost and space requirements of industrial control panels and assemblies.

In group installations involving a number of System PKZ 0 motor protectors, the maximum rating of the group branch circuit overcurrent protective device is based on the lowest backup overcurrent rating marked on each motor protector in the group, combined with applicable NEC installation rules. Please refer to the UL/CSA short circuit current and backup overcurrent protection ratings in columns 8-10 for selection guidelines on PKZM 0 and

Please refer to the UL/CSA short circuit current and backup overcurrent protection ratings in columns 8-10 for selection guidelines on PKZM 0 and PKZM 0-.../S(E) 00 motor protectors.

Additional Notes:

PKZM 0-../SE 00 Motor Protector combinations are in conformity with Type 1 co-ordination levels @ up to

500 V AC, per IEC/EN 60 947-4-1.

PKZM 0-../S 00 Motor Protector combinations are in conformity with Type 2 co-ordination levels @ up to 500 VAC, per IEC/EN 60 947-4-1. Further, during UL/CSA short circuit testing of this combination, no heater burn-out or contact welding occurred.



System PKZ 0

System PKZ 0- Motor Protector Accessories- Auxiliary Contacts

	1 2	3	4		5	6	7
	Connection Diagram	Auxiliary Contact state in	Numbe Contac	ts	Туре	Price	Remarks
		relation to Main Contacts	N.C. =	Normally Open Normally Closed			
			N. O.	N. C.		\$	
	Standard Auxiliary Contacts Short Version- Side Mounted					e List e List	
Manual Motr			1	1	NHI 11-PKZ 0		
Manual Motor Protectors Motor Protectors with Contactor		L1L2L3 ──── ↓ NHI 12 ──── ↓ ──── ↓	1	2	NHI 12-PKZ 0		
Motor Prote	Mounts to side of PKZM 0 Motor Protector	L1L2L3	2	1	NHI 21-PKZ 0		
intore	1.14 1.22 1.34						1 - Manual Motor Protector 7/6
wi i h	Standard Auxiliary Contacts Top Mounted						 2 - Motor Protector Combinations 7/8 3 - Trip Indicating_Contact
		0 L1 L2 L3	1	1	NHI-E-11-PKZ 0		7/11 The Side Mounted contacts (Short Version) mount on the right side of the protector and can be combined with:
	Clips onto top portion of PKZM 0 Motor Protector	L1L2L3	1	0	NHI-E-10-PKZ 0		 Trip indicating contacts Type AGM Top-Mounted contacts Type NHI-E but cannot be combined with the long version contact module Type NHI2-11S-PKZ0.
	Standard Auxiliary Contacts Long Version- Side Mounted						The Top-Mounted contacts Type NHI-E have the added benefit of not increasing the width or height of the Motor Protector when inserted.
			2	2	NHI 2-11S-PKZ 0		The long version contact module Type NHI2-11S-PKZ0 mounts on the right side of the PKZM0/S(E) 00 Motor Protector Combination and can be combined with:
							- Top-Mounted contacts Type NHI-E
	Mounts on side of PKZM 0/S(E) 00						 but cannot be combined with: Short version contact Modules Type NHI Trip indicating contacts Type AGM
	Protector combination. Features two sets of contacts: - One set actuated by Motor Protector - One set actuated by Contactor Permits differentiated signalling of the state of Motor Protector and Contactor Main Contacts.					See Price List See See Price List See	Ordering Information: If ordered separately: - Specify Type from Column 5 Example: NHI 21-PKZ 0 If ordered with device: - Add a + in front of Type Example: + NHI 21-PKZ 0



6 5 7 1 2 3 4 **Connection Diagram** Auxiliary Number of Type Price Remarks Contacť Contacts state in N.O. = Normally relation to Main Open Contacts N.C. = Normally Closed N. O. N. C. **Trip Indicating Auxiliary Contacts** "+" "_I >" 4.43 4.13 ON 2 0 AGM 2-10-PKZ 0 L1 L2 L3 · -----TRIP L1 L2 L3 . "i>" 4.44 4.14 Manual Motor Protector 1 -7/6 Mounts to side of PKZM 0 Motor "+" "I>" 4.31 4.21 ON OFF 0 2 AGM 2-01-PKZ 0 Standard Auxiliary Contact 3 -Protector. Provides a differentiated trip signal: "+" : These contacts actuate under 7/10 Accessories 7/13 all trip conditions. "I >" : These contacts actuate only TRIP "+' The AGM... trip indicating contact under short circuit trip conditions. mounts on the right side of the Motor L1 L2 L3 Also comes with red short circuit trip Protector and can be combined with: indicator which can be reset "i >" Standard Auxiliary Contacts: NHI 11-PKZ 0 NHI 12-PKZ 0 NHI 21-PKZ 0 4.32 4.22 manually. Early-Make Auxiliary Contacts NHI-E-PKZ 0 It cannot be combined with the long 2 VHI 20-PKZ 0 0 version auxiliary contact: NHI 2-11S-PKZ 0 Clips onto top portion of **PKZM 0** Motor Protector. Ideally used in combination with the undervoltage trip module in Emergency-Stop circuits -@ Voltage trips Insert desired Voltage rating from page 7/39 Shunt Trip AC and DC ratings A-PKZ 0 (...) 1 - Manual Motor Protector A-PKZ 0 (...)DC 7/6 2 - Motor Protector Combinations **Undervoltage Trip** 7/8 AC ratings U-PKZ 0 (...) Voltage trip modules mount on the left side of the main device. A-PKZ 0 shunt trips cannot be combined with U-PKZ 0 undervoltage U trips. The DC version is rated for short time duty: Max. 5 sec. Fuseless Current Limiter Used to increase the short circuit rating of Motor Protectors and Motor Protector U-PKZ 0 undervoltage trips cannot be combined with A-PKZ 0 shunt CL-PKZ0 trips. Can be used in conjunction Combinations. Mounts beneath or next to **PKZM 0** Motor with the Motor Protector PKZM 0 and VHI early-make contacts to provide Emergency-Stop functions. Protector.

System PKZ 0- Motor Protector Accessories- Auxiliary Contacts, Voltage Trips

Ordering Information:

- If ordered separately: Specify Type from Column 5. Example: U-PKZ 0 (120V, 60Hz)

- If ordered with device: Add a + in front of Type: Example: + U-PKZ 0 (120V, 60 Hz)



2		3				4		5
Conne	ection Diagram	UL/CSA Maximur 3 Phase	n HP Rating (@:		Number o N.O. = No	of Contacts	For Use With:
			hase ratings	-)	Op N.C. = No	en	
		200 V	230 V	460 V	575 V	N. O.	N. C.	
lagnetic Contactor	Module							
f.Ro.w		2	3	5	5	1	1	PKZM 0
Andreas a second a	T.	2	3	5	5	2	-	PKZM 0
el es		2	3	5	5	2	-	PKZM 0
		2	3	5	5	1	1	PKZM 0
ligh Capacity Magne	etic Contacto	r Module						
vith Current Limiting Co	ntact Assembly	0	0	F	F	4	4	
		2	3	5	5	1	1	PKZM 0
angen 1		2	3	5	5	2	-	PKZM 0
- m - 1		2	3	5	5	2	-	PKZM 0
Plug-fit into load side of Motor Protector		2	3	5	5	1	1	PKZM 0
Surge Suppressors		Voltage I	Range (50,6	0Hz):				
	A1	24 - 48 V	/ AC					S(E)00PKZ 0
\bigcirc		110 - 250	O V AC					S(E)00PKZ 0
\cap	A1	24 - 48 V	/ AC					S(E)00PKZ 0
	É 🖉	110 - 250	O V AC					S(E)00PKZ 0
	A2	380 - 41	5 V AC					S(E)00PKZ 0
Base for separate mo	ounting							S(E)00-PKZ 0 () HI 11-S/EZ-PKZ 0
Mechanical Interlock	[
								S(E)00-PKZ 0 () PKZM 0/S(E)00
Auxiliary contact mo								
THE L	43 31					1	1	S(E)00 + EZ-PKZ 0

System PKZ 0- Motor Protector Contactors and Accessories, Auxiliary Contacts, Surge Suppressors

7/12





System PKZ 0- Motor Protector Contactors and Accessories, Auxiliary Contacts, Surge Suppressors

6	7	8	9 Surge Suppressors
Туре	Price	Notes	Remarks
Specify Coil Voltage from page 7/39 when ordering SE00-11-PKZ 0 () SE00-20-PKZ 0 () SE00-20-PKZ 0 (V DC) SE00-11-PKZ 0 (V DC) Specify Coil Voltage from page 7/39 when ordering S00-11-PKZ 0 () S00-20-PKZ 0 (V DC) S00-20-PKZ 0 (V DC)	See Price List See Pr	 SE 00 and S 00 contactors are only suitable for use with PKZM 0 protectors The Contactors are designed to plug in the load side of the PKZM 0 Motor Protector to form a compact and contoured fit. A clip plate (see figure at right), onto which the combination is mounted, is a necessary part of the assembly and mube ordered separately if the Motor Protector combination is not purchased complete as shown on page 7/8. S(E) 00 contactors can also be Individually mounted using the EZ-PKZ 0 mounting base. Contactors so mounted can also be equipped with a sidemounted auxiliary contact module Type HI11-S/EZ-PKZ 0. (See below). The S 00 contactor is identical to the SE 00 except for the built-in current limiting contact assembly, which makes suitable for "Type 2" co-ordination level per IEC/EN 60 947 and no welding performance in combination with the PKZM 0 Motor Protector. 	to ist ist i i i i i i i i i i i i i
RC SPKZ 0 48 RC SPKZ 0 250 VG SPKZ 48 VG SPKZ 250 VG SPKZ 415 EZ-PKZ 0	Price List See Price List See Price List Price List See Price List See Price List	DC rated contactor coils are supplied standard with built-in surge suppressor Coil Voltage: Circuit Diagram: 12 V DC 24 V DC 48 V DC 60 V DC 110 V DC 220 V DC SE 00 and S 00 contactors can be individually or separately mounted usin the EZ-PKZ 0 mounting base. The base can also be mounted on DIN rail (on rail of 7.5 mm or 15 mm heights).	g
MV-PKZ 0	st See Price List See st See Price List See	The MV-PKZ 0 can be used to mechar cally interlock two S(E) 00 contactors e to build reversing starter combinations.	.g.
HI11-S/EZ-PKZ 0		Cannot be combined with: PKZM 0/S(E) 00 equipped with NHIPKZ 0 and/or AGMPKZ 0.	Insert desired coil voltage where specified. Example: SE00-11-PKZ 0 (120V, 60Hz) S00-20- PKZ 0 (24V DC)

Moeller $\textcircled{\begin{tabular}{c} \hline \end{tabular}}$



System PKZ 0- Motor Protector Insulated Enclosures, Housings, Padlocking provisions

1	2	3	4	5	6	7
	Notes	Degree of Protection	For Use With	Remarks	Туре	Price
nsulate	d Enclosures for surfa	ce mounting				List
or Motor	Protector					
	Cover with opening dimensioned to accommo- date front of Motor Protector	IP 40 UL/NEMA 1	PKZM 0+NHI or U or A , +L-PKZ 0 (Max. 2 lights)	Includes ground terminal connection, 2 PG 16 cable entry knockouts, top and bottom	CI-PKZ 0	
°	With black/gray handle	IP 55 UL/NEMA 12	PKZM 0, +NHI+NHI-E or		CI-PKZ 0-G	
	With red/yellow handle for use in Emergency-Stop circuits.	IP 55 UL/NEMA 12	U+NHI-E or A+NHI-E, +L-PKZ 0 (Max. 2 lights)		CI-PKZ 0-GR	
or Motor	Protector with early-make	contacts				
	With black/gray handle	IP 55 UL/NEMA 12	PKZM 0 +VHI+ U	Includes ground terminal connection, 2 PG 16 cable entry knockouts, top and	CI-PKZ 0-GV	
	With red/yellow handle for use in Emergency-Stop circuits.	IP 55 UL/NEMA 12	PKZM 0 +VHI+ U	bottóm	CI-PKZ 0-GRV	
or Motor	Protector enclosures					
-	Padlocking assembly accommodating up to 3 padlocks with a hasp thickness of 3 - 6 mm		CI-PKZ 0-G(R)(V)	Padlockable in the OFF position of the PKZM 0 Manual Motor Protector	SVB-PKZ 0-CI	
or Motor	Protector Combinations					
	Suitable for cover interlocking handle (R)H-PKZ 0 (IP 65).	IP 65 UL/NEMA 12 ¹⁾	PKZM 0/S(E)00 +NHI or NHIS +NHI-E, +U or A +(R)H +L PKZ 0 (MAX. 2 lights)	Mounting depth 125 mm, additional M3-Cl23 mounting plate required	CI23X-125-NA	e Price List See
nsulate	d Housings for cavity i	mounting				See
38.	Cover with opening dimensioned to accommo- date front of Motor Protector	Front IP 40	PKZM 0, +NHI or U or A, +L-PKZ 0 (Max.2 lights)	Includes ground terminal connection, 2 PG 16 cable entry knockouts, top and bottom	E-PKZ 0	
	With black/gray rotary handle	Front IP 55	PKZM 0, +NHI+NHI-E or U+NHI-E or A+NHI-E,		E-PKZ 0-G	
	With red/yellow rotary handle for use in Emergency-Stop circuits	Front IP 55	+AGM or U+NHI-E or A+NHI-E, +L-PKZ 0		E-PKZ 0-GR	
	Padlocking accessory to accommodate up to 3 padlocks with a hasp thickness of 3 - 6 mm		E-PKZ 0-G(R)	Padlockable in the OFF position of the PKZM 0 Manual Motor Protector	SVB-PKZ 0-E	

1) UL Type 12 currently under submittal

Ordering Information: Specify Type from Column 6. Example: **CI-PKZ 0-G**

Manual Motor Protectors, Motor Protectors with Contactor Motor Starter Combinations



System PKZ 0- Motor Protector Accessories- Clip plates, Handles, Indicating Lights

	Notes			3 Type	4 Price
	10100			1300	1100
p Plate					e List
	Can be either panel mounter	e a magnetic Moto d with screws or D	manual protector and a S(E) 00 r Protector Combination. JIN rail mounted using one 15 mm N rails must conform to EN 50 022-35.	C-PKZ 0	
ve dog and A-I	g Handles UL/NEMA I-PKZ 0 extension shaft suppl o any required length to accor	ied with all door c	oupling handles. The extension		st See Price
	For use as Main Switch. Do Color: Black with On/Off an using three 4 - 8 mm padloo position.	oor/Cover interlock d "+" (Trip) switch ks. Can also be m	ed when switch is in the ON position. positions, lockable in OFF position lodified to be lockable in the ON	H-PKZ 0	
	For use as Main Switch with feature. Color: Red/yellow OFF position using three 4	n Emergency-Stop with On/Off and "+ - 8 mm padlocks.	function. Door/Cover interlocking " (Trip) switch positions, lockable in	RH-PKZ 0	
/	Simpler mechanism, withou Color: Black, with On/Off an	t any door/cover ir d "+" (Trip) switch	terlocking or padlocking capability. positions.	HSOV-PKZ 0	
" Padlocka	ble Knob for Manua	I Protector			e List
		knob handle with	a padlockable version. Accommodates ble in OFF position.	AK-PKZ 0	
nper sealir	ng Cover				Price List
	To prevent unauthorized act Test-to-Trip function. Uses o	cess to the Motor I conventional lead s	FLC thermal trip dial setting and the seal.	PL-PKZ 0	
licator Ligh	nts				
licator Ligh		, E-PKZ 0 Er	nclosures and Housings		Price
licator Ligh		, E-PKZ 0 Er Voltages:	nclosures and Housings 110 - 230 V	L-PKZ 0 (230V)	See Price
icator Ligh	For CI23X, CI-PKZ 0		_	L-PKZ 0 (230V) L-PKZ 0 (400V)	See Price
licator Ligh	For CI23X, CI-PKZ 0		110 - 230 V		Price List See Price
licator Ligh	For CI23X, CI-PKZ 0		110 - 230 V 230 - 400 V	L-PKZ 0 (400V)	See Price List See Price
licator Ligh	For CI23X, CI-PKZ 0 Color: White	Voltages:	110 - 230 V 230 - 400 V 415 - 500 V	L-PKZ 0 (400V) L-PKZ 0 (500V)	List See Price List See Price
dicator Ligh	For CI23X, CI-PKZ 0 Color: White	Voltages:	110 - 230 V 230 - 400 V 415 - 500 V 110 - 230 V	L-PKZ 0 (400V) L-PKZ 0 (500V) L-PKZ 0-GN (230V)	Price List See Price List See Price
dicator Ligh	For CI23X, CI-PKZ 0 Color: White	Voltages:	110 - 230 V 230 - 400 V 415 - 500 V 110 - 230 V 230 - 400 V	L-PKZ 0 (400V) L-PKZ 0 (500V) L-PKZ 0-GN (230V) L-PKZ 0-GN (400V)	See Price List See Price List See Price
dicator Ligh	For CI23X, CI-PKZ 0 Color: White Color: Green	Voltages: Voltages:	110 - 230 V 230 - 400 V 415 - 500 V 110 - 230 V 230 - 400 V 415 - 500 V	L-PKZ 0 (400V) L-PKZ 0 (500V) L-PKZ 0-GN (230V) L-PKZ 0-GN (400V) L-PKZ 0-GN (500V)	List See Price List See Price List See Price
dicator Ligh	For CI23X, CI-PKZ 0 Color: White Color: Green	Voltages: Voltages:	110 - 230 V 230 - 400 V 415 - 500 V 110 - 230 V 230 - 400 V 415 - 500 V 110 - 230 V	L-PKZ 0 (400V) L-PKZ 0 (500V) L-PKZ 0-GN (230V) L-PKZ 0-GN (400V) L-PKZ 0-GN (500V)	See Price List See Price List See Price

1) UL Type 12 currently under submittal

Ordering Information: Specify Type from Column 3. Example: **AK-PKZ 0**



Manual Motor Protectors, Motor Protectors with Contactor Motor Starter Combinations

System PKZ 0- Motor Protector Wiring Accessories

1	2	3	4	5	6	7
	Notes	Number of Motor Protectors	Connec- tor Length	Unit Width available per Motor Protector	Туре	Pric
			mm	mm		
Reduces mountin	Feeder Bus Connectors of space and wiring time by eliminating daisy-chain accommodate more units.	wiring.				See Price List
244 646	For Motor Protector and Motor Protector Combinations without side-mounted auxiliary	2	90	45	B3.0/2-PKZ 0	
***********	contacts or voltage trips.	4	180	45	B3.0/4-PKZ 0	
The second second	For Motor Protector and Motor Protector Combinations each with one side-mounted	2	99	45 + 9	B3.1/2-PKZ 0	
State of the local division of the local div	auxiliary contact or trip-indicating contact module, or a single voltage trip.	3	153	45 + 9	B3.1/3-PKZ 0	
And the second second	1	4	207	45 + 9	B3.1/4-PKZ 0	
AND MADE AND ADDRESS		5	261	45 + 9	B3.1/5-PKZ 0	
totor Trics	For Motor Protector and Motor Protector Combinations each having one auxiliary contact	2	108	45 + 18	B3.2/2-PKZ 0	
140 ANN 804	and trip-indicating auxiliary contact module mounted on the right, or a voltage trip mounted on the left, or for Motor Protector Combinations having a long NHI 2-11S-PKZ 0 standard auxiliary contact mounted on the right.	4	234	45 + 18	B3.2/4-PKZ 0	
						e List
Protective Sh	roud for Unused Terminals					
▲	Finger-safe covers which slip over unused terminals of a three-phase feeder bus connector to protect against accidental contact.				H-B3-PKZ 0	
						Price L
Connector Fe	eder Terminal					
	Incoming supply terminal to feed bus connectors. Finger-safe design. Maximum Ampacity: 63 A Permissible Conductor Range: AWG 104, Cu Only				BK25/3-PKZ 0	



System PKZ 0- Motor Protector Wiring Accessories

	2	3	4	5	6	7
	For use with	Maximum Rated Current	Adapter Supply leads	Adapter Width	Туре	Price
		Amps	AWG	mm		
For mounting i with 60 mm ph Components a	nel Bus Bar Adapters, 3-Pole in industrial control panels on Cu 20 x 5 mm hase separation. The back of the adapter con are mounted on top of the adapter and wired s done under de-energized (Power OFF) con	nnects onto the bus. to the supply leads.	i			
	PKZM 0 or PKZM 0/S(E)00 + AGM or NHI	25	10	54	AD 25/5-1	
	2 x PKZM 0 or 2 x PKZM 0/S(E) 00 + AGM or NHI, or 1 x PKZM 0 + 2 x EZ-PKZ 0 + MV-PKZ 0	25	10	108	AD 25/5-2	
	2 x PKZM 0 or 2 x PKZM 0/S(E) 00 + AGM or NHI, or 1 x PKZM 0 + 2 x EZ-PKZ 0 + MV-PKZ 0 + AGM or NHI	25	10	144	AD 25/5-144	
ame as abov hase separat	e except for mounting on Cu 30 x 10 and 20 ion.) x 10 mm busbar arr	angements with	n 60 mm		
	PKZM 0 or PKZM 0/S(E) 00 + AGM or NHI	25	10	54	AD 25/10-1	
	2 x PKZM 0 or 2 x PKZM 0/S(E) 00 + AGM or NHI, or 1 x PKZM 0 + 2 x EZ-PKZ 0 + MV-PKZ 0	25	10	108	AD 25/10-2	
	2 x PKZM 0 or 2 x PKZM 0/S(E) 00 + AGM or NHI, or 1 x PKZM 0 + 2 x EZ-PKZ 0 + MV-PKZ 0 + AGM or NHI	25	10	144	AD 25/10-144	
dapter Ex	tension					N N N
	Push-fit strip, can be fitted onto AD to extend mounting width			9	AD-E	See Price List See Price List

Ordering Information: Specify Type from Column 6. Example: AD 25/10-1



Manual Motor Protectors, Motor Protectors with Contactor Motor Starter Combinations

1	2	3		4	5	6	
	For Use With PKZM 0 Motor Protectors + DILM Magnetic Contactors (Refer to Section 3 for info on Type DILM	UL/CSA Maximum 3 Phase HP Rating @:		MVS Kit Type	Price	Remarks	
	contactors.)	460 V	575 V				
		400 V	575 V				
Full Voltage, N	Ion-Reversing Starter C	ombir	nations				
	PKZM 0 + DIL (E)EM	5	5	MVS-D4		Includes a mounting plate and finge safe wiring harness to accommodal	
j 🕅	PKZM 0 + DIL 00(A)M	7 1/ ₂	10	MVS-D5		FVNR motor starter combinations consisting of PKZM 0 Motor Protect tors and DILM Magnetic Contactor in various HP sizes.	
	PKZM 0 + DIL 0M	10	15	MVS-D11		UL listed/CSA certified for group installations and high fault short circ current ratings (see page 7 /19) in	
	PKZM 0 + DIL 0AM	15	20	MVS-D11		association with Moeller Electric components.	
Accommodates Mecha	anically Interlocked Contactors						
	PKZM 0 + DIUL (E)EM/21/MV	5	5	MVS-W4		Includes a mounting plate and finge safe wiring harnesses to accommo date FVR motor starter combination	
	PKZM 0 + DIUL 00(A)M/11/MV	7 1/ ₂	10	MVS-W5MV		consisting of PKZM 0 Motor Protectors and DILM mechanically interlocked Magnetic Contactors in various HP sizes.	
	PKZM 0 + DIUL 0M/11/MV	10	15	MVS-W11MV		UL listed/CSA certified for group installations and high fault short cir	
	PKZM 0 + DIUL 0AM/11/MV	15	20	MVS-W11MV		current ratings (see page 7/19) in association with Moeller Electric components.	
Star-Delta Sta	rter Combinations						
Open Transition						Includes a mounting plate and finge safe wiring harnesses to accommo	
	PKZM 0 + DIL EM/EEM +DIL ET 11-30-A	7 1/ ₂	10	MVS-S5		date Star-Delta motor starter comb tions consisting of PKZM 0 Motor Protectors, electronic timing relays	
	PKZM 0 + DIL 00AM/00M + ETR 4-51-A	10	15	MVS-S7		DILM Magnetic Contactors in var HP sizes. UL listed/CSA certified for group installations and high fault short cir	
	PKZM 0 + DIL 0M/00AM +ETR 4-51-A	15	20	MVS-S11		current ratings (see page 7 /19) in association with Moeller Electric components.	
For PKZM 0 M	otor Protector Combina	tions			See Price See Price		
	PKZM 0/SE 00			MVS-C45-S		Mounting Plate to combine PKZM 0/S(E) 00 Motor Protector	
	PKZM 0/S 00					PKZM 0/S(E) 00 Motor Protecto Combinations with other MVS start Also allows feed using bus bar connectors (page 7/16).	

Notes:

Control Circuit Voltage The MVS System wiring harnesses are designed to accommodate DIL (E)EM contactors that are either AC or DC energized and DIL...M contactors that are AC energized only.

Surge Suppressors for DIL...M contactors The following surge suppressors can be used with DIL...M contactors mounted on MVS mtg. plates: RC B DIL 250 (RC filter), VG B DIL 250 (Varistor suppressor) and FD B-DIL (diode suppressor)

Refer to Section 3 for more information on DIL (E)EM and DIL M contactors.

Ordering Information: Specify Type from Column 4. Example: MVS-D5



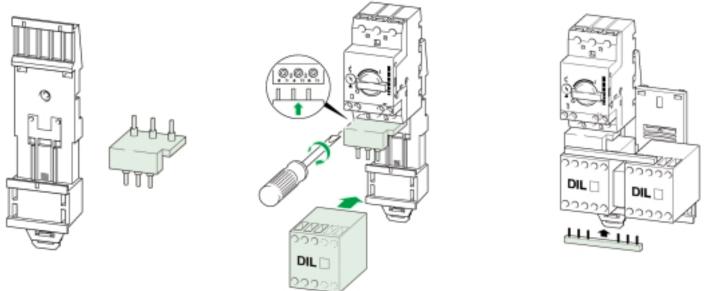
MVS System

The **MVS** system consists of mounting plates and wiring harnesses designed to combine **PKZM 0** Motor Protectors and **DIL...M** Magnetic Contactors in various Motor Starter configurations.

MVS Motor Starter Combinations are UL Listed and CSA Certified for group installations per the intent of NEC 430-53 and are also rated for high fault current ratings in association with listed upstream protective circuit breakers or fuses.

The **MVS** mounting and wiring system greatly cuts down the amount of mounting and wiring assembly time normally associated with motor starters and is thus ideally suited for use in industrial control panels.

Installation Instructions



The **MVS** System Mounting plates are equipped with DIN Rails onto which **PKZM 0** Motor Protector and **DIL...M** Magnetic Contactors are securely fastened. Each **MVS** type comes with its own set of wiring harnesses to accommodate a number of starter configurations such as Full Voltage Non-Reversing and Full Voltage Reversing combinations. Once the wiring harness is in place it will provide a finger-safe connection between the Motor Protector and Contactor(s). One size screwdriver is the only tool required to complete the assembly. The mounting plate itself can either be panel mounted using screws or snapped onto a 35 mm DIN rail (EN 50 022) for quicker assembly. Depending on the starter type, assembly and wiring time is reduced by more than 50% over conventional methods. In addition to the time saving, the **MVS** System kits will further lower costs by reducing overall panel space requirements.

Full Voltage Non-Reversing Combinations: **MVS-D**... Full Voltage Reversing Combinations: **MVS-W**...(**MV**) Star-Delta Combinations **MVS-S**...

MOELLER

UL/CSA Short Circuit Current / NEC Group Protection Ratings

MVS System used in association with PKZM 0 Motor Protectors, DIL...M Magnetic Contactors and Listed Branch Circuit Overcurrent Protective Devices

	RMS Short Circuit Current Rating @ 600 V AC kA	Listed Grou Protection B Device Fuse	
PKZM 0-6.3 + DILM + MVS	50	600 A	600 A
PKZM 0-10 + DILM + MVS	22	150 A	125 A
PKZM 0-16, 20, 25 + DILM + MVS	10	150A	125 A



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