



Powering Business Worldwide

E-Line Controlgear

Maximum Retail Price w.e.f. 2nd May '26

Contactors



Overload Relays



MPCBs



Special Purpose Contactors



Index Page

3 Pole Power Contactors	Page 6
2 Pole Power Contactors	Page 7
Fr-1 Control Contactors	Page 8
3 Pole Power Contactors with Wide Operating Band Coils	Page 9
4 Pole Power Contactors Rated AC-1	Page 10
4 Pole Power Contactors Rated AC-1 (With Wide Band Coil)	Page 11
Accessories of Power Contactors (2, 3 & 4 Pole)	Page 12
Spare Coils for Power Contactor (3 & 2 Pole)	Page 13
Thermal Overload Relays Type ER2, ER3, ER4 & ER5	Page 14
3 Pole Mini Power Contactors	Page 15
Mini Control Contactors - Control Relay	Page 16
Accessories for Mini Contactors	Page 17
Mini Overload Relay Type ER1	Page 18
Motor Protection Circuit Breaker (MPCB) Type EKZ	Page 19
Accessories for MPCB type EKZ	Page 20-21
Special Purpose Contactors	Page 22
Terms & Condition	Page 23



E-Line Range of Controlgear is designed for **Extreme Reliability** to support Demanding Applications. Its Superior Contemporary design backed by years of Experience makes it suitable for any application including Inching duty, i.e. Crane Duty - **AC-4**. It encompasses many user friendly features which makes life of the user in day to day operations very simple. Designed for Extreme Performance support reduction in your OPEX and **Total Cost of Ownership** by avoiding Frequent Replacements of Contacts and Coils.

Very High Making and Breaking Capacity with superior best in class Electrical Durability makes it Suitable for IE3 Motors as well.

E-Line Range of Controlgear can be easily selected for Motor Applications using Type-2 Co-ordination Charts which are IE3 Ready.

IE3 Ready Type-2 Co-ordination charts are available for various Combinations like Direct-On-Line Starters, Star-Delta Starters using Fuses and Fuseless SCPDs (Short Circuit Protection Devices).

Bussman Fuses give best in class Short Circuit Protections to Motor Feeders. Fuseless SCPDs available to build Motor Starters are EKZ MPCB Based and BZMX MCCB.

One of the Most Unique **Industry First** Feature of this Type-2 Charts is Motor Starters can be Built using all type of MCCBs, i.e. Motor Protection version MCCBs which have Magnetic Only (Short Circuit Protection), Thermal Magnetic MCCBs, and also Electronic Trip Unit MCCBs.

Electronic Trip Unit MCCBs come with Built-in Ground Fault Protection (LSIG) which helps to implement / enables Ground Fault Protection in each of the Motor Feeder with Option to ENABLE / DISABLE as per requirement.

Range & Certification

Product Group	Product	Range Name starts with	Available Ratings/Range	UL File No.	IEC	CE	RoHS
Power Contactors	3Pole AC Contactors	EC	9 - 105A : AC-3	E549779	Yes	Yes	Yes
	3Pole DC Contactors	EC	9 - 105A : AC-3	E549779	Yes	Yes	Yes
	2Pole AC Contactors	EC	9 - 105A : AC-3	E549779	Yes	Yes	Yes
	2Pole DC Contactors	EC	9 - 105A : AC-3	E549779	Yes	Yes	Yes
	4Pole AC Contactors	EC	25 - 63A : AC-1	E549779 up to 32A-AC1	Yes ^C	Yes	Yes
	4Pole DC Contactors	EC	25 - 63A : AC-1	E549779 up to 32A-AC1	Yes ^C	Yes	Yes
	3Pole AC Contactors With Wide Operating Band Coils	EC	9 - 25A : AC-3	-	Yes ^C	Yes	Yes
	4Pole AC Contactor With Wide Operating Band Coils	EC	25 - 32A : AC-1	-	Yes ^C	Yes	Yes
Control Contactor	Control AC Contactor - Fr-1	ESR	6A : AC-15 at 400V AC	-	Yes ^C	Yes	Yes
	Control DC Contactor - Fr-1	ESR	6A : AC-15 at 400V AC	-	Yes ^C	Yes	Yes
Accessories For EC Power Contactors & ESR Control Contactors	Auxiliary Contacts - Front Mounted	ECFA	4A : AC-15 at 400V AC	E549842	Yes	Yes	Yes
	Auxiliary Contacts - Side Mounted	ECSA	4A : AC-15 at 400V AC	E549842	Yes	Yes	Yes
	Mechanical Interlock Kit	ECSM	-	E549842	Yes	Yes	Yes
	Mechanical Interlock Kit With In-built NC Contacts	ECSM	4A : AC-15 at 400V AC	E549842	Yes	Yes	Yes
	Surge Suppressors Type RC	EC**SSR	24V - 250V AC	E549779	Yes	Yes	Yes
	Surge Suppressors Type Diode	EC**SSD	12V - 600V DC	E549779	Yes	Yes	Yes
	Reversing Wiring KIT	EC**RWM	9 - 80A	E549779	Yes	Yes	Yes
Spares For EC Power Contactors & ESR Control Contactors	Spare coils For AC Contactors Type EC	EC**A	24V - 525V	-	-	-	Yes
	Spare coils For DC Contactors Type EC	EC**D	24V - 220V	-	-	-	Yes
Thermal OLR and Accessories	Thermal Overload Relay - TOLR	ER	0.28 - 112A	E549842	Yes ^T	Yes	Yes
	Mounting Adaptor for TOLR	ERSM	Matching with Relay	E549842	Yes ^{MA}	Yes	Yes
Mini Contactors	3Pole Mini Power AC Contactors	EMC	7 - 16A : AC-3	E549779	Yes	Yes	Yes
	3Pole Mini Power DC Contactors	EMC	7 - 16A : AC-3	E549779	Yes	Yes	Yes
	Mini Control AC Contactors	ECR	6A : AC-15	E549842	Yes	Yes	Yes
	Mini Control DC Contactors	ECR	6A : AC-15	E549842	Yes	Yes	Yes
	4Pole Mini Power AC Contactors	EMC	18 - 22A : AC-1	-	Yes ^C	Yes	Yes
	4Pole Mini Power DC Contactors	EMC	18 - 22A : AC-1	-	Yes ^C	Yes	Yes
Accessories for Mini Contactors	Front Mount	EMCFA ECRFA	5A : AC-15	E549842	Yes	Yes	Yes
	Electronic Timer	EMCET	0.3 - 30 Sec	E549842	Yes	Yes	Yes
	Surge Suppressors Type RC	EMCSSR	12 - 510V AC	E549779	Yes	Yes	Yes
	Surge Suppressors Type Varistor	EMCSSV	12 - 510V AC/DC	E549779	Yes	Yes	Yes
	Surge Suppressors Type Diode	EMCSSD	12 - 600V DC	E549779	Yes ^C	Yes	Yes
	Spare Coils For AC Contactors Type EMC / ECR	EMC__A	24V - 400V	-	Yes	-	Yes
	Spare Coils For DC Contactors Type EMC / ECR	EMC__D	12V - 250V	-	Yes	-	Yes
	PCB link module	EMC	22A : AC-1	E549779	Yes	Yes	Yes
Thermal OLR - Mini	Thermal Overload Relay	ER	0.28 - 17A	E549842	Yes	Yes	Yes

Range & Certification

Product Group	Product	Range Name starts with	Available Ratings/ Range	UL File No.	IEC	CE	RoHS
MPCB	Motor Protection Circuit Breakers	EKZ	0.1 - 63A	E549838	Yes	Yes	Yes
MPCB Accessories	Shunt trip	EKZ-SR	100V - 440V	E549838	Yes ^C	Yes ^S	Yes
	Under Voltage Relay	EKZ-UR	24V - 500V	E549838	Yes ^C	Yes ^S	Yes
	Commoning Link 45mm	EKZ-CL	63A	E549838	Yes ^C	Yes ^S	Yes
	Commoning Link 54mm	EKZ-CL	63A	E549838	Yes ^C	Yes ^S	Yes
	Contactor Link module	EKZ**LM	7A - 40A	E549838	Yes ^C	Yes ^S	Yes
	Feeder Terminal	EKZ-FT	63A	E549838	Yes ^C	Yes ^S	Yes
	Front Mount Auxiliary Contact Block	EKZ-AF	0.75A : AC-15	E549838	Yes ^C	Yes ^S	Yes
	Side Mount Auxiliary Contact Block	EKZ-AS	3A : AC-15	E549838	Yes ^C	Yes ^S	Yes
	Indicator Auxiliary Contact block- Fr1	EKZ-AST	0.75A : AC-15	E549838	Yes ^C	Yes ^S	Yes
Agri Contactors	2Pole, 3Pole & 4Pole Contactors	EMS	16 - 40A : AC-3 25 - 50A : AC-1	-	Yes ^C	Yes	-
	Spare Coils	EMS	120 - 484V AC	-	Yes ^C	-	-

Remarks

Yes ^T	For ER1, ER2, ER3
Yes ^{MA}	For ERSMA2, ERSMA4
Yes ^C	Conformance
Yes ^S	Internal Declaration

3 Pole Power Contactors



Range

- Frame : 4 Frames
- Current Rating : 9-105 A
- Utilization Category : AC-1, AC-2, AC-3 & **AC-4**
- Wide Range of Accessories



Key Features

- **Compact and yet Robust Design**
- **4 Terminal Coils - Aids Wiring Flexibility**
- AC Coils and DC Coils
- **DC Contactor in Same Size as AC for 50A to 105A**
- Click fit type Auxiliary Contacts Front Mounting / Side Mounting :
- Common Accessories from 9A to 105A, 3P and 2P Contactors
- Mounting on 35 mm DIN Rail from 9A to 105A
- **IP20 Finger proof terminals for Human Safety**
- High Mechanical durability Up to **10 million operations**
- **Device Identification Label** - For ease of Wiring traceability in complex Panels
- Max switching rate: 9000 ops/hour
- Reversing wiring module available for reversing applications.
- Compatible Thermal OLR suitable for Direct and Separate Mounting

Frame Size	Width in mm	AC-3 Rating	AC-1 Rating	In-built Auxiliary Contacts		Contactors with AC Coils		Contactors with DC Coils	
				NO	NC	Part code	MRP	Part code	MRP
1	45	9	25		1	EC009P3001A XXX FL	2,100	EC009P3001D XXX L	3,790
				1		EC009P3010A XXX FL		EC009P3010D XXX L	
		12	25		1	EC012P3001A XXX FL	2,300	EC012P3001D XXX L	4,080
				1		EC012P3010A XXX FL		EC012P3010D XXX L	
		18	32		1	EC018P3001A XXX FL	2,700	EC018P3001D XXX L	4,650
				1		EC018P3010A XXX FL		EC018P3010D XXX L	
		25	32		1	EC025P3001A XXX FL	3,450	EC025P3001D XXX L	5,740
				1		EC025P3010A XXX FL		EC025P3010D XXX L	
2	55	32	60	-	-	EC032P3000A XXX FL	7,400	EC032P3000D XXX L	11,080
		40	60	-	-	EC040P3000A XXX FL	10,600	EC040P3000D XXX L	14,090
3	66	50	90	-	-	EC050P3000A XXX FL	14,700	EC050P3000D XXX L	15,690
		65	110	-	-	EC065P3000A XXX FL	20,500	EC065P3000D XXX L	21,320
		80	110	-	-	EC080P3000A XXX FL	28,000	EC080P3000D XXX L	29,590
4	75	95	140	-	-	EC095P3000A XXX FL	36,500	EC095P3000D XXX L	41,150
		105	140	-	-	EC105P3000A XXX FL	41,500	EC105P3000D XXX L	52,940

Note:

1. Replace XXX with required Coil voltage
2. Other Coil Voltages available on Request (Special Prices Apply)
3. 60Hz Coils Available on Request
4. 50/60Hz Coils Available on Request
5. Contactors with Wide Operating Band Coils - 240WB available - Listed on Other Page

AC Coil Voltage	Replace XXX with	DC Coil Voltage	Replace XXX with
24V, 50Hz	024	24V	024
48V, 50Hz	048	48V	048
110V, 50Hz	110	110V	110
230V, 50Hz	230	220V	220
240V, 50Hz	240		
380V, 50Hz	380		
415V, 50Hz	415		
525V, 50Hz	525		

2 Pole Power Contactors



Range

- Frame : 4 Frames
- Current Rating : 9-105 A
- Utilization Category : AC-1, AC-2, AC-3 & **AC-4**
- Wide Range of Accessories



Key Features

- **Compact and yet Robust Design**
- **4 Terminal Coils - Aids Wiring Flexibility**
- AC Coils and DC Coils
- **DC Contactor in Same Size as AC for 50A to 105A**
- Click fit type Auxiliary Contacts Front Mounting / Side Mounting :
- Common Accessories from 9A to 105A, 3P and 2P Contactors
- Mounting on 35 mm DIN Rail from 9A to 105A
- **IP20 Finger proof terminals for Human Safety**
- High Mechanical durability Up to **10 million operations**
- **Device Identification Label** - For ease of Wiring traceability in complex Panels
- Max switching rate: 9000 ops/hour
- Reversing wiring module available for AC-4 duty reversing applications.
- Compatible Thermal OLR suitable for Direct and Separate Mounting

Frame Size	Width in mm	AC-3 Rating	AC-1 Rating	In-built Auxiliary Contacts		Contactors with AC Coils		Contactors with DC Coils	
				NO	NC	Part code	MRP	Part code	MRP
1	45	9	25		1	EC009P2001A XXX FL	1,800	EC009P2001D XXX L	3,350
				1		EC009P2010A XXX FL		EC009P2010D XXX L	
		12	25		1	EC012P2001A XXX FL	1,970	EC012P2001D XXX L	3,590
				1		EC012P2010A XXX FL		EC012P2010D XXX L	
		18	32		1	EC018P2001A XXX FL	2,300	EC018P2001D XXX L	4,100
				1		EC018P2010A XXX FL		EC018P2010D XXX L	
		25	32		1	EC025P2001A XXX FL	2,950	EC025P2001D XXX L	5,060
				1		EC025P2010A XXX FL		EC025P2010D XXX L	
2	55	32	60	-	-	EC032P2000A XXX FL	6,300	EC032P2000D XXX L	9,760
				-	-	EC040P2000A XXX FL	9,020	EC040P2000D XXX L	12,410
3	66	50	90	-	-	EC050P2000A XXX FL	12,510	EC050P2000D XXX L	13,820
				-	-	EC065P2000A XXX FL	17,430	EC065P2000D XXX L	18,780
		80	110	-	-	EC080P2000A XXX FL	23,800	EC080P2000D XXX L	26,040
				-	-	EC095P2000A XXX FL	31,040	EC095P2000D XXX L	36,220
4	75	105	140	-	-	EC105P2000A XXX FL	35,280	EC105P2000D XXX L	46,590

Note:

1. Replace XXX with required Coil voltage
2. Other Coil Voltages available on Request (Special Prices Apply)
3. 60Hz Coils Available on Request
4. 50/60Hz Coils Available on Request
5. Contactors with Wide Operating Band Coils - 240WB available - Listed on Other Page

AC Coil Voltage	Replace XXX with	DC Coil Voltage	Replace XXX with
24V, 50Hz	024	24V	024
48V, 50Hz	048	48V	048
110V, 50Hz	110	110V	110
230V, 50Hz	230	220V	220
240V, 50Hz	240		
380V, 50Hz	380		
415V, 50Hz	415		
525V, 50Hz	525		

Fr-1 Control Contactors



Range

- Frame Size - 45mm - Frame-1
- AC Control & DC Control
- **Contact Combinations Available : 2NO + 2NC, 3NO + 1NC, 4NO**
- **Wide Range of Accessories Common with Fr-1 Contactor Type EC**



Key Features

- Same as Fr-1 Main Contactors
- **Max. Allowable NC Contacts - Not to Exceed 4 NCs**
- Side and Front Mounted Aux. Contacts Combination can be used

Frame Size	Width in mm	AC-15 Rating at 415V	DC-13 Rating at 220V	In-built Auxiliary Contacts		Contactors with AC Coils		Contactors with DC Coils	
				NO	NC	Part code	MRP	Part code	MRP
1	45	5A	0.7A	2	2	ESR025P0022A XXX FL	2,480	ESR025P0022D XXX L	4,080
				3	1	ESR025P0031A XXX FL		ESR025P0031D XXX L	
				4	-	ESR025P0040A XXX FL		ESR025P0040D XXX L	

Note:

1. Replace XXX with required Coil voltage
2. Other Coil Voltages available on Request (Special Prices Apply)
3. 60Hz Coils Available on Request
4. 50/60Hz Coils Available on Request

AC Coil Voltage	Replace XXX with	DC Coil Voltage	Replace XXX with
24V, 50Hz	024	24V	024
110V, 50Hz	110	48V	048
240V, 50Hz	240	110V	110
415V, 50Hz	415	220V	220

3 Pole Power Contactors with Wide Operating Band Coils*



Range & Key Features

- Frame Size - 45mm - Frame-1
- AC Control - 240V, 50Hz Coil with **150-300V, 50Hz Operating band**
- 9A to 25A : AC-3
- **Wide Range of Accessories Common with Fr-1 Contactor Type EC**



Frame Size	Width in mm	AC-3 Rating	AC-1 Rating	In-built Auxiliary Contacts		Contactors with AC Coils		Coil Operating Band
				NO	NC	Part code	MRP	
1	45	9	25		1	EC009P3001A240WB	2,460	150 - 300V, 50Hz
				1		EC009P3010A240WB		
		12	25		1	EC012P3001A240WB	2,570	
				1		EC012P3010A240WB		
		18	32		1	EC018P3001A240WB	2,810	
				1		EC018P3010A240WB		
		25	32		1	EC025P3001A240WB	3,150	
				1		EC025P3010A240WB		

Note * - Normal Fr-1 Contactor Coils can not be used in Wide Band Contactors Listed above
 Spare Coil Available on Request - EC025A240WB (Special Prices Apply)
 Spare Coil is Common for 3P, 4P and 2P Wide Band Contactors which are Derived from Fr-1 EC Range
 4Pole Wide band Contactors in Fr-1 Available - Pl refer 4Pole Contactor Pages
 2Pole Wide Band Contactors in Fr-1 : Available on Request

4 Pole Power Contactors Rated AC-1



Frame Size	Width in mm	AC-1 Rating	AC-3 Rating	Contactors with AC Coils		Contactors with DC Coils		Remark
				Part code	MRP	Part code	MRP	
Mini Contactor	45	18	7	EMC007P4000A XXX FL	2,040	EMC007P4000D XXX L	2,990	All the Accessories and Spares of Mini Contactors can be used
		20	9	EMC009P4000A XXX FL	2,130	EMC009P4000D XXX L	3,140	
		22	12	EMC012P4000A XXX FL	2,220	EMC012P4000D XXX L	3,270	
		22	16	EMC016P4000A XXX FL	2,290	EMC016P4000D XXX L	3,390	

Note:

1. Replace XXX with required Coil voltage
2. Other Coil Voltages available on Request (Special Prices Apply)
3. 60Hz Coils Available on Request
4. 50/60Hz Coils Available on Request

AC Coil Voltage	Replace XXX with	DC Coil Voltage	Replace XXX with
24V, 50 / 60Hz	024	24V	024
110V, 50 / 60Hz	110	42V	042
240V, 50 / 60Hz	240	48V	048
415V, 50 / 60Hz	415	110V	110
		220V	220

4 Pole Power Contactors Rated AC-1 in Power Contactors Frames

All the Features, same as EC Range of Contactors



Frame Size	Width in mm	AC-1 Rating	AC-3 Rating	Contactors with AC Coils		Contactors with DC Coils		Remark
				Part code	MRP	Part code	MRP	
1	45	25	9	EC009P4000A XXX FL	2,700	EC009P4000D XXX L	4,450	All the Accessories and Spares of EC Range of Power Contactors can be used
		25	12	EC012P4000A XXX FL	2,850	EC012P4000D XXX L	5,100	
		32	18	EC018P4000A XXX FL	3,110	EC018P4000D XXX L	5,450	
		32	25	EC025P4000A XXX FL	3,480	EC025P4000D XXX L	6,740	
2	73	60	32	EC032P4000A XXX FL	7,650	EC032P4000D XXX L	12,250	
		63	40	EC040P4000A XXX FL	11,890	EC040P4000D XXX L	15,590	

AC Coil Voltage	Replace XXX with	DC Coil Voltage	Replace XXX with
24V, 50Hz	024	24V	024
48V, 50Hz	048	48V	048
110V, 50Hz	110	110V	110
230V, 50Hz	230	220V	220
240V, 50Hz	240		
380V, 50Hz	380		
415V, 50Hz	415		
525V, 50Hz	525		

Note:

1. Replace XXX with required Coil voltage
2. Other Coil Voltages available on Request (Special Prices Apply)
3. 60Hz Coils Available on Request
4. 50/60Hz Coils Available on Request
5. Contactors with Wide Operating Band Coils - 240WB available - Listed on Other Page

4 Pole Power Contactors Rated AC-1 (With Wide Band Coil)



4 Pole Power Contactors Rated AC-1 : Fr-1 with Wide Operating Band Coil

Frame Size	Width in mm	AC-1 Rating	AC-3 Rating	Contactors with AC Coils	
				Part code	MRP
1	45	25	9	EC009P4000A240WB	2,840
		25	12	EC012P4000A240WB	2,990
		32	18	EC018P4000A240WB	3,250
		32	25	EC025P4000A240WB	3,660

All the Features, same as EC Range of Contactors

Remark	Coil Operating Band
All the Accessories and Spares of EC Range of Power Contactors can be used	150 - 300V, 50Hz

Note:

- Normal Fr-1 Contactor Coils can not be used in Wide Band Contactors Listed above
- Spare Coil Available on Request - EC025A240WB (Special Prices Apply)
- Spare Coil is Common for 3P, 4P and 2P Wide Band Contactors which are Derived from Fr-1 EC Range
- 3Pole Wide band Contactors in Fr-1 Available - PI refer 3Pole Wide band Contactor Pages
- 2Pole Wide Band Contactors in Fr-1 : Available on Request

4Pole Contactors Rated 25A to 50A - AC1 in Agri Style also Available, PI refer Agri Contactor Page



Accessories of Power Contactors (2, 3 & 4 Pole)

Suitable for Frame Size	Accessory Type	Accessory Details	Part Code	MRP
Common for all Frames	Auxiliary Contacts	1NO	ECFA10L	290
		1NC	ECFA01L	
	Front Mounted	1NO (Early Make)	ECFA10EML	630
		1NC (Delayed Break)	ECFA01DBL	
	Auxiliary Contacts	1NO	ECSA10L	470
		1NC	ECSA01L	
	Side Mounted	1NO + 1NC	ECSA11L	870
		2NO	ECSA20L	
	Mechanical Interlock KIT	Mechanical Interlock	ECSMIL	840
		Mechanical Interlock with in-built 2NC Aux. Contacts	ECSMEIL	890
Fr-1 9A to 25A	Reversing Wiring Module Kit	For use on Load Side	EC025RWM1L	800
		For use on Line Side	EC025RWM2L	
Fr-2 32A to 40A		For use on Load Side	EC040RWM1L	1,020
		For use on Line Side	EC040RWM2L	
Fr-3 50A to 80A		For use on Load Side	EC080RWM1L	1,500
		For use on Line Side	EC080RWM2L	

Spare Coils for Power Contactor (3 & 2 Pole)

AC Coils

Coils for	Suitable for Contactors	Part Code	MRP
Fr-1	9A - 25A	EC025A XXX FL	1,010
Fr-2	32A - 40A	EC040A XXX FL	1,040
Fr-3	50A - 65A	EC065A XXX FL	3,280
Fr-4	80A - 105A	EC105A XXX FL	5,580

DC Coils

Coils for	Suitable for Contactors	Part Code	MRP
Fr-1	9A - 25A	EC025D XXX L	2,250
Fr-2	32A - 40A	EC040D XXX L	2,340
Fr-3	50A	EC050D XXX L	6,100
Fr-3	65A	EC065D XXX L	
Fr-3	80A	EC080D XXX L	10,260
Fr-4	95A - 105A	EC105D XXX L	

AC Coil Voltage	Replace XXX with
24V 50Hz	024
48V 50Hz	048
110V 50Hz	110
220V 50Hz	220
230-240V 50Hz	240
380V 50Hz	380
400-415V 50Hz	415
440V 50Hz	440

DC Coil Voltage	Replace XXX with
24V DC	024
48V DC	048
110V DC	110
220V DC	220

Surge Suppressors

For Contactor Frame Size	Surge Suppressor Type	For Coils Type	Part Code	MRP
Fr-1 & Fr-2	RC	AC	EC040SSRA XXX L	770
Fr-3 & Fr-4			EC105SSRA XXX L	
All Frames	Diode	DC	EC105SSDD XXX L	240

Applicable for Surge Suppressor

Coil Voltage	Replace XXX with
24 to 48V AC	048
50V to 127V AC	127
130V to 250V AC	250
12V to 600V DC	600

Thermal Overload Relays Type ER2, ER3, ER4 & ER5

For use with 3Pole Power Contactors Type EC009 to EC105



Range

- 0.28-112 A
- **Trip Class : 10**
- Direct Mounting on EC Contactors
- Separate Mounting KIT / Adaptor



Key Features

- Available in 4 Frame sizes
- Suitable for Direct and Separate Mounting
- **Phase loss sensitivity (Current Based)**
- Multi-function RESET button
- Trip Indicator to aid Fault Diagnosis
- **Trip Test Facility to Check Healthiness of Relay Mechanism**

For use with Contactors Rated	Relay Frame	Current Range	Part Code	MRP
9,12,18, 25,32,40A	ER2	0.28 - 0.4A	ER2L40L	2,300
		0.4 - 0.63A	ER2L63L	
		0.56 - 0.8A	ER2L80L	
		0.8 - 1.2A	ER2M12L	
		1.2 - 1.8A	ER2M18L	
		1.8 - 2.8A	ER2M28L	
		2.8 - 4A	ER2M40L	2,330
		4 - 6.3A	ER2M63L	
		5.6 - 8A	ER2M80L	
		7 - 10A	ER2H10L	
		8 - 12.5A	ER2H12L	2,360
		10 - 15A	ER2H15L	
		11 - 17A	ER2H17L	
		15 - 23A	ER2H23L	2,520
32A, 40A	ER3	22 - 32A	ER2H32L	3,720
50, 65, 80A	ER4	25 - 40A	ER3H40L	5,270
		32 - 50A	ER4H50L	6,100
		40 - 57A	ER4H57L	6,540
		50 - 63A	ER4H63L	6,960
95 & 100A	ER5	57 - 70A	ER4H70L	7,720
		63 - 80A	ER5H80L	8,000
		78 - 97A	ER5H97L	8,470
		90 - 112A	ER5X11L	

Accessories

For use with Thermal Overload Relays Type ER2, ER3, ER4 & ER5

Accessories Type	For use with Relay	Part Code	MRP
Separate Mounting Adaptor	ER2	ERSMA2L	510
	ER3/4	ERSMA4L	1,160
	ER5	ERSMA5L	1,600

3 Pole Mini Power Contactors



Range

- Current Rating : 7-16 A
- Utilization Category : AC-1, AC-3 & AC-4
- Compatible OLR ER1 Series 0.28 -- 17A - Direct Mounting OLR



Key Features

- **Compact single Frame : Up to 16A - AC3**
- Rated Operation Voltage up to 690V
- Electronic ON and OFF delay timer available
- Wide Range of Accessories – Front Mounted Aux. Contacts, Reversing KIT, Surge Suppressors type RC / Varistor / Diode
- **AC and DC Control in Same Size**
- Surge Suppressors type RC / Varistor / Diode
- IP20 Finger proof terminals for Human Safety
- 35mm DIN rail mounting for quick, tool-free installation
- High Mechanical Durability: Up to 10 million operations
- **Device Identification Label** -Ease of Wiring traceability

Frame Size	AC-3 Rating	AC-1 Rating	In-Built Auxiliary Contacts		Contactors with AC Coils		Contactors with DC Coils	
			NO	NC	Part code	MRP	Part code	MRP
Mini Contactor	7	18		1	EMC007P3001A XXX FL	1,770	EMC007P3001D XXX L	2,590
			1		EMC007P3010A XXX FL		EMC007P3010D XXX L	
	9	20		1	EMC009P3001A XXX FL	1,840	EMC009P3001D XXX L	2,730
			1		EMC009P3010A XXX FL		EMC009P3010D XXX L	
	12	22		1	EMC012P3001A XXX FL	1,920	EMC012P3001D XXX L	2,820
			1		EMC012P3010A XXX FL		EMC012P3010D XXX L	
	16	22		1	EMC016P3001A XXX FL	1,990	EMC016P3001D XXX L	2,940
			1		EMC016P3010A XXX FL		EMC016P3010D XXX L	

Mini Control Contactors - Control Relay



Range

- Utilization Category : AC-15, DC-13
- Coil Version : AC, DC
- 4NO, 3NO+1NC, 2NO+2NC, 1NO+3NC, 4NC

Key Features

- 16A-AC1 Thermal Rating**
- Compact Size
- AC and DC Control in Same Size**
- IP20 terminals for Human Safety
- High Mech Durability : 10 million ops
- 35mm DIN rail mounting for quick, tool-free installation
- PCB Link Module Available
- Device Identification Label** -Ease of Wiring traceability
- IP20 Finger proof terminals



Frame Size	Thermal Rating	AC-15 Rating	Contact Combination	Contactors with AC Coils		Contactors with DC Coils	
				Part code	MRP	Part code	MRP
Control Relay- Mini	16	5	2NO + 2NC	ECR016P0022A XXX FL	2,050	ECR016P0022D XXX L	2,730
			3NO + 1NC	ECR016P0031A XXX FL		ECR016P0031D XXX L	
			1NO + 3NC	ECR016P0013A XXX FL		ECR016P0013D XXX L	
			4NO	ECR016P0040A XXX FL		ECR016P0040D XXX L	
			4NC	ECR016P0004A XXX FL		ECR016P0004D XXX L	

Note:

1. Replace XXX with required Coil voltage
2. Other Coil Voltages available on Request
3. 60Hz Coils Available on Request
4. 50/60Hz Coils Available on Request

AC Coil Voltage	Replace XXX with	DC Coil Voltage	Replace XXX with
24V, 50 / 60Hz	024	24V	024
110V, 50 / 60Hz	110	48V	048
240V, 50 / 60Hz	240	110V	110
415V, 50 / 60Hz	415	220V	220

Spare Coils for Mini Contactors

Coil Type	Part Code	MRP
AC	EMC016A XXX BL	510
DC	EMC016D XXX L	830

Accessories for Mini Contactors

Front Mounted (Top Mounted) Auxiliary Contacts

Contact Combination	For Mini Power Contactor	For Mini Control Contactor	MRP
	Part Code	Part Code	
2 NO	EMCFA20L	ECRFA20L	500
1 NO + 1 NC	EMCFA11L	ECRFA11L	
2 NC	EMCFA02L	ECRFA02L	
4 NO	EMCFA40L	ECRFA40L	820
2 NO + 2 NC	EMCFA22L	ECRFA22L	
4 NC	EMCFA04L	ECRFA04L	
3 NO + 1 NC	EMCFA31L	ECRFA31L	
1 NO + 3 NC	EMCFA13L	ECRFA13L	

For use with only Mini Power Contactors

Accessory Type	Part Code	MRP
Reversing module for Load Side	EMCRWM16M1L	430
Reversing module for Line Side	EMCRWM16M2L	
Front Mounted Mechanical Interlock	EMCFMMIL	480

Surge Suppressors : Common for Mini Power and Control Contactors

Type	Coil Voltage Range	Part Codes	MRP
RC	12 - 24V AC 50/60Hz	EMCSSRA024BL	780
	24 - 48V AC 50/60Hz	EMCSSRA048BL	
	48 - 127V AC 50/60Hz	EMCSSRA127BL	
	127 - 250V AC 50/60Hz	EMCSSRA250BL	
	250 - 380V AC 50/60Hz	EMCSSRA380BL	
	380 - 510V AC 50/60Hz	EMCSSRA510BL	
Varistor	12 - 48V AC/12-60V DC	EMCSSVD048L	750
	50 - 127V AC/60-180V DC	EMCSSVD127L	
	130 - 275V AC/ 80-300V DC	EMCSSVD275L	
	277 - 380V AC/300-510V DC	EMCSSVA380L	
	400 - 510V AC	EMCSSVA510L	
Diode	12 - 600V DC	EMCSSDD600L	240

PCB Link Module

Part Code	MRP
EMCPCLM	POR

Electronic timer - Side Mount

Part Code	Delay Type	Time Range	Control Voltage Range	MRP
EMCETN03V240	ON Delay	0.3 - 3 Sec	24 - 240V AC / DC	POR
EMCETN10V240		1 - 10 Sec		POR
EMCETN30V240		3 - 30 Sec		POR
EMCETF03V060	OFF Delay	0.3 - 3 Sec	24 - 60V AC / DC	POR
EMCETF10V060		1 - 10 Sec		POR
EMCETF30V060		3 - 30 Sec		POR
EMCETF03V240	OFF Delay	0.3 - 3 Sec	100 - 240V AC / DC	POR
EMCETF10V240		1 - 10 Sec		POR
EMCETF30V240		3 - 30 Sec		POR

Mini Overload Relay Type ER1

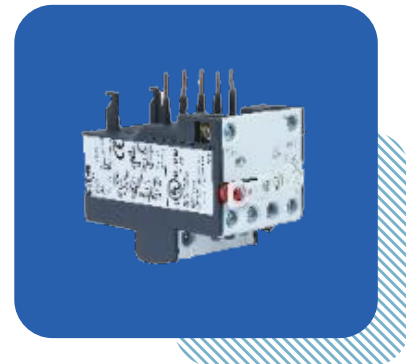
Mini Overload Relay - For use with Mini Power Contactor Type EMC



Current Range	Part Code	MRP
0.28 - 0.4A	ER1L40L	2,300
0.4 - 0.63A	ER1L63L	
0.56 - 0.8A	ER1L80L	
0.8 - 1.2A	ER1M12L	
1.2 - 1.8A	ER1M18L	
1.8 - 2.8A	ER1M28L	2,330
2.8 - 4A	ER1M40L	
4 - 6.3A	ER1M63L	
5.6 - 8A	ER1M80L	
7 - 10A	ER1H10L	
8 - 12.5A	ER1H12L	2,360
10 - 15A	ER1H15L	
11 - 17A	ER1H17L	

Range

- Current Range :
- 0.28 – 17 A
- Trip Class : 10
- Direct Mounting on Mini Contactors



Key Features

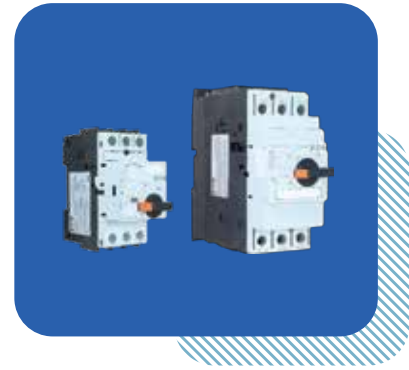
- Suitable for Direct Mounting
- **Phase loss sensitivity (Current Based)**
- Multi-function RESET button
- Trip Indicator to aid Fault Diagnosis
- **Trip Test Facility to Check Healthiness of Relay Mechanism**
- IP20 Finger Proof terminals
- **Trip Class 10 & Ambient Compensated**

Motor Protection Circuit Breaker (MPCB) Type EKZ



Key Features

- Rotary Version - 2 Frame Sizes, 45 mm and 55 mm width
- Thermal Magnetic - 0.1A -63A,
- Magnetic Version - 0.16A - 63A
- Rated Operational Voltage **Ui : 690 V**
- **High Magnetic Setting -13 In - Makes it suitable for IE2, IE3 and IE4 Motors**
- TM MPCB can be used as Self Protected Motor Starter due to In-built Type-2 Co-ordination between Overload and Short Circuit Protection Characteristics
- IP20 Finger proof Terminals for Human Safety
- **Lockable in OFF Position & MID Trip Feature**
- Suitable for DIN channel and Base Mounting both
- Wide Range of Accessories :
 - UV Release
 - Shunt Release
 - Top and Side Mounting Auxiliary Contacts,
 - Trip Alarm Contacts - Separate Contacts for Overload Tripping and Short Circuit Tripping



Thermal Magnetic MPCB - Overload and Short Circuit Protection

Frame Size	Relay Range	MPCB Rating	Breaking Capacity at 415V	Part Code	MRP
 32A	0.1-0.16 A	0.16	100	EKZM0-0.16	5,880
	0.16-0.25	0.25	100	EKZM0-0.25	
	0.25-0.4 A	0.4	100	EKZM0-0.4	
	0.4-0.63 A	0.63	100	EKZM0-0.63	
	0.63-1.0 A	1	100	EKZM0-1	
	1.0-1.6 A	1.6	100	EKZM0-1.6	6,500
	1.6-2.5 A	2.5	100	EKZM0-2.5	
	2.5-4.0A	4	100	EKZM0-4	
	4.0-6.3 A	6.3	100	EKZM0-6.3	
	6.3-10 A	10	100	EKZM0-10	
 63A	10-16 A	16	50	EKZM0-16	7,750
	16-20 A	20	50	EKZM0-20	8,130
	20-25 A	25	50	EKZM0-25	8,880
	25-32 A	32	50	EKZM0-32	12,630
	11-16 A	16	50	EKZM4-16	23,630
	14-20 A	20	50	EKZM4-20	22,130
	18.25 A	25	50	EKZM4-25	
	22-32 A	32	50	EKZM4-32	
	28-40 A	40	50	EKZM4-40	
	36-45 A	45	50	EKZM4-45	
	40-50 A	50	50	EKZM4-50	22,750
	45-63 A	63	50	EKZM4-63	26,130

Magnetic Only MPCB - Short Circuit Protection

Frame Size	MPCB Rating	Breaking Capacity at 415V	Part Code	MRP
 32A	0.16	100	EKM0-0.16	5,380
	0.25	100	EKM0-0.25	
	0.4	100	EKM0-0.4	
	0.63	100	EKM0-0.63	
	1	100	EKM0-1	
	1.6	100	EKM0-1.6	6,250
	2.5	100	EKM0-2.5	
	4	100	EKM0-4	
	6.3	100	EKM0-6.3	
	10	100	EKM0-10	
 63A	16	50	EKM0-16	7,000
	20	50	EKM0-20	7,380
	25	50	EKM0-25	8,000
	32	50	EKM0-32	11,380
	16	50	EKM4-16	21,380
	20	50	EKM4-20	
	25	50	EKM4-25	
	32	50	EKM4-32	
	40	50	EKM4-40	
	45	50	EKM4-45	23,630
	50	50	EKM4-50	
	63	50	EKM4-63	23,630

Accessories for MPCB type EKZ

Accessory	Remark	Part code	Description	MRP
Auxiliary Contacts	Front Mounting	EKZ-AF11	EKZ Aux Contact 1NO + 1NC_ Front mounted	690
	Left Side Mounted	EKZ-AS11	EKZ Aux Contact 1NO + 1NC_ Left mounted	980
		EKZ-AS20	EKZ Aux Contact 2NO_ Left mounted	
		EKZ-AS02	EKZ Aux Contact 2NC_ Left mounted	
Trip Alarm Contacts (Fault Signalling Contacts)	Left Side Mounted for Fr-1	EKZ-AST11	EKZ Trip indication 1NO+1NC_ Left_Fr-1	2,280
(1 C/O Contact for OL & 1C/O contact for SC)	Left Side Mounted for Fr-2	EKZ-AST11F2	EKZ Trip indication 1NO+1NC_ Left_Fr-2	3,130
Rotary Operating Handles	Fr-1	EKZ-RH1YR	EKZ Operating handle for Frame 1, FPYR	1,320
		EKZ-RH1GB	EKZ Operating handle for Frame 1, FPGB	
	Fr-2	EKZ-RH2YR	EKZ Operating handle for Frame 2, FPYR	
		EKZ-RH2GB	EKZ Operating handle for Frame 2, FPGB	
Enclosures	For Mounting MPCB alone	EKZ-EM1YR	EKZ Enclosure with padlock small_YR	3,440
	For Fr-1 MPCB	EKZ-EM1GB	EKZ Enclosure with padlock small_GB	
	For Mounting MPCB with Auxiliaries	EKZ-EM2YR-A	EKZ Enclosure with padlock big_YR	3,900
	For Fr-1 MPCB	EKZ-EM2GB-A	EKZ Enclosure with padlock big_GB	
Shunt Release	For Fr-1 and Fr-2 Mount on Right	EKZ-SR127B	EKZ Shunt trip 100 - 127V 50/60Hz_ Right	2,300
		EKZ-SR24B	EKZ Shunt Trip 20 - 24V 50/60Hz_ Right	
		EKZ-SR240B	EKZ Shunt Trip 200 - 240V 50/60Hz_ Right	
		EKZ-SR48B	EKZ Shunt Trip 40 - 48V 50/60Hz_ Right	
		EKZ-SR440B	EKZ Shunt Trip 365 - 440V 50/60Hz_ Right	
Under Voltage Release	For Fr-1 and Fr-2 Mount on Right	EKZ-UR95F	EKZ UVR 95V 50Hz / 110V 60Hz_ Right	
		EKZ-UR115F	EKZ UVR 110-115V 50Hz /127V 60Hz_ Right	
		EKZ-UR190F	EKZ UV Release 190V 50Hz / 220V 60 Hz_ Right	
		EKZ-UR325F	EKZ UVR 325V 50Hz / 380V 60Hz_ Right	
		EKZ-UR20F	EKZ UVR 20V 50Hz / 24V 60Hz_ Right	
		EKZ-UR110F	EKZ UVR 110V 50Hz / 120V 60Hz_ Right	
		EKZ-UR208F	EKZ UVR 208V 50 Hz / 240V 60 Hz_ Right	
		EKZ-UR24F	EKZ UVR 24V 50Hz / 28V 60Hz_ Right	
		EKZ-UR180F	EKZ UVR 180V 50Hz / 208V 60Hz_ Right	
		EKZ-UR240F	EKZ UVR 230-240V 50Hz / 277V 60Hz_ Right	
		EKZ-UR380F	EKZ UVR 380V 50Hz / 440V 60Hz_ Right	
		EKZ-UR415F	EKZ UVR 400-415V 50Hz / 480V 60Hz_ Right	
		EKZ-UR500F	EKZ UVR 500V 50Hz / 600V 60Hz_ Right	
		EKZ-UR24B	EKZ UVR 24V 50/60Hz_ Right	

Accessories for MPCB type EKZ

Accessory	Remark	Part code	Description	Typical Image	MRP
Feeder Terminal	-	EKZ-FT1	EKZ Feeder Terminal_Fr-1		1220
Line Side Terminal Barrier	-	EKZ-TB1	EKZ Terminal Barrier_Line side_ Fr-1		170
Protective Shroud	-	EKZ-PS1	EKZ Protective Shroud_ Fr-1		100
Mounting Foot Kit	For Base Mounting	EKZ-MF1	EKZ Mounting Foot Kit_ Fr-1		180
Contactor Link Module For MPCB to Contactor Direct Mounting	MPCB Fr-1 + AC Contactor Fr-2	EKZ-EC040LMA	EKZ Link module-EC cont. 32-40A AC_Fr-1		670
	MPCB Fr-1 + DC Contactor Fr-2	EKZ-EC040LMD	EKZ Link module-EC cont. 32-40A DC_Fr-1		820
	MPCB Fr-1 + AC Contactor Fr-1	EKZ-EC025LMA	EKZ Link module-EC cont. 9-25A AC_Fr-1		500
	MPCB Fr-1 + DC Contactor Fr-1	EKZ-EC025LMD	EKZ Link module-EC cont. 9-25A DC_Fr-1		670
	MPCB Fr-1 + Mini Contactors	EKZ-EMC016LM	EKZ Link module-EMC cont. 16A _Fr-1		480
Commoning Link 45mm	For Fr-1 MPCB Side by Side Mounting	EKZ-CL4512	EKZ Commoning link 45mm- 2xFr-1 MPCB		1,080
		EKZ-CL4513	EKZ Commoning link 45mm- 3xFr-1 MPCB		1,420
		EKZ-CL4514	EKZ Commoning link 45mm- 4xFr-1 MPCB		1,720
		EKZ-CL4515	EKZ Commoning link 45mm- 5xFr-1 MPCB		1,950
Commoning Link 54mm	For Fr-1 MPCB Side by Side Mounting with Accessories	EKZ-CL5412	EKZ Commoning link 54mm- 2xFr-1 MPCB		1,250
		EKZ-CL5413	EKZ Commoning link 54mm- 3xFr-1 MPCB		1,570
		EKZ-CL5414	EKZ Commoning link 54mm- 4xFr-1 MPCB		1,840
		EKZ-CL5415	EKZ Commoning link 54mm- 5xFr-1 MPCB		2,170

Special Purpose Contactors



Range & Features

- 16A to 40A - AC-3 (25-50A - AC1)
- **2Pole, 3Pole & 4Pole Contactors**
- Robust Contactor with High Electrical and Mechanical Durability
- **Encapsulated Epoxy Moulded Coils with Wide Operating band**
- Accessories - Aux. Contact Block, Surge Suppressors
- **Suitable for demanding applications like :**
 - > Agricultural Starters,
 - > AMF Panels (DG Set Panels for Changeover applications)
 - > Street Lighting
- **Suitable for Harsh Outdoor applications**



Frame Size	AC-3 Rating	AC-1 Rating	2Pole Contactors		3Pole Contactors		4Pole Contactors	
			Part code	MRP	Part code	MRP	Part code	MRP
Special Purpose Contactors	16	25	EMS162P00XXXA	2,080	EMS163P00XXXA	2,380	EMS164P00XXXA	2,730
	25	40	EMS252P00XXXA	2,320	EMS252P00XXXA	2,700	EMS254P00XXXA	3,330
	40	50	EMS402P00XXXA	3,480	EMS402P00XXXA	4,000	EMS404P00XXXA	7,600

Spare Coils

		2Pole Contactors		3Pole Contactors		4Pole Contactors	
		Part code	MRP	Part code	MRP	Part code	MRP
		EMS2PXXXA	POR	EMS3PXXXA	POR	EMS4PXXXA	POR

Coil Voltage	Replace XXX with	2 Pole - Coil Availability	3 Pole - Coil Availability	4 Pole - Coil Availability
88 - 120V	120	✓	✓	✓
150 - 250V	250	✓	-	-
160 - 240V	240	-	✓	✓
170 - 280V	280	✓	✓	✓
266 - 418V	418	✓	✓	✓
308 - 484V	484	✓	✓	✓

Side Mounted Auxiliary Contact Blocks			Spare Contact KIT			
Contact Combination	Part Code	MRP	For Contactors		Part Code	MRP
1 NO	EMSSA10	640	EMS162P00XXXA	2Pole	EMS162PKIT	POR
1 NC	EMSSA01		EMS252P00XXXA		EMS252PKIT	POR
2 NO	EMSSA20		EMS402P00XXXA		EMS402PKIT	POR
2 NC	EMSSA02	870	EMS163P00XXXA	3Pole	EMS163PKIT	POR
1 NO + 1 NC	EMSSA11		EMS252P00XXXA		EMS252PKIT	POR
			EMS402P00XXXA		EMS402PKIT	POR
			EMS164P00XXXA	4Pole	EMS164PKIT	POR
			EMS254P00XXXA		EMS254PKIT	POR
			EMS404P00XXXA		EMS404PKIT	POR

Terms & Condition

1. Prices are Maximum Retail Prices, Ex Warehouse.
2. Prices are subject to change without prior notice.
3. Prices applicable at the time of delivery will be charged
4. Normal stat items classification is subject to change without prior notice
5. Warranty: Products are covered under warranty for a period of 12 months from the date of supply against any manufacturing defect subject to usage under normal conditions and as per technical parameters set out in technical catalogues and installation manuals.

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EILVCG00005_2026_R2
02_05_2026