DATASHEET - MSC-DE-12-M17-SP(24VDC)

Part no. Catalog No.

No.



DOL starter, Ir= 3 - 12 A, 24 V DC, DC Voltage

MSC-DE-12-M17-SP(24VDC) 167820 Alternate Catalog XTFCE012BCCSTD



Delivery program

Derivery program			
Basic function			Type E DOL starters (complete devices)
Basic device			MSC
Components for			North America
Connection to SmartWire-DT			no
Maximum motor rating			
AC HP = PS			
200 V 208 V		HP	3
230 V 240 V		HP	3
460 V 480 V		HP	7.5
Short Circuit Current Rating			
240 V		kA	18
480 Y 277 V		kA	18
Setting range			
Setting range of overload releases	l _r	A	3 - 12
Contact sequence			
Actuating voltage			24 V DC
			DC Voltage
Motor-protective circuit-breakers PKE12/XTU-12			
Contactor DILM17-10()			

DOL starter wiring set

Mechanical connection element and electrical electric contact module PKZM0-XDM32

Notes

The DOL starter type E (complete devices) consists of a PKE motor-protective circuit-breaker with AK-PKZ0, a DILM contactor and an extension terminal BK25/3-PKZ0-E.

Motor-protective circuit-breaker and contactor mounted on top hat rail adapter plate.

The connection of the main circuit between PKE and contactor is established with electrical contact modules.

Technical data

lecinical data			
General Standarda			
Standards Mounting position			IEC/EN 60947-4-1, VDE 0660, UL, CSA
Altitude		m	Max. 2000
Ambient temperature			-25 - +55
Main conducting paths			
Rated impulse withstand voltage	U _{imp}	V AC	6000
Overvoltage category/pollution degree			111/3
Rated operational voltage	U _e	V	208 - 600
Rated operational current			
Ореп, 3-pole: 50 – 60 Hz			
380 V 400 V	le	A	12
AC-4 cycle operation	-6		-
Minimum current flow times		ms	500 (Class 5) 700 (Class 10) 900 (Class 15) 1000 (Class 20)
Minimum cut-out periods		ms	500
Note		ms	In AC-4 cycle operation, going below the minimum current flow time can cause overheating of the load (motor). For all combinations with an SWD activation, you need not adhere to the minimum current flow times and minimum cut-out periods.
Additional technical data			
Motor protective circuit breaker PKZM0, PKE			PKE motor-protective circuit-breaker, see motor-protective circuit-breaker product group DILM contactors, see contactor product group
DILM contactors			
Current heat loss			
Current heat loss at I _e to AC-3/400 V		W	4.2
Power consumption			
DC operated	Sealing	W	0.86
Rating data for approved types			
Switching capacity			
Maximum motor rating			
-			
Three-phase 200 V		HP	3
Three-phase		HP	3 3
Three-phase 200 V 208 V 230 V			
Three-phase 200 V 208 V 230 V 240 V 460 V		HP	3
Three-phase 200 V 208 V 230 V 240 V 460 V 480 V		HP	3
Three-phase 200 V 208 V 230 V 240 V 460 V 480 V		HP	3
Three-phase 200 V 208 V 230 V 240 V 460 V 480 V Auxiliary contacts Pilot Duty		HP	3 7.5
Three-phase 200 V 208 V 230 V 240 V 460 V 480 V Auxiliary contacts Pilot Duty AC operated		HP	3 7.5 A600

ACIDCV20DCA1Short Circuit Current Rating, type ECCR1240 VKA8480 Y / 277 VKA8Basic RatingCCR-Basic RatingCA0max. FuseAA10SCCR (fuse)KA10Max. FuseAA10Max. FuseAA			
DCAAShort Circuit Current Rating, type ESCCR240 VKA480 Y / 277 VKA480 Y / 277 VKAShort Circuit Current RatingSCCRBasic RatingKASCCRKAMax. FuseKAMax. FuseKASCCR (fuse)KASCCR (fuse)KASCCR (cB)KAMax. FuseKASCCR (CB)KAMax. FuseKAMax. FuseKAMax. FuseKASCCR (CB)KAMax. FuseKAMax. FuseKA	AC	A	15
Short Circuit Current Rating, type ESCCRSCCR240 VKA13480 Y / 277 VKA14Short Circuit Current RatingCCRCBasic RatingCCRCSCCRKA10max. FuseCA20480 Y High FaultCSCSCCR (fuse)KA10max. FuseKA10max. FuseKA10GCCR (fuse)KA10max. FuseKA10max. FuseKA10max. FuseKA10max. FuseKA10max. FuseKA10max. FuseKA10max. FuseKA10max. FuseKA10max. GBKA5Max CBKA6Max CBKA6M	DC	V	250
240 VkA8480 Y / 277 VKA8A80 Y / 277 VKA8Shot Circuit Current RatingSCR-Basic RatingCSCCRKA10max. FuseA90A80 V High FaultC-SCCR (fuse)KA10max. FuseKA10max. FuseKA10max. FuseKA10max. FuseKA10max. FuseKA10max. FuseKA10max. FuseKA10max. FuseKA50max. BaKA50Max. BaKA50Max. BaMaxMaxMax. BaMaxMaxMax. BaMaxMaxMax. BaMaxMaxMax. BaMaxMaxMax. BaMaxMaxMax. BaMaxMaxMax. BaMaxMaxMax. BaMaxM	DC	А	1
480 Y / 277 VKA8480 Y / 277 VKA8Short Circuit Current RatingSCCRSCCRBasic RatingKA1SCCRKA0max. FuseA0Max CBCCSCCR (fuse)KA10max. FuseKA10SCCR (CB)KA10max. CBKA10max. FuseKA10Max. FuseKA10max. FuseKA10Max. FuseKA10Max. FuseKA10Max. CBKA5Max. CBKA5Max. CBMaxMaxMax. CB </td <td>Short Circuit Current Rating, type E</td> <td>SCCR</td> <td></td>	Short Circuit Current Rating, type E	SCCR	
Short Circuit Current Rating SCCR Basic Rating	240 V	kA	18
Basic RatingImage: CRImage: CR </td <td>480 Y / 277 V</td> <td>kA</td> <td>18</td>	480 Y / 277 V	kA	18
SCCR kA 0 max. Fuse A 00 max. CB A 50 480 V High Fault M M SCCR (fuse) KA 10 max. Fuse MA 00 max. Fuse M 10 SCCR (CB) KA 10 max. CB KA 10 Max. Fuse M 50 Max. Fuse M 50 Max. Fuse M 10 Max. Fuse M 10 Max. Fuse M 50 Max. CB M 50 Max. CB M 50	Short Circuit Current Rating	SCCR	
max. FuseA20max. CBA50480 V High FaultFor50SCCR (fuse)KA10max. FuseIOICSCCR (CB)KA65max. CBAFor600 V High FaultICA	Basic Rating		
max. CBA50480 V High FaultHHSCCR (fuse)KA10max. FuseA10 Class J/CCSCCR (CB)KA5max. CBA6600 V High FaultII	SCCR	kA	10
480 V High Fault Image: CR (fuse) SCCR (fuse) Image: CR (CB) Max. CB Image: CB 600 V High Fault Image: CB	max. Fuse	А	200
SCCR (fuse) kA 100 max. Fuse A 10 Class J/CC SCCR (CB) KA 65 max. CB A 75 600 V High Fault Max Max	max. CB	А	150
max. FuseA10 Class J/CCSCCR (CB)KA65max. CBA75600 V High FaultImage: Calibrit Colibrit Colibri	480 V High Fault		
SCCR (CB) kA 65 max. CB A 75 600 V High Fault Image: Calify the second sec	SCCR (fuse)	kA	100
max. CB A 75	max. Fuse	А	110 Class J/CC
600 V High Fault	SCCR (CB)	kA	65
	max. CB	А	75
	600 V High Fault		
SCCR (tuse) kA 100	SCCR (fuse)	kA	100
max. Fuse A 110 Class J/CC	max. Fuse	А	110 Class J/CC

Design verification as per IEC/EN 61439

Design vermoution as per 120/211 01405			
Technical data for design verification			
Rated operational current for specified heat dissipation	In	А	12
Heat dissipation per pole, current-dependent	P _{vid}	W	1.4
Equipment heat dissipation, current-dependent	P _{vid}	W	4.2
Static heat dissipation, non-current-dependent	P _{vs}	W	0.86
Heat dissipation capacity	P _{diss}	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	55
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
10.2.2 Corrosion resistance			Meets the product standard's requirements.
10.2.3.1 Verification of thermal stability of enclosures			Meets the product standard's requirements.
10.2.3.2 Verification of resistance of insulating materials to normal heat			Meets the product standard's requirements.
10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects			Meets the product standard's requirements.
10.2.4 Resistance to ultra-violet (UV) radiation			Meets the product standard's requirements.
10.2.5 Lifting			Does not apply, since the entire switchgear needs to be evaluated.
10.2.6 Mechanical impact			Does not apply, since the entire switchgear needs to be evaluated.
10.2.7 Inscriptions			Meets the product standard's requirements.
10.3 Degree of protection of ASSEMBLIES			Does not apply, since the entire switchgear needs to be evaluated.
10.4 Clearances and creepage distances			Meets the product standard's requirements.
10.5 Protection against electric shock			Does not apply, since the entire switchgear needs to be evaluated.
10.6 Incorporation of switching devices and components			Does not apply, since the entire switchgear needs to be evaluated.
10.7 Internal electrical circuits and connections			Is the panel builder's responsibility.
10.8 Connections for external conductors			Is the panel builder's responsibility.
10.9 Insulation properties			
10.9.2 Power-frequency electric strength			Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage			Is the panel builder's responsibility.
10.9.4 Testing of enclosures made of insulating material			Is the panel builder's responsibility.
10.10 Temperature rise			The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
10.11 Short-circuit rating			Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.12 Electromagnetic compatibility			Is the panel builder's responsibility. The specifications for the switchgear must be observed.

Technical data ETIM 7.0

Low-voltage industrial components (EG000017) / Motor starter/Motor starter combination (EC001037)

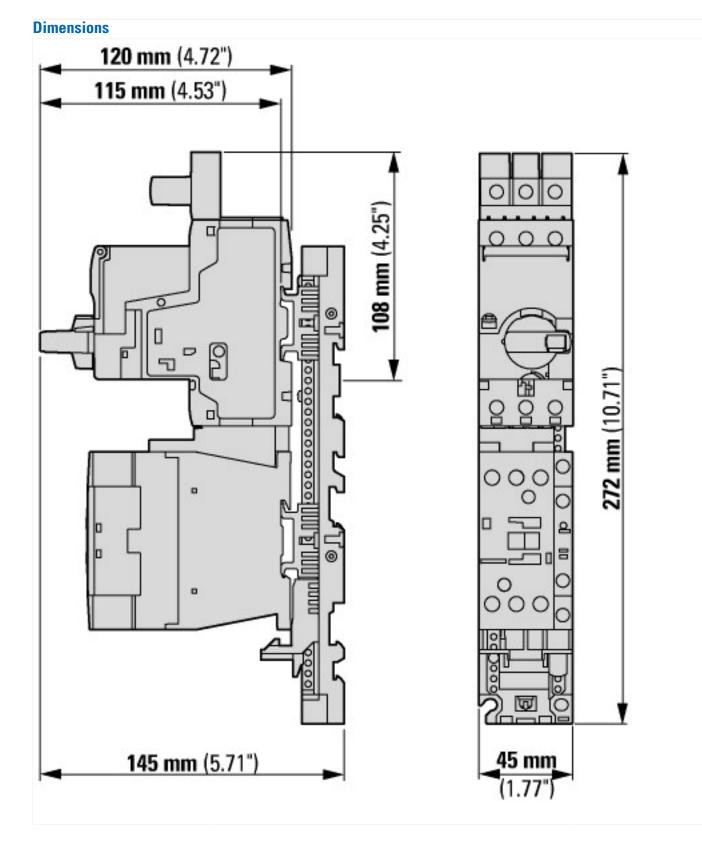
Electric engineering, automation, process control engineering / Low-voltage switch technology / Load breakout, motor breakout / Motor starter combination (ecl@ss10.0.1-27-37-09-05 [AJZ718013])

Kind of motor starter		Direct starter
With short-circuit release		Yes
Rated control supply voltage Us at AC 50HZ	V	0 - 0
Rated control supply voltage Us at AC 60HZ	V	0 - 0
Rated control supply voltage Us at DC	V	24 - 24
Voltage type for actuating		DC
Rated operation power at AC-3, 230 V, 3-phase	kW	3
Rated operation power at AC-3, 400 V	kW	7.5
Rated power, 460 V, 60 Hz, 3-phase	kW	5.52
Rated power, 575 V, 60 Hz, 3-phase	kW	0
Rated operation current le	A	12
Rated operation current at AC-3, 400 V	A	12
Overload release current setting	A	3 - 12
Rated conditional short-circuit current, type 1, 480 Y/277 V	A	0
Rated conditional short-circuit current, type 1, 600 Y/347 V	A	0
Rated conditional short-circuit current, type 2, 230 V	A	0
Rated conditional short-circuit current, type 2, 400 V	A	0
Number of auxiliary contacts as normally open contact		1
Number of auxiliary contacts as normally closed contact		0
Ambient temperature, upper operating limit	°C	60
Temperature compensated overload protection		Yes
Release class		Adjustable
Type of electrical connection of main circuit		Screw connection
Type of electrical connection for auxiliary- and control current circuit		Screw connection
Rail mounting possible		Yes
With transformer		No
Number of command positions		0
Suitable for emergency stop		No
Coordination class according to IEC 60947-4-3		Class 2
Number of indicator lights		
		0
External reset possible		0 No
External reset possible With fuse		
· · · · ·		No
With fuse		No No
With fuse Degree of protection (IP)		No No IP20
With fuse Degree of protection (IP) Degree of protection (NEMA)		No No IP20 Other
With fuse Degree of protection (IP) Degree of protection (NEMA) Supporting protocol for TCP/IP		No No IP20 Other No
With fuse Degree of protection (IP) Degree of protection (NEMA) Supporting protocol for TCP/IP Supporting protocol for PROFIBUS		No No IP20 Other No
With fuse Pegree of protection (IP) Degree of protection (NEMA) Image: Composition of the		No No IP20 Other No No
With fuseDegree of protection (IP)Degree of protection (NEMA)Supporting protocol for TCP/IPSupporting protocol for PROFIBUSSupporting protocol for CANSupporting protocol for INTERBUS		No No IP20 Other No No No
With fuseDegree of protection (IP)Degree of protection (NEMA)Supporting protocol for TCP/IPSupporting protocol for PROFIBUSSupporting protocol for CANSupporting protocol for INTERBUSSupporting protocol for ASI		No No IP20 Other No No No
With fuseDegree of protection (IP)Degree of protection (NEMA)Supporting protocol for TCP/IPSupporting protocol for PROFIBUSSupporting protocol for CANSupporting protocol for INTERBUSSupporting protocol for ASISupporting protocol for MODBUS		No No IP20 Other No No No No No
With fusePegree of protection (IP)Pegree of protection (NEMA)Degree of protection (NEMA)Image: Composition of the		No No P20 Other No
With fuseImage: constraint of the second		No No IP20 Other No No
With fuseDegree of protection (IP)Degree of protection (NEMA)Supporting protocol for TCP/IPSupporting protocol for PROFIBUSSupporting protocol for CANSupporting protocol for INTERBUSSupporting protocol for ASISupporting protocol for Data-HighwaySupporting protocol for SUCONET		NoNoIP20OtherNo
With fuseImage: state of protection (IP)Degree of protection (NEMA)Image: state of protection (NEMA)Supporting protocol for TCP/IPImage: state of protection (NEMA)Supporting protocol for PROFIBUSImage: state of protection (NERBUS)Supporting protocol for CANImage: state of protection (NERBUS)Supporting protocol for INTERBUSImage: state of protection (NOBBUS)Supporting protocol for MODBUSImage: state of protection (NOBBUS)Supporting protocol for Data-HighwayImage: state of protection (NORET)Supporting protocol for SUCONETImage: state of protection (NORET)Supporting protocol for LONImage: state of protection (NORET)		NoNoIP20OtherNo
With fuseImage: state of protection (IP)Degree of protection (NEMA)Image: state of protection (NEMA)Supporting protocol for TCP/IPImage: state of protection (NEMA)Supporting protocol for PROFIBUSImage: state of protection (NERBUS)Supporting protocol for CANImage: state of protection (NERBUS)Supporting protocol for INTERBUSImage: state of protection (NODBUS)Supporting protocol for Data-HighwayImage: state of protection (NODBUS)Supporting protocol for SUCONETImage: state of protection (SUCONET IO)Supporting protocol for PROFINET IOImage: state of protection (SUCONET Image: sta		NoNoIP20OtherNo
With fuseDegree of protection (IP)Degree of protection (NEMA)Supporting protocol for TCP/IPSupporting protocol for PROFIBUSSupporting protocol for CANSupporting protocol for INTERBUSSupporting protocol for ASISupporting protocol for Data-HighwaySupporting protocol for SUCONETSupporting protocol for SUCONET IOSupporting protocol for PROFINET IOSupporting protocol for PROFINET CBA		NoNoIP20OtherNo
With fuseImage: state of the sta		NoNoIP20OtherNo

Supporting protocol for AS-Interface Safety at Work		No
Supporting protocol for DeviceNet Safety		No
Supporting protocol for INTERBUS-Safety		No
Supporting protocol for PROFIsafe		No
Supporting protocol for SafetyBUS p		No
Supporting protocol for other bus systems		No
Width	mm	45
Height	mm	272
Depth	mm	145

Approvals

Product Standards	UL60947-4-1A; CSA-C22.2 No. 14-10; IEC60947-4-1; CE marking
UL File No.	E123500
UL Category Control No.	NKJH
CSA File No.	12528
CSA Class No.	3211-08
North America Certification	UL listed, CSA certified
Specially designed for North America	Yes



Assets (links)

Declaration of CE Conformity 00003119 Instruction Leaflets IL03402052Z2018_03

Additional product information (links)

IL03402052Z Motorstarter combination: type E starter/type F starter with PKE

IL03402052Z Motorstarter combination: type E ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL03402052Z2018_03.pdf starter/type F starter with PKE