# 1 Phase electronic contactor (SC 1)



- Rated operational voltage up to 600VAC 50/60 Hz
- Rated operational current up to 15/30A/50/63A AC-1
- Control voltage from 5-24 VDC or 24-230 VAC/DC
- Compact modular design 22.5, 45, or 90 mm
- LED Status indication
- Meets EN 60947-4-3 requirements
- Requires no additional components
- Built-in varistor protection
- IP-20 Protection

Item sel	lection an	d technic	cal specif	ication	S								
Load AC-1/51 Heating - element	Load AC-3 Motor	Load AC-55b Lamp	Load AC-56a Trans- former	Contro	12-2-70 17-0		r by	Item nummer by 24-480VAC 50/60Hz Line Voltage	Item nummer by 24-600VAC 50/60Hz Line Voltage			Modul- breite	
454	15A	454	454	5-24 VI	DC	SC 1 DD 2315		SC 1 DD 4015	SC 1 DD 6	6015		22.5mm	
15A	10A by 600 VAC	15A	15A	24-230	VAC/DC	SC 1 DA 2315	5	SC 1 DA 4015	SC 1 DA 6	6015		22.5mm	
30A	15A	20A	15A	5-24 VI	DC	SC 1 DD 233	0	SC 1 DD 4030				45mm	
30A	IDA	20A	IDA	24-230	VAC/DC	SC 1 DA 2330	0	SC 1 DA 4030				45mm	
50A	15A	20A	15A	5-24 VI	DC			SC 1 DD 4050				90mm	
50A	ISA	20A	154	24-230	VAC/DC			SC 1 DA 4050				90mm	
63A	30A	40A	30A	5-24 VI	DC			SC 1 DD 4063 *	SC 1 DD 6	6063 *		90mm	
03A	JUA	40A	SUA	24-230	VAC/DC			SC 1 DA 4063 *				90mm	
Output I	load spec	ification	•	•									
Leakage (	current				1mA ACm	ax.	Min.	operational current			10mA		
Duty cycle	е				100%								
Control	terminal	specifica	tions										
SC 1 DD	XXXX (DC	)					SC 1 DA XXXX (AC/DC)						
Control vo	oltage				5-24 VDC		Control voltage				24-230 VAC/DC		
Pick-up vo	oltage max				4.25 VDC	1.25 VDC Pick-up volta			up voltage max.			С	
Drop-out	voltage mir	1.			1.5 VDC			Drop-out voltage min.				;	
Control cu	urrent volta	ge			15 mA@24 VDC			Control current / power max.				A@24 VDC	
Max. cont	trol voltage				32 VDC			. control voltage			253 VAC/DC		
Response	e time max.				1/2 cycle Response time max.					1 cycle			
Therma	l specifica	ation											
Power dis	sipation for	continuous	operation	PDmax	1.2 W/A	1.2 W/A Operation in ambient temperatures exceed dissipation is limited either by reducing the							
Power dis	ssipation for	r intermitte	nt operation	n PD	1.2 W/A x	dutycycle	the d	luty-cycle as shown i	n the table. N	lax.cycle time	e 15min.		
Cooling m	nethod				Natural co	nvection	By 40	0°C	By 50°C		By 60°C		
Mounting					Vertical +/	-30°	100% load Duty-cycle 100% 80% load Duty-cycle max. 0.8			r-cycle max. 0.8	70% load Duty-cycle max. 0.65		
Operating	temperatu	re range E	N 60947-4	-3	-5°C to 40	°C	Env	vironment			1		
Max. opera	ating temper	rature with o	current dera	ting	60°C					Pollution d	egree	3	
Storage to	emperature	EN 60947	-4-3		-20°C to 8	0°C	Apr	oroval	1	1			
Insulation specifications							Std No. 508. Not ap	proved SC1 D	X 6015-1 + SC	1 DX XX63 + S	 C1 DX 69XX		
Rated insulation voltage				Ui 660 V	olt/	UL:U	Jse thermal overload e. When protected b	d protection a	as required b	y the National	Electric		
Rated ins	ulation volt	age #			Ui 690 V	olt/	2669	% of motor FLA, this not more than 5,0	device is ra	ted for use or	n a circuit cap	able of deli-	
Rated imp	oulse withst	tand voltag	е		Uimp. 4 I	«Volt		imum surrounding to			70100, 000 V II	MAIIIIIIII.	
Installatio	n catagory				III								

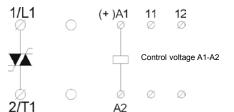


### 1 Phase electronic contactor (SC 1)

### Wiring specifications

# SC 1 DX XXXX

11-12: for UP62 or other wiring purposes



### Short-circuit protection by fuses

Two type of short-circuit protection can be used:

#### Short-circuit protection by fuses

Fuse short-circuit protection is divided into 2 levels Type 1 or Type 2

Co-ordination Type 1: Short-circuit protects the installation SC 1 DX XX15 Protection max. 50A gL/gG SC 1 DX XX15-1 Protection max. 50A gL/gG SC 1 DX XX30 Protection max. 50A gL/gG SC 1 DX XX50 Protection max. 50A gL/gG SC 1 DX XX63 Protection max. 80A gL/gG

Co-ordination Type 2: Short-circuit protects the installation and the semi conductors inside the motor controller

 SC 1 DX 2315 / 4015
 Protection max. i²t of the fuse
 1800 A²S

 SC 1 DX 6X15 / 6X15-1
 Protection max. i²t of the fuse
 610 A²S

 SC 1 DX 2330 / 4030
 Protection max. i²t of the fuse
 1800 A²S

 SC 1 DX 6X30
 Protection max. i²t of the fuse
 6300 A²S

 SC 1 DX 2350 / 4050
 Protection max. i²t of the fuse
 6300 A²S

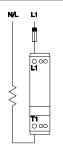
 SC 1 DX 6X50
 Protection max. i²t of the fuse
 6300 A²S

 SC 1 DX XX63
 Protection max. i²t of the fuse
 6300 A²S

Fuses from e.g. Ferraz, Siba, Bussmann can be used as short-circuit protection Type 2

More information concerning Co-ordination Type 2 see page 45

### Short Circuit Protection with standard fuse for SC1DX..15



Short Cicuit Protection for SC1 DX XX15 (15 A Type) Co-ordination Type 2

Line Voltage up to 480 V. Due to the over sized Output SCR's the contactor is fully protected by a standard fuse up to 16 A. Operating Class gL/gG...

No need for Ultra Fast Fuses Max Load at 230 V: 3.5 kW Max Load at 400 V: 6.0 kW Max Load at 480 V: 7.2 kW

### EMC

This component meets the requirements of the product standard EN 60947-4-3 and is CE marked according to this standard. This products has been designed for class A equipment. Use of the product in domestic environments may cause radio interference, in which case the user may be required to employ additional mitigation methods.

### Utilisation Categories (EN 60947-4-3)

AC - 51 Switching of resistive loads

AC - 55a Switching of electric discharge lamp controls

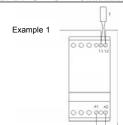
AC - 55b Switching of incandescent lamps

AC - 56a Switching of transformers

### Thermal overload protection (see also page 44)



Optional thermal overload protection is possible by inserting a thermostat in a slot on the right hand side of the electronic contactor. Type number UP62

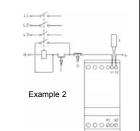


The thermostat can be connected in series with the control circuit of the electronic contactor.

When the temperature of the heatsink exceeds 90°C the electronic contactor will switch Off.

Note:

When the temperature has dropped approx. 30°C the electronic contactor will automatically be switched on again.



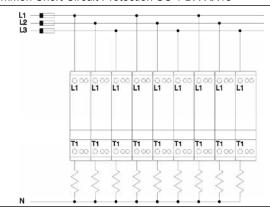
The thermostat is connected in series with the control circuit of the main contactor.

When the temperature of the heatsink exceeds 90°C the main contactor will switch Off.

Note:

A manual reset is necessary to restart this circuit.

### Common Short Circuit Protection SC 1 DX XX15



Short Cicuit Protection for several Contactors e.g. SC1 DX XX15

Max Fuse 50 A gL/gG for Short Circuit Coordination type 1

SC1 DX 2315 / SC 1 DX 4015 Max Fuse 1800 A2s e.g. Siemens SILIZED 5SD4 60

SC1 DX 6015
Max Fuse 450 Ass
e.g. Siemens SILIZED 5SD4 50
Short Circuit Coordination type 2

# Short Circuit Coordination type 2 Dimensions (se also page 44)

Туре	Н	D	w
22.5 mm module	94 mm	124.3 mm	22.5 mm
45 mm module	94 mm	124.3 mm	45 mm
90 mm module	94 mm	124.3 mm	90 mm

Mounting and cable wiring information

Mounting information see page 44 / Cable wiring see page 45

# 1 Phase dual pole electronic contactor (SC 2)



- Rated operational voltage up to 600VAC 50/60 Hz
- Rated operational current up to 30 / 50A AC-1 (accumulated)
- Control voltage from 5-24 VDC or 24-230 VAC/DC
- Compact modular design 45 or 90 mm
- LED Status indication
- Meets EN 60947-4-3 requirements
- Requires no additional components
- Built-in varistor protection
- IP-20 Protection

Load AC-1/51 Heating- element	Load AC-3 Motor	Load AC-55b Lamp	Load AC-56a Trans- former	Contro				Item numbe 24-480VAC Line Voltage	50/6					Mod	dule- th
30A <sup>1</sup> 15A 20A		454	5-24 VI	С			SC 2 DD 403	30					45m	ım	
accumulated	15A	20A	15A	24-230	VAC/DC			SC 2 DA 4030					45m	ım	
50A <sup>1</sup>	15A	20A	15A	5-24 VI	OC			SC 2 DD 405	50					90m	ım
accumulated	IDA	20A	IDA	24-230	VAC/DC			SC 2 DA 405	50					90m	ım
<sup>1</sup> The indic	ated loads	are accumu	lated. E.g. th	ne total su	ım of the cu	rrent in L1 & L2	(1x30A or 2	x15A)							
Output	load spe	ecificatio	n												
Leakage	current				1mA ACm	ax.	Min. opera	tional current					10mA		
Duty cycle	e				100%										
Contro	termina	l specifi	cations												
SC 2 DD	XXXX (DC	)					SC 2 DA XXXX (AC/DC)								
Control vo	oltage				5-24 VDC		Control voltage					24-230 VAC/DC			
Pick-up v	oltage max				4.25 VDC		Pick-up voltage max.					20.4 VAC/D	С		
Drop-out	voltage mir	١.			1.5 VDC Drop-out voltage n			oltage min.					7.2 VAC/DC		
Control co	urrent volta	ge			15 mA@2	4 VDC Control current / power max.				6mA / 1.5VA@24 VDC					
Max. cont	rol voltage				32 VDC		Max. control voltage				253 VAC/DO				
Response	time max	•			1/2 cycle		Response time max.				1 cycle				
Therma	l specifi	cation													
Power dis	sipation for	continuous	operation I	PDmax	2.2 W/A a	ccumulated		in ambient tem							
Power dis	sipation fo	r intermitte	nt operation	n PD	2.2 W/A x	dutycycle		is limited eithe cle as shown i						ру ге	aucin
Cooling m	nethod				Natural convection E		By 40°C		By 50°C			By 60°C			
Mounting					Vertical +/	-30°	100% load I	10% load Duty-cycle 100% 80% load Duty-		y-cycle max. 0.8 70% load Dr		70% load Duty	uty-cycle max. 0.6		
Operating temperature range EN 60947-4-2				-2	-5 <sup>0</sup> C to 40	o <sub>o</sub> C	Environ	ment				<u>'</u>			
Max. operating temperature with current derating				ting	60°C		Degree of	protection		IP 20	Pollutio	n de	gree	3	 3
Storage temperature EN 60947-4-2 -20°C to 80°C				30°C	Approva	al	ı		1		-	ı			
Insulati	on spec	ification	S				ULc Std N								
Rated ins	ulation volt	age			Ui 660 V	olt	UL:Use th	ermal overload							
Rated impulse withstand voltage			Uimp. 4 k	Code. When protected by a non-time delay K5 or H Class fuse, rated 26 of motor FLA, this device is rated for use on a circuit capable of delivering not more than 5.000 rms. symmetrical amperes. 600 V maximum.											

Ш



not more than 5,000 rms. symmetrical amperes, 600 V maximum.

Maximum surrounding temperature 40°C.

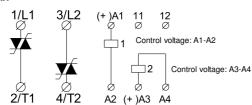
Installation catagory

# 1 Phase dual pole electronic contactor (SC 2)

### Wiring specifications

#### SC 2 DX XXXX

11-12: for UP62 or other wiring purposes



### Short-circuit protection by fuses

Two type of short-circuit protection can be used:

### Short-circuit protection by fuses

Short-circuit protection is divided into 2 levels Type 1 or Type 2

Co-ordination Type 1: Short-circuit protects the installation SC 2 DX XX30 SC 2 DX XX50 Protection max. 50A gL/gG Protection max. 50A gL/gG

Co-ordination Type 2: Short-circuit protects the installation and the semicon-

ductors inside the motor controller

SC 2 DX XX30 Protection max. i2t of the fuse 1800 A2S SC 2 DX XX50 Protection max. i2t of the fuse 1800 A2S

Fuses from e.g. Ferraz, Siba, Bussmann can be used as short-circuit protection Type 2

More information concerning Co-ordination Type 2 see page 45

#### **EMC**

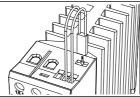
This component meets the requirements of the product standard EN 60947-4-3 and is CE marked according to this standard.

This products has been designed for class A equipment. Use of the product in domestic environments may cause radio interference, in which case the user may be required to employ additional mitigation methods.

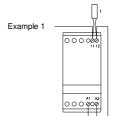
### Dimensions (se also page 44)

Type	Н	D	W
45 mm module	94 mm	124.3 mm	45 mm
90 mm module	94 mm	124.3 mm	90 mm

### Thermal overload protection (see also page 44)



Optional thermal overload protection is possible by inserting a thermostat in a slot on the right hand side of the electronic contactor. Type number UP62

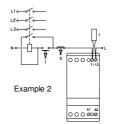


The thermostat can be connected in series with the control circuit of the electronic contactor.

When the temperature of the heatsink exceeds 90°C the electronic contactor will switch Off.

### Note:

When the temperature has dropped approx. 30°C the electronic contactor will automatically be switched on again.



The thermostat is connected in series with the control circuit of the main contactor.

When the temperature of the heatsink exceeds 90°C the main contactor will switch Off.

#### Note:

A manual reset is necessary to restart this circuit.

### **Utilisation Categories (EN 60947-4-3)**

Switching of resistive loads

AC - 55a Switching of electric discharge lamp controls

AC - 55b Switching of incandescent lamps

Switching of transformers AC - 56a

### Mounting and cable wiring information

Mounting information see page 44 / Cable wiring see page 45

# 3 Phase electronic contactor (SC 3)



- Rated operational voltage up to 600VAC 50/60 Hz
- Rated operational current up to 10 ,15 and 20 A AC-1
- Control voltage from 5-24 VDC or 24-230 VAC/DC
- Compact modular design 45 or 90 mm
- LED Status indication
- Meets EN 60947-4-3 requirements
  Requires no additional components
- Built-in varistor protection
- IP-20 Protection

Item sel	ection ar	nd technic	cal specif	ications	S							
Load AC-1/51 Heating- element	Load AC-3 Motor	Load AC-55b Lamp	Load AC-56a Trans- former	Contro				24-480VAC 50/60Hz 24-60			tem number by 24-600VAC 50/60Hz ine Voltage	
				5-24 VI	ЭС	С		SC 3 DD 40	10	SC 3 DD 60	10	45mm
10A	10A	10A	5A	24-230	VAC/DC	VAC/DC		SC 3 DA 40	10	SC 3 DA 60	10	45mm
				5-24 VI	DC .			SC 3 DD 40	20			90mm
20A	10A	10A	5A	24-230	VAC/DC			SC 3 DA 4020			90mm	
Output I	oad spec	ification	1	1				I.				1
Leakage	current				1mA ACm	ax.	Min. opera	ational current			10mA	
Duty cycle	e				100%							
Control	terminal	specifica	tions									
SC 3 DD	XXXX (DC	)					SC 3 DA XXXX (AC/DC)					
Control vo	oltage				5-24 VDC		Control voltage			24-230 VAC/DC		
Pick-up vo	oltage max				4.25 VDC		Pick-up voltage max.				20.4 VAC/DC	
Drop-out	voltage mir	۱.			1.5 VDC	1.5 VDC Drop-out voltage min.				7.2 VAC/D0		
Control cu	ırrent volta	ge			15 mA@2	nA@24 VDC Control current / power max.				6mA / 1.5V	A@24 VDC	
Max. cont	rol voltage				32 VDC	Max. control voltage				253 VAC/D	С	
Response	time max.	(ON/OFF)			1/2 cycle	Response time max. (ON/OFF)				1 cycle		
Therma	Specific	ation										
Power dis	sipation for	continuous	operation	PDmax	3.3 W/A			in ambient ten				
Power dis	sipation fo	r intermitte	nt operation	n PD	3.3 W/A x	dutycycle		ycle as shown				<i>z</i> , .caacg
Cooling m	ethod				Natural co	nvection	By 40 <sup>o</sup> C		By 50°C		By 60 <sup>o</sup> C	
Mounting					Vertical +/-	-30 <sup>o</sup>	100% load	Duty-cycle 100%	80% load Duty-cycle max. 0.8		70% load Duty-cycle max. 0.6	
Operating	temperatu	ire range E	N 60947-4	-3	-5 <sup>O</sup> C to 40	0°C	Environment				1	
Max. operating temperature with current derating 60°C				60°C					Pollution d	egree	3	
Storage to	Storage temperature EN 60947-4-3 -20°C to 80°C					80°C						I
Insulation	n specifi	cations					Approva	lo. 508 <b>( Not</b>	approved S	SC3DX4015 )		
Rated insulation voltage				Ui 660 V	olt	UL: Use th	nermal overloa en protected l	ad protection	as required b			
Rated imp	oulse withs	tand voltag	е		Uimp. 4 k	Volt	266% of n	notor FLA, this	device is ra	ated for use or	n a circuit cap	able of deli-
Installation catagory				III		vering not more than 5,000 rms. symmetrical amperes, 600 V maximum. Maximum surrounding temperature 40°C.						

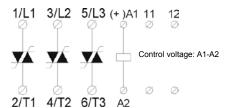


# 3 Phase electronic contactor (SC 3)

### Wiring specifications

SC 3 DX XXXX

11-12: for UP62 or other wiring purposes



### Short-circuit protection by fuses

Two type of short-circuit protection can be used:

Short-circuit protection by fuses

Short-circuit protection is divided into 2 levels Type 1 or Type 2

Co-ordination Type 1: Short-circuit protects the installation

SC 3 DX XX20 Protection max. 50A gL/gG

Co-ordination Type 2: Short-circuit protects the installation and the semicon-

ductors inside the motor controller SC 3 DX XX10 Protection max. i<sup>2</sup>t of the fuse 610 A<sup>2</sup>S

SC 3 DX XX20 Protection max. i<sup>2</sup>t of the fuse 610 A<sup>2</sup>S

Fuses from e.g. Ferraz, Siba, Bussmann can be used as short-circuit protection Type 2

More information concerning Co-ordination Type 2 see page 45

### **EMC**

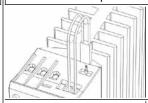
This component meets the requirements of the product standard EN 60947-4-3 and is CE marked according to this standard.

This products has been designed for class A equipment. Use of the product in domestic environments may cause radio interference, in which case the user may be required to employ additional mitigation methods.

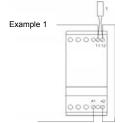
### Mounting and cable wiring information

Mounting information see page 44 / Cable wiring see page 45

### Thermal overload protection (see also page 44)



Optional thermal overload protection is possible by inserting a thermostat in a slot on the right hand side of the electronic contactor. Type number UP62

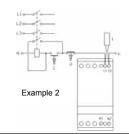


The thermostat can be connected in series with the control circuit of the electronic contactor.

When the temperature of the heatsink exceeds 90°C the electronic contactor will switch Off.

Note:

When the temperature has dropped approx. 30°C the electronic contactor will automatically be switched on again.



The thermostat is connected in series with the control circuit of the main contactor

When the temperature of the heatsink exceeds 90°C the main contactor will switch Off.

Note: A manual reset is necessary to restart this circuit.

### Utilisation Categories (EN 60947-4-3)

AC - 51 Switching of resistive loads

AC - 55a Switching of electric discharge lamp controls

AC - 55b Switching of incandescent lamps

AC - 56a Switching of transformers

### Dimensions (se also page 44)

Туре	Н	D	W
45 mm module	94 mm	124.3 mm	45 mm
90 mm module	94 mm	124.3 mm	90 mm

# 3-Phase electronic reversing contactor



- Rated operational voltage up to 480 VAC 50/60Hz
  Rated operational current up to 10A AC-3
  Two independent control inputs with mutual interlock
  Control voltage from 5-24VDC or 24-230VAC/DC
  LED Status indication

- Meets EN 60947-4-2 requirements
- Requires only 45 mm DIN rail space

Item selection and	l technical specificat	ions						
Load ratings AC-53 motor load stand. AC-4 motor load inching / plugging	Control voltage		Item number by 24-480VAC 50/60Hz Line Voltage			Mod	lule-width	
10A AC-53 / 8A AC-4	5-24 VDC		SRC 3 DD 4010			45m	m	
10A AC-53 / 8A AC-4	24-230 VAC/DC		SRC 3 DA 4010			45m	m	
Output load speci	fication	'	'					
Operational current AC-	3	10A	Leakage current			5mA	ACmax.	
Operational current AC-	4	8A	Min. operational currer	t		50m	A	
Duty cycle		100%						
Control terminal s	pecifications	'				'		
SRC 3 DD 4010			SRC 3 DA 4010					
Control voltage		5 - 24 VDC	Control voltage			24- :	230 VAC/DC	
Pick-up voltage max.		4.25 VDC	Pick-up voltage max.			20.4	20.4 VAC/DC	
Drop-out voltage min.		1.5 VDC	Drop-out voltage min.			7.2	7.2 VAC/DC	
Control current		25mA @ 4VDC	Control current / power max.			6mA	. / 1.5VA@24VDC	
Response time max.		1/2 cycle	Response time max.			1cyc	cle	
Interlock time max.		80 msec.	Interlock time max.			150	msec.	
Thermal specificat	tion	•						
Power dissipation for cor	ntinuous operation PDmax	2.2 W/A	Operation in ambient te					
Power dissipation for int	ermittent operation PD	2.2 W/A x dutycycle	dissipation is limited eith					
Cooling method		Natural convection	By 40°C By 50°C By 60°C				ос.	
Mounting		Vertical +/-30 <sup>O</sup>	, , , , , , , , , , , , , , , , , , , ,				oad Duty-cycle max. 0.65	
Operating temperature	range EN 60947-4-2	-5C <sup>0</sup> to 40 <sup>o</sup> C	Environment					
Storage temperature EN	N 60947-4-2	-20C <sup>o</sup> to 80 <sup>o</sup> C	Degree of protection IP 20 Pollution deg		earee	3		
Max. operating temperatu	re with current derating	60°C	*This products has been					
Insulation specific	ations		domestic environments r	nay cause radi	o interference,			
Rated insulation voltage		Ui 660 Volt	be required to employ additional mitigation methods.  *UL:Use thermal overload protection as required by the National Electric Code. When protected by a non-time delay K5 or H Class fuse, rated 266% of motor FLA, this device is rated for use on a circuit capable of delivering not more than 5,000 rms. symmetrical amperes, 600 V maximum. Maximum surrounding temperature 40°C.					
Rated impulse withstand	d voltage	Uimp. 4 kVolt						
Installation catagory		III						
Functional diagrar	n		Approval					
Maineldlala			ULc Std No. 508 / CAN	/CSA-C22.2				
Mains L1,L2,L3 Forward A1-A2		Mounting and cable wiring information						
Reverse A3-A4			Mounting information s	ee page 36 /	Cable wiring s	see pag	je 37	
Motor forward			Dimensions (se als	o page 36)				
Motor reverse			Туре	Н	D		W	
			45 mm module	94 mm	128.1 m	m	45 mm	



### 3-Phase electronic reversing contactor

### Wiring specifications

#### SRC 3 DX 4010

For UP 62 or other wiring purposes

1/L1 3/L2 5/L3 (+ )A1 11 12

2/T1 4/T2 6/T3 A2 (+ )A3 A4

Control voltage A1-A2 Control voltage A3-A4

### Short-circuit protection by circuit breaker or fuses

#### Two type of short-circuit protection can be used:

- a) Short-circuit protection by circuit breaker.
- b) Short-circuit protection by fuses.

Short-circuit protection is divided into 2 levels Type 1 or Type 2

Co-ordination Type 1: Short-circuit protects the installation

Co-ordination Type 2: Short-circuit protects the installation and the semiconductors inside the motor controller

#### a) Short-circuit protection by circuit breaker

A 3-Phase motor with correctly installed and adjusted overload relay will not short circuit totally to earth or between the 3 phases. Part of the winding will normally limit the short circuit current to a value that will cause instantaneous magnetic tripping of the circuit breaker without damage to the electronic contactor. The magnetic trip response current is approx. 11 times the max. adjustable current.

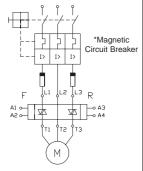
### b) Short-circuit protection by fuses

Type 1: SRC 3 DX 4010 Protection max. 50 A gL/gG

Type 2: SRC 3 DX 4010 Protection max. l2t of the fuse 610 A2S

Fuses from e.g. Ferraz, Siba, Bussmann can be used as short-circuit protection Type 2 More information concerning Co-ordination Type 2 see page 37

### **Overload Protection in Motor Control Reversing**



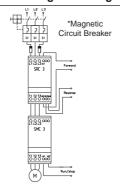
Overload protection of the motor is easily achieved by installing a manual thermal magnetic circuit breaker on the supply side of the motor.

The circuit breaker provides means for padlocking and the necessary clearance for use as a circuit isolator according to EN 60204-1.

Adjust the current limit on the MCB according to the rated nominal current of the motor

\*Use UL approved Magnetic Circuit Breaker or UL specified back-up fuse type K5 or H Class

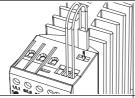
### Combining Reversing Electronic Contactor & Soft Starter



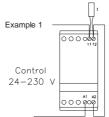
### Soft-reversing of motors up to 10A

A Soft-Reversing of a motor can easily be achieved by connecting a reversing relay to the Soft Starter. The reversing relay type SRC 3 DX will determine the direction of rotation Forward or Reverse and the Soft Starter type SMC 33 DA XXXX will perform soft-starting and soft-stopping of the motor. If soft-stop is not required the application can be simplified by connecting the control circuit of the Soft Starter to the main terminals as shown under Line Controlled Soft-Start. A delay of approx. 0.5 sec. between forward and reverse control signal must be allowed to avoid influence from the voltage generated by the motor during turn Off.

### Thermal overload protection (see also page 36)



Optional thermal overload protection is possible by inserting a thermostat in a slot on the right hand side of the contactor. Type number UP62

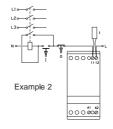


The thermostat can be connected in series with the control circuit of the control circuit of the control circuit.

When the temperature of the heatsink exceeds 90°C the soft starter will switch Off.

### Note:

When the temperature has dropped approx. 30°C the contactor will automatically be switched on again.



The thermostat is connected in series with the control circuit of the main contactor.

When the temperature of the heatsink exceeds 90°C the main contactor will switch Off.

A manual reset is necessary to restart this circuit.

### **Utilisation Categories EN60947-4-2**

Category AC-53: Starting, switching off motors during running

Category AC-4: Starting, plugging, reversing the motors rapidly while the motor is during.

### EMC

This component meets the requirements of the product standard EN60947-4-2 and is CE marked according to this standard.

