

LS..K mini contactors and SH..K mini contactor relays

2 Presentation

3-pole mini contactors - 4 to 5.5 kW

3	LS05K..A, LS06K..A	AC operated
4	LS05K..D	DC operated

4-pole mini contactors - 4 kW

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4-pole mini contactor relays

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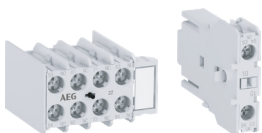
19 Dimensions

LS..K mini contactors and SH..K mini contactor relays

LS..K mini contactors are high performance devices with small dimensions. They are used for switching, even in harsh conditions, resistive loads up to 20 A and motors up to 5.5 kW / 400 V.



In the assortment, it is possible to find 3-pole contactors, 4-pole contactors and 4-pole contactor relays. These devices can be operated with standard AC or extended operating limits DC coils. Auxiliary contact blocks for front and side mounting, surge suppressors and kits for creating reversing solutions or for the connection with manual motor starters complete the offer.



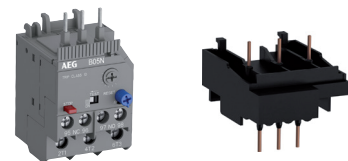
Auxiliary contact blocks

1-pole side mounting and 4-pole front mounting auxiliary contact blocks available, both with different contact configurations.



Reversing solutions

Using the VB05K mechanical interlock kit, it is possible to build a reversing contactor in very short time for a dual direction motor control.



Full protection

LS..K contactors can be easily combined with AEG protection devices in order to safeguard safety of people and equipment. The connection with MBS32NG can be done using MF32L05K link.

LS05K..A, LS06K..A 3-pole mini contactors

4 to 5.5 kW

AC operated




LS05K-30-10-AD

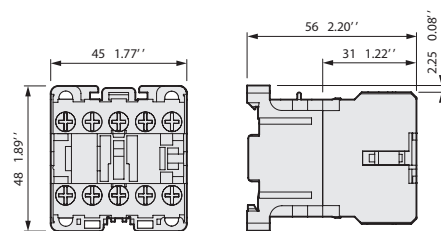


LS06K-30-10-AD

LS05K..A and LS06K..A 3-pole mini contactors are compact devices for the control of resistive loads up to 20 A or motors up to 5.5 kW. These contactors are designed with 3 main poles and one built-in auxiliary contact:

- control circuit: AC operated
- suitable for use in combination with auxiliary contact blocks : 4 front or up to 2 side auxiliary contacts
- rail or wall mounting possible

IEC Rated operational power 400 V AC-3 kW	UL/CSA 3-phase motor rating 480 V AC-1 A	General use rating 600 V AC hp A	Rated control circuit voltage Uc		Auxiliary contacts fitted 	Type	Order code	Weight Pkg (1 pce) kg	
			V 50 Hz	V 60 Hz					
4	20	5	20	24	24	1 0	LS05K-30-10-AD	4TQE581011R0000	0.170
						0 1	LS05K-30-01-AD	4TQE581012R0000	0.170
				110...115	110...120	1 0	LS05K-30-10-AJ	4TQE581021R0000	0.170
						0 1	LS05K-30-01-AJ	4TQE581022R0000	0.170
				220...230	220...230	1 0	LS05K-30-10-AN	4TQE581031R0000	0.170
						0 1	LS05K-30-01-AN	4TQE581032R0000	0.170
5.5	20	7.5	20	24	24	1 0	LS06K-30-10-AD	4TQE582011R0000	0.170
						0 1	LS06K-30-01-AD	4TQE582012R0000	0.170
				110...115	110...120	1 0	LS06K-30-10-AJ	4TQE582021R0000	0.170
						0 1	LS06K-30-01-AJ	4TQE582022R0000	0.170
				220...230	220...230	1 0	LS06K-30-10-AN	4TQE582031R0000	0.170
						0 1	LS06K-30-01-AN	4TQE582032R0000	0.170



LS05K..A, LS06K..A

Main dimensions mm, inches

LS05K..D 3-pole mini contactors

4 kW

DC operated



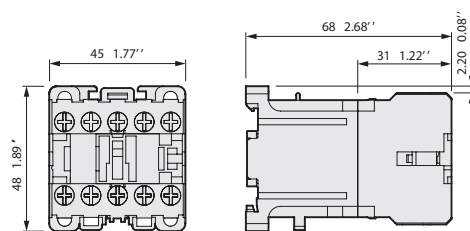
LS05K-30-10-DD

LS05K..D 3-pole mini contactors are compact devices for the control of resistive loads up to 20 A or motors up to 4 kW. These contactors are designed with 3 main poles and one built-in auxiliary contact:

- control circuit: DC operated
- suitable for use in combination with auxiliary contact blocks : 4 front or up to 2 side auxiliary contacts
- rail or wall mounting possible

IEC		UL/CSA		Rated control circuit voltage U _c	Auxiliary contacts fitted	Type	Order code	Weight
Rated operational power	current $\theta \leq 55^\circ\text{C}$	3-phase motor rating 480 V	General use rating 600 V AC					
400 V AC-3 kW	AC-1 A	hp	A	V DC				kg
4	20	5	20	24 (1)	1 0	LS05K-30-10-DD	4TQE581041R0000	0.250
					0 1	LS05K-30-01-DD	4TQE581042R0000	0.250
				110 (1)	1 0	LS05K-30-10-DJ	4TQE581051R0000	0.250
					0 1	LS05K-30-01-DJ	4TQE581052R0000	0.250

(1) Extended operating limits coils offer a wider range of voltages, $-30\% \leq U_c \leq +30\%$, which can be used for the operation with a limitation of the number of auxiliary contacts.



LS05K..D

Main dimensions mm, inches

LS05K..A 4-pole mini contactors

4 kW

AC operated

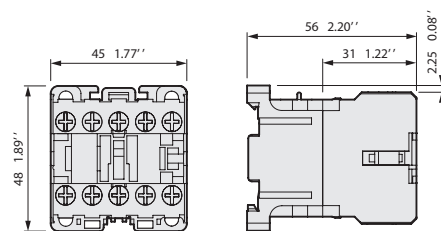


LS05K-40-00-AD

LS05K..A 4-pole mini contactors are compact devices for the control of resistive loads up to 20 A or motors up to 4 kW.

- control circuit: AC operated
- suitable for use in combination with auxiliary contact blocks : 4 front or up to 2 side auxiliary contacts
- rail or wall mounting possible

IEC	UL/CSA		Rated control circuit voltage U _c		Auxiliary contacts fitted	Type	Order code	Weight
	Rated operational current θ ≤ 55 °C	3-phase motor rating 480 V	General use rating 600 V AC	V 50 Hz				
AC-1		hp	A					kg
4 N.O. main poles								
20	5	20	24	24	0 0	LS05K-40-00-AD	4TQE581013R0000	0.170
			220 ... 230	220 ... 230	0 0	LS05K-40-00-AN	4TQE581033R0000	0.170



LS05K..A

Main dimensions mm, inches

LS05K..D 4-pole mini contactors

4 kW

DC operated



LS05K-40-00-DD

LS05K..A 4-pole mini contactors are compact devices for the control of resistive loads up to 20 A or motors up to 4 kW.

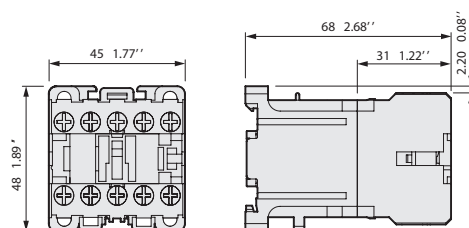
- control circuit: DC operated
- suitable for use in combination with auxiliary contact blocks : 4 front or up to 2 side auxiliary contacts
- rail or wall mounting possible

IEC	UL/CSA		Rated control circuit voltage Uc	Auxiliary contacts fitted	Type	Order code	Weight
Rated operational current $\theta \leq 55^\circ\text{C}$	3-phase motor rating 480 V	General use rating 600 V AC					Pkg (1 pce)
AC-1	hp	A	V DC				kg

4 N.O. main poles

20	5	20	24 (1)	0 0	LS05K-40-00-DD	4TQE581043R0000	0.250
			110 (1)	0 0	LS05K-40-00-DJ	4TQE581053R0000	0.250

(1) Extended operating limits coils offer a wider range of voltages, $-30\% \leq U_c \leq +30\%$, which can be used for the operation with a limitation of the number of auxiliary contacts.



LS05K..D

Main dimensions mm, inches

SH05K..A 4-pole mini contactor relays

AC operated

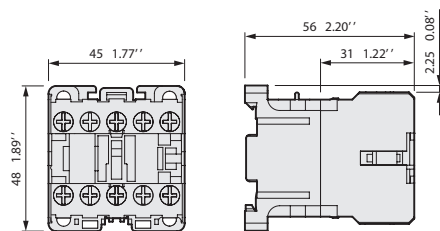


SH05H-40-AD

SH05K..A 4-pole mini contactor relays are compact devices for the control of small loads up to 6 A.

- control circuit: AC operated
- suitable for use in combination with auxiliary contact blocks : 4 front or up to 2 side auxiliary contacts
- rail or wall mounting possible

Rated control circuit voltage Uc	Auxiliary contacts fitted	Type	Order code	Weight Pkg (1 pce)	
V 50 Hz	V 60 Hz			kg	
4 N.O. poles					
24	24	4 0	SH05K-40-AD	4TQE583011R0000	0.170
110 ... 115	110 ... 120	4 0	SH05K-40-AJ	4TQE583021R0000	0.170
220 ... 230	220 ... 230	4 0	SH05K-40-AN	4TQE583031R0000	0.170
3 N.O. + 1 N.C. poles					
24	24	3 1	SH05K-31-AD	4TQE583013R0000	0.170
110 ... 115	110 ... 120	3 1	SH05K-31-AJ	4TQE583023R0000	0.170
220 ... 230	220 ... 230	3 1	SH05K-31-AN	4TQE583033R0000	0.170
2 N.O. + 2 N.C. poles					
24	24	2 2	SH05K-22-AD	4TQE583012R0000	0.170
110 ... 115	110 ... 120	2 2	SH05K-22-AJ	4TQE583022R0000	0.170
220 ... 230	220 ... 230	2 2	SH05K-22-AN	4TQE583032R0000	0.170



SH05K..A

Main dimensions mm, inches

SH05K..D 4-pole mini contactor relays

DC operated




SH05K-40-DD

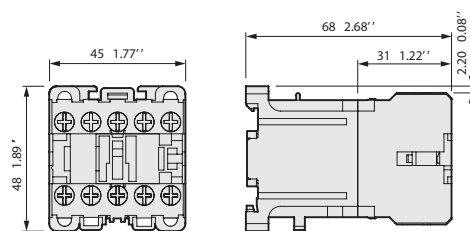
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SH05K..D 4-pole mini contactor relays are compact devices for the control of small loads up to 6 A.

- control circuit: DC operated
- suitable for use in combination with auxiliary contact blocks : 4 front or up to 2 side auxiliary contacts
- rail or wall mounting possible.

Rated control circuit voltage Uc	Auxiliary contacts fitted 	Type	Order code	Weight Pkg (1 pce) kg
V DC				
4 N.O. poles				
24 (1)	4 0	SH05K-40-DD	4TQE583041R0000	0.235
3 N.O. + 1 N.C. poles				
24 (1)	3 1	SH05K-31-DD	4TQE583043R0000	0.235
2 N.O. + 2 N.C. poles				
24 (1)	2 2	SH05K-22-DD	4TQE583042R0000	0.235

(1) Extended operating limits coils offer a wider range of voltages, $-30\% \leq U_c \leq +30\%$, which can be used for the operation with a limitation of the number of auxiliary contacts.



SH05K..D

Main dimensions mm, inches

Accessories



HS05K-F-22



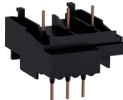
HS05K-L-10



EB05K-1



VB05K



MF32L05K

Auxiliary contact blocks for LS..K mini contactors and SH..K mini contactors relays

Suitable for	Auxiliary contacts	Type	Order code	Weight
				Pkg (1 pce) kg

Front mounted instantaneous auxiliary contact blocks

All LS05K, LS06K and SH05K variants		Type	Order code	Weight
	4 0	HS05K-F-40	4TQE589001R0000	0.040
	3 1	HS05K-F-31	4TQE589002R0000	0.040
	2 2	HS05K-F-22	4TQE589003R0000	0.040

Side mounted instantaneous auxiliary contact block

All LS05K, LS06K and SH05K variants		Type	Order code	Weight
	1 0	HS05K-L-10	4TQE589004R0000	0.017
	0 1	HS05K-L-01	4TQE589005R0000	0.017

Other accessories for LS..K mini contactors and SH..K mini contactors relays

Suitable for	Rated control circuit voltage U _c			Protection type	Type	Order code	Weight
	V DC	V 50 Hz	V 60 Hz				
							Pkg (1 pce) kg

Surge suppressors for contactor coils

All LS05K, LS06K and SH05K								
AC operated variants	–	12 ... 60	12 ... 60	R/C	EB05K-1	4TQE589006R0000	0.006	
DC operated variants	6 ... 240	–	–	Diode	EB05K-3	4TQE589008R0000	0.006	

Mechanical interlock

All LS05K, LS06K and SH05K variants	Type	Order code	Weight
	VB05K	4TQE589009R0000	0.003



Connecting link with manual motor starters

All LS05K and LS06K variants	Type	Order code	Weight
	MF32L05K	4TQE569017R0000	0.021

LS05K, LS06K 3-pole and 4-pole mini contactors

Technical data

Main pole – Utilization characteristics according to IEC

Contactor types	AC operated	LS05K..A	LS06K..A
	DC operated	LS05K..D	
Standards		IEC/EN 60947-1, IEC/EN 60947-4-1	
Rated operational voltage U _e max		690 V AC, 440 V DC	
Rated frequency (without derating)		DC or 50 / 60 Hz	
Conventional free-air thermal current I _{th} acc. to IEC/EN 60947-4-1, open contactors, $\theta \leq 55^\circ\text{C}$, with conductor cross-sectional area		20 A	
AC-1 Utilization category for air temperature close to contactor $\theta \leq 55^\circ\text{C}$			
I _e / Rated operational current AC-1	230 V	20 A	
U _e max ≤ 690 V, 50/60 Hz	400 V	20 A	
	500 V	20 A	
	690 V	20 A	
AC-1 Utilization category for air temperature close to contactor $55 < \theta \leq 70^\circ\text{C}$			
I _e / Rated operational current AC-1	230 V	16 A	
U _e max ≤ 690 V, 50/60 Hz	400 V	16 A	
	500 V	16 A	
	690 V	16 A	
AC-3 Utilization category for air temperature close to contactor $\theta \leq 55^\circ\text{C}$			
I _e / Rated operational current AC-3	230 V	9 A	12 A
	400 V	9 A	12 A
	500 V	8 A	10 A
	690 V	5 A (1)	5 A
 3-phase motors Rated operational power AC-3	230 V	2.2 kW	3 kW
1500 r.p.m. 50 Hz	400 V	4 kW	5.5 kW
1800 r.p.m. 60 Hz	500 V	4 kW	5.5 kW
3-phase motors	690 V	4 kW (1)	4 kW
AC-4 Utilization category for air temperature close to contactor $\theta \leq 55^\circ\text{C}$			
I _e / Rated operational current AC-4	230 V	9 A	
	400 V	9 A (1)	
	500 V	8 A	
	690 V	5 A (1)	
 3-phase motors Rated operational power AC-4	230 V	2.2 kW	
1500 r.p.m. 50 Hz	400 V	4 kW (1)	
1800 r.p.m. 60 Hz	500 V	4 kW	
3-phase motors	690 V	4 kW (1)	
DC-1 Utilization category for air temperature close to contactor $\theta \leq 55^\circ\text{C}$			
I _e / Rated operational current DC-1 with 3 poles in series	24 V	20 A	
	48 V	20 A	
	60 V	20 A	
	125 V	10 A	
	220 V	8 A	
DC-3 Utilization category for air temperature close to contactor $\theta \leq 55^\circ\text{C}$			
I _e / Rated operational current DC-3 with 3 poles in series	24 V	12 A	
	48 V	9 A	
	60 V	9 A	
	125 V	6 A	
	220 V	2.5 A	
DC-5 Utilization category for air temperature close to contactor $\theta \leq 55^\circ\text{C}$			
I _e / Rated operational current DC-5 with 3 poles in series	24 V	9 A	
	48 V	8 A	
	60 V	7 A	
	125 V	2 A	
	220 V	0.8 A	
Rated making capacity		10 x I _e AC-3 acc. to IEC/EN 60947-4-1, 12 x I _e AC-4 acc. to IEC/EN 60947-4-1	
Rated breaking capacity		8 x I _e AC-3 acc. to IEC/EN 60947-4-1, 10 x I _e AC-4 acc. to IEC/EN 60947-4-1	
Short-circuit protection device for contactors without thermal O/L relay - motor protection excluded fuse type gG		Type 1: 32 A / Type 2: 20 A	
Rated short-time withstand current I _{cw} at 40 °C ambient temperature, in free air from a cold state	10 s	72 A	96 A
Maximum breaking capacity cos $\varphi = 0.45$	at 400 V	90 A	120 A
Maximum electrical switching frequency		AC 300 cycles/h (AC-1), 1200 cycles/h (AC-3), 150 cycles/h (AC-4)	
		DC 600 cycles/h	

(1) Valid for N.O. contacts only. Other ratings on request.

LS05K, LS06K 3-pole and 4-pole mini contactors

Technical data

Main pole – Utilization characteristics according to UL/NEMA/CSA

Contactor types	AC operated	LS05K..A	LS06K..A
	DC operated	LS05K..D	
Standards	UL/CSA 60947-1, UL/CSA 60947-4-1		
Maximum operational voltage	600 V AC		
UL/CSA general use rating	20 A / 600 V		
UL/CSA maximum 1-phase motor rating for air temperature close to contactor $\theta \leq 40$ °C			
Full load current	115 V AC	9.8 A	9.8 A
	230 V AC	10 A	12 A
Horse power rating	115 V AC	0.5 hp	0.5 hp
	230 V AC	1.5 hp	2 hp
UL/CSA maximum 3-phase motor rating for air temperature close to contactor $\theta \leq 40$ °C			
Full load current	200 V AC	11 A	11 A
	240 V AC	9.6 A	9.6 A
	380-415 V AC	6.1 A	9.7 A
	440-480 V AC	7.6 A	11 A
	550-600 V AC	6.1 A	11 A
Horse power rating	200 V AC	3 hp	3 hp
	240 V AC	3 hp	3 hp
	380-415 V AC	3 hp	5 hp
	440-480 V AC	5 hp	7.5 hp
	550-600 V AC	5 hp	10 hp
Short-circuit protection device for contactors without thermal overload relay - motor protection excluded			
Fuse rating	600 V	50 A	
Fuse type	600 V	Class J	

General technical data

Contactor types	AC operated	LS05K..A	LS06K..A
	DC operated	LS05K..D	
Rated insulation voltage U_i			
acc. to IEC/EN 60947-4-1		750 V	
acc. to UL/CSA 60947-4-1		600 V	
Rated impulse withstand voltage U_{imp}		6 kV (1)	
Ambient air temperature, close to contactor			
Operation Fitted with thermal overload relay		-25 ... +55 °C	
Without thermal overload relay		-40 ... +55 °C	
Storage		-55 ... +80 °C	
Climatic withstand		Acc. to IEC 60947-1 Annex Q	
Maximum operating altitude (without derating)		3000 m	
Mechanical durability		107 operating cycles	
Electrical durability			
	AC-1 20 A	210 000 operating cycles	260 000 operating cycles
	AC-3 400 V	900 000 operating cycles (9 A) (2)	800 000 operating cycles (12 A) (2)
	AC-4 400 V	30 000 operating cycles (9 A) (2)	35 000 operating cycles (9 A) (2)
Resistance to shock		Half-sine	
acc. to IEC/EN 60068-2-27		25 g / 11 ms	
acc. to IEC/EN 60947-1 Annex. Q		Category E	
Resistance to vibrations		Sinusoidal	
acc. to IEC/EN 60068-2-6		5 g / 3 ... 150 Hz	
acc. to IEC/EN 60947-1 Annex. Q		Category E	

(1) 2 mm clearance distance between contactor side wall and grounded metal parts of cabinet required

(2) Valid for 3-pole mini contactors only. Other ratings on request.

LS05K, LS06K 3-pole and 4-pole mini contactors

Technical data

Magnet system characteristics for LS05K..A, LS06K..A mini contactors

Contactor types	AC operated	LS05K..A	LS06K..A
Coil operating limits acc. to IEC/EN 60947-4-1	AC supply	0.85 ... 1.1 x U _c	
AC control voltage			
Rated control circuit voltage U _c		See ordering tables	
Coil consumption	Average pull-in value (50 Hz)	26 VA	
	Average pull-in value (60 Hz)	32 VA	
	Average holding value (50 Hz)	5.3 VA	
	Average holding value (60 Hz)	4.5 VA	
Drop-out voltage in % of U _c min		20 ... 75%	

Magnet system characteristics for LS05K..D contactors

Contactor types	DC operated	LS05K..D
Coil operating limits acc. to IEC/EN 60947-4-1	DC supply	0.85 ... 1.1 x U _c
DC control voltage		
Rated control circuit voltage U _c		See ordering tables
Coil consumption	Average pull-in value	4 W
	Average holding value	4 W
Drop-out voltage in % of U _c min		10 ... 65%

Mounting characteristics and conditions for use

Contactor types	AC operated	LS05K..A	LS06K..A
	DC operated	LS05K..D	
Mounting positions			
Mounting distances	The contactors can be assembled side by side		
Fixing			
On rail acc. to IEC/EN 60715	35 x 7.5 mm or 35 x 15 mm		
By screws (not supplied)	4 screws at the 4 angles - M4		

LS05K, LS06K 3-pole and 4-pole mini contactors

Technical data










Built-in auxiliary contact according to IEC

Types		Built-in auxiliary contacts
Standards		IEC/EN 60947-1, IEC/EN 60947-5-1
Rated operational voltage U _e max		690 V AC, 440 V DC
Rated frequency (without derating)		DC or 50 / 60 Hz
Conventional free-air thermal current I _{th} θ ≤ 55 °C		10 A
I _e / Rated operational current AC-15	240 V	6 A
	400 V	4 A
	500 V	2.5 A
	690 V	1.5 A
I _e / Rated operational current DC-13	24 V	5 A
	48 V	2.5 A
	125 V	0.55 A
	250 V	0.3 A
	440 V	0.15 A
Short-circuit protection device - fuse type gG		10 A
Minimum switching capacity with failure rate acc. to IEC/EN 60947-5-4		17 V / 5 mA
Maximum electrical switching frequency	AC-15	360 cycles/h
	DC-13	360 cycles/h

Built-in auxiliary contact according to UL/CSA

Types		Built-in auxiliary contacts
Standards		UL/CSA 60947-1, UL/CSA 60947-5-1
Maximum operational voltage		600 V AC
Pilot duty		A600, Q600

Connection

Contactor types	AC operated	LS05K..A, LS06K..A	
	DC operated	LS05K..D	
Terminals			
	Screw terminals with cable clamp		
Connection capacity			
Main conductors (poles + built-in auxiliary terminals)			
	Rigid: solid	1 x	0.75 ... 4 mm ²
		2 x	0.75 ... 2.5 mm ²
	Flexible without ferrule	1 or 2 x	0.75 ... 2.5 mm ²
	Flexible with ferrule	1 x	0.75 ... 2.5 mm ²
	(insulated or not)	2 x	0.75 ... 1.5 mm ²
Connection capacity acc. to UL/CSA		1 or 2 x	AWG 12 ... 18
Stripping length			9 mm
Tightening torques			0.8 ... 1.0 Nm / 7 lb.in
Coil terminals			
	Rigid: solid	1 or 2 x	0.75 ... 2.5 mm ²
		1 or 2 x	0.75 ... 2.5 mm ²
	Flexible without ferrule	1 or 2 x	0.75 ... 2.5 mm ²
	Flexible with ferrule	1 x	0.75 ... 2.5 mm ²
	(insulated or not)	2 x	0.75 ... 1.5 mm ²
Connection capacity acc. to UL/CSA		1 or 2 x	AWG 12 ... 18
Stripping length			9 mm
Tightening torques			0.8 Nm / 7 lb.in
Degree of protection acc. to IEC/EN 60947-1 and IEC/EN 60529			
All terminals			IP20
Screw terminals			(screws of unused terminals must be tightened)
All terminals			M3
Screwdriver type			Flat Ø 5.5 mm / Pozidriv 2

SH05K 4-pole mini contactor relays

Technical data

Main pole – Utilization characteristics according to IEC

Contactor types	AC operated	SH05K..A
	DC operated	SH05K..D
Standards	IEC/EN 60947-1, EN 60947-5-1	
Rated operational voltage U _e max	690 V AC, 440 V DC	
Rated frequency (without derating)	DC or 50 / 60 Hz	
Conventional free-air thermal current I _{th} θ ≤ 55 °C	10 A	
I _e / Rated operational current AC-15	240 V	6 A
	400 V	4 A
	500 V	2.5 A
	690 V	1.5 A
I _e / Rated operational current DC-13	24 V	5 A
	48 V	2.5 A
	125 V	0.55 A
	250 V	0.3 A
	440 V	0.15 A
Short-circuit protection device for contactors - fuse type gG	10 A	
Minimum switching capacity with failure rate acc. to IEC 60947-5-4	17 V / 5 mA	
Maximum electrical switching frequency	AC-15	600 cycles/h
	DC-13	600 cycles/h

Main pole – Utilization characteristics according to UL/NEMA/CSA

Contactor types	AC operated	SH05K..A
	DC operated	SH05K..D
Standards	UL/CSA 60947-1, UL/CSA 60947-5-1	
Maximum operational voltage	600 V AC	
Pilot duty	A600, Q600	

SH05K 4-pole mini contactor relays

Technical data

General technical data

Contactor relay types	AC operated	SH05K..A
	DC operated	SH05K..D
Rated insulation voltage Ui		750 V
acc. to IEC/EN 60947-5-1		600 V
acc. to UL/CSA 60947-5-1		600 V
Rated impulse withstand voltage Uimp		6 kV
Electromagnetic compatibility		
Ambient air temperature close to contactor relay	Operation in free air	-40 ... +55 °C
	Storage	-55 ... +80 °C
Climatic withstand		Acc. to IEC / EN 60947-1 Annex. Q
Maximum operating altitude (without derating)		3000 m
Mechanical durability		107 operating cycles
Resistance to shock		Half-sine
acc. to IEC/EN 60068-2-27		25 g / 11ms
acc. to IEC/EN 60947-1 Annex. Q		Category E
Resistance to vibrations		Sinusoidal
acc. to IEC/EN 60068-2-6		5 g / 3 ... 150 Hz
acc. to IEC/EN 60947-1 Annex. Q		Category E

Magnet system characteristics for SH05K..A mini contactor relays

Contactor relay types	AC operated	SH05K..A
Coil operating limits	AC supply	0.85 ... 1.1 x Uc
acc. to IEC/EN 60947-5-1		
AC control voltage		
Rated control circuit voltage Uc		See ordering tables
Coil consumption	Average pull-in value (50 Hz)	26 VA
	Average pull-in value (60 Hz)	32 VA
	Average holding value (50 Hz)	5.3 VA
	Average holding value (60 Hz)	4.5 VA
Drop-out voltage in % of Uc min		20 ... 65 %

Magnet system characteristics for SK05K..D mini contactor relays

Contactor relay types	DC operated	SH05K..D
Coil operating limits acc. to IEC/EN 60947-5-1	DC supply	0.85 ... 1.1 x Uc
DC control voltage		
Rated control circuit voltage Uc		See ordering tables
Coil consumption	Average pull-in value	4 W
	Average holding value	4 W
Drop-out voltage in % of Uc min		10 ... 75 %

SH05K 4-pole mini contactor relays

Technical data

Mounting characteristics and conditions for use

Contactor types	AC operated	SH05K..A
	DC operated	SH05K..D
Mounting positions		
Mounting distances	The contactors can be assembled side by side.	
Fixing	On rail acc. to IEC/EN 60715	35 x 7.5 mm or 35 x 15 mm
	By screws (not supplied)	4 screws at the 4 angles - M4

Connection characteristics

Contactor types	AC operated	SH05K..A
	DC operated	SH05K..D
Terminals	<p>Screw terminals with cable clamp</p>	
Connection capacity		
Auxiliary terminals		
Rigid: solid	1 x	0.75 ... 4 mm ²
Rigid: solid	2 x	0.75 ... 2.5 mm ²
Flexible without ferrule	1 or 2 x	0.75 ... 2.5 mm ²
Flexible with ferrule	1 x	0.75 ... 2.5 mm ²
Flexible with ferrule (insulated or not)	2 x	0.75 ... 1.5 mm ²
Connection capacity acc. to UL/CSA	1 or 2 x	AWG 12 ... 18
Stripping length	9 mm	
Tightening torques	0.8 ... 1.0 Nm / 7 lb.in	
Coil terminals		
Rigid: solid	1 or 2 x	0.75 ... 2.5 mm ²
Flexible without ferrule	1 or 2 x	0.75 ... 2.5 mm ²
Flexible with ferrule	1 x	0.75 ... 2.5 mm ²
Flexible with ferrule (insulated or not)	2 x	0.75 ... 1.5 mm ²
Connection capacity acc. to UL/CSA	1 or 2 x	AWG 12 ... 18
Stripping length	9 mm	
Tightening torques	0.8 Nm / 7 lb.in	
Degree of protection acc. to IEC/EN 60947-1 and IEC/EN 60529	IP20	
All terminals	(screws of unused terminals must be tightened)	
Screw terminals	M3	
All terminals	M3	
Screwdriver type	Flat Ø 5.5 mm / Pozidriv 2	

Accessories

Technical data






Auxiliary contacts for front mounting and side mounting according to IEC

Types	HS05K-F, HS05K-L	
Standards	IEC/EN 60947-1, IEC/EN 60947-5-1	
Rated operational voltage Ue max	690 V AC	
Rated frequency (without derating)	DC or 50 / 60 Hz	
Conventional free-air thermal current Ith $\theta \leq 55 \text{ }^\circ\text{C}$	10 A	
Ie / Rated operational current AC-15	240 V	6 A
	400 V	4 A
	500 V	2.5 A
	690 V	1.5 A
Short-circuit protection device - fuse type gG	10 A	
Minimum switching capacity with failure rate acc. to IEC/EN 60947-5-4	17 V / 5 mA	
Maximum electrical switching frequency	AC-15	360 cycles/h
	DC-13	360 cycles/h

Auxiliary contacts for front mounting and side mounting according to UL/CSA

Types	HS05K-F, HS05K-L	
Standards	UL/CSA 60947-1, UL/CSA 60947-5-1	
Max. operational voltage	600 V AC	
Pilot duty	A600, Q600	

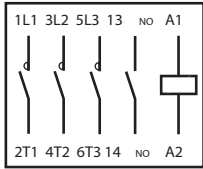
Connection characteristics

Terminals	 <p>Screw terminals with cable clamp</p>	
Connection capacity		
Auxiliary terminals		
 Rigid: solid	1 or 2 x	0.75 ... 2.5 mm ²
 Flexible without ferrule	1 or 2 x	0.75 ... 2.5 mm ²
 Flexible with ferrule	1 x	0.75 ... 2.5 mm ²
 (insulated or not)	2 x	0.75 ... 1.5 mm ²
Connection capacity acc. to UL/CSA	1 or 2 x	AWG 12 ... 18
Stripping length	9 mm	
Tightening torques	0.8 Nm / 7 lb.in	
Degree of protection acc. to IEC/EN 60947-1 and IEC/EN 60529		
Auxiliary terminals	IP20	
Screw terminals	(screws of unused terminals must be tightened)	
All terminals	M3.5	
Screwdriver type	Flat \varnothing 5.5 mm / Pozidriv 2	

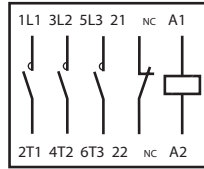
LS..K mini contactors, SH..K 4-pole mini contactor relays and auxiliary contact blocks

Terminal marking and positioning

LS..K 3-pole mini contactors

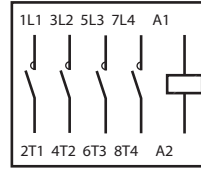


LS05K-30-10-..
LS06K-30-10-..



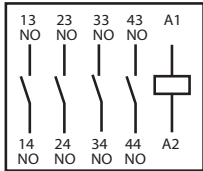
LS05K-30-01-..
LS06K-30-01-..

LS..K 4-pole mini contactors

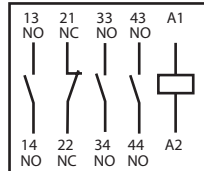


LS05K-40-00-..

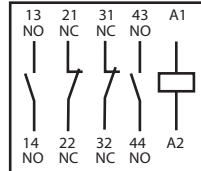
SH..K 4-pole mini contactor relays



SH05K-40-..



SH05K-31-..

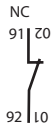


SH05K-22-..

HS05K-L.. 1-pole side-mounted auxiliary contact blocks

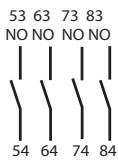


HS05K-L-10

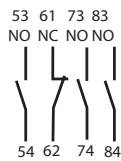


HS05K-L-01

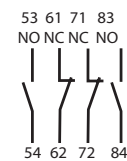
HS05K-F 4-pole front-mounted auxiliary contact blocks



HS05K-F-40

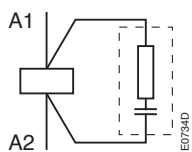


HS05K-F-31

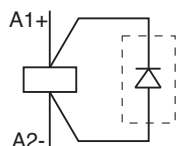


HS05K-F-22

EB05K Surge suppressors



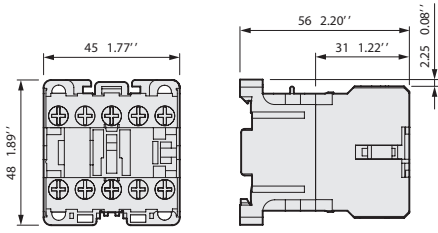
R/C
EB05K-1
EB05K-2



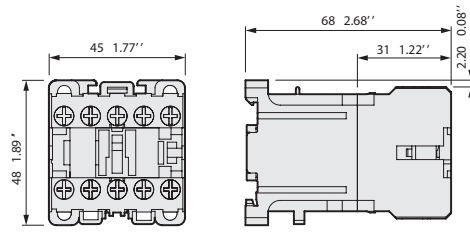
Diode
EB05K-3

LS..K mini contactors and SH..K mini contactor relays

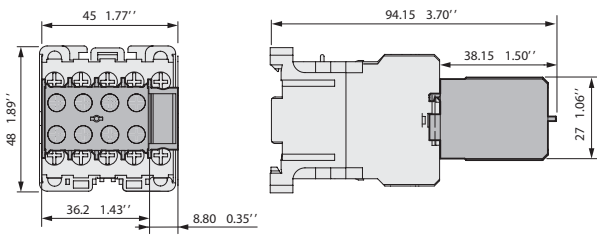
Dimensions



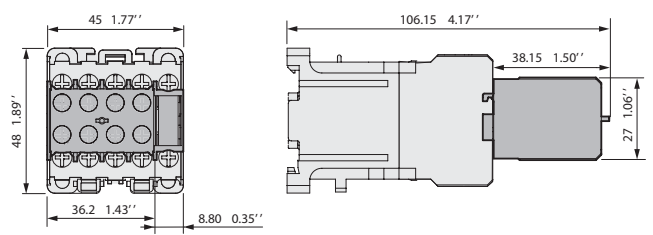
LS05K..A, LS06K..A, SH05K..A



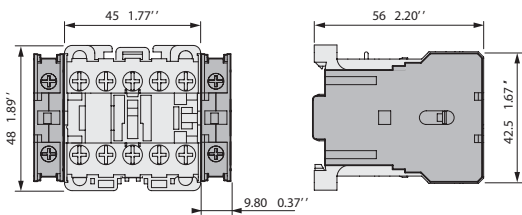
LS05K..D, SH05K..D



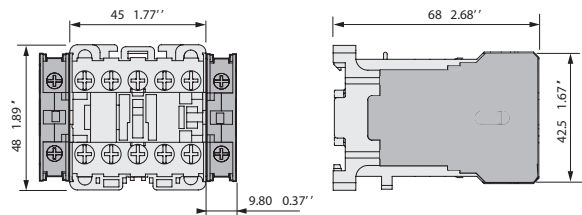
LS05K..A, LS06K..A, SH05K..A
+ HS05K-F 4-pole auxiliary contact block



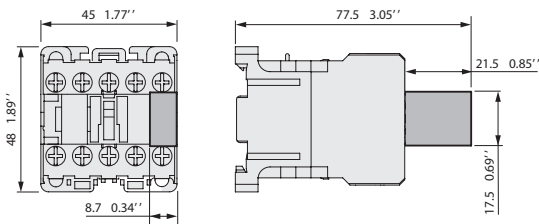
LS05K..D, SH05K..D
+ HS05K-F 4-pole auxiliary contact block



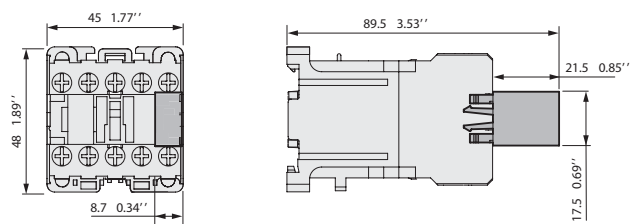
LS05K..A, LS06K..A, SH05K..A
+ HS05K-L 1-pole auxiliary contact block



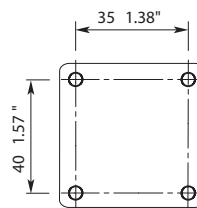
LS05K..D, SH05K..D
+ HS05K-L 1-pole auxiliary contact block



LS05K..A, LS06K..A, SH05K..A
+ EB05K surge suppressor



LS05K..D, SH05K..D
+ EB05K surge suppressor



Drilling plan