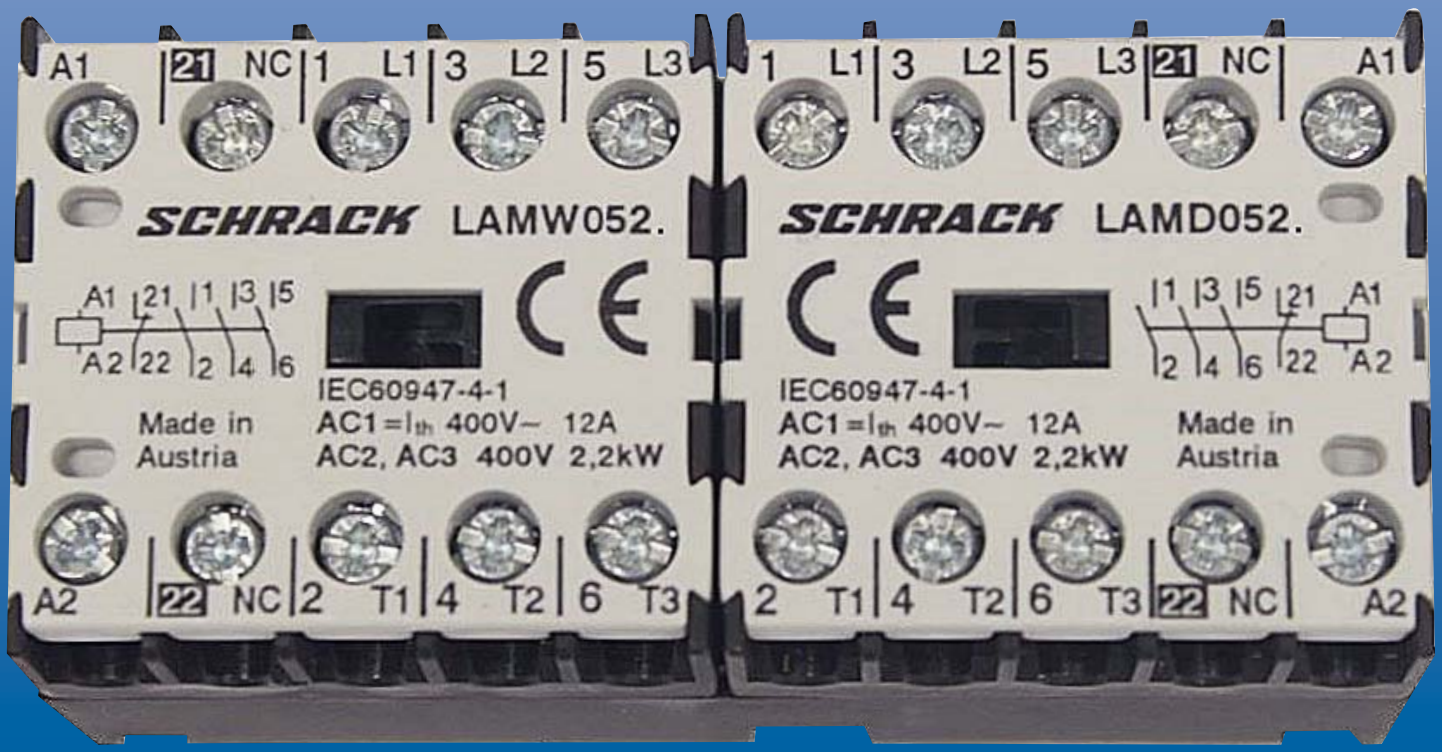
Micro-Contactors LAM



- The contactor, as small as a relay – the smallest in the world
- > 3mm contact clearance acc. IEC60335-1 for safety-related applications
- Reversing contactors with mechanical interlock

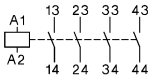
ONLINE SHOPPING!

In the office and on the go with the Live Phone App

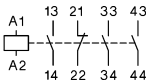
MICRO AUXILIARY CONTACTORS 4-POLE, AC OPERATED

Ratings		Contacts[1]			Distinc. number acc. to	Type	Coil voltage **0** 24V 50Hz/60Hz **3** 220-240V 50Hz/60Hz	Pack pcs.	Weight kg/pc.
AC15	AC15	Rated current							
230V	400V	I_{th}							
A	A	A	S	Ö	EN50011				
4-pole, with screw terminals									
3	1,5	5	4	-	40E	**LAMH037.**		10	0,07
3	1,5	5	3	1	31E	**LAMH038.**		10	0,07
3	1,5	5	2	2	22E	**LAMH039.**		10	0,07

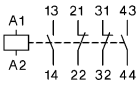
LAMH037.



LAMH038.



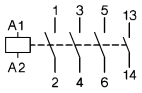
LAMH039.



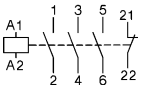
MICRO CONTACTORS 3-POLE, AC OPERATED

Power ratings	Rated current	Aux. contacts[1] built-in		Type	Coil voltage **0** 24V 50Hz/60Hz **3** 220-240V 50Hz/60Hz	Pack pcs.	Weight kg/pc.
AC2, AC3	AC1						
380V							
400V							
415V	440V						
kW	A	S	Ö				
3-pole, with screw terminals							
2,2	12	1	-	**LAMD051.**		10	0,07
2,2	12	-	1	**LAMD052.**		10	0,07
4-pole, with screw terminals							
2,2	12	-	-	**LAMD054.**		10	0,07

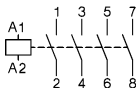
LAMD051.



LAMD052.



LAMD054.

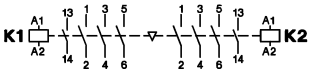


[1] Contacts suitable for electronic circuits, according to EN947-5-4 for rated voltage 24V DC (test ratings 17V DC, 5mA). Positively guided contacts.

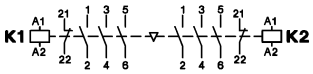
MICRO REVERSING CONTACTORS, MECHANICAL INTERLOCKED, AC OPERATED

Power ratings AC2, AC3 380V 400V 415V kW	Rated current AC1 690V A	Aux. contacts[1] built-in S	Ö	Type	Coil voltage 0 24V 50Hz/60Hz 3 220-240V 50Hz/60Hz	Pack pcs.	Weight kg/pc.
3-pole, with screw terminals							
2,2	12	1	-	**LAMW051.**		1	0,14
2,2	12	-	1	**LAMW052.**		1	0,14

LAMW051.



LAMW052.



SNAP-ON ADAPTOR

For Type	Specification	Type	Pack pcs.	Weight kg/pc.
LAMD, LAMW[2], LAMH	Adaptor for snap-on mounting to DIN-rail TS35	**LAMZTS35**	10	0,0061

DIN-RAIL TS15, 1000mm

For Type	Specification	Type	Pack pcs.	Weight kg/pc.
LAMD, LAMW, LAMH	DIN-rail TS15 length 1000mm	**LAMZTS15**	1	0,02

[1] Contacts suitable for electronic circuits, according to EN947-5-4 for rated voltage 24V DC (test ratings 17V DC, 5mA). Positively guided contacts.

[2] Two adaptors are neccessary for one reversing unit LAMW....

TECHNICAL DATA

Data according to IEC 60947-4-1, VDE 0660, EN 60947-4-1

Main Contacts		Type	LAMD, LAMW
Rated insulation voltage U_i		V~	480 [1]
Making capacity I_{eff}	at U_e = 440V~	A	65
Breaking capacity I_{eff} cos ϕ = 0,65	400V~	A	50
Utilization category AC1 Switching of resistive load			
Rated operational current I_e (=I_{th}) at 40°C, open		**A**	**12**
Rated operational power of three-phase resistive loads 50-60Hz, cos ϕ = 1	230V	kW	4,7
	240V	kW	4,8
	400V	kW	8,3
	415V	kW	8,6
	480V	kW	9,5
Rated operational current I_e (=I_{th}) at 60°C, enclosed		A	8
Rated operational power of three-phase resistive loads 50-60Hz, cos ϕ = 1	230V	kW	3,1
	240V	kW	3,3
	400V	kW	5,5
	415V	kW	5,7
	480V	kW	6,5
Minimum cross-section of conductor at load with I_e (=I_{th})		mm²	1,5
Utilization category AC2 and AC3 Switching of three-phase motors			
Rated operational current I_e open and enclosed	220V	A	6,2
	230V	A	6,2
	240V	A	5,6
	380-400V	**A**	**5**
	415-440V	A	5
	480V	A	5
Rated operational power of three-phase motors 50-60Hz	220-240V	kW	1,5
	380-440V	**kW**	**2,2**
	480V	kW	2,2
Utilization category AC4 Switching of squirrel cage motors, inching			
Rated operational current I_e open and enclosed	220V	A	4,9
	230V	A	4,9
	240V	A	4,1
	380-400V	**A**	**5**
	415-440V	A	5
	480V	A	5
Rated operational power of three-phase motors 50-60Hz	220-240V	kW	1,1
	380-440V	**kW**	**2,2**
	480V	kW	2,2

[1] Suitable for: earthed-neutral systems, overvoltage category I to III, pollution degree 3 (standard-industry): U_{imp} = 4kV. Data for other conditions on request.

TECHNICAL DATA – CONTINUED

Data according to IEC 60947-4-1, VDE 0660, EN 60947-4-1

Main Contacts		Type	LAMD, LAMW
Utilization category DC1			
Switching of resistive load	1 pole 24V	A	12
Time constant L/R ≤1ms	60V	A	12
Rated operational current I_e	110V	A	-
	220V	A	-
	3 pole in series 24V	A	12
	60V	A	12
	110V	A	12
	220V	A	-
Utilization category DC3 and DC5			
Schalten von Nebenschluß-	1 pole 24V	A	12
und Reihenschlußmotoren	60V	A	-
Time constant L/R ≤15ms	110V	A	-
Rated operational current I_e	220V	A	-
	3 pole in series 24V	A	12
	60V	A	12
	110V	A	12
	220V	A	-
Maximum ambient temperature			
Operation	open	°C	-40 to +60 (+90) [1]
	enclosed	°C	-40 to +40
with therminal overload relay	open	°C	-25 to +60
	enclosed	°C	-25 to +40
Storage		°C	-50 to +90
Short circuit protection			
for contactors without thermal overload relay			
Coordination-type "1" according to IEC 947-4-1			
Contact welding without hazard of persons			
max. fuse size	gL (gG)	A	20
Coordination-type "2" according to IEC 947-4-1			
Light contact welding accepted			
max. fuse size	gL (gG)	A	-
Contact welding not accepted			
max. fuse size	gL (gG)	A	-
For contactors with thermal overload relay the device with the smaller admissible backup fuse (contactor or thermal overload relay) determines the fuse size.			
Cable cross-sections			
for contactors			
Main connector	solid or stranded	mm²	0,5 - 1,5
	flexible	mm²	0,5 - 1,5
	flexible with multicore cable end	mm²	0,5 - 1,5
Cables per clamp			2
	solid or stranded	AWG	20 - 14
Frequency of operation z	without load	1/h	10000
Contactors without	AC3, I_e	1/h	600
therminal oberload relay	AC4, I_e	1/h	120
	DC3, I_e	1/h	600
Mechanical life AC operated	S x	10^6	3
Short time current	10s--current	A	50
Power loss per pole	at I_e /AC3 400V	W	0,2
Resistance to shock according to IEC 68-2-27			
Shock time 20ms sine-wave			
AC operated	S	g	2,5
	Ö	g	2,5

[1] With reduced control voltage range 0,9 up to 1,0 x U_s and with reduced rated current I_e /AC1according to I_e /AC3.

TECHNICAL DATA – CONTINUED

Data according to IEC 60947-5-1, VDE 0660, EN 60947-5-1

Auxiliary Contacts		Type	LAMD, LAMW, LAMH
Rated insulation voltage	U_i	V~	440 [1]
Thermal rated current I_{th} to 440V			
Ambient temperature	40°C	A	5
	60°C	A	3
Power loss per pole	at I_{th}	W	0,25
Utilization category AC15			
Rated operational current I_e	220-240V	A	3
	380-415V	A	1,5
	440V	A	1
Utilization category DC13			
Rated operational current I_e	60V	A	0,5
			-
			-
Maximum ambient temperature			
Operation	open	°C	-40 to +60 (+90) [2]
	enclosed	°C	-40 to +40
Storage		°C	-40 to +90
Short circuit protection			
short-circuit current 1kA, contact welding not accepted			
max. fuse size	gL (gG)	A	10
For contactors with thermal overload relay the device with the smaller admissible control fuse (contactor or thermal overload relay) determines the fuse size.			
Power consumption of coils			
AC operated	inrush	VA	9
	sealed	VA	4
		W	1,8
Operation rage of coils			
in multiples of control voltage U_s			0,85 - 1,1
Switching time at control voltage U_s ±10% [3] [4]			
AC operated	make time	ms	13 - 18
	release time	ms	5 - 10
	arc duration	ms	10 - 15
DC operated	make time	ms	-
	release time	ms	-
	arc duration	ms	-
Cablecross-section			
all connectors	solid	mm^2	0,5 - 1,5
	flexible	mm^2	0,5 - 1,5
	flexible with multicore cable end	mm^2	0,5 - 1,5
Clamps per pole			2
	solid or stranded	AWG	20 - 14

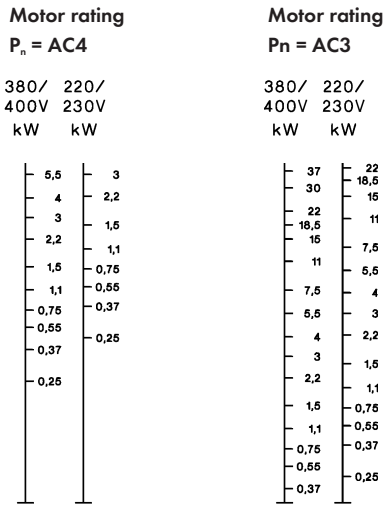
[1] Suitable for: earthed-neutral systems, overvoltage category I to III, pollution degree 3 (standard-industry): U_{imp} =4kV. Data for other conditions on request.

[2] With reduced control voltage range 0,9 up to 1,0 x U_s and with reduced thermal rated current I_{th} to I_e /AC15.

[3] Summary switching time = release time + arc duration.

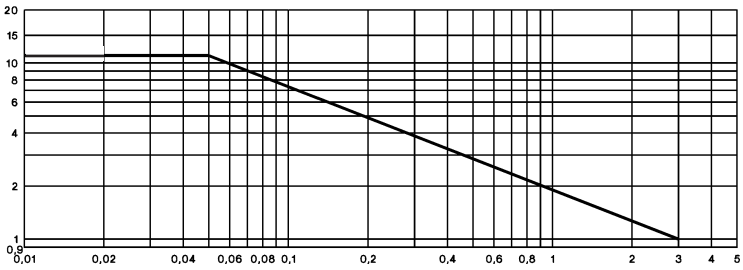
[4] Release time of NC make time of NO increase when suppressor units for voltage peak protection are used (Varistor, RC-units, diode units).

MOTOR RATING AND BREAKING CURRENT



Breaking current
I_a (= I_e = AC1)
A

LAMD, LAMW

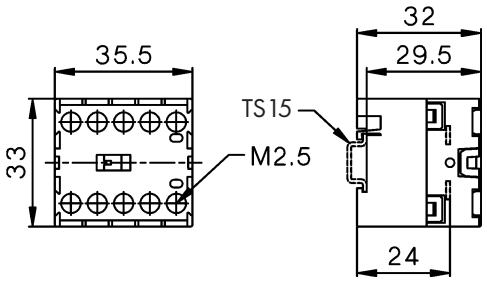


Millions of operations

DIMENSIONS

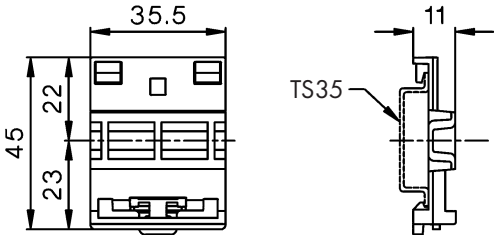
AC operated
with screw terminals

LAMD
LAMH



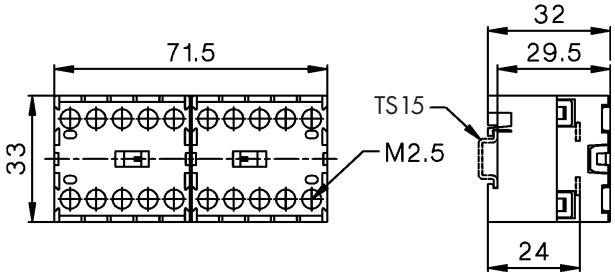
Snap-on adaptor

LAMZTS35

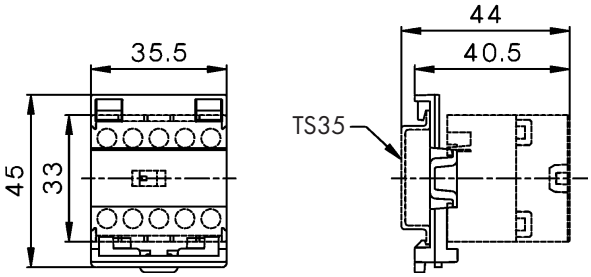


Reversing contactors
with screw terminals

LAMW



LAMD, LAMH with Snap-on adaptor



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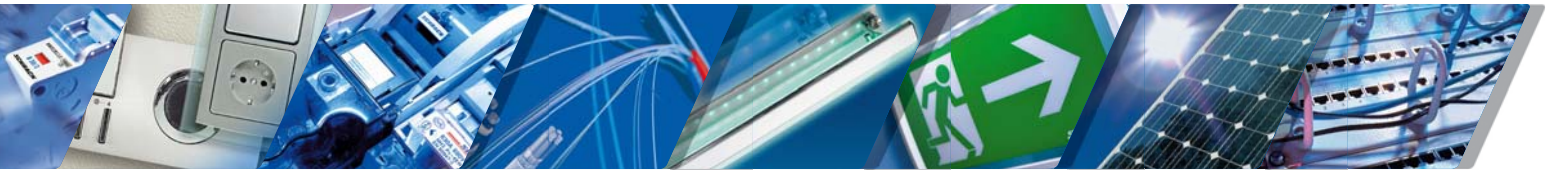
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