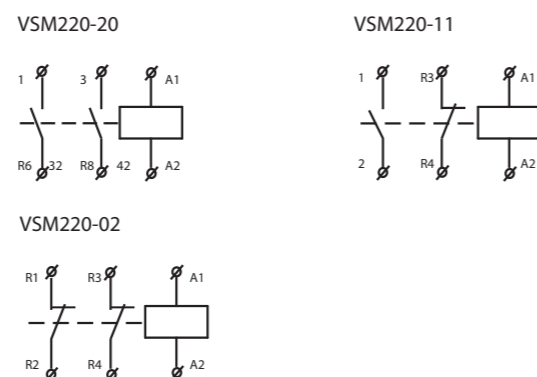


EAN code see page 148

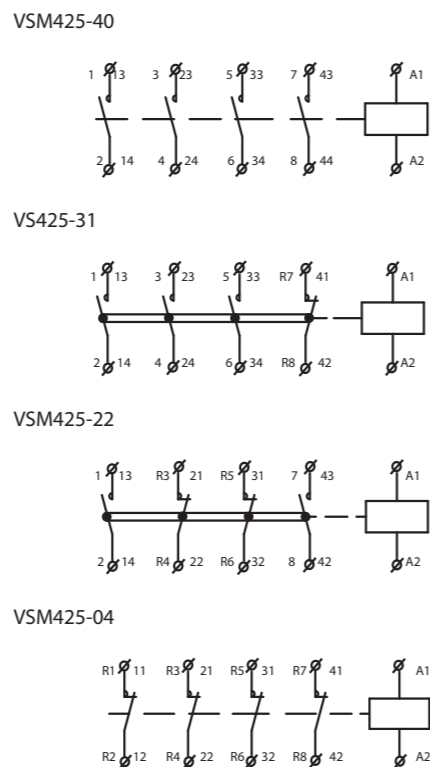
Technical parameters	VSM220	VSM425
Rated insulation voltage (Ui):	230 V	440 V
Rated thermo-current I _m (in AC):	20 A	25 A
Switched operation		
AC-1 for 400 V:	x	16 kW, 3 phase
AC-1 for 230 V:	4 kW, 1 phase	9 kW, 3 phase
AC-3 for 400 V:	x	4 kW, 3 phase
AC-3 for 230 V:	1.3 kW only NO, 1 phase	2.2 kW, 3 phase
AC-7a for 400 V:	x	16 kW, 3 phase
AC-7a for 230 V:	4 kW, 1 phase	9 kW, 3 phase
AC-7b for 400 V:	x	4 kW, 3 phase
AC-7b for 230 V:	1.3 kW only NO, 1 phase	2.2 kW, 3 phase
AC-15 for 400 V:	4 A	4 A
AC-15 for 230 V:	6 A	6 A
DC1 U _e = 24 V:	20 A	25 A
DC1 U _e = 110 V:	6 A	6 A
DC1 U _e = 220 V:	0.6 A	0.6 A
Loadability of modular contactors see page 147		
The max. number of switching for max. load:	600 switch/hr.	600 switch/hr.
Electrical life in 230 / 400 V		
AC-1- resistive load:	0.2x10 ⁶	0.2x10 ⁶
AC-3-power load:	0.3x10 ⁶	0.5x10 ⁶
AC-5a - high-intensity discharge lamp:	0.1x10 ⁶ by 30 μF	0.1x10 ⁶ by 36 μF
AC-5b - incandescent lamps:	0.1 10 ⁶ by 1.5 kW	0.1x10 ⁶ by 1.5 kW
AC-7a - resistive household devices:	0.2x10 ⁶	0.2x10 ⁶
AC-7b - inductive household devices:	0.3x10 ⁶	0.5x10 ⁶
Minimal load:	≥ 17 V, ≥ 50 mA	≥ 17 V, ≥ 50 mA
Short circuit protection with the fuse char. aM:	20 A	25 A
Coordination Type according EN 60 947-4-1:	2	2
Electrical strength:	4 kV	4 kV
Contacts - max. cable size		
Solid conductor:	AWG 7 (10 mm ²)	AWG 7 (10 mm ²)
Stranded conductor:	6 mm ²	6 mm ²
Maximal torque:	1.2 Nm	1.2 Nm
Coil - max. cable size		
Solid conductor:	AWG 10 (2.5 mm ²)	AWG 10 (2.5 mm ²)
Stranded conductor:	2.5 mm ²	2.5 mm ²
Max. torque:	0.6 Nm	0.6 Nm
Operating		
Coil control voltage:	AC 12 V, 24 V, 110 V, 230 V	AC 12 V, 24 V, 42 V, 230 V
Coil permanent supply +/- 10 %:	2.8 VA/1.2 W	5.5 VA/1.6 W
Coil gear supply +/- 10 %:	12 VA /10 W	33 VA/25 W
Mounting side-by-side:	max. 2 contactors*	max. 2 contactors*
Operational temperature:	-5 ... +55 °C (23.. 131 °F)	
Storing temperature:	-30... +80 °C (-22.. 176 °F)	
Weight:	140 g (4.9 oz.)	260 g (9.17 oz.)
Dimensions:	17.5 x 85 x 60 mm (0.7" x 3.35" x 2.4")	35 x 85 x 60 mm (1.4" x 3.35" x 2.4")
Standards:	IEC 60947-4-1, IEC 60947-5-1, IEC 61095, EN 60947-4-1, EN 61095, VDE 0660	

- Special version of installation contactors with not only basic functions but also with manual control.
- For switching accumulative appliances for heating and service water warming.
- Description of individual positions of manual control.
 - AUTO: common function as with installation contactors without manual control.
 - 1: shifting from AUTO to 1: operational contacts are closed and back contacts are open until there is another impulse to a contactor coil.
 - 0: contacts are open (operational contact) or closed (stand-by contact) regardless voltage.
- Optical indicator: ON-OFF.
- It is produced in configuration of making and breaking contacts: VSM220: 20, 11, 02 VSM425: 40, 31, 22, 04
- It is possible to connect auxiliary contacts VSK to contactors VSM220, VSM425.

Connection VSM220 VSM220 - only AC supply voltage



Connection VSM425 VSM425 - only AC supply voltage



Auxiliary contacts VSK-11 and VSK-20

Datas of auxiliary contacts for VSK-11 and VSK-20 see page 145.

* Note: In case several contactors are mounted close to each other, you need to use a installation spacer between every other contactor.

TYPE OF LIGHT	OPERATION (W)	I (A)	Number of lights on one contactor's contact							
			VS120	VS220	VS420	VS425	VS440	VS463	VSM220	VSM425
Incandescent lamps	60	0.26	33	33	33	33	65	85	33	33
	100	0.43	20	20	20	20	40	50	20	20
	200	0.87	10	10	10	10	20	25	10	10
	500	2.17	3	3	3	3	8	10	3	3
Flourescent lamps	1000	4.35	1	1	1	1	4	5	1	1
	18	0.37	22	22	22	24	90	140	22	24
	24	0.35	22	22	22	24	90	140	22	24
	36	0.43	17	17	17	20	65	95	17	20
Flourescent lamps lead-lag circuit	58	0.67	14	14	14	17	45	70	14	17
	18	0.11	2 x 30	2 x 30	2 x 30	2 x 40	2 x 100	2 x 150	2 x 30	2 x 40
	24	0.14	2 x 24	2 x 24	2 x 24	2 x 31	2 x 78	2 x 118	2 x 24	2 x 31
	36	0.22	2 x 17	2 x 17	2 x 17	2 x 24	2 x 65	2 x 95	2 x 17	2 x 24
Flourescent lamps parallel correction	58	0.35	2 x 10	2 x 10	2 x 10	2 x 14	2 x 40	2 x 60	2 x 10	2 x 14
	18	0.12	7	7	7	8	48	73	7	8
	24	0.15	7	7	7	8	48	73	7	8
	36	0.2	7	7	7	8	48	73	7	8
Flourescent lamps with electronic ballast units (EVG)	58	0.32	4	4	4	5	31	47	4	5
	1 x 18	0.09	25	25	25	35	100	140	25	35
	1 x 36	0.16	15	15	15	20	52	75	15	20
	1 x 58	0.25	14	14	14	19	50	72	14	19
High-pressure mercury-vapour lamps uncorrected	2 x 18	0.17	12	12	12	17	50	70	12	17
	2 x 36	0.32	7	7	7	10	26	38	7	10
	2 x 58	0.49	7	7	7	9	25	36	7	9
	50	0.61	14	14	14	18	38	55	14	18
	80	0.8	10	10	10	13	29	42	10	13
	125	1.15	7	7	7	9	20	29	7	9
High-pressure mercury-vapour lamps parallel correction	250	2.15	4	4	4	5	10	15	4	5
	400	3.25	2	2	2	3	7	10	2	3
	700	5.4	1	1	1	2	4	6	1	2
	1000	7.5	1	1	1	1	3	4	1	1
	50	0.28	4	4	4	5	31	47	4	5
	80	0.41	4	4	4	5	27	41	4	5
Halogen metal vapour lamps uncorrected	125	0.65	3	3	3	4	22	33	3	4
	250	1.22	1	1	1	2	12	18	1	2
	400	1.95	1	1	1	1	9	13	1	1
	700	3.45	-	-	-	-	5	7	-	-
	1000	4.8	-	-	-	-	4	5	-	-
	35	0.53	18	18	18	22	43	60	18	22
Halogen metal-vapour lamps parallel correction	70	1	10	10	10	12	23	32	10	12
	150	1.8	5	5	5	7	12	18	5	7
	250	3	3	3	3	4	7	10	3	4
	400	3.5	3	3	3	3	6	9	3	3
	1000	9.5	1	1	1	1	2	3	1	1
	2000	16.5	-	-	-	-	1	1	-	-
High-pressure sodium-vapour lamps uncorrected	35	0.25	5	5	5	6	36	50	5	6
	70	0.45	2	2	2	3	18	25	2	3
	150	0.75	1	1	1	1	11	15	1	1
	250	1.5	-	-	-	1	6	9	-	1
	400	2.5	-	-	-	1	6	8	-	1
	1000	5.8	-	-	-	-	2	3	-	-
High-pressure sodium-vapour lamps parallel correction	2000	11.5	-	-	-	-	1	2	-	-
	150	1.8	5	5	5	6	17	22	5	6
	250	3	3	3	3	4	10	13	3	4
	400	4.7	2	2	2	2	6	8	2	2
Low-pressure sodium-vapour lamps uncorrected	1000	10.3	-	-	-	1	3	3	-	1
	150	0.83	1	1	1	1	11	16	1	1
	250	1.5	-	-	-	1	6	10	-	1
	400	2.4	-	-	-	-	4	6	-	-
Low-pressure sodium-vapour lamps parallel correction	1000	6.3	-	-	-	-	2	3	-	-
	18	0.35	22	22	22	27	71	90	22	27
	35	1.5	7	7	7	9	23	30	7	9
	55	1.5	7	7	7	9	23	30	7	9
	90	2.4	4	4	4	5	14	19	4	5
	135	3.5	3	3	3	4	10	13	3	4
Low-pressure sodium-vapour lamps parallel correction	180	3.3	3	3	3	4	10	13	3	4
	18	0.35	6	6	6	7	44	66	6	7
	35	0.31	1	1	1	1	11	16	1	1
	55	0.42	1	1	1	1	11	16	1	1
	90	0.63	1	1	1	1	8	12	1	1
	135	0.94	-	-	-	-	4	7	-	-
180	1.16	-	-	-	-	5	8	-	-	

EAN codes for VS

VS120	VS220	VS420
VS120-01 24V AC/DC: 8595188129848	VS220-02 24V AC/DC: 8595188129381	VS420-31 24V AC: 8595188129442
VS120-01 230V AC/DC: 8595188123105	VS220-02 110V AC/DC: 8595188138628	VS420-31 110V AC: 8595188129466
	VS220-02 230V AC/DC: 8595188121422	VS420-31 230V AC: 8595188121446
VS120-10 24V AC/DC: 8595188129367	VS220-11 24V AC/DC: 8595188129374	VS420-40 12V AC: 8595188129459
VS120-10 230V AC/DC: 8595188123112	VS220-11 48V AC/DC: 8595188129398	VS420-40 24V AC: 8595188129435
	VS220-11 110V AC/DC: 8595188130790	VS420-40 48V AC: 8595188138581
	VS220-11 230V AC/DC: 8595188121408	VS420-40 230V AC: 8595188121439
	VS220-20 24V AC/DC: 8595188125253	
	VS220-20 48V AC/DC: 8595188129411	
	VS220-20 110V AC/DC: 8595188129428	
	VS220-20 230V AC/DC: 8595188121392	
VS425	VS440	VS463
VS425-04 24V AC/DC: 8595188129527	VS440-04 24V AC/DC: 8595188129299	VS463-22 24V AC/DC: 8595188129794
VS425-04 48V AC/DC: 8595188129558	VS440-04 110V AC/DC: 8595188129305	VS463-22 230V AC/DC: 8595188121514
VS425-04 110V AC/DC: 8595188160032	VS440-04 230V AC/DC: 8595188121484	VS463-31 24V AC/DC: 8595188129596
VS425-04 230V AC/DC: 8595188121682	VS440-22 24V AC/DC: 8595188129787	VS463-31 110V AC/DC: 8595188137904
VS425-13 230V AC/DC: 8595188129473	VS440-22 230V AC/DC: 8595188121477	VS463-31 230V AC/DC: 8595188121507
VS425-22 24V AC/DC: 8595188129541	VS440-31 24V AC/DC: 8595188129572	VS463-40 24V AC/DC: 8595188129589
VS425-22 230V AC/DC: 8595188121675	VS440-31 230V AC/DC: 8595188121460	VS463-40-48V AC/DC: 8595188160612
VS425-31 24V AC/DC: 8595188129497	VS440-40 24V AC/DC: 8595188129565	VS463-40 110V AC/DC: 8595188140652
VS425-31 48V AC/DC: 8595188137898	VS440-40 110V AC/DC: 8595188138567	VS463-40 230V AC/DC: 8595188121491
VS425-31 110V AC/DC: 8595188129534	VS440-40 230V AC/DC: 8595188121453	
VS425-31 230V AC/DC: 8595188121668		
VS425-40 24V AC/DC: 8595188129480		
VS425-40 48V AC/DC: 8595188136174		
VS425-40 230V AC/DC: 8595188121651		

EAN codes for VSM

VSM220	VSM425
VSM220-02 24V AC: 8595188129817	VSM425-04 24V AC: 8595188129831
VSM220-02 230V AC: 8595188128100	VSM425-04 230V AC: 8595188128155
VSM220-11 24V AC: 8595188129800	VSM425-22 24V AC: 8595188129336
VSM220-11 230V AC: 8595188128094	VSM425-22 230V AC: 8595188128148
VSM220-20 12V AC: 8595188138369	VSM425-31 24V AC: 8595188129824
VSM220-20 24V AC: 8595188128117	VSM425-31 230V AC: 8595188128131
VSM220-20 110V AC: 8595188160223	VSM425-40 12V AC: 8595188160049
VSM220-20 230V AC: 8595188128087	VSM425-40 24V AC: 8595188128162
	VSM425-40 230V AC: 8595188128124

EAN codes for VSK

VSK-11:	8595188121613
VSK-20:	8595188121606