



VS116K



VS116B

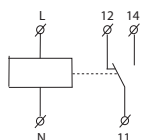
Type	Current rating	Number of contacts	Design	Supply terminals
VS116K	16 A	1	DIN (1M)	A1 - A2 230 V AC/ A1 - A3 24 V AC/DC
VS116U	16 A	1	DIN (1M)	A1 - A2 12- 240 V AC/DC
VS116B/230	16 A	1	BOX (MINI)	L-N 230 V AC
VS308K	8 A	3	DIN (1M)	A1 - A2 230 V AC/ A1 - A3 24 V AC/DC
VS308U	8 A	3	DIN (1M)	A1 - A2 12 - 240 V AC/DC
VS316/24	16 A	3	DIN (1M)	A1 - A2 24 V AC/DC
VS316/230	16 A	3	DIN (1M)	A1 - A2 230 V AC

- Power relay used for switching larger load output, strengthen or „multiplying“ contacts of the existing device.
- Relays VS316/24, VS316/230 enable connection to a 3-phase circuit.
- In the design 1-MODULE , DIN rail mounting, output status indicated by high intensity LED with choice of LED color (red, green, yellow, blue or white LED*).
- VS116/B230 MINI, mounting in installation box or ceilings, enabling switching of lights, motors for blinds or awnings.
- For VS116/B230 status of output indicated by LED on front panel of device.

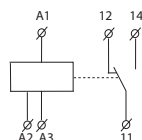
Technical parameters	VS116B/230	VS116K	VS116U	VS308K	VS308U	VS316/24	VS316/230
Supply terminals:	L - N		A1 - A2				
Voltage range:	AC 230 V / 50-60 Hz	AC 230 V / 50-60 Hz	AC/DC 12-240 V / 50-60 Hz	AC 230 V / 50-60 Hz	AC/DC 12-240 V / 50-60 Hz	AC/DC 24 V / 50-60 Hz	AC 230 V / 50-60 Hz
Burden (max.):	AC 7.5 VA / 1 W	AC 7.5 VA / 1 W	AC 0.7 - 3 VA/ DC 0.5 - 1.7 W	AC 10.3 VA / 1.1 W	AC 0.7 - 3 VA/ DC 0.5 - 1.7 W	1.6 VA / 1.2 W	2.5 VA
Supply terminals:	x	A1 - A3	x	A1 - A3	x		
Voltage range:	x	AC/DC 24 V (50-60 Hz)	x	AC/DC 24 V (50-60 Hz)	x		
Burden:	x	AC 1 VA/ DC 1W	x	AC 1 VA/ DC 1W	x		
Supply voltage tolerance:	-15%; +10%						
Max. dissipated power (Un + terminals):	4 W			3 W		8 W	6 W
Output							
Number of contacts:	1 x changeover/ SPDT (AgSnO ₂)			3 x changeover/TPDT (AgNi / Silver Alloy)		3 x changeover/ TPDT (AgSnO ₂)	
Current rating:	16 A/ AC1			8 A/ AC1		16A/ AC1	
Breaking capacity:	4000VA/ AC1, 384W/ DC			2000VA/ AC1, 192W/ DC		4000VA/ AC1, 384W/ DC	
Inrush current:	30 A/ <3s			10 A/ <3s		30 A/ <3s	
Switching voltage:	250 V AC1/ 24 V DC						
Output indication:	red LED	high intensity of LED					
Mechanical life:	3x10 ⁷					1x10 ⁷	
Electrical life (AC1):	0.7x10 ⁵					1x10 ⁵	
Time between switching:	min. 2s					20 ms	50 ms
Other information							
Operating temperature:	-20.. +55 °C						
Storage temperature:	-30.. +70 °C						
Electrical strength:	4 kV (supply-output)						
Operating position:	any						
Mounting:	free at connecting wire	DIN rail EN 60715					
Protection degree:	IP30	IP40 from front panel / IP20 terminals					
Overvoltage category:	III.						
Pollution degree:	2						
Max. cable size (mm ²):	2x 0.75 mm ² (AWG 18), 3x 2.5 mm ² (AWG 10)	max. 1x 2.5 or 2x 1.5 max. 1x 2.5 (AWG 12)					
Dimensions:	49 x 49 x 21 mm (2" x 2" x 0.8")		90 x 17.6 x 64 mm (3.5" x 0.7" x 2.5")				
Weight:	48 g (1.7 oz.)	56 g (2 oz.)	59 g (2.1 oz.)	78 g (2.75 oz.)	80 g (2.8 oz.)	90 g (3.17 oz.)	93 g (3.3 oz.)
Standards:	EN 61810-1, EN 61010-1						

Symbol

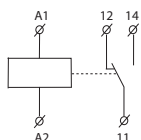
VS116B/230



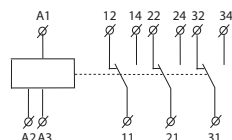
VS116K



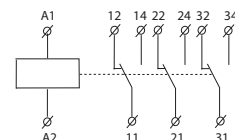
VS116U



VS308K

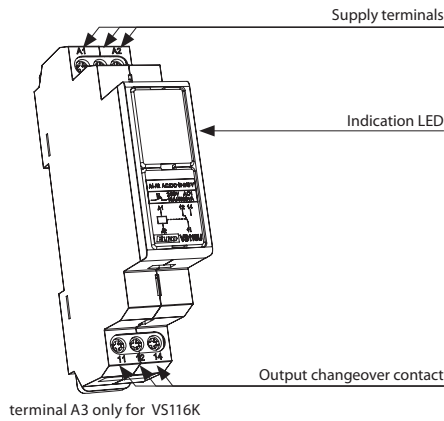


VS308U, VS316/24, VS316/230

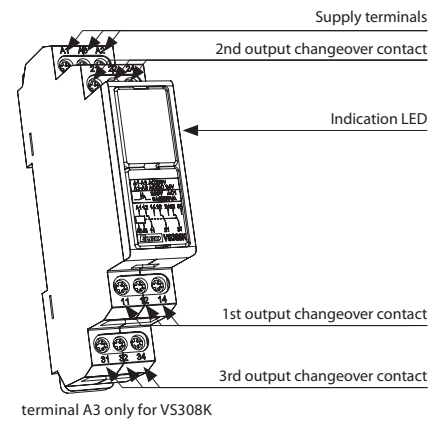


Description

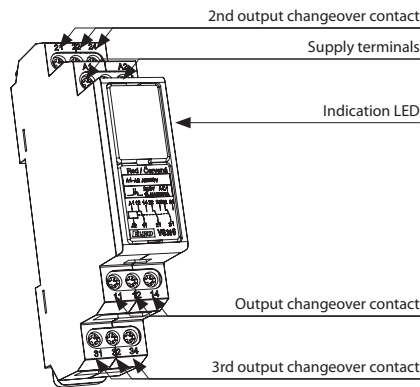
VS116K, VS116U



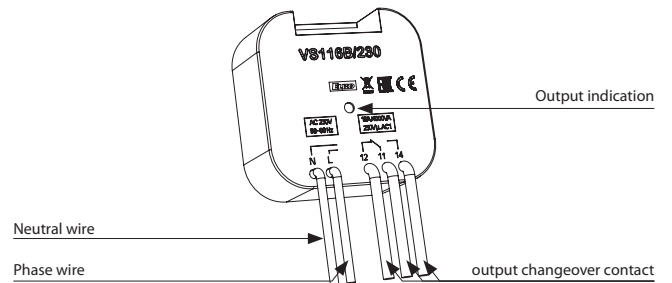
VS308K, VS308U



VS316/24, VS316/230



VS116B/230



EAN codes

VS116B/230 8595188147545

VS116K /red	8595188122597	VS308K /red	8595188122696	VS316 /24 red	8595188135771
VS116K /green	8595188122610	VS308K /green	8595188122719	VS316 /24 green	8595188136105
VS116K /yellow	8595188122580	VS308K /yellow	8595188122689	VS316 /24 yellow	8595188136129
VS116K /white	8595188122573	VS308K /white	8595188122672	VS316 /24 white	8595188136099
VS116K /blue	8595188122603	VS308K /blue	8595188122702	VS316 /24 blue	8595188136112

VS116U /red	8595188124607	VS308U /red	8595188130103	VS316 /230 red	8595188135559
VS116U /green	8595188136433	VS308U /green	8595188136440	VS316 /230 green	8595188136075
VS116U /yellow	8595188138499	VS308U /yellow	8595188138529	VS316 /230 yellow	8595188136082
VS116U /white	8595188138482	VS308U /white	8595188138512	VS316 /230 white	8595188136051
VS116U /blue	8595188138475	VS308U /blue	8595188138505	VS316 /230 blue	8595188136068

Notes

Max. time of changeover of contact is 10ms.

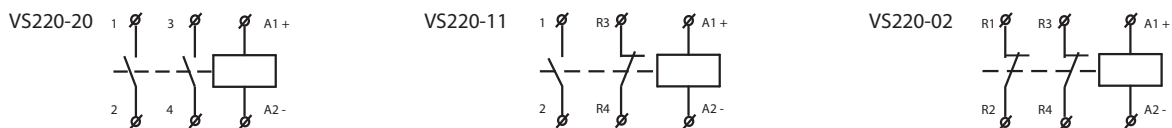
VS316/24 or VS316/230 enables switching of different phases or 3 phase voltage.

* possibility to choose blue, white and yellow color of LED for power relays line VS in case of minimal order quantity 100 pcs.

VS120



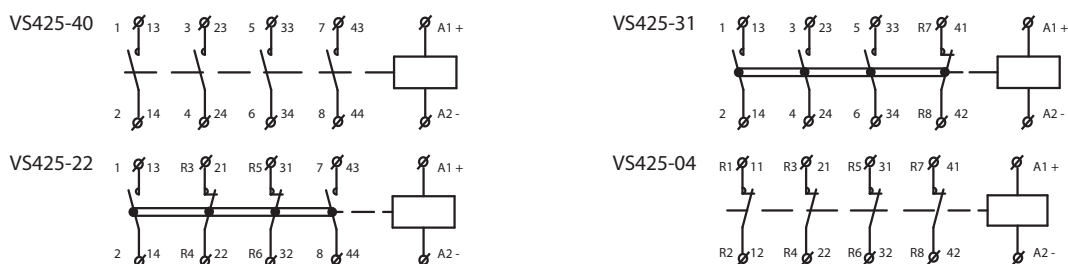
VS220



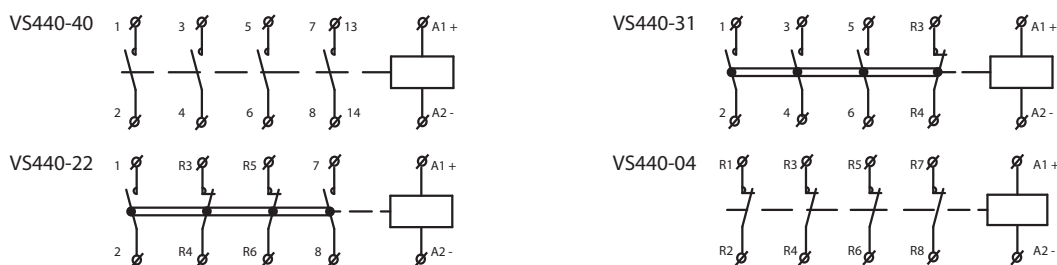
VS420



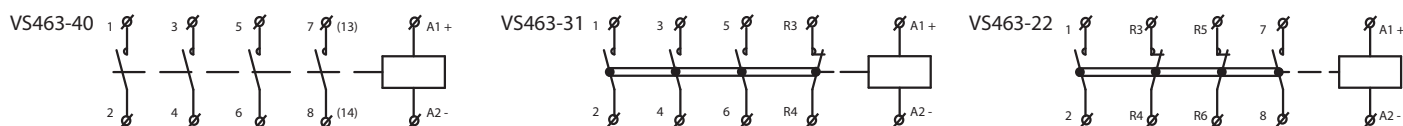
VS425



VS440



VS463



Auxiliary contacts for VS425, VS440, VS463 and VSM220, VSM425

Datas of auxiliary contacts for VSK-11 and VSK-20

Ambient temperature:	-5 °C to +55 °C (23 °F to 131 °F)
Rated insulation voltage (Ui):	500 V
Electrical strength:	4 kV
Rated current 230 V (AC 15):	6 A
Rated current 400 V (AC 15):	4 A
Max. switching frequency:	6 A
The max. number of switching for max. load:	600 sep./hod.
Minimal load:	≥ 12 V, ≥ 10 mA
Short circuit protection with the fuse char. aM:	6 A
Solid/ Stranded conductor (max):	2.5 mm ² / 2.5 mm ² (AWG 10)
Maximal torque:	0.8 Nm
Weight:	10 g (0.35 oz.)
Dimensions:	10 x 85 x 60 mm (0.4"x 3.35"x 2.4")

Connection of auxiliary contact VSK-11 and VSK-20

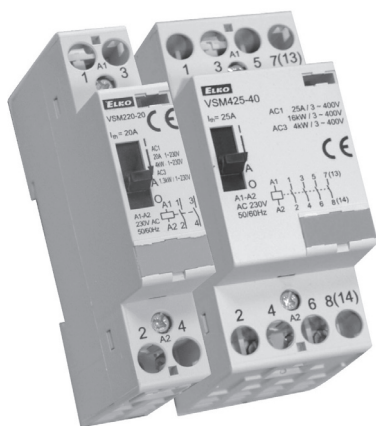
EAN code
see page 154

VSK-11



VSK-20





EAN code see page 154

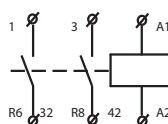
Technical parameters	VSM220	VSM425
Rated insulation voltage (Ui):	230 V	440 V
Rated thermo-current I _{th} (in AC):	20 A	25 A
Switched operation		
AC-1 for 400 V:	x	16 kW, 3 phase
AC-1 for 230 V:	4 kW, 1 phase	9 kW, 3 phase
AC-3 for 400 V:	x	4 kW, 3 phase
AC-3 for 230 V:	1.3 kW only NO, 1 phase	2.2 kW, 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 153		
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 strenght:	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 of 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.

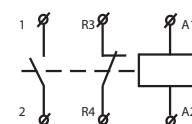
Connection VSM220

VSM220 - only AC supply voltage

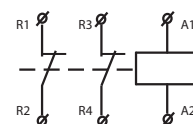
VSM220-20



VSM220-11



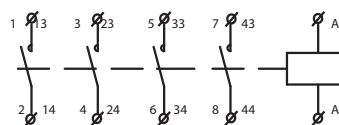
VSM220-02



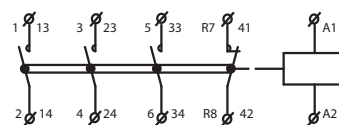
Connection VSM425

VSM425 - only AC supply voltage

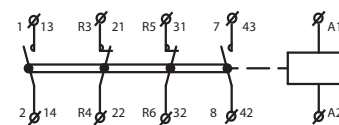
VSM425-40



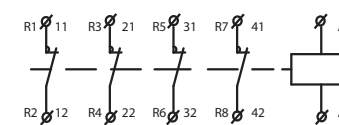
VS425-31



VSM425-22



VSM425-04



Auxiliary contacts VSK-11 and VSK-20

Datas of auxiliary contacts for VSK-11 and VSK-20 see page 151.

* 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
	1000	4.35	1	1	1	1	4	5	1	1
Flourescent lamps	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
	58	0.67	14	14	14	17	45	70	14	17
Flourescent lamps lead-lag circuit	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
	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
Flourescent lamps parallel correction	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
	58	0.32	4	4	4	5	31	47	4	5
Flourescent lamps with electronic ballast units (EVG)	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
	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
High-pressure mercury-vapour lamps uncorrected	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
	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
High-pressure mercury-vapour lamps parallel correction	50	0.28	4	4	4	5	31	47	4	5
	80	0.41	4	4	4	5	27	41	4	5
	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	-	-
Halogen metal vapour lamps uncorrected	35	0.53	18	18	18	22	43	60	18	22
	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	-	-
Halogen metal-vapour lamps parallel correction	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	-	-
	2000	11.5	-	-	-	-	1	2	-	-
High-pressure sodium-vapour lamps uncorrected	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
	1000	10.3	-	-	-	1	3	3	-	1
High-pressure sodium-vapour lamps parallel correction	150	0.83	1	1	1	1	11	16	1	1
	250	1.5	-	-	-	1	6	10	-	1
	400	2.4	-	-	-	-	4	6	-	-
	1000	6.3	-	-	-	-	2	3	-	-
Low-pressure sodium-vapour lamps uncorrected	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
	180	3.3	3	3	3	4	10	13	3	4
Low-pressure sodium-vapour lamps parallel correction	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	
VS425-04 230V AC/DC: 8595188121682		VS463-31 24V AC/DC: 8595188129596
	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
	VS440-31 24V AC/DC: 8595188129572	VS463-40 24V AC/DC: 8595188129589
VS425-22 24V AC/DC: 8595188129541	VS440-31 230V AC/DC: 8595188121460	VS463-40-48V AC/DC: 8595188160612
VS425-22 230V AC/DC: 8595188121675		VS463-40 110V AC/DC: 8595188140652
	VS440-40 24V AC/DC: 8595188129565	VS463-40 230V AC/DC: 8595188121491
VS425-31 24V AC/DC: 8595188129497	VS440-40 110V AC/DC: 8595188138567	
VS425-31 48V AC/DC: 8595188137898	VS440-40 230V AC/DC: 8595188121453	
VS425-31 110V AC/DC: 8595188129534		
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	
VSM220-20 230V AC: 8595188128087	VSM425-40 12V AC: 8595188160049
	VSM425-40 24V AC: 8595188128162
	VSM425-40 230V AC: 8595188128124

EAN codes for VSK

VSK-11:	8595188121613
VSK-20:	8595188121606