

The Mini-Vario and Vario motor disconnect switch catalog numbers can be identified as described in Table 8.1.



VCFN12GE



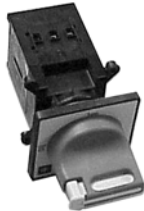
VN12



VN12/KCC1YZ



VBDN12



VCDN12

Table 8.1: Identification System

		V	CF	N12	GE
Model (V-Vario, K-Operator)					
Operator Type/ Accessory Designation					
CD	Single hole Red & Yellow	BD	Single hole Black & Gray		
CF	Four hole Red & Yellow	BF	Four hole Black and Gray		
CCD	Single hole Red & Yellow w/extension shaft	VE	Switch with Red handle installed on unit (one padlock only)		
CCF	Four hole Red & Yellow w/ extension shaft	VD	Switch with Black handle installed on unit (no padlock provision)		
Blank	No operator or accessory	Z	Accessory, power pole, neutral or ground		
Switch Type▲					
Blank		1	Vario 20/32 A		
N12	Mini-Vario 10/12 A	2	Vario 25/40 A		
N20	Mini-Vario 16/20 A	3	Vario 45/63 A		
02	Vario 10/12 A	4	Vario 63/80 A		
01	Vario 16/20 A	5	Vario 100/125 A		
0	Vario 20/25 A	6	Vario 115/175 A		
Enclosure Type (if applicable)					
Blank	No Enclosure	G30, A30, W30	Type 1/12/4/4X Metallic (Class 9421)		
GE	Mini-Vario IP55 Non-Metallic	GU	Vario IP55 Non-Metallic		

▲ Switches/contacts are dual rated (UL/IEC).

Mini-Vario

Table 8.2: Assembled Switches—IP65

Current Rating	Complete Switches for Door Mounting (3-Padlock)				Complete Switches for Rear Mounting, Includes Extension Shaft (3-Padlock)	
	Red/Yellow (Single Hole)		Black/Gray (Single Hole)		Red/Yellow (Single Hole)	
UL/IEC	Catalog Number	\$ Price	Catalog Number	\$ Price	Catalog Number	\$ Price
10/12 A	VCDN12	90.00	VBDN12	90.00	VCCDN12	134.00
16/20 A	VCDN20	135.00	VBDN20	135.00	VCCDN20	161.00

Table 8.3: Enclosed Switches

Complete Switches Mounted in IP55 Non-metallic Enclosure	
Red/Yellow Mounted In Sealable Enclosure, Non-UL Listed	
Catalog Number	\$ Price
VCFN12GE	179.00
VCFN20GE	189.00

Table 8.5: Operators and Accessories

Catalog Number	Description	\$ Price
KCC1YZ	45 x 45 mm Red & Yellow operator	39.20
KCD1PZ	60 x 60 mm Red & Yellow operator	39.20
KAD1PZ	60 x 60 mm Black & Gray operator	39.20
VZN17	300–340 mm shaft extension	22.50
VZN30	400–430 mm shaft extension	27.00
KZ32	Door interlocking plate for 45 or 60 mm operator	20.30
KZ83	Door mounting plate for 45 or 60 mm operator	20.30

Table 8.4: Component Parts

Catalog Number	Description	\$ Price
VN12▲	10/12 A switch only	52.00
VN20▲	16/20 A switch only	63.00
VZN12▲	Add on power pole for 10/12 A switch	26.00
VZN20▲	Add on power pole for 16/20 A switch	31.50
VZN11	Neutral Pole with early make, late break for VN12 or VN20 switch	29.30
VZN14	Grounding module for VN12 or VN20	29.30
VZN05	N.O. late make auxiliary contact■	27.00
VZN06	N.C. early break auxiliary contact■	27.00
VZN26	Single-pole shroud for auxiliary contacts	5.90
VZN08	Three-pole shroud for VN12 or VN20	7.70

▲ Switches/contacts are dual rated (UL/IEC).
■ Auxiliary contacts are dual rated (UL/IEC 10/12 A).



VCCDN20

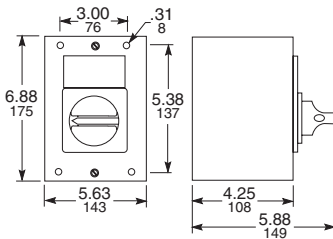
Vario



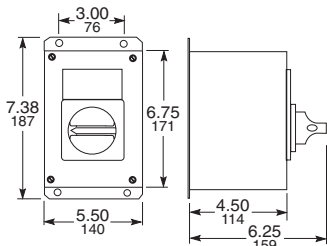
Non-Metallic Enclosure

Metallic Enclosure

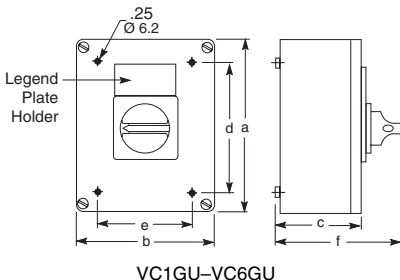
Metallic Enclosed Switch Dimensions



NEMA Type 1 V1G30, V2G30



NEMA Type 4, 4X, 12
V1W30, V2W30, V1A30, V2A30



VC1GU-VC6GU

Table 8.6: NEMA Type 1 and 12 Assembled Switches for Door Mounting

Operator Style	Complete Switches (Switch and Handle) for Door Mounting (3-padlock)							
	Red/Yellow (Four Hole)		Black/Gray (Four Hole)		Red/Yellow (Single Hole)		Black/Gray (Single Hole)	
	Catalog No.	\$ Price	Catalog No.	\$ Price	Catalog No.	\$ Price	Catalog No.	\$ Price
10/12 A	VCF02	125.00	VBFO2	125.00	VCD02	134.00	VBD02	134.00
16/20 A	VCF01	147.00	VBFO1	147.00	VCD01	161.00	VBD01	161.00
20/25 A	VCF0	174.00	VBFO	174.00	VCD0	206.00	VBD0	206.00
20/32 A	VCF1	185.00	VBFO1	185.00	VCD1	219.00	VBD1	219.00
25/40 A	VCF2	237.00	VBFO2	237.00	VCD2	252.00	VBD2	252.00
45/63 A	VCF3	282.00	VBFO3	282.00	—	—	—	—
63/80 A	VCF4	329.00	VBFO4	329.00	—	—	—	—
100/125 A	VCF5	401.00	VBFO5	401.00	—	—	—	—
115/75 A	VCF6	612.00	VBFO6	612.00	—	—	—	—

Table 8.7: NEMA Type 1 and 12 Assembled Switches for Rear Mounting

Operator Style	Complete Switches for Rear Mounting with Extension Shaft (3-Padlock)▲				Switches with Handles Installed on Unit, DIN Rail Mount Only			
	Red/Yellow (Four Hole)		Red/Yellow (Single Hole)		Red/Yellow (1-Padlock)		Black/Gray (No-Padlock)	
	Catalog No.	\$ Price	Catalog No.	\$ Price	Catalog No.	\$ Price	Catalog No.	\$ Price
10/12 A	VCCF02	162.00	VCCD02	162.00	—	—	—	—
16/20 A	VCCF01	185.00	VCCD01	185.00	—	—	—	—
20/25 A	VCCF0	197.00	VCCD0	197.00	VVE0	149.00	VVD0	149.00
20/32 A	VCCF1	206.00	VCCD1	206.00	VVE1	156.00	VVD1	156.00
25/40 A	VCCF2	252.00	VCCD2	252.00	VVE2	180.00	VVD2	180.00
45/63 A	VCCF3	320.00	—	—	VVE3	212.00	VVD3	212.00
63/80 A	VCCF4	356.00	—	—	VVE4	300.00	VVD4	300.00
100/125 A	VCCF5	464.00	—	—	—	—	—	—
115/75 A	VCCF6	606.00	—	—	—	—	—	—

▲ Complete switch includes handle operator, shaft, door interlock plate, and line terminal shroud.

The Vario Motor Disconnect Switch is also offered as an enclosed switch, which is made of corrosion resistant material. The 3-pole version makes the Vario switch ideal for manual motor control applications. They are compact, easy to wire and connect, and come undrilled to allow variable cable entry positions. Note: VCGU enclosures are UL approved.

Table 8.8: Non-Metallic Enclosed Switches ▲ ■

Ampere Size UL/IEC	IP55-PVC 3-Pole, NEMA Type 1 & 12	
	Catalog No.	\$ Price
20/32	VC1GU	239.00
25/40	VC2GU	287.00
45/63	VC3GU	345.00
63/80	VC4GU	381.00
100/125	VC5GU	548.00
115/175	VC6GU	845.00

▲ Assembled, includes switches mounted in enclosure with handle.

■ Refer to Table 8.11 and Table 8.12 for horsepower ratings.

The V1 and V2 come in metallic enclosures (NEMA Type 1, 4, 4X, and 12). The NEMA Type 1 is supplied with conduit knockouts top and bottom. A VZ7 auxiliary contact can be factory installed in these metallic enclosures by adding Form X11 to the catalog number. A VZ20 auxiliary contact can be factory installed in these enclosures by adding Form X20 to the catalog number. Price Adder \$42.00

Table 8.9: Metallic Enclosed Switches ▲ ■

Ampere Size UL/IEC	Horsepower Ratings			NEMA Type 1		NEMA Type 12		NEMA Type 4/4X■	
	240 V	480 V	600 V	Catalog No.	\$ Price	Catalog No.	\$ Price	Catalog No.	\$ Price
20/32	5	10	10	9421V1G30	333.00	9421V1A30	548.00	9421V1W30	783.00
25/40	5	10	15	9421V2G30	381.00	9421V2A30	594.00	9421V2W30	831.00

▲ Assembled, includes: switches mounted in enclosure with handle.

■ For indoor use only. The NEMA 4/4X enclosure is made of #304 stainless steel with 3/4 in. T&B stainless steel hubs on the top and bottom.

Table 8.10: Non-Metallic Enclosed Switch Dimensions▲

Catalog No. ▲	No. of Poles	Dimensions											
		a		b		c		d		e		f	
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
VC1GU-VC2GU	3	6.7	170	4.1	105	3.2	82	4.8	122	2.1	53	5.0	128
VC3GU-VC4GU	3	6.7	170	5.3	135	3.3	85	5.1	130	3.7	95	5.2	131
VC5GU-VC6GU	3	11.0	280	8.6	220	5.0	126	7.9	201	7.5	190	8.6	203

▲ UL Rated, NEMA Type 1, 12, IP55.

Table 8.11: Vario Manual Motor Control Switches, IEC

Ampere Size IEC	kW Rating				3-Pole Switch Body	
	230 V	240 V	400 V	415 V	500 V	690 V
12	3	3	4	4	5.5	7.5
20	4	4	5.5	5.5	7.5	11
25	5.5	5.5	7.5	7.5	11	15
32	5.5	5.5	11	11	11	15
40	7.5	7.5	15	15	18.5	15
63	15	15	22	22	30	22
80	18.5	18.5	30	30	37	30
125	22	22	37	37	45	37
175	30	30	45	45	55	45

Table 8.12: Vario Manual Motor Control Switches, UL

Ampere Size UL	Horsepower Rating			Shaft Size mm	3-Pole Switch Body Type
	240 V	480 V	600 V		
10	2	5	5	6	V02
16	3	7.5	7.5	6	V01
20	5	10	10	6	V0
20	5	10	10	6	V1
25	5	10	15	6	V2
45	10	20	30	8	V3
63	15	30	40	8	V4
100	25	50	50	8	V5
115	30	50	60	8	V6



Manual Motor Control Switch

Vario Manual Motor Control Switches

Vario switches act as enclosure disconnects when short circuit protection is provided upstream of the switch (if short circuit protection is not provided upstream, use GS1, LK3, Class 9422 Type T or D10 disconnect switches). Type V switches meet UL 508 requirements as manual motor controllers.

Table 8.13: Switch Body▲

Ampere Size UL/IEC	Shaft Size mm	3 Pole Switch Body	
		Type	\$ Price
10/12	6	V02	62.00
16/20	6	V01	74.00
20/25	6	V0	84.00
20/32	6	V1	95.00
25/40	6	V2	143.00
45/63	8	V3	179.00
63/80	8	V4	215.00
100/125	8	V5	287.00
115/175	8	V6	428.00

▲ Refer to Table 8.11 and Table 8.12 for horsepower ratings.

Table 8.14: NEMA Type 1 and 12 Handle Operators: V02-V2 (6 mm Shaft), V3-V6 (8 mm Shaft) ▲

Operator Type		Red/Yellow Single Hole 45 x 45 mm		Red/Yellow Four Hole 45 x 45 mm		Black/Gray Single Hole 45 x 45 mm		Black/Gray Four Hole 45 x 45 mm	
Switches	No. of Padlocks	Catalog No.	\$ Price	Catalog No.	\$ Price	Catalog No.	\$ Price	Catalog No.	\$ Price
V02-V2	0	KCC1LZ	39.20	KCE1LZ	39.20	KAC1BZ	39.20	KAE1BZ	39.20
V02-V2	1	KCC1YZ	39.20	KCE1YZ	39.20	—	—	—	—
Operator Type		Red/Yellow Single Hole 60 x 60 mm		Red/Yellow Four Hole 60 x 60 mm		Black/Gray Single Hole 60 x 60 mm		Black/Gray Four Hole 60 x 60 mm	
V02-V2	0	KDD1PZ	39.20	KDF1PZ	39.20	KBD1PZ	39.20	KBF1PZ	39.20
V3-V4	0	—	—	KDF2PZ	39.20	—	—	KBF2PZ	39.20
V02-V2	3	KCD1PZ	39.20	KCF1PZ	39.20	KAD1PZ	39.20	KAF1PZ	39.20
V3-V4	3	—	—	KCF2PZ	39.20	—	—	KAF2PZ	39.20
Operator Type		Red/Yellow Four Hole 90 x 90 mm		Black/Gray Four Hole 90 x 90 mm					
V5-V6	0	KDF3PZ	107.00	KBF3PZ	107.00				
V5-V6	3	KCF3PZ	107.00	KAF3PZ	107.00				

▲ When using these handles for replacements on the non-metallic enclosed switches (see page 8-3), the handle shaft supplied with the enclosure must be reused.



Single-Hole Operator

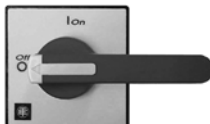


Four-Hole Operator (All except KDF3PZ and KBF3PZ)

Table 8.15: Low Profile Handle Operators▲

Operator Type		Red/Yellow Single Hole 60 x 60 mm		Red/Yellow Four Hole 60 x 60 mm		Black/Gray Single Hole 60 x 60		Black/Gray Four Hole 60 x 60 mm	
Switches	No. of Padlocks	Catalog No.	\$ Price	Catalog No.	\$ Price	Catalog No.	\$ Price	Catalog No.	\$ Price
V02-V2	3	KCD1YZ	39.20	KCF1YZ	39.20	KAD1XZ	39.20	KAF1XZ	39.20
V3-V4	3	—	—	KCF2YZ	39.20	—	—	KAF2XZ	39.20
Operator Type		Red/Yellow Four Hole 90 x 90 mm		Black/Gray Four Hole 90 x 90 mm					
V5-V6	3	KCG2YZ	72.00	KAG2XZ	72.00				

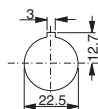
▲ When using these handles for replacements on the non-metallic enclosed switches (see page 8-3), the handle shaft supplied with the enclosure must be reused.



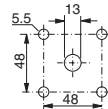
Four-Hole Operator KDF3PZ and KBF3PZ

Table 8.16: Gasket Kits

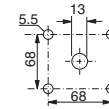
Catalog No.	Description	\$ Price
KZ65	45 x 45 mm Gasket for V02-V2 for 4-hole type handles (order in quantities of 5)—IP65	5.90
KZ66	60 x 60 mm Gasket for V02-V2 for 4-hole type handles (order in quantities of 5)	12.00
KZ62	60 x 60 mm Gasket for V3-V4 for 4-hole type handles (order in quantities of 5)	12.00
KZ67	90 x 90 mm Gasket for V5-V6 for 4-hole type handles (order in quantities of 5)—IP65	15.60



Single-Hole Mounting Dimensions



Four-Hole 60 x 60 Mounting Dimensions ▲

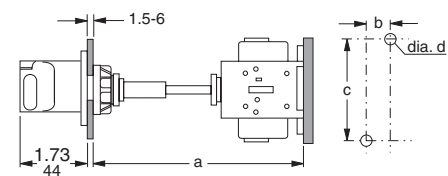


Four-Hole 90 x 90 Mounting Dimensions ▲

▲ The door interlock plate included with VCC Kits has the same drilling as the handle operators.

Table 8.17: Rear/Panel Mounting Switch Body Dimensions

Type	Shaft Extension	Dimensions							
		a		b		c		d	
		in.	mm	in.	mm	in.	mm	in.	mm
V02 to V2	VZ17	5.5-13.0	140-330	0.60	15	2.4	60	0.17	4.2
	VZ30	5.5-16.9	140-430						
V3 to V4	VZ18	5.5-12.6	140-320	0.79	20	2.4	60	0.20	5.2
	VZ31	5.5-16.5	140-420						
V5 to V6	VZ18	6.5-13.8	165-350	1.20	30	3.9	100	0.28	7.0
	VZ31	6.5-17.7	165-450						



Low-Profile Handle KCD1YZ

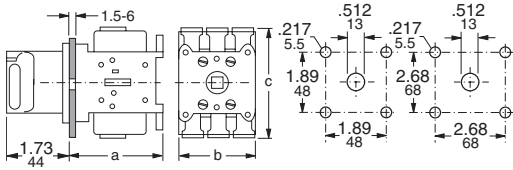


Table 8.18: Door Mounting Switch Body Dimensions

Switch Type	Dimensions						Weight Approx. lbs.
	a		b		c		
	in.	mm	in.	mm	in.	mm	
V02 to V2▲	2.83	72	2.17	55	2.91	74	0.44
V02 to V2	2.36	60	2.17	55	2.91	74	0.44
V3 to V4	2.56	65	2.36	60	3.27	83	1.10
V5 to V6	3.54	90	3.54	90	4.92	125	2.00

▲ Dimensions for single-hole mounting.

Table 8.19: Shaft Extension and Door Interlock

Switch Type	Maximum Panel Depth		Shaft Extension Kit	\$ Price	Door Interlock Plate	\$ Price	Door Mounting Plate	\$ Price
	in.	mm						
V02 to V2	13.0	330	VZ17	28.70	KZ32	20.30	KZ83	20.30
V3, V4	12.6	320	VZ18	35.60	KZ74	39.20	KZ81	39.20
V5, V6	13.8	351	VZ18	35.60	KZ74	39.20	KZ81	39.20
V02 to V2	16.9	429	VZ30	35.60	KZ32	20.30	KZ83	20.30
V3, V4	16.5	419	VZ31	42.80	KZ74	39.20	KZ81	39.20
V5, V6	17.7	450	VZ31	42.80	KZ74	39.20	KZ81	39.20

Table 8.20: Accessories

Switch Type	Line Side Terminal Shroud For Main Switch	\$ Price	Terminal Shroud for Add-on Power Pole	\$ Price	Terminal Shroud for Auxiliary Contact	\$ Price
V3, V4	VZ9	8.40	VZ27	5.90	VZ29	5.90
V5, V6	VZ10	12.00	VZ28	9.50	VZ29	5.90

Table 8.21: Add-On Contact Modules

Switch Type	Main Pole Module	Main Pole	Ampere Rating UL/IEC	\$ Price	Auxiliary Contacts		\$ Price
					1 N.O. & 1 N.C. ▲	2 N.O.	
V02	VZ02	VZ02	10/12	31.50	VZ7 ■	VZ20 ■	42.80
V01	VZ01	VZ01	16/20	32.90			
V0	VZ0	VZ0	20/25	34.20			
V1	VZ1	VZ1	20/32	35.60			
V2	VZ2	VZ2	25/40	55.00			
V3	VZ3	VZ3	45/63	66.00			
V4	VZ4	VZ4	63/80	82.00			
V5	—	—	—	—			
V6	—	—	—	—			

▲ Early Break, Late Make.
■ Auxiliary contacts are rated UL/IEC 10/12 A.

Table 8.22: Add-On Contact Modules

Switch Type	Neutral Modules Early Make/Late Break		Grounding Module		Auxiliary Contacts		
	Catalog No.	\$ Price	Catalog No.	\$ Price	Catalog No.	Description	\$ Price
V02-V2	VZ11	42.80	VZ14	42.80	VZ7	1 Late Make N.O. & 1 Early Break N.C.	42.80
V3-V4	VZ12	54.00	VZ15	54.00	VZ20	2 N.O. Contacts	42.80
V5-V6	VZ13	70.00	VZ16	70.00	—	—	—

Table 8.23: Labeling Accessories

Size	Nameplate Holder with Nameplate		Nameplate Holder Only		Nameplate Only		
	Catalog No.	\$ Price	Catalog No.	\$ Price	Use With	Catalog No.	\$ Price
45 x 45 mm	KZ13	4.80	KZ14	4.40	KZ14	KZ76	3.50
60 x 60 mm	KZ15	4.80	KZ16	4.40	KZ16	KZ77	3.50
90 x 90 mm	KZ103	7.80	KZ101	6.80	KZ1010	KZ100	3.50

Table 8.24: Shrouds

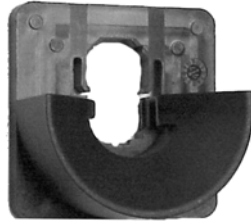
Switch Type	3-Pole Shroud		Single-Pole Shroud			
	Catalog No.	\$ Price	For Add-on Power Pole	Catalog No.	\$ Price	
V02-V2	VZ8	8.40	VZ02-VZ2, VZ11 & VZ14	VZ26	5.90	
V3-V4	VZ9	8.40	VZ23, VZ4, VZ12 & VZ15	VZ27	6.90	
V5-V6	VZ10	12.00	VZ13 & VZ16	VZ28	9.50	
—	—	—	For 2-Pole Aux. Contact	VZ29	5.90	

Table 8.25: Main Pole Module Dimensions

Switch Type	Dimensions						Weight Approx. lbs.
	a		b		c		
	in.	mm	in.	mm	in.	mm	
V02 to VZ2	0.63	16	2.9	74	1.38	35	0.10
VZ3 to VZ4	0.79	20	3.3	83	1.80	46	0.22



Shaft Extension Kit



Door Interlock Plate
KZ32



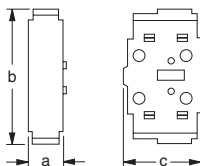
Add-On Contact Modules



Terminal Shroud for Main Switch
VZ8



Terminal Shroud for Auxiliary Contact
VZ29



Main Pole Module