

TeSys Control

Enclosed switch-disconnectors
and motor starters



Enclosed switch-disconnectors

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Enclosed Motor Starter Solution Guide

The software to help you to select intuitively your enclosed motor starter solution.

The Enclosed Motor Starter Solution Guide software is available for both PC and iPad.



TeSys Control

Enclosed switch-disconnectors

Introduction & selection table

Enclosed starters



Range of pre-assembled casings with handle and their rotary switch

They can be fixed on a wall, a panel, or on the chassis of a machine. For simple isolation and/or control of an electrical circuit. Red/yellow handle provides a clear indication of the device safety function ⁽¹⁾, while black handle is usually dedicated to ON/OFF control.

⁽¹⁾ Conforming to IEC 60947-3 and IEC 60204.

With numerous advantages to meet OEM's most common needs

- IEC or UL
- Multiple ratings and sizes
- IP65
- Additional poles
- Replaceable switch bodies

Selection in 2 steps

- 1 Identify your need (1 line one or more) in the **Selection criteria** area (example.: Load 5 kW– Emergency Stop - IEC)

Selection criteria							
Ithe (A)	Load power (kW)	Circuit isolation	Emergency stop	IP55	IP65	IEC	UL & CSA
10...140	4...45 (400 V)	●			●	●	
10...140	4...45 (400 V)	●	●		●	●	
10...32	4...15 (400 V)	●	●	●		●	
32...175 (Ithe IEC) 20...115 (Ith UL)	10...50 HP (480 V)	●	●		●	●	●

- 2 Choose your enclosed switch-disconnector in the **Solutions** area, note the radical of the product references

Solutions				See page
VBF				A1/3
	VCF			A1/3
		VCFN		A1/3
			VC•GUN	A1/4

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Enclosed switch-disconnectors / Ready-to-use

Product references



VCF0GE



VCF3GE



VCF5GEN



VCFN12GE



VBF0GE



VBF6GEN

Control + Disconnection (IEC)

Enclosed switch-disconnectors, ready to be fixed on workshop wall or directly on the machine and wired to main supply circuit and to load.

Functions / Range / Specificities:

- Direct Control: ON/OFF of 3-phase motor (black handle) or ON/Emergency Stop (red handle)
- 23 IEC motor starters, for 3P motors from 4 to 45 kW (10 to 140 A)
- 6 UL motor starters for 3P motors from 5 to 30 HP (240 V)
- Padlockable handle (1 to 3 padlocks – not included)
- Sealable, lockable cover when handle in position 1 (up to 63 A rating).

Included:

- rotary switch-disconnector body
- handle.

Enclosures for ON / Emergency Stop – IP65 – conforming IEC 60947-3, IEC 60204 ⁽¹⁾										
Operator		lthe	Power AC-23 at 400 V	Incorpor- ated switch body	Possible attach- ments ⁽²⁾	With ground plate	Reference ⁽³⁾	Weight	Overall dimensions ⁽⁴⁾ WxHxD	
Handle	Front plate Dim.									
	mm	A	kW					kg	mm	
Red, standard, padlockable with up to 3 padlocks (Ø 4 to Ø 8 shank)	Yellow 60 x 60	10	4	V02	2	No	VCF02GE	0.500	90x146x131	
						Yes	VCF02GEGP	0.560	90x146x131	
		16	5.5	V01	2	No	VCF01GE	0.500	90x146x131	
						Yes	VCF01GEGP	0.560	90x146x131	
		20	7.5	V0	2	No	VCF0GE	0.500	90x146x131	
						Yes	VCF0GEGP	0.560	90x146x131	
		25	11	V1	2	No	VCF1GE	0.500	90x146x131	
						Yes	VCF1GEGP	0.560	90x146x131	
		32	15	V2	2	No	VCF2GE	0.500	90x146x131	
		50	22	V3	3	No	VCF3GE	0.930	157x180x152	
Red, long, padlockable with up to 3 padlocks (Ø 4 to Ø 8 shanks)	Yellow 90 x 90	63	30	V4	3	No	VCF4GE	0.930	157x180x152	
		100	37	V5	1	No	VCF5GEN	2.190	241x291x190.5	
		140	45	V6	1	No	VCF6GEN	2.190	241x291x190.5	

Protection of sensitive equipment: ground plate available for VCF02GE...VCF1GE – see page A1/5.

Enclosures for ON / Emergency Stop – IP65 - conforming IEC 60947-3 ⁽¹⁾									
Operator		lthe	Power AC-23 at 400 V	Incorporated switch body	Possible attachments ⁽²⁾	Reference ⁽³⁾	Weight	Overall dimensions ⁽⁴⁾ WxHxD	
Handle	Front plate Dim.								
	mm	A	kW				kg	mm	
Red padlockable, either by 1 (Ø 8 shank) or by 3 padlocks (Ø 6 shank)	Yellow 60 x 60	10	4	VN12	2	VCFN12GE	0.422	82.5x131x106	
		16	5.5	VN20	2	VCFN20GE	0.422	82.5x131x106	
		20	7.5	V0	0	VCFN25GE	0.512	82.5x131x106	
		25	11	V1	0	VCFN32GE	0.512	82.5x131x106	
		32	15	V2	0	VCFN40GE	0.512	82.5x131x106	
Enlosures for ON/OFF F– IP65 – conforming IEC 60947-3, IEC 60204 ⁽¹⁾									
Black, standard, padlockable with up to 3 padlocks (Ø 4 to Ø 8 shank)	Black 60 x 60	10	4	V02	2	VBF02GE	0.500	90x146x131	
		16	5.5	V01	2	VBF01GE	0.500	90x146x131	
		20	7.5	V0	2	VBF0GE	0.500	90x146x131	
		25	11	V1	2	VBF1GE	0.500	90x146x131	
		32	15	V2	2	VBF2GE	0.500	90x146x131	
		50	22	V3	3	VBF3GE	0.930	157x180x152	
Black, long, padlockable with up to 3 padlocks (Ø 4 to Ø 8 shank)	Black 90 x 90	63	30	V4	3	VBF4GE	0.930	157x180x152	
		100	37	V5	1	VBF5GEN	2.190	241x291x190.5	
		140	45	V6	1	VBF6GEN	2.190	241x291x190.5	

⁽¹⁾ For characteristics of switch-disconnectors, please consult your Regional Sales Office.

⁽²⁾ Number of add-on modules that can be attached.

⁽³⁾ Enclosure not suitable in atmosphere contaminated with harsh substances (detergents, chlorine solvents, ketones, alcohol, aromatic hydrocarbons).

⁽⁴⁾ Dimensions of standard versions, comprising (if any) handle, pushbutton, indicator light.

Note: For VCF and VBF enclosures from 02GE to 2GE, only one auxiliary contact block VZ7 or VZ20 can be mounted.

Dimensions:
page A1/38

Schemes:
page A1/39



VC1GUN



VC3GUN



VC5GUN

Control + Disconnection (UL)

ON / Emergency Stop – IP65

Conforming UL508 CSA22.2 n° 14, IEC 60947-3, IEC 60204 ⁽¹⁾

Operator		Rating		Standard power ratings of UL motors			Incorporated switch body	Possible attachments	Reference ⁽²⁾	Weight	Overall dimensions ⁽¹⁾ WxHxD
Handle	Front plate Dim.	IEC (lth)	UL	600 V	240 V	480 V					
	mm	A	A	HP	HP	HP				kg	mm
Red, standard, padlockable with up to 3 padlocks (Ø 4 to Ø 8)	Yellow 60 x 60	32	20	5	10	10	V1	2	VC1GUN	0.500	121x164x132.1
		40	25	5	10	15	V2	2	VC2GUN	0.500	121x164x132.1
		63	45	10	20	30	V3	2	VC3GUN	0.930	164x193x132.1
		80	63	15	30	40	V4	2	VC4GUN	0.930	164x193x132.1
Red, long, padlockable with up to 3 padlocks (Ø 4 to Ø 8)	Yellow 90 x 90	125	100	25	50	50	V5	1	VC5GUN	2.190	241x291x190.5
		175	115	30	50	60	V6	1	VC6GUN	2.190	241x291x190.5

Additional modules for VZ switch bodies

Enclosed switches include a VZ switch body. Additional modules can be plugged on 1 or 2 sides of the switch body to provide additional contacts or extra connectivity.

Common modules for enclosed switch disconnectors – with exceptions ⁽³⁾

Description	Rating	Reference
	A	
Main pole module (mounted in enclosure)	10	VZ02 (not for VCxGUN starters)
	16	VZ01 (not for VCxGUN starters)
	20	VZ0 (not for VCxGUN starters)
	25	VZ1
	32	VZ2
	50	VZ3
	63	VZ4
Neutral pole modules with early make and late break contacts	10 to 32	VZ11
	50 and 63	VZ12
	100 and 140	VZ13
Earthing modules	10 to 32	VZ14
	50 and 63	VZ15
	100 and 140	VZ16
Description	Type of contacts	Reference
Auxiliary contact block modules with 2 auxiliary contacts	N/O + N/C ⁽⁴⁾	VZ7
	N/O + N/O	VZ20

⁽¹⁾ For characteristics of switch-disconnectors, please consult your Regional Sales Office.

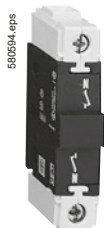
⁽²⁾ Enclosure not suitable in atmosphere contaminated with harsh substances (detergents, chlorine solvents, ketones, alcohol, aromatic hydrocarbons).

⁽³⁾ Not compatible with V●F5GEN, V●F6GEN, VC5GUN, VC6GUN, VCFN12GE, VCFN20GE.

⁽⁴⁾ Late make N/O, early break N/C contacts.



VZ0
Main pole



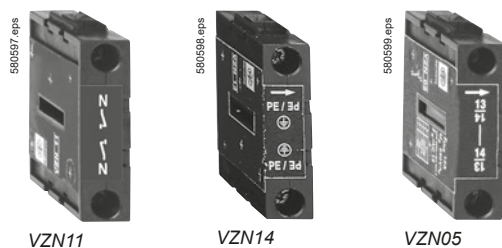
VZ11
Neutral pole



VZ15
Earthing terminal



VZ20
Auxiliary contacts

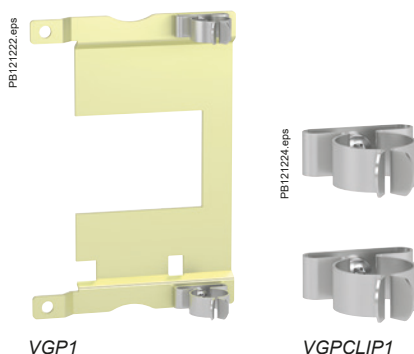


Additional modules for switch bodies

Specific modules for VCFN12GE and VCFN20GE

Description	Rating	Reference
	A	
Main pole modules	10	VZN12
	16	VZN20
Neutral pole module with early make and late break contacts	10 and 16	VZN11
Earthing module	10 and 16	VZN14

Description	Type of contacts	Reference
Auxiliary contact block modules	1 N/O late make contact	VZN05
	1 N/C early break contact	VZN06



Accessories for enclosed switch-disconnectors

Ground plate and accessories for VCF02GE, VCF01GE, VCF0GE, VCF1GE

Metallic ground plate, for shielded cables connection. To be installed between back of enclosed switch-disconnectors, 2 fixing screws. Cable shield grounding ensured by 2 clamps, clamping from Ø11 to 14 mm

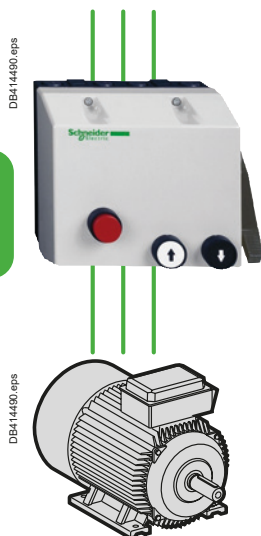
For switch body	Reference
Ground plate + 2 clamps + 2 screws	VGP1
2 clamps + 2 screws	VGPClip1

TeSys Control

Enclosed standard starters

Introduction & selection table

Enclosed starters



Range of pre-assembled motor starters, with pushbuttons, selectors, protection and control components in a robust casing

They can be fixed on a wall, on a panel, or on the chassis of a machine. They provide an operator with an easy access with visual simplicity

Numerous advantages to meet OEM's most common needs

- IEC
- Multiple ratings and sizes
- IP55, IP65
- IK08, IK09
- Totally or partially pre-wired

Standard starters

They are used to isolate a circuit, to protect and/or to control a motor

Customized protection

Enclosed starter offer is available in fully pre-equipped and pre-wired enclosures, also in partially pre-equipped enclosures to be completed with protective components of the required rating

Accessories

Additional accessories provide reinforced sealing, padlock locking, additional contacts...

Selection in 2 steps

- 1 Identify your need (1 line one or more) in the **Selection criteria** area (example: Load 5 kW – ON/OFF control with overload protection)

- 2 Choose your starter in the **Solutions** area by adding column contents, note the radical of the product references (example: LE1D + LRD)

Selection criteria							Solutions				
Load Power (kW) / 400V	Circuit isolation	Direct starter - ON/OFF	Reverser ON/REVERSE/OFF	Short circuit protection	Overload protection	Star - delta					
0.25...7.5		•			•		LE1M35				 GV2L A1/7
4 ... 30		•			•			LE1D			 LRD A1/8
0.02... 30		•		•			GV2PC GV3PC				 GV2P A1/9 + A1/10
0.02... 30							GV2PC GV3PC				 GV2ME A1/9 + A1/10
0.06... 11		•		•	•		GV2MC GV3MP				 LR2K A1/11
2.2 ... 15								LE4K LE4D			 LR2K LRD A1/12
2.2 ... 30			•		•			LE2K LE2D			 LR2K LRD A1/13
2.2 ... 15			•	•	•			LE8K LE8D			 LR2K LRD A1/14
7.5...30		•			•	•		LE3D			 LRD A1/15
7.5...18.5		•	•	•	•	•		LE6D			 LRD A1/16



LE1M35●●●●

Control + Protection against Overloads

- Direct Control: ON/OFF of 3-phase motor
- Motor protection: motor OFF in case of overload – manual reset with the red pushbutton.
- Indication: yellow light activated with the contactor coil.
- The LE1M35 starter, combined with short-circuit protection components, provides type 1 or type 2 coordination, depending on the type of devices used.

Range:

- 10 IEC motor starters, for 3P motors from 0.25 to 7.5 kW (400V AC)
- Configurable pushbuttons: impulse or latched
- Conforming to IEC 60947-4-1 standard
- Degree of protection IP65, according IEC 60529
- Ambient air temperature in operation -5 to +40°C
- Operating position: same as K series contactors
- Material: self extinguishing ABS.

Included (standard version):

- 1 contactor LC1K●●⁽¹⁾
- 1 thermal overload relay LR2K⁽²⁾
- 1 green Start button "I",
- 1 red Stop/Reset button "O/R",
- 1 yellow operating indicator
- earth + neutral terminals at bottom of enclosure.

For supply voltages between 380 and 440 V (codes Q7, V7, N7 or R7) the control circuit is pre-wired between phases. For other supply voltages, the control circuit must be wired by the customer.

Direct-on-line starters

Standard power ratings of 3-phase motors 50-60 Hz in category AC-3				Setting range of thermal overload relay LR2K	Basic reference, to be completed by adding the voltage code ^{(3) (4)}	Overall dimensions ⁽⁵⁾ WxHxD
220 V	240 V	380 V	415 V			
230 V		400 V		A		mm
0.12	0.12	0.25	0.25	0.54...0.8	LE1M35●●05	78x160x108
0.18	0.18	0.37	0.37	0.8...1.2	LE1M35●●06	78x160x108
0.25	0.25	0.55	0.55	1.2...1.8	LE1M35●●07	78x160x108
0.37	0.37	1.1	0.75	1.8...2.6	LE1M35●●08	78x160x108
0.55	0.55	1.5	1.5	2.6...3.7	LE1M35●●10	78x160x108
1.1	0.75	2.2	2.2	3.7...5.5	LE1M35●●12	78x160x108
1.5	1.1	3	3	5.5...8	LE1M35●●14	78x160x108
2.2	2.2	4	4	8...11.5	LE1M35●●16	78x160x108
3	3	5.5	5.5	10...14	LE1M35●●21	78x160x108
3.7	4	7.5	7.5	12...16	LE1M35●●22	78x160x108
Replacement contactor					LC1K●●A80	-

Coil voltage codes

Volts	24	110	220	230	240	380	400	415	440
~ 50/60 Hz									
Code	B7	F7	M7	P7	U7	Q7	V7	N7	R7

(1) K contactor characteristic: refer to chapter B8.

(2) LR2K overload relay characteristics: refer to chapter B11.

(3) Remove the 2 last numbers if the thermal overload relay is not required.

Example: LE1M35P7 instead of LE1M35P714.

(4) Please check the availability of your variant in the index page A1/34. The SEARCH function of your viewer can be used.

(5) Dimensions of standard versions, comprising (if any) handle, pushbutton, indicator light.



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Enclosed standard starters / DOL / to be completed
with Deca ⁽¹⁾ overload relay

Product references



Control + Protection against Overloads

- ON/OFF motor starters: 1-way rotation control of 3-phase motor, by green & red pushbuttons
- Motor protection against overload: manual reset with the red pushbutton or remotely.

Range:

- 8 direct-on-line starters for 3P motors from 4 to 30 kW (9 to 65 A AC-3)
- Choice of up to 12 AC coil voltages for control supply circuit (depending on starter rating).

Enclosures characteristics:

- Conforming to IEC 60947-4-1 standard
- Degree of protection according IEC 60529:
 - IP65,
 - IK07 for LE1D09...D35,
 - IK09 for LE1D40A...D65A
- Ambient air temperature in operation -5 to +40°C
- Operating position: same that as contactors
- Material: LE1D09... D35 polycarbonate ⁽²⁾
- LE1D40A... D65A steel sheet.

Included:

- 1 pre-wired LC1D contactor
- 2 Harmony XB5 pushbuttons.

An LRD overload relay of the required rating must be ordered separately and wired at bottom of the contactor.

Direct on-line starters

Standard power ratings of 3-phase motors 50-60 Hz in category AC-3						Max. current lth up to	Basic reference, to be completed by adding the voltage code ⁽³⁾	Weight kg	Overall dimensions ⁽⁴⁾ WxHxD mm
220 V	380 V	415 V	440 V	500 V	660 V	690 V			
kW	kW	kW	kW	kW	kW	A			
2.2	4	4	4	5.5	5.5	9	LE1D09●●	0.920	88x166x128.5
3	5.5	5.5	5.5	7.5	7.5	12	LE1D12●●	0.920	88x166x128.5
4	7.5	7.5	7.5	9	10	17	LE1D18●●	1.015	101x201x153.5
5.5	11	11	11	15	15	22	LE1D25●●	1.015	101x201x153.5
7.5	15	15	15	18.5	18.5	26.5	LE1D35●●	4.320	101x201x153.5
11	18.5	22	22	22	30	40	LE1D40A●●	4.820	200x300x158.5
15	22	25	30	30	33	50	LE1D50A●●	4.850	200x300x158.5
18.5	30	37	37	37	37	65	LE1D65A●●	4.850	200x300x158.5

Variants (pre-assembled)

Description	Available variants for starter	Suffix to be added to the starter reference ⁽³⁾
No pushbuttons on cover	LE1D09...D65A●●	A04
1 blue Reset button "R"	LE1D09...D65A●●	A05
1 3-position stay put selector switch ("I"- "O"- "II") ("I": Automatic Start; "O": Stop; "II": Manual Start) 1 blue Reset button "R"	LE1D09...D25●●	A09
1 2-position stay put selector switch "O"- "I" ("O": Stop; "I": Manual Start) 1 blue Reset button "R"	LE1D09...D25●●	A13
Mounting of an LC1D09 contactor in an enclosure identical to LE1D18	LE1D09P7 LE1D09P7A13	T

Coil voltage codes ⁽³⁾

Volts ~ 50/60 Hz	24	48	110	115	120	220	230	240	380	400	415	440
LE1D09 to D35	B7	E7	F7	FE7	G7	M7	P7	U7	Q7	V7	N7	R7
LE1D40A to D65A	-	-	-	FE7	-	-	P7	-	Q7	-	-	-

⁽¹⁾ LRD overload relay selection: product reference page A1/33, more details in chapter B11.

⁽²⁾ Avoid placing this material in contact with harsh substances (detergents, chlorine solvents ketones, alcohol, aromatic hydrocarbons).

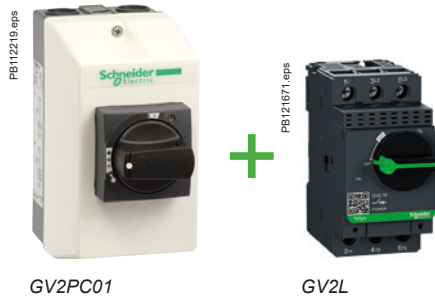
⁽³⁾ Please check the availability of your variant in the index page A1/34. The SEARCH function of your viewer can be used.

⁽⁴⁾ Dimensions of standard versions, comprising (if any) handle, pushbutton, indicator light.

TeSys Control

Enclosed standard starters / DOL / to be completed
with Deca ⁽¹⁾ magnetic circuit breaker

Product references



GV2PC01

GV2L



GV3PC02

GV3L

Control + Isolation + Protection against Short circuits

2 solutions according to the required current rating.

GV2PC + GV2L > up to 23 A (Ithe)

GV3PC + GV3L > up to 55 A (Ithe)

The GV2L or GV3L circuit breaker of the required rating must be ordered separately.

- Circuit isolation
- ON/OFF motor starters: 1-way rotation control of 3-phase motor
- Padlocking:
 - in ON or OFF position (PGV2PC01, GV3PC01),
 - in OFF position (GV2PC02, GV3PC02).

Suitable circuit breakers:

- GV2L - 12 ratings (3P motors from 0.09 to 11 kW - 400/415 V AC)
- GV3L - 3 ratings (3P motors from 18.5 to 30 kW - 400/415 V AC).

Enclosures characteristics:

- Conforming to IEC 60947-2
- Degree of protection according IEC 60529:
 - IP65, IK08 (for GV2PC),
 - IK09 (for GV3PC)
- Ambient air temperature in operation -5 to +40°C
- Operational voltage (Ue): 690V
- Material: GV2PC polycarbonate ⁽²⁾, GV3PC steel sheet.

Included:

- GV rotary handle.

Enclosures fitted with padlockable rotary handle

Composition	Type	Reference	Overall dimensions ⁽³⁾ WxHxD mm
■ Insulating enclosure ■ Black handle, padlockable in ON/OFF position	Surface mounting For GV2L	GV2PC01	88x166x163
■ Insulating enclosure ■ Red handle on yellow background, padlockable in OFF position	Surface mounting For GV2L	GV2PC02	88x166x163
■ Metal enclosure ■ Black handle, padlocking in ON/OFF position ■ Circuit breaker/handle adapter	Surface mounting For GV3L	GV3PC01	200x300x200
■ Metal enclosure ■ Red handle, padlocking in OFF position ■ Circuit breaker/handle adapter	Surface mounting For GV3L	GV3PC02	200x300x200

GV2L, GV3L product references: add code to product reference ⁽⁴⁾

Ithe (A)	0.4	0.63	1	1.6	2.5	4	6.3	9	13	17	21	23
GV2L codes	03	04	05	06	07	08	10	14	16	20	21	22
Ithe (A)	35	41	55									
GV3L codes	40	50	65									

⁽¹⁾ GV2, GV3 circuit breaker not included - characteristics: refer to chapter B6.

⁽²⁾ Avoid placing this material in contact with harsh substances (detergents, chlorine solvents, ketones, alcohol, aromatic hydrocarbons).

⁽³⁾ Dimensions of standard versions, comprising (if any) handle, pushbutton, indicator light.

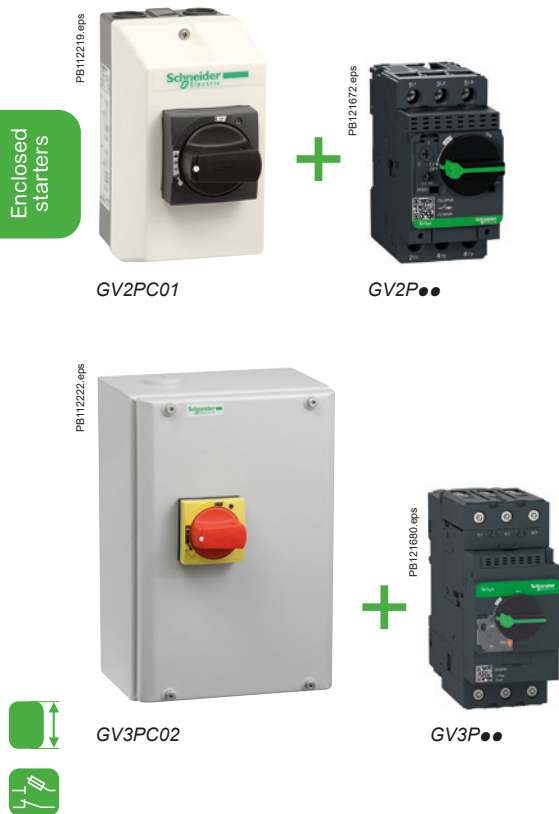
⁽⁴⁾ Example: for Ithe 17 A, magnetic circuit breaker is GV2L20.



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Enclosed standard starters / DOL / to be completed with Deca ⁽¹⁾ thermal-magnetic circuit breaker

Product references



Control + Isolation + Protection against Short circuits and Overloads

For OEM, 2 solutions according to the required current rating.

GV2PC + GV2P > up to 23 A (Ithe)

GV3PC + GV3P > up to 55 A (Ithe) The enclosure includes a rotary handle. The GV2P or GV3P circuit breaker of the required rating must be ordered separately.

- Circuit isolation
- ON/OFF motor starters: 1-way rotation control of 3-phase motor
- Padlocking:
 - in ON or OFF position (GV2PC01, GV3PC01),
 - in OFF position (GV2PC02, GV3PC02).

Suitable circuit breakers:

- GV2P - 14 ratings (3P motors from 0.06 to 11 kW - 400/415 V AC)
- GV3P - 2 ratings (3P motors from 18.5 to 30 kW - 400/415 V AC).

Enclosures characteristics:

- Conforming to IEC 60947-2
- Degree of protection according IEC 60529: IP65, IK08 (for GV2PC), IK09 (for GV3PC)
- Ambient air temperature in operation -5 to +40°C
- Operational voltage (Ue) 690V
- Material: GV2PC polycarbonate ⁽²⁾, GV3PC steel sheet.

Included:

- GV rotary handle.

Enclosures fitted with padlockable rotary handle

Composition	Type	Reference	Overall dimensions ⁽³⁾ WxHxD mm
■ Insulating enclosure ■ Black handle, padlockable in ON/OFF position	Surface mounting For GV2L	GV2PC01	88x166x163
■ Insulating enclosure ■ Red handle on yellow background, padlockable in OFF position	Surface mounting For GV2L	GV2PC02	88x166x163
■ Metal enclosure ■ Black handle, padlocking in ON/OFF position ■ Circuit breaker/handle adapter	Surface mounting For GV3L	GV3PC01	200x300x200
■ Metal enclosure ■ Red handle, padlocking in OFF position ■ Circuit breaker/handle adapter	Surface mounting For GV3L	GV3PC02	200x300x200

GV2P, GV3P product references: add code to product reference ⁽⁴⁾

Ithe (A)	0.16	0.25	0.4	0.63	1	1.6	2.5	4	6.3	9	13	17	21	23
GV2P codes	01	02	03	04	05	06	07	08	10	14	16	20	21	22
Ithe (A)	35	41	55											
GV3P codes	40	50	65											

⁽¹⁾ GV2, GV3 circuit breaker not included - characteristics: refer to chapter B6.

⁽²⁾ Avoid placing this material in contact with harsh substances (detergents, chlorine solvents, ketones, alcohol, aromatic hydrocarbons).

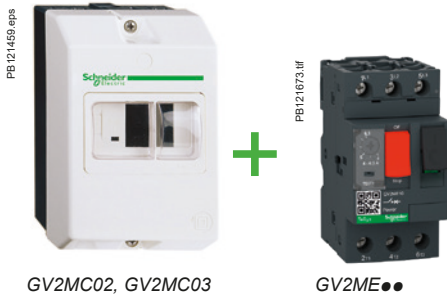
⁽³⁾ Dimensions of standard versions, comprising (if any) handle, pushbutton, indicator light.

⁽⁴⁾ Example: for Ithe 17 A, magnetic circuit breaker is GV2P20.

TeSys Control

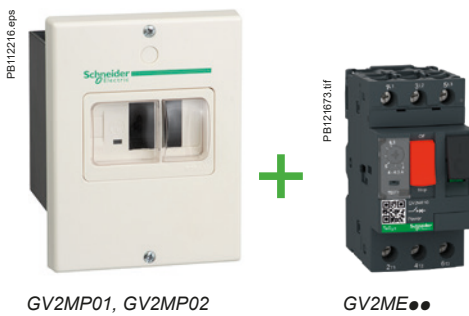
Enclosed standard starters / DOL / to be completed
with Deca ⁽¹⁾ thermal-magnetic circuit breaker (ref. GV2ME)

Product references



GV2MC02, GV2MC03

GV2ME●●



GV2MP01, GV2MP02

GV2ME●●

Control + Isolation + Protection against Short circuits and Overloads

For OEM, 2 solutions, according to the enclosure installation mode:

GV2MC surface mounting enclosure for GV2ME circuit breaker

GV2MP flush mounting enclosure for GV2ME circuit breaker.

The GV2ME circuit breaker of the required rating must be ordered separately.

- Circuit isolation
- ON/OFF motor starters: 1-way rotation control of 3-phase motor
- Short-circuit and adjustable overload protection
- Padlocking in OFF position.

Suitable circuit breakers:

- GV2ME - 14 ratings (3P motors from 0.06 to 11 kW - 400/415 V AC).

Enclosures characteristics:

- Conforming to IEC 60947-2; IEC 60947-4-1
- Degree of protection according IEC 60529: refer to selection chart
- Operational voltage (Ue) 690 V
- Material: polycarbonate ⁽²⁾.

Included:

- GV2E01 or GV2E02 sealing kit (fixed on the front plate).

Enclosures for thermal-magnetic circuit breakers GV2ME

Type	Degree of protection	Possible no. of side mounting auxiliary contact blocks on GV2ME		Reference	Weight kg	Overall dimensions ⁽³⁾ WxHxD mm
		LH side	RH side			
Surface mounting, double insulated with protective conductor. Sealable cover	IP41	1	1	GV2MC01	0.290	93x147x84
Flush mounting, with protective conductor	IP55	1	1	GV2MC02 or GV2MCK04 ⁽⁴⁾	0.300 0.420	93x147x84 93x147x145.5
	IP55 for temperature < +5 °C	1	1	GV2MC03	0.300	93x147x84
	IP41 (front face)	1	1	GV2MP01	0.115	106.5x140x83
	IP41 (front face – reduced flush mounting)	–	1	GV2MP03	0.115	106.5x140x98
	IP55 (front face)	1	1	GV2MP02	0.130	106.5x140x83
	IP55 (front face – reduced flush mounting)	–	1	GV2MP04	0.130	106.5x140x98

GV2ME product references: add code to product reference ⁽⁵⁾

lthe (A)	0.16	0.25	0.4	0.63	1	1.6	2.5	4	6.3	9	13	17	21	23
GV2ME codes	01	02	03	04	05	06	07	08	10	14	16	20	21	22

GV2MC, GV2MP enclosures with complementary circuit breaker and mushroom head pushbutton allow the construction of safety direct-on-line starters conforming INRS and VDE0113.

Surface and flush mounting enclosures, mushroom heads, circuit breakers and undervoltage release cover a large number of applications.

⁽¹⁾ Characteristics of GV2ME circuit breakers and additives: refer to page A1/32.

⁽²⁾ Enclosure not suitable in atmosphere contaminated with harsh substances (detergents, chlorine solvents, ketones, alcohol, aromatic hydrocarbons).

⁽³⁾ Dimensions of standard versions, comprising (if any) handle, pushbutton, indicator light

⁽⁴⁾ Enclosure GV2MCK04 is fitted with a GV2K04 mushroom head Emergency stop pushbutton as standard.

⁽⁵⁾ Example: for lthe 17 A, magnetic circuit breaker is GV2ME20.



TeSys Control

Enclosed standard starters / DOL / to be completed with LR2K, Deca ⁽¹⁾ overload relays

Product references

Enclosed starters



LE4K●●●●



LR2K●●



LE4D●●●●



LRD●●

Control + Isolation + Protection against Short circuits and Overloads

- ON/OFF motor starters: 1-way rotation control of 3-phase motor, by green & red pushbuttons
 - Option: no pushbutton on cover
 - Circuit disconnection by side black handle
 - Protection against short circuits by NFC fuses type aM (to be ordered separately)
 - Motor protection against overload – manual reset with the red pushbutton or remotely. Option: cover with just a “Reset” blue pushbutton.
- An LR2K or LRD overload relay of the required rating must be ordered separately and wired at bottom of the contactor ⁽¹⁾.

Ranges:

- 8 partially pre-equipped enclosures to build-up 3P motor starters from 2.2 to 15 kW (6 to 35 AAC-3)
- Choice of 5 coils for LE4K●●, 12 coils for LE4D●●, for control with different AC voltages.

Enclosures characteristics:

- Conforming to IEC 60947-4-1 standard
- Degree of protection according IEC 60529:
 - IP65, IK09 for LE4KIP65,
 - IK07 for LE4D,
- Ambient air temperature in operation -5 to +40°C
- Operating position: same that as contactors
- Material: LE4K and LE4D polycarbonate ⁽²⁾.

Included:

- 1 fuse carrier with external side handle
- 1 pre-wired LC1K or LC1D contactor
- 2 Harmony XB5 pushbuttons.

Direct-on-line starters

Standard power ratings of 3-phase motors 50-60 Hz in category AC-3							Max. current lth up to	Fuses to be fitted by the customer		Basic reference, to be completed by adding the voltage code ^{(3) (4)}	Weight	Overall dimensions ⁽⁵⁾ WxHxD
220 V	380 V	415 V	440 V	500 V	660 V	690 V		Size	Type aM			
kW	kW	kW	kW	kW	kW	kW	A				kg	mm
1.5	2.2	2.2	3	–	–	–	6	10 x 38	10	LE4K065●●	1.450	206x165x146
2.2	4	4	4	–	–	–	9	10 x 38	12	LE4K095●●	1.450	206x165x146
										or LE4D09●● ⁽⁶⁾	1.960	217x348x175.5
2.2	4	4	4	5.5	–	–	9	10 x 38	12	LE4D09●●	1.960	217x348x175.5
3	5.5	5.5	5.5	7.5	–	–	12	10 x 38	16	LE4D12●●	1.960	217x348x175.5
4	7.5	9	9	10	–	–	18	10 x 38	20	LE4D18●●	2.200	217x348x175.5
5.5	11	11	11	15	–	–	25	10 x 38	25	LE4D25●●	2.200	217x348x175.5
7.5	15	15	15	18.5	18.5	–	26.5	14 x 51	32	LE4D35●●	5.190	217x348x175.5

Voltages code ⁽⁴⁾

Volts	24	48	110	115	120	220	230	240	380	400	415	440
~ 50/60 Hz												
LE4D	B7	E7	F7	FE7	G7	M7	P7	U7	Q7	V7	N7	R7
LE4K	–	–	–	–	–	M7	P7	U7	Q7	V7	–	–

Supply voltages between 380 and 440 V (codes Q7, V7, N7 or R7): pre-wired control circuit between phases.

Other supply voltages: control circuit must be wired by the customer.

⁽¹⁾ LR2K, LRD overload relay selection: product references page A1/33, more details in chapter B11.

⁽²⁾ Avoid placing this material in contact with harsh substances (detergents, chlorine solvents, ketones, alcohol, aromatic hydrocarbons).

⁽³⁾ LE4D●●● (with P7 and V7 coil) with no pushbutton on cover: add “A04” to product reference (example: LE4D25V7A04).

LE4D●●● (with P7 and V7 coil) with overload “Reset” blue pushbutton only on cover: > add “A05” to full product reference.

⁽⁴⁾ Please check the availability of your variant in the index page A1/34. The SEARCH function of your viewer can be used.

⁽⁵⁾ Dimensions of standard versions, comprising (if any) handle, pushbutton, indicator light.

⁽⁶⁾ Selection according to dimensions and the number of operating cycles, please consult your Regional Sales Office.

TeSys Control

Enclosed standard starters / Reverser / to be completed
with LR2K, Deca ⁽¹⁾ overload relays

Product references



LE2K09●●●

LR2K●●



LE2D12●●●

LRD●●

Reverse Control + Isolation + Protection against Overloads

- ON/REVERSE/OFF motor starters: 2-way rotation control of 3-phase motor
 - by black I-II position spring return selector, red STOP/RESET pushbuttons for LE2K●● starters
 - by black ON ↑, ON ↓ pushbuttons, red STOP/RESET pushbutton for LE2D●● starters
 - Motor protection against overload: manual reset with the red pushbutton or remotely.
- An LR2K or LRD overload relay of the required rating must be ordered separately and wired at bottom of the contactor.

Ranges:

- for 3P motors from 4 to 30 kW (9 to 65 A AC-3), in 11 ranges of reverser starters
- Choice of up to 7 AC coils voltages (depending on starter) for control supply circuit.

Enclosures characteristics:

- Conforming to IEC 60947-4-1 standard
- Degree of protection according IEC 60529: IP65, IK07 for LE2D09●●●D35, IK09 for LE2K and LE●D40A●●●D65A,
- Ambient air temperature in operation -5 to +40°C
- Operating position: same that as contactors
- Material: LE2K and LE●D09●●●D35 polycarbonate ⁽²⁾
- LE●D40A●●● D65A steel sheet.

Included:

- 2 pre-wired LC1K or LC1D contactor
- 3 Harmony XB5 pushbuttons - or -1 Harmony XB5 pushbutton + 1 Harmony XB5 switch.

Reversing starters

Standard power ratings of 3-phase motors 50-60 Hz in category AC-3							Maximum current Ith up to	Basic reference, to be completed by adding the voltage code ⁽³⁾	Weight	Overall dimensions ⁽⁴⁾ WxHxD
220 V	380 V	415 V	440 V	500 V	660 V	690 V				
230 V	400 V						A		kg	
1.5	2.2	2.2	3	—	—	—	6	LE2K065●●	1.080	175x165x146
2.2	4	4	4	—	—	—	9	LE2K095●●	1.080	175x165x146
—	—	—	—	5.5	5.5	—	9	LE2D09●● ⁽⁵⁾	2.100	101x201x153.5
—	—	—	—	5.5	5.5	—	9	LE2D09●●	2.100	101x201x153.5
3	5.5	5.5	5.5	7.5	7.5	—	12	LE2D12●●	2.100	101x201x153.5
4	7.5	7.5	7.5	9	10	—	17	LE2D18●●	2.410	101x201x153.5
5.5	11	11	11	15	15	—	22	LE2D25●●	2.570	101x201x153.5
7.5	15	15	15	18.5	18.5	—	26.5	LE2D35●●	4.100	101x201x153.5
11	18.5	22	22	22	30	—	40	LE2D40A●●	5.270	200x300x174
15	22	25	30	30	33	—	50	LE2D50A●●	5.470	200x300x174
18.5	30	37	37	37	37	—	65	LE2D65A●●	5.470	200x300x174

Coil voltage codes ⁽³⁾

Volts ~ 50/60 Hz	24	48	110	115	120	220	230	240	380	400	415	440
LE2D40A to D65A	—	—	—	FE7	—	—	P7	—	Q7	—	—	—
LE2D09 to D35	B7	—	—	—	—	M7	P7	U7	Q7	V7	N7	—
LE2K	—	—	—	—	—	M7	P7	U7	Q7	V7	—	—

⁽¹⁾ LR2K, LRD overload relay selection: product references page A1/33, more details in chapter B11.

⁽²⁾ Avoid placing this material in contact with harsh substances (detergents, chlorine solvents, ketones, alcohol, aromatic hydrocarbons).

⁽³⁾ Please check the availability of your variant in the index page A1/34. The SEARCH function of your viewer can be used.

⁽⁴⁾ Dimensions of standard versions, comprising (if any) handle, pushbutton, indicator light.

⁽⁵⁾ Selection according to dimensions and the number of operating cycles, please consult your Regional Sales Office.



TeSys Control

Enclosed standard starters / DOL / to be completed
with LR2K, Deca ⁽¹⁾ overload relays

Product references

Enclosed
starters



LE8K●●●●



LR2K●●



LE8D●●●●



LRD●●

Reverse Control + Isolation + Protection against Short circuits and Overloads

- ON/REVERSE/OFF motor starters: 2-way rotation control of 3-phase motor
 - LE8K●●starters, by white ↑, black ↓, red Stop/Reset pushbuttons
 - LE8D●● starters, by black I-II position spring return selector, red Stop/Reset pushbutton
 - Option: no pushbutton on cover
 - Circuit disconnection by side black handle
 - Protection against short circuits by NFC fuses type aM (to be ordered separately)
 - Motor protection against overload: manual reset with the red pushbutton or remotely. LE8D option: cover with just a "Reset" blue pushbutton.
- An LR2K or LRD overload relay of the required rating must be ordered separately and wired at bottom of a the contactor.

Ranges:

- 8 partially pre-equipped enclosures to build-up 3P motor reversers from 2.2 to 15 kW (6 to 35 A AC-3)
- Choice of 3 coils for control with different AC voltages.

Enclosures characteristics:

- Conforming to IEC 60947-4-1 standard
- Degree of protection according IEC 60529: IP65, IK09 for LE8KIP65, IK07 for LE8D
- Ambient air temperature in operation -5 to +40°C
- Operating position: same that as contactors
- Material: LE8K and LE8D09●●●D35 polycarbonate ⁽²⁾.

Included:

- 1 fuse carrier with external side handle
- 2 pre-wired LC1K or LC1D contactors
- 3 Harmony XB5 pushbuttons - or -1 Harmony XB5 pushbutton + 1 Harmony XB5 switch.

Reversing starters

Standard power ratings of 3-phase motors 50-60 Hz in category AC-3							Maximum current lth up to	Fuses to be fitted by the customer		Basic reference, to be completed by adding the voltage code ^{(3) (4)}	Weight	Overall dimensions ⁽⁵⁾ WxHxD
220 V	380 V	415 V	440 V	500 V	660 V	690 V		Size	Type aM			
kW	kW	kW	kW	kW	kW	kW	A		A		kg	
1.5	2.2	2.2	3	—	—	—	6	10 x 38	10	LE8K065●●	1.600	206x165x146
2.2	4	4	4	—	—	—	9	10 x 38	12	LE8D09●● ⁽⁶⁾	3.550	217x348x182
—	—	—	—	5.5	—	—	9	10 x 38	12	LE8D09●●	3.550	217x348x182
3	5.5	5.5	5.5	7.5	—	—	12	10 x 38	16	LE8D12●●	3.550	217x348x182
4	7.5	9	9	10	—	—	17	10 x 38	20	LE8D18●●	3.700	217x348x182
5.5	11	—	—	—	—	—	22	10 x 38	25	LE8D25●●	4.670	217x348x182
7.5	15	15	15	18.5	18.5	—	26.5	14 x 51	32	LE8D35●●	5.800	217x348x182

Voltage codes ⁽⁴⁾

Volts ~ 50/60 Hz	24	48	110	115	120	220	230	240	380	400	415	440
LE8 K, LE8 D	—	—	—	—	—	—	P7	—	Q7	V7	—	—

⁽¹⁾ LR2K, LRD overload relay selection: product references page A1/33, more details in chapter B11.

⁽²⁾ Avoid placing this material in contact with harsh substances (detergents, chlorine solvents, ketones, alcohol, aromatic hydrocarbons).

⁽³⁾ LE8K●●●●●, LE8D●●●●● (with P7 and V7 coil) with no pushbutton on cover: add "A04" to product reference (example: LE8K065P7A04, LE8D25V7A04) LE4D●●●● (with P7 and V7 coil) with only one pushbutton on cover: overload "Reset" blue pushbutton > add "A05" to full product reference.

⁽⁴⁾ Please check the availability of your variant in the index page A1/34. The SEARCH function of your viewer can be used.

⁽⁵⁾ Dimensions of standard versions, comprising (if any) handle, pushbutton, indicator light.

⁽⁶⁾ Selection according to dimensions and the number of operating cycles, please consult your Regional Sales Office.

TeSys Control

Enclosed standard starters / Star-delta / to be completed

with Deca ⁽¹⁾ overload relays

Product references



Star-delta Control + Protection against Overload

- Star-delta starting of 3-phase motor: ON by green pushbutton, OFF by red pushbutton. Option: no pushbutton on cover
- Maximum operating rate: 30 starts/hour.
- Maximum starting time: 30 seconds.
- Delay of 40 ms ±15 ms at changeover by LAD S2 timer on delta contactor to provide sufficient time for star contactor to break.
- Motor protection against overload: manual reset with the red pushbutton or remotely.

An LRD overload relay of the required rating must be ordered separately and wired at bottom of the contactor.

Range:

- 4 partially pre-equipped enclosures to build-up 3P motor starters from 7.5 to 30 kW.
- Choice of 7 coils for control with different AC voltages.

Enclosures characteristics:

- Conforming to IEC 60947-4-1 standard
- Degree of protection according IEC 60529: IP65, IK07
- Ambient air temperature in operation -5 to +40°C
- Operating position: same that as contactors
- Material: polycarbonate ⁽²⁾.

Included:

- 3 pre-wired LC1D contactors
- 2 Harmony XB5 pushbuttons.

Star-delta starters

Standard power ratings of squirrel cage motors Mains voltage - delta connection				Basic reference, to be completed by adding the voltage code ⁽³⁾ ⁽⁴⁾	Weight	Overall dimensions ⁽⁵⁾ WxHxD
220 V	380/400 V	415 V	440 V			
kW	kW	kW	kW		kg	
4	7.5	7.5	7.5	LE3D09●●	3.650	186x348x175.5
5.5	11	11	11	LE3D12●●	3.650	186x348x175.5
11	18.5	22	22	LE3D18●●	3.750	186x348x175.5
11	22	26	26	LE3D35●●	5.160	186x348x175.5

Voltage codes ⁽⁴⁾

Volts ~ 50/60 Hz	24	220	230	240	380	400	415
LE3 D	B7	M7	P7	U7	Q7	V7	N7

⁽¹⁾ LRD overload relay selection: product references page A1/33, more details in chapter B11 - Select appropriate overload relay for setting at 0.58 of the full load rated motor current.

⁽²⁾ Avoid placing this material in contact with harsh substances (detergents, chlorine solvents, ketones, alcohol, aromatic hydrocarbons).

⁽³⁾ LE3D●●●● (with P7 and V7 coil) with no pushbutton on cover: add "A04" to product reference (example: LE3D18P7A04).

⁽⁴⁾ Please check the availability of your variant in the index page A1/34. The SEARCH function of your viewer can be used.

⁽⁵⁾ Dimensions of standard versions, comprising (if any) handle, pushbutton, indicator light.



TeSys Control

Enclosed standard starters / Star-delta / to be completed

with Deca ⁽¹⁾ overload relays

Product references

Enclosed starters



LE6D●●●●



LRD●●

Star-delta Control + Disconnection + Protection against Short circuits and Overloads

- Star-delta starting of 3-phase motor: ON by green pushbutton, OFF by red pushbutton. Options: no pushbutton, "Reset" pushbutton only
- Maximum operating rate: 30 starts/hour.
- Maximum starting time: 30 seconds.
- Delay of 40 ms ±15 ms at changeover by LAD S2 timer on delta contactor to provide sufficient time for star contactor to break.
- Circuit disconnection by side black handle
- Protection against short circuits by NFC fuses type aM (to be ordered separately)
- Motor protection against overload: manual reset with the red pushbutton or remotely.

An LRD overload relay of the required rating must be ordered separately and wired at bottom of the contactor.

Range:

- 4 partially pre-equipped enclosures to build-up 3P motor starters from 7.5 to 30 kW choice of 7 coils for control with different AC voltages.

Enclosures characteristics:

- Conforming to IEC 60947-4-1 standard
- Degree of protection according IEC 60529: IP65, IK07
- Ambient air temperature in operation -5 to +40°C
- Operating position: same that as contactors
- Material: polycarbonate ⁽²⁾.

Included:

- 1 fuse carrier with external side handle
- 3 pre-wired LC1D contactors
- 2 Harmony XB5 pushbuttons.

Star-delta starters

Standard power ratings of squirrel cage motors				Fuses to be fitted by the customer		Basic reference, to be completed by adding the voltage code ⁽³⁾	Weight	Overall dimensions ⁽⁴⁾ WxHxD
Mains voltage - delta connection				Size	Type aM			
220 V	380/400 V	415 V	440 V					
							kg	
4	7.5	7.5	7.5	10 x 38	20	LE6D09●●	3.900	217x348x175.5
5.5	11	11	11	10 x 38	25	LE6D12●●	3.900	217x348x175.5
11	18.5	22	22	14 x 51	40	LE6D18●●	4.850	217x348x175.5

Voltage codes

Volts ~ 50/60 Hz	24	230	400
LE6 D	B7	P7	V7

⁽¹⁾ LRD overload relay selection: product references page A1/33, more details in chapter B11 - Select appropriate overload relay for setting at 0.58 of the full load rated motor current.

⁽²⁾ Avoid placing this material in contact with harsh substances (detergents, chlorine solvents, ketones, alcohol, aromatic hydrocarbons).

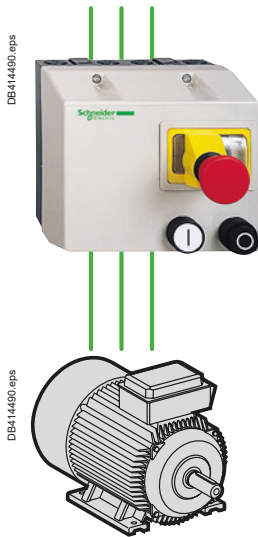
⁽³⁾ Please check the availability of your variant in the index page A1/34. The SEARCH function of your viewer can be used.

⁽⁴⁾ Dimensions of standard versions, comprising (if any) handle, pushbutton, indicator light.

TeSys Control

Enclosed safety starters

Introduction & selection table



Range of pre-assembled safety motor starters, with mushroom pushbuttons, protection and control components in a robust casing

They can be fixed on a wall, on a panel, or on the chassis of a machine. They provide the operator with safety machine controls complying with IEC 60204-1.

With numerous advantages to meet OEM's most common needs

- IEC
- Multiple ratings and sizes
- IP55
- IK07
- Pre-wired

Safety starters

They provide similar functions as standard starters but also include emergency stops to comply with IEC 60204-1 machine safety standards.

Enclosed starters

Selection in 2 steps

- Identify your need (on a single line) in the **Selection criteria** area (example: Load 5 kW – Visible circuit isolation, ON/OFF control with short circuit / overload protection)

- Choose your **Solutions** by adding column contents, note the radical of the product references (example: LG1D)

Selection criteria							Solutions					
Load Power (kW) / 400 V supply	Direct starter ON/OFF	Reverser ON/REVERSE/OFF	Short circuit / overload protection	Power circuit isolation	Visible isolation by rotary switch	Isolated control circuit by transfo						
0.06...4	•		•	•			LG7K					
4 ... 9							LG7D					
0.06... 4	•		•	•	•		LG1K					
4... 9							LG1D					
0.06... 4	•		•	•		•		LJ7K				
0.06... 5.5		•	•	•				LG8K				
0.06 ... 4		•	•	•		•			LJ8K			
0.06 ... 15	•		•	•							GV2MCK04 GV2ME GV2AX	

See page

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TeSys Control

Enclosed safety starters / DOL / Ready-to-use

Product references

Enclosed
starters



LG7K06



LG7K09, LG7D●●



For Control + Isolation + Short circuit / Overload Protection

Enclosed safety motor starters complying with IEC 60204-1 "Safety of machinery" standards.

- ON/OFF motor starters: 1-way rotation control of 3-phase motor
- Emergency stop
- Electrical circuit isolation, lockable (from LG7K09) with up to 3 padlocks
- Short circuit protection
- Overload protection
- Undervoltage protection (LG7K06: with additional undervoltage release module). Switching back on power supply after tripping must be a deliberate action.

Range:

- 12 pre-equipped enclosed safety starters from 0.06 to 9 kW.

Enclosures characteristics:

- Conforming to IEC 60947-1, IEC 60204-1
- Degree of protection according IEC 60529: IP55, IK07
- Ambient air temperature in operation -5 to +40°C
- Operational voltage (Ue) 690 V
- Operating position: same that as contactors
- Material: polycarbonate ⁽¹⁾.

Included:

- 1 GV2ME thermal magnetic circuit breaker (with mushroom emergency stop with LG7K06) ⁽²⁾
- 1 LC1K or LC1D pre-wired contactor
- 1 Harmony emergency stop pushbutton (from LG7K09)
- 2 Harmony XB5 pushbuttons.
- 1 GVAX undervoltage release module (from LG7K09).

Additional GVAX●● undervoltage release module for LG7K06 – to be ordered separately.

Additional GV2SN●● Indicator light – to be ordered separately.

Non-reversing starters (with pushbutton control of isolation)

Standard power ratings of 3-phase motors 50-60 Hz in category AC-3			Circuit breaker Setting range of thermal trips	Dust & damp protected starter Basic reference, to be completed by adding the voltage code ⁽³⁾	Weight	Overall dimensions ⁽⁴⁾ WxHxD
220/ 230 V	400/ 415 V	440 V			kg	
kW	kW	kW	A			
–	0.06	0.06	0.16...0.25	LG7K06●●02	1.300	175x165x177
0.06	0.09	0.12	0.25...0.40	LG7K06●●03	1.300	175x165x177
–	0.18	0.18	0.40...0.63	LG7K06●●04	1.300	175x165x177
0.12	0.25	0.37	0.63...1	LG7K06●●05	1.300	175x165x177
0.25	0.55	0.55	1...1.6	LG7K06●●06	1.300	175x165x177
0.37	0.75	1.1	1.6...2.5	LG7K06●●07	1.300	175x165x177
0.75	1.5	1.5	2.5...4	LG7K06●●08	1.300	175x165x177
1.1	2.2	3	4...6.3	LG7K06●●10	1.300	175x165x177
1.5	4	4	6...10	LG7K09●●14	1.450	175x165x177
3	5.5	5.5	9...14	LG7D12●●16	1.600	175x165x177
4	7.5	9	13...18	LG7D18●●20	1.630	175x165x177
4	9	9	17...23	LG7D18●●21	1.630	175x165x177

Voltage codes ⁽³⁾

Volts ~ 50/60 Hz	24	220/ 230	230	380/ 400	400	400/415 for LG7K)
LG7K, LG7D	B7	M7	P7	Q7	V7	N7

⁽¹⁾ Avoid placing this material in contact with harsh substances (detergents, chlorine solvents, ketones, alcohol, aromatic hydrocarbons).

⁽²⁾ LG7K09, D12, D18: the Emergency Stop function is performed by an undervoltage trip module acting on the circuit breaker. This circuit breaker is always pre-wired for use on 380/400/415 V 50 Hz supply.

For a 60 Hz supply, please consult your Regional Sales Office.

⁽³⁾ Please check the availability of your variant in the index page A1/34. The SEARCH function of your viewer can be used.

⁽⁴⁾ Dimensions of standard versions, comprising (if any) handle, pushbutton, indicator light.

TeSys Control

Enclosed safety starters / DOL / Ready-to-use

Product references



LG1K065

For Control + Visible Isolation + Short circuit / Overload Protection

Enclosed safety motor starters complying with IEC 60204-1 "Safety of machinery" standards.

- ON/OFF motor starters: 1-way rotation control of 3-phase motor
 - Emergency stop
 - Electrical circuit isolation, lockable with up to 3 padlocks
 - Short circuit protection
 - Overload protection
 - Undervoltage protection (with additional undervoltage release module).
- Switching back on power supply after tripping must be a deliberate action.

Range:

- 12 pre-equipped enclosed safety starters from 0.06 to 9 kW.

Enclosures characteristics:

- Conforming to IEC 60947-1, IEC 60204-1
- Degree of protection according IEC 60529 : IP55, IK07
- Ambient air temperature in operation -5 to + 40°C
- Operational voltage (U_e) 690 V
- Operating position: same that as contactors
- Material: polycarbonate ⁽¹⁾
- Enclosure cannot be opened when energized in position "I".

Included:

- 1 GV2ME thermal magnetic circuit breaker
- 1 LC1K (LG1K starters) or LC1D (LG1D starters) pre-wired contactor
- Switch with rotary red/yellow handle for isolation and emergency
- 2 Harmony XB5 pushbuttons.

Additional GVAX●● undervoltage release module – to be ordered separately.

Additional GV2SN●● indicator light – to be ordered separately.

Non-reversing starters (with rotary operator for control of isolation)

Enclosure cannot be opened when energised in position "I".

Standard power ratings of 3-phase motors 50-60 Hz in category AC-3			Circuit breaker Setting range of thermal trips	Dust & damp protected starter Basic reference, to be completed by adding the voltage code ⁽²⁾	Weight	Overall dimensions ⁽³⁾ WxHxD
220/ 230 V	400/ 415 V	440 V			kg	
kW	kW	kW	A			
–	0.06	0.06	0.16...0.25	LG1K065●●02	0.970	175x165x165
0.06	0.09	0.12	0.25...0.40	LG1K065●●03	0.970	175x165x165
–	0.18	0.18	0.40...0.63	LG1K065●●04	0.970	175x165x165
0.12	0.25	0.25	0.63...1	LG1K065●●05	0.970	175x165x165
0.25	0.55	0.55	1...1.6	LG1K065●●06	0.970	175x165x165
0.37	0.75	1.1	1.6...2.5	LG1K065●●07	0.970	175x165x165
0.75	1.5	1.5	2.5...4	LG1K065●●08	0.970	175x165x165
1.1	2.2	3	4...6.3	LG1K065●●10	0.970	175x165x165
1.5	4	4	6...10	LG1K095●●14	1.120	175x165x165
3	5.5	5.5	9...14	LG1D122●●16	1.270	175x165x165
4	7.5	9	13...18	LG1D182●●20	1.290	175x165x165
4	9	9	17...23	LG1D182●●21	1.290	175x165x165

Voltage codes ⁽²⁾

Volts ~ 50/60 Hz	220/ 230	230	380/ 400	400	400/415 (for LG1K)
LG1K, LG1D	M7	P7	Q7	V7	N7

⁽¹⁾ Avoid placing this material in contact with harsh substances (detergents, chlorine solvents, ketones, alcohol, aromatic hydrocarbons).

⁽²⁾ Please check the availability of your variant in the index page A1/34. The SEARCH function of your viewer can be used.

⁽³⁾ Dimensions of standard versions, comprising (if any) handle, pushbutton, indicator light.





LJ7K06

Enclosed starters



For Control + Isolation + Short circuit / Overload Protection, with isolated 24 V control circuit

Enclosed safety motor starters complying with IEC 60204-1 "Safety of machinery" standards.

- ON/OFF motor starters: 1-way rotation control of 3-phase motor
 - Emergency stop ⁽¹⁾
 - Electrical circuit isolation, lockable on LJ7K09 with up to 3 padlocks
 - Short circuit protection
 - Overload protection
 - Protection against voltage drops for LJ7K09. For LJ7K06, a GVAX●● undervoltage trip may be added
 - Possible signaling with GV2SN●● indicator (to be ordered separately).
- Switching back on power supply after tripping must be a deliberate action.

Range:

- 9 pre-equipped enclosed safety starters from 0.06 to 4 kW.

Enclosures characteristics:

- Conforming to IEC 60947-1, IEC 60204-1
- Degree of protection according IEC 60529: IP55, IK07
- Ambient air temperature in operation -5 to +40°C
- Operational voltage (Ue) 690 V
- Operating position: same that as contactors
- Material: polycarbonate ⁽²⁾.

Included:

- 1 GV2ME thermal magnetic circuit breaker with mushroom emergency stop (release on ¼ turn),
 - 1 LC1K pre-wired contactor
 - 2 Harmony XB5 pushbuttons
 - 1 Integral transformer: 400/24 V, 25 VA
 - 1 GVAX undervoltage release module (with LJ7K09).
- Additional GVAX●● undervoltage release module for LJ7K06 - to be ordered separately.
- Additional GV2SN●● indicator light – to be ordered separately.
- Terminal allowing the connection of a volt-free contact, if required, in the control circuit.

Non-reversing motor starters with integral transformer, pre-wired for operation on a 3-phase 380 to 400 V 50 Hz supply (with pushbutton control of isolator function)

Standard power ratings of 3-phase motors 50 Hz in category AC-3	Circuit breaker	Dust and damp protected starter	Weight	Overall dimensions ⁽⁵⁾ WxHxD
380/400 V	Setting range of thermal trips	Reference ^{(3) (4)}	kg	
kW	A			
0.06	0.16...0.25	LJ7K06Q702	2.270	175x165x177
0.09	0.25...0.40	LJ7K06Q703	2.270	175x165x177
0.25	0.63...1	LJ7K06Q705	2.270	175x165x177
0.55	1...1.6	LJ7K06Q706	2.270	175x165x177
0.75	1.6...2.5	LJ7K06Q707	2.270	175x165x177
1.5	2.5...4	LJ7K06Q708	2.270	175x165x177
2.2	4...6.3	LJ7K06Q710	2.270	175x165x177
4	6...10	LJ7K09Q714	2.270	175x165x146

Variants (pre-assembled) ⁽⁴⁾

Description	Variants available for starter	Suffix to be added to the starter reference ⁽⁶⁾
With Emergency Stop No control pushbuttons	LJ7K06Q705...K09Q714	A04
With padlocking facility (fitted as standard on LJ7 K09)	LJ7K06Q705...K06Q710	A29
Without circuit breaker ⁽⁸⁾ (or undervoltage release voltage)	LJ7	⁽⁷⁾
Without circuit breaker ⁽⁸⁾ With Emergency Stop No control pushbuttons	LJ7K09Q7	A04
Without circuit breaker ⁽⁸⁾ Without Emergency Stop (if the emergency stop is on the machine)	LJ7K09Q7	A39
Without circuit breaker ⁽⁸⁾ Without Emergency Stop No control pushbuttons	LJ7K09Q7	A04A39

- ⁽¹⁾ **LJ7K06**: the mushroom head type Emergency Stop acts mechanically on the circuit breaker.
LJ7K09: the Emergency Stop function is performed by an undervoltage trip **GVAX385**, acting on the circuit breaker. This circuit breaker is always supplied pre-wired for use on 380/400 V 50 Hz.
- ⁽²⁾ Avoid placing this material in contact with harsh substances (detergents, chlorine solvents, ketones, alcohol, aromatic hydrocarbons).
- ⁽³⁾ In the reference, the voltage code **Q7 (380/400 V)** indicates the power supply voltage to which the starter will be connected, it being assumed that the contactor has a ~ 24 V coil (see control circuit scheme).
- ⁽⁴⁾ Some combinations of variants / control voltage may not be available. Please consult us.
- ⁽⁵⁾ Dimensions of standard versions, comprising (if any) handle, pushbutton, indicator light.
- ⁽⁶⁾ Example: **LJ7K06Q705A04**.
- ⁽⁷⁾ Delete the last 2 digits of the selected starter reference. Example: **LJ7K06Q705** becomes **LJ7K06Q7**.
- ⁽⁸⁾ Circuit breaker to be ordered separately.
 References GV2ME: see chapter B6 "Circuit breakers".

TeSys Control

Enclosed safety starters / Reverser / Ready-to-use

Product references



LG8K06



LG8K09

For Control + Isolation + Short circuit / Overload Protection

For OEM, the enclosed safety motor reverser starters comply with IEC 60204-1 "Safety of machinery" standards.

- ON/REVERSE/OFF motor starters: 2-way rotation control of 3-phase motor
- Emergency stop ⁽¹⁾
- Electrical circuit isolation, lockable on LG8K09 and LG8K12 with up to 3 padlocks
- Short circuit protection (switching back on power supply after tripping must be a deliberate action)
- Overload protection
- Protection against voltage drops for LG8K09, LG8K12. For LG8K06, a GVAX●● undervoltage trip may be added.
- Possible signaling with GV2SN●● indicator (to be ordered separately).

Range:

- 10 pre-equipped enclosed safety inverter starters from 0.06 to 5.5 kW.

Enclosures characteristics:

- Conforming to IEC 60947-1, IEC 60204-1 ⁽¹⁾
- Degree of protection according IEC 60529: IP55, IK07
- Ambient air temperature in operation -5 to +40°C
- Operational voltage (Ue) 690 V
- Operating position: same that as contactors
- Material: polycarbonate ⁽²⁾

Included:

- 2 LC1K prewired contactors
- 1 GV2ME thermal magnetic circuit breaker with mushroom emergency stop (release on ¼ turn)
- 1 "Stop" black pushbutton + 1 2-position spring return selector switch "I – II"
- 1 GVAX undervoltage release module with LG8K09, LG8K12 (to be ordered separately for LG8K06).

Reversing starters (with pushbutton control of isolation)

Standard power ratings of 3-phase motors 50-60 Hz in category AC-3			Circuit breaker Setting range of thermal trips	Dust & damp protected starter Basic reference, to be completed by adding the voltage code ⁽³⁾	Weight	Overall dimensions ⁽⁴⁾ WxHxD
220/ 230 V	400/ 415 V	440 V			kg	
kW	kW	kW	A			
–	0.06	0.06	0.16...0.25	LG8K06●●02	1.640	175x165x177
0.06	0.09	0.12	0.25...0.40	LG8K06●●03	1.640	175x165x177
–	0.18	0.18	0.40...0.63	LG8K06●●04	1.640	175x165x177
0.12	0.25	0.25	0.63...1	LG8K06●●05	1.640	175x165x177
0.25	0.55	0.55	1...1.6	LG8K06●●06	1.640	175x165x177
0.37	0.75	1.1	1.6...2.5	LG8K06●●07	1.640	175x165x177
0.75	1.5	1.5	2.5...4	LG8K06●●08	1.640	175x165x177
1.1	2.2	3	4...6.3	LG8K06●●10	1.640	175x165x177
1.5	4	4	6...10	LG8K09●●14	1.640	175x165x177
3	5.5	5.5	9...14	LG8K12●●16	1.640	175x165x177

Voltage codes ⁽³⁾

Volts ~ 50/60 Hz	220/ 230	380/ 400	400/ 415
	M7	Q7	N7

⁽¹⁾ LG8K06: the mushroom head type Emergency Stop acts mechanically on the circuit breaker. LG8K09, LG8K12: the Emergency Stop function is performed by an undervoltage trip, acting on the circuit breaker.

This circuit breaker is always supplied pre-wired for use on 380/400/415 V 50 Hz. For a 60 Hz supply, please consult your Regional Sales Office.

⁽²⁾ Avoid allowing the material to come into contact with strong bases (detergents, chlorine solvents, ketones, alcohol, aromatic hydrocarbons).

⁽³⁾ Please check the availability of your variant in the index page A1/34. The SEARCH function of your viewer can be used.

⁽⁴⁾ Dimensions of standard versions, comprising (if any) handle, pushbutton, indicator light.





LJ8K06



LJ8K09

For Control + Isolation + Short circuit /Overload Protection, with isolated 24 V control circuit

For OEM, the enclosed safety motor reverser starters comply with IEC 60204-1 "Safety of machinery" standards.

- ON/REVERSE/OFF motor starters: 2-way rotation control of 3-phase motor
- Emergency stop ⁽¹⁾
- Electrical circuit isolation, lockable on LJ8K09 with up to 3 padlocks
- Short circuit protection (switching back on power supply after tripping must be a deliberate action)
- Overload protection
- Protection against voltage drops for LJ8K09. For LJ8K06, a GVAX●● undervoltage trip may be added
- Possible signaling with GV2SN●● indicator (to be ordered separately).

Range:

- 9 pre-equipped enclosed safety inverter starters from 0.06 to 4 kW.

Enclosures characteristics:

- Conforming to IEC 60947-1, IEC 60204-1
- Degree of protection according IEC 60529: IP55, IK07
- Ambient air temperature in operation -5 to +40°C
- Operational voltage (Ue) 690 V
- Operating position: same that as contactors
- Material: polycarbonate ⁽²⁾.

Included:

- 2 LC1K prewired contactors
- 1 GV2ME thermal magnetic circuit breaker with mushroom emergency stop (release on ¼ turn)
- 1 Integral transformer: 400/24 V, 25 VA
- 1 "Stop" black pushbutton + 1 2-position spring return selector switch "I – II"
- 1 GVAX undervoltage release module with LJ8K09 (to be ordered separately for LJ8K06).
- Terminal allowing the connection of a volt-free contact, if required, in the control circuit.

Reversing motor starters with integral transformer, pre-wired for operation on a 3-phase 380 to 400 V 50 Hz supply (with pushbutton control of isolator function)

Standard power ratings of 3-phase motors 50 Hz in category AC-3	Circuit breaker	Dust and damp protected starter	Weight	Overall dimensions ⁽⁵⁾ WxHxD
380/400 V	Setting range of thermal trips	Reference ^{(3) (4)}		
kW	A		kg	
0.06	0.16...0.25	LJ8K06Q702	2.650	175x165x177
0.18	0.40...0.63	LJ8K06Q704	2.650	175x165x177
0.25	0.63...1	LJ8K06Q705	2.650	175x165x177
0.55	1...1.6	LJ8K06Q706	2.650	175x165x177
0.75	1.6...2.5	LJ8K06Q707	2.650	175x165x177
1.5	2.5...4	LJ8K06Q708	2.650	175x165x177
2.2	4...6.3	LJ8K06Q710	2.650	175x165x177
4	6...10	LJ8K09Q714	2.650	175x165x146

Variants (pre-assembled) ⁽⁴⁾

Description	Variants available for starter	Suffix to be added to the starter reference
Without circuit breaker ⁽⁷⁾ (or undervoltage release voltage)	LJ8	⁽⁶⁾

⁽¹⁾ LJ8K06: the mushroom head type Emergency Stop acts mechanically on the circuit breaker. LJ8K09: the Emergency Stop function is performed by an undervoltage trip GVAX385, acting on the circuit breaker. This circuit breaker is always supplied pre-wired for use on 380/400 V 50 Hz.

⁽²⁾ Avoid placing this material in contact with harsh substances (detergents, chlorine solvents, ketones, alcohol, aromatic hydrocarbons).

⁽³⁾ In the reference, the voltage code Q7 (380/400 V) indicates the power supply voltage to which the starter will be connected, it being assumed that the contactor has a ~ 24 V coil (see control circuit scheme).

⁽⁴⁾ Please check the availability of your variant in the index page A1/34. The SEARCH function of your viewer can be used.

⁽⁵⁾ Dimensions of standard versions, comprising (if any) handle, pushbutton, indicator light.

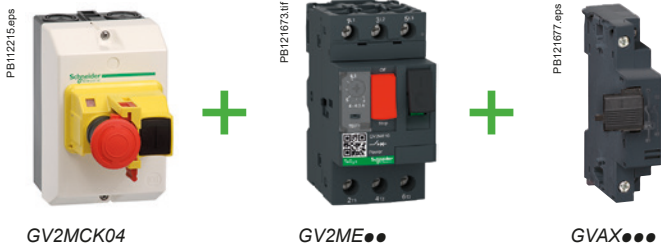
⁽⁶⁾ Delete the last 2 digits of the selected starter reference. Example: LJ8K09Q714 becomes LJ8K09Q7.

⁽⁷⁾ Circuit breaker to be ordered separately. References GV2ME: see chapter B6 "Circuit breakers".

TeSys Control

Enclosure for safety starters / DOL / to be completed
with ref. GV2ME, GVAX

Product references



GV2MCK04 enclosure is fitted with a mushroom pushbutton.
It allows, with addition of a circuit breaker and undervoltage trip, the construction of a safety direct-on-line starter conforming INRS and VDE0113.

- Enclosures characteristics:
- Conforming to IEC 60947-2; IEC 60947-4-1
 - Degree of protection according IEC 60529: refer to selection chart
 - Operational voltage (Ue) 690 V
 - Material : polycarbonate (1).

Enclosure						
Enclosure for thermal-magnetic circuit breakers GV2ME						
Type	Degree of protection	Possible no. of side mounting auxiliary contact blocks on GV2ME		Reference	Weight kg	Overall dimensions WxHxD
		LH side	RH side			
Surface mounting, double insulated with protective conductor. Sealable cover	IP55	1	1	GV2MCK04	0.420	93x147x145.5

GV2ME circuit beaker, GVAX undervoltage trip
Product references: page A1/32.

(1) Avoid placing this material in contact with harsh substances (detergents, chlorine solvents, ketones, alcohol, aromatic hydrocarbons).

Enclosed starters



TeSys Control

Enclosures, components,
for customer assemblies
Spare parts



Enclosed starters

PB121229.eps



VCFXGE4

PB121230.eps



VBFXGE2



PB121728.eps



V0

PB121232.eps



V4

Empty enclosures with rotary handle

IP65 enclosure with red padlockable handle operator and yellow front plate (for mounting a main or Emergency Stop switch-disconnector)

Ithe	For switch body	Nb. of possible add. module attachments	Reference ⁽¹⁾	Weight
A	A			kg
10...32	VN12, VN20 V02...V2	2	VCFXGE1	0.340
10...32	V02...V2	4	VCFXGE4	0.660
50...63	V3 - V4	3	VCFXGE2	0.660
100... 140	V5 - V6	1	VCFXGE6	1.04

IP65 enclosure with black padlockable handle and black front plate (for mounting a main switch-disconnector)

10...32	VN12, VN20 V02...V2	2	VBFXGE1	0.340
10...32	V02...V2	4	VBFXGE4	0.660
50...63	V3-V4	3	VBFXGE2	0.660
100... 140	V5 - V6	1	VBFXGE6	1.04

Switch bodies to fit VCFX, VBFX enclosures ⁽²⁾

Standard applications

Description	Rating	Reference	Weight
	A		kg
3-pole switch-disconnectors	10	VN12	0.110
	16	VN20	0.110

High performance applications

Description	Rating	Reference	Weight
	A		kg
3-pole switch-disconnectors	10	V02	0.200
	16	V01	0.200
	20	V0	0.200
	25	V1	0.200
	32	V2	0.200
	50	V3	0.500
	80	V4	0.500
	125	V5	0.900
	175	V6	0.900

⁽¹⁾ Enclosure not suitable in atmosphere contaminated with harsh substances (detergents, chlorine solvents, ketones, alcohol, aromatic hydrocarbons).

⁽²⁾ For characteristics of switch-disconnectors, please consult your Regional Sales Office.

TeSys Control

Enclosures for DOL starters / To be completed
with ref. GV2ME, LC1K

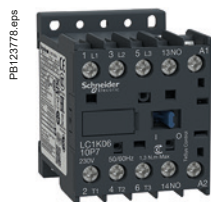
Product references



LE1GVMEK, LE1GVMEKA59



GV2ME●●



LC1K0610●●

Empty enclosures with sealing device

Composition	Reference
Insulating enclosure with GV2E01 sealing device	LE1GVMEK
Insulating enclosure with GV2E01 sealing device, neutral terminal	LE1GVMEKA59

Direct-on-line starters characteristics

(based on LE1GVMEK enclosure + GV2ME circuit breaker + LC1K contactor assemblies)

Functions / range / specificities:

- Circuit Isolation
- Protection against short circuit
- Motor protection: motor OFF in case of overload – manual reset with the black pushbutton.
- ON/OFF motor control
- Functions can be completed with optional components: remote control, signaling.

Enclosures characteristics:

- Conforming to IEC 60947-4-1 standard
- Degree of protection IP55, according IEC 60529
- Ambient air temperature in operation -5 to +40°C
- Operating position: same as K series contactors
- Material: polycarbonate ⁽¹⁾.

■ 6 ratings of direct-on-line starters from 0.37 to 5.5 kW (400 V AC) can be realized, based the combinations of circuit breaker + contactor to be ordered separately:

- GV2ME thermal magnetic circuit breaker, of the required rating (see below)
- LC1K contactor, of the required rating (see below)
- optional accessories (indicating light, On pushbutton, sealing kit...).

Circuit breakers + contactors - Type 1 coordination ⁽²⁾

Standard power ratings of 3-phase motors 50/60 Hz in AC-3			Setting range of thermal trips	Fixed magnetic current 13 Irth	For customer assembly	
400/415 V	440 V	500 V			Motor circuit breaker Reference	Contactor Reference to be completed with the coil voltage code ⁽³⁾
kW	kW	kW	A	A		
0.37	0.37	0.37	1...1.6	22.5	GV2ME06	LC1K0610●●
0.55	0.55	0.55	-	-	-	-
-	-	0.75	-	-	-	-
0.75	0.75	-	1.6...2.5	33.5	GV2ME07	LC1K0610●●
-	1.1	1.1	-	-	-	-
1.1	-	1.5	2.5...4	51	GV2ME08	LC1K0610●●
1.5	1.5	2.2	-	-	-	-
2.2	2.2	-	4...6.3	78	GV2ME10	LC1K0610●●
-	3	3	-	-	-	-
3	-	4	6...10	138	GV2ME14	LC1K0910●●
4	4	5.5	-	-	-	-
5.5	5.5	7.5	9...14	170	GV2ME16	LC1K1210●●

Coil voltage codes

Volts	24	110	220/230	230	230/240	380/400
~ 50/60 Hz	B7	F7	M7	P7	U7	Q7
---	BW3	-	-	-	-	-

BW3 coil: low consumption (1.5 W), wide range (0.7...1.3 U_c) with integral suppression device as standard.

⁽¹⁾ Avoid placing this material in contact with harsh substances (detergents, chlorine solvents, ketones, alcohol, aromatic hydrocarbons).

⁽²⁾ Extract from Coordination tables see chapter A6.

⁽³⁾ Please check the availability of your variant in the index page A1/34. The SEARCH function of your viewer can be used.



TeSys Control

Empty enclosures for standard starters

Product references

Enclosed starters

PB112264.epps



DE1DS1A04

PB112269.epps



DE1DS1A05

PB112269.epps



DE1DS1

PB112275.epps



DE1DS1A13

Empty enclosures for starters without isolating device		
Head(s) mounted on cover	Designed for use with	Reference
Without	LE1D09 and D12	DE1DS1A04
	LE1D18...D35	DE1DS2A04
	LE2D09...D35	DE1DS2A04
1 flush blue head "R"	LE1D09 and D12	DE1DS1A05
	LE1D18...D35	DE1DS2A05
	LE2D09...D35	DE1DS2A05
1 flush green head "I" 1 projecting red head "O"	LE1D09 and D12	DE1DS1
	LE1D18...D35	DE1DS2
1 flush blue head "R" 1 switch with 2 fixed positions	LE1D09 and D12	DE1DS1A13
	LE1D18...D35	DE1DS2A13

TeSys Control

Empty enclosures for safety starters

Product references



DE1KS217A06



DE1KS217A06A37

Empty enclosures for security starters			
Designed for use with	Head(s) mounted on cover	Add-on blocks	Reference
LG7	Without		DE1KS217A04
	1 flush white head "I"		DE1KS217A06
	1 projecting black head "O"		
	1 flush white head "I"	Padlocking devices	DE1KS217A06A37
	1 projecting black head "O"		
	1 head emergency stop		

Enclosed starters

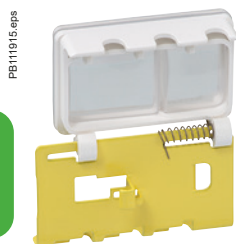


TeSys Control

TeSys Control accessories for standard and safety starters

Product references

Enclosed starters



GV2V01



GV2K011



GV2K021



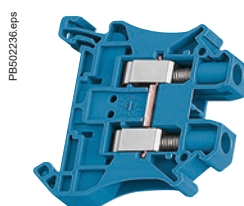
GV2K031



GV2K04



GV2E01 - GV2E02



NSYTRV62BL



NSYTRAC22BL



GV2CP21

Accessories					
Description		Sold in lots of	Unit reference	Weight kg	
Mushroom head pushbutton Ø 40 mm, red, IP55	Padlocking device ⁽⁶⁾ for GV2ME operator (padlocking is only possible in the "O" position)	1 to 3 padlocks Ø 4 to 8 mm	1	GV2V01	0.075
	Spring return ⁽²⁾		1	GV2K011	0.052
	Emergency stop Latching ⁽²⁾	Key release, key n° 455	1	GV2K021	0.160
		Turn to release	1	GV2K031	0.115
		Turn to release, padlockable	1	GV2K04 ⁽¹⁾	0.120
Sealing kit	For enclosures and front plate	IP 55 for temperature between +5 °C and +40 °C	10	GV2E01	0.012
		IP 55 for temperature between -20 °C and +40 °C	10	GV2E02	0.012
Linery passthrough neutral terminal block – 6 mm² 41 A single-level 1x1 screw		50	NSYTRV62BL	0.015	
End cover for Linery screw single-level terminal block		50	NSYTRAC22BL	0.003	

⁽¹⁾ Circuit breaker to be ordered separately. Commercial references of GV2ME01 to M22: see chapter B6 "Circuit breakers".

⁽²⁾ Supplied with IP55 GV2E01 sealing kit. To be fitted with enclosure GV2M●01.

⁽³⁾ Padlockable in "O" position using Ø 4 to 8 mm shank padlocks.

Separate front plate for GV2ME

Provides a sealing cover to GV2ME circuit breaker, on any kind of front panel.

Front plate			
Description		Reference	Weight kg
For direct control, through a panel, of a chassis mounted GV2ME	IP55	GV2CP21	0.800

TeSys Control

TeSys Control accessories for standard and safety starters

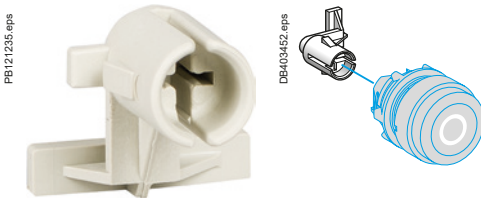
Product references



ZB5AA331



ZB5AL432



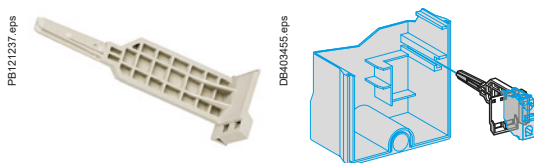
LAD9091



ZB5AD●



ZENL1111



LAD90909

Heads for Start and Stop/Reset pushbuttons

Description	For use on	Unit reference
Flush, green "I" ⁽¹⁾	LE1, LE3, LE4, LE6 D09...D35	ZB5AA331
Projecting, red "O" ⁽¹⁾	LE●D09...D35	ZB5AL432
Adaptation kit for head ZB5AL432	LE1D09 and D12	LAD9091
	LE1D18...D35, LE2D09...D35	LAD91810
	LE3, LE4, LE6 and LE8 D09...D35	LAD9T4

Heads for Reset pushbuttons

Flush, blue "R" ⁽²⁾	LE●D09...D35	ZB5AA0
		+ ZBA639 ⁽³⁾
Adaptation kit for head ZB5AA0 + ZBA639	LE1D09 and D12	LAD9092
	LE1D18...D35, LE2D09...D35	LAD91810
	LE3, LE6, LE4 and LE8D09...D35	LAD9T4

Heads for selector switches

3-position stay put	LE1D09...D35●●A09	ZB5AD3
2-position stay put	LE1D09...D35●●A13	ZB5AD2
3-position spring return to centre	LE2D09...D35 LE8D09...D35	ZB5AD5

Contact blocks

1 N/O spring return	LE●D09...D35	ZENL1111
1 N/C spring return	LE●D09...D35	ZENL1121
Mounting for contact block	LE1D09 and D12	LAD90909
	LE1D18...D35, LE2, LE3, LE4, LE6 and LE8D09...D35	LAD91809

⁽¹⁾ Remember to order adaptation kit LAD9091 or LAD91810 or LAD9T4, depending on size.

⁽²⁾ Remember to order adaptation kit LAD9092 or LAD91810 or LAD9T4, depending on size.

⁽³⁾ Sold in lots of 10.

Enclosed
starters

TeSys Control

Deca circuit breakers ref. GV2ME, undervoltage trips

Product references

Enclosed starters

PB121673.tif



GV2ME●●

Thermal magnetic circuit breakers, with screw clamp terminals

GV2ME with pushbutton control

Standard power ratings of 3-phase motors
50/60 Hz in category AC-3

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3									Setting range of thermal trips ⁽²⁾	Magnetic tripping current I _d ± 20 %	Reference
400/415 V			500 V			690 V					
P	I _{cu}	I _{cs} ⁽¹⁾	P	I _{cu}	I _{cs} ⁽¹⁾	P	I _{cu}	I _{cs} ⁽¹⁾			
kW	kA	%	kW	kA	%	kW	kA	%	A	A	
—	—	—	—	—	—	—	—	—	0.1...0.16	1.5	GV2ME01
0.06	★	★	—	—	—	—	—	—	0.16...0.25	2.4	GV2ME02
0.09	★	★	—	—	—	—	—	—	0.25...0.40	5	GV2ME03
0.12	★	★	—	—	—	0.37	★	★	0.40...0.63	8	GV2ME04
0.18	★	★	—	—	—	—	—	—			
0.25	★	★	—	—	—	0.55	★	★	0.63...1	13	GV2ME05
0.37	★	★	0.37	★	★	—	—	—	1...1.6	22.5	GV2ME06
0.55	★	★	0.55	★	★	0.75	★	★			
—	—	—	0.75	★	★	1.1	★	★			
0.75	★	★	1.1	★	★	1.5	3	75	1.6...2.5	33.5	GV2ME07
1.1	★	★	1.5	★	★	2.2	3	75	2.5...4	51	GV2ME08
1.5	★	★	2.2	★	★	3	3	75			
2.2	★	★	3	50	100	4	3	75	4...6.3	78	GV2ME10
3	★	★	4	10	100	5.5	3	75	6...10	138	GV2ME14
4	★	★	5.5	10	100	7.5	3	75			
5.5	15	50	7.5	6	75	9	3	75	9...14	170	GV2ME16
—	—	—	—	—	—	11	3	75			
7.5	15	50	9	6	75	15	3	75	13...18	223	GV2ME20
9	15	40	11	4	75	18.5	3	75	17...23	327	GV2ME21
11	15	40	15	4	75	—	—	—	20...25	327	GV2ME22 ⁽³⁾

GV2ME technical characteristics: see in chapter B6.

Undervoltage trip, INRS (can only be mounted on GV2ME)

Safety device for dangerous machines conforming to INRS and VDE0113

Side (1 block on RH side of circuit breaker GV2 ME)	110...115 V	50 Hz	GVAX115
		60 Hz	GVAX116
	127 V	60 Hz	GVAX115
	220...240 V	50 Hz	GVAX225
		60 Hz	GVAX226
	380...400 V	50 Hz	GVAX385
		60 Hz	GVAX386
	415...440 V	50 Hz	GVAX415
	440 V	60 Hz	GVAX385

GVAX technical characteristics: see in chapter B6.

(1) As % of I_{cu}.

(2) The thermal trip setting must be within the range marked on the graduated knob.

(3) Maximum rating which can be mounted in enclosures **GV2MC** or **MP**, please consult your Regional Sales Office.

★ > 100 kA.

PB121677.eps



GVAX●●●

TeSys Control

LR2K, Deca thermal overload relays

Product references



LR2K●●

Thermal overload relays - selection table

LR2K thermal overload relays can be mounted on all 3P LC1K contactors with screw clamp connectors.

Class 10 A (the standard specifies a tripping time of between 2 and 10 seconds at 7.2 In)

Relay setting range	Fuses to be used with selected relay			Reference
	Maximum rating Type	aM	gG	BS88
A	A	A	A	A
0.11...0.16	0.25	0.5	–	LR2K0301
0.16...0.23	0.25	0.5	–	LR2K0302
0.23...0.36	0.5	1	–	LR2K0303
0.36...0.54	1	1.6	–	LR2K0304
0.54...0.8	1	2	–	LR2K0305
0.8...1.2	2	4	6	LR2K0306
1.2...1.8	2	6	6	LR2K0307
1.8...2.6	4	8	10	LR2K0308
2.6...3.7	4	10	16	LR2K0310
3.7...5.5	6	16	16	LR2K0312
5.5...8	8	20	20	LR2K0314
8...11.5	10	25	20	LR2K0316
10...14	16	32	25	LR2K0321
12...16	20	40	32	LR2K0322

LRD thermal overload relays can only be mounted on LC1D contactors of same size ratio and with screw clamp connectors.

Relay setting range (A)	Fuses to be used with selected relay			For use with contactor LC1	Reference
	aM (A)	gG (A)	BS88 (A)		
Class 10 A ⁽¹⁾ for connection by screw clamp terminals or connectors					
0.10...0.16	0.25	2	–	D09...D38	LRD01
0.16...0.25	0.5	2	–	D09...D38	LRD02
0.25...0.40	1	2	–	D09...D38	LRD03
0.40...0.63	1	2	–	D09...D38	LRD04
0.63...1	2	4	–	D09...D38	LRD05
1...1.6	2	4	6	D09...D38	LRD06
1.6...2.5	4	6	10	D09...D38	LRD07
2.5...4	6	10	16	D09...D38	LRD08
4...6	8	16	16	D09...D38	LRD10
5.5...8	12	20	20	D09...D38	LRD12
7...10	12	20	20	D09...D38	LRD14
9...13	16	25	25	D12...D38	LRD16
12...18	20	35	32	D18...D38	LRD21
16...24	25	50	50	D25...D38	LRD22
23...32	40	63	63	D25...D38	LRD32
30...38	40	80	80	D32 and D38	LRD35



LRD●●

Enclosed starters

DE1DS1	KZ16	LE1D18N7A04	LE1M35N705
DE1DS1A04	KZ18	LE1D18P7	LE1M35N706
DE1DS1A05	KZ20	LE1D18P7A04	LE1M35N707
DE1DS1A13	KZ21	LE1D18P7A05	LE1M35N708
DE1DS2	KZ27	LE1D18P7A13	LE1M35N710
DE1DS2A04	KZ28	LE1D18Q7	LE1M35N712
DE1DS2A05	KZ30	LE1D18Q7A09	LE1M35N714
DE1DS2A13	KZ50	LE1D18R7	LE1M35N716
DE1KS217A04	KZ52	LE1D18U7	LE1M35N721
DE1KS217A06	KZ62	LE1D18V7	LE1M35N722
DE1KS217A06A29	KZ65	LE1D18V7A04	LE1M35P7
DE1KS217A06A37	KZ66	LE1D18V7A05	LE1M35P705
DE1KS217A29	KZ67	LE1D18V7A13	LE1M35P706
DE1KS217A29A37	KZ77	LE1D25B7	LE1M35P707
DE1KS217A37	KZ93	LE1D25F7	LE1M35P708
DE2DS2	LAD90909	LE1D25M7	LE1M35P710
DK1FB005	LAD9091	LE1D25M7A09	LE1M35P712
GC2530M5D	LAD9092	LE1D25N7	LE1M35P714
GV2CP21	LAD91809	LE1D25P7	LE1M35P716
GV2E01	LAD91810	LE1D25P7A04	LE1M35P721
GV2E02	LAD9T4	LE1D25P7A05	LE1M35P722
GV2E03	LC1KV7A80	LE1D25P7A13	LE1M35Q7
GV2K011	LE1D09B7	LE1D25Q7	LE1M35Q705
GV2K021	LE1D09E7	LE1D25Q7A09	LE1M35Q706
GV2K031	LE1D09F7	LE1D25R7	LE1M35Q707
GV2K04	LE1D09M7	LE1D25U7	LE1M35Q708
GV2MC01	LE1D09M7A04	LE1D25V7	LE1M35Q710
GV2MC02	LE1D09M7A13	LE1D25V7A04	LE1M35Q712
GV2MC03	LE1D09N7	LE1D25V7A13	LE1M35Q714
GV2MCK04	LE1D09N7A04	LE1D35B7	LE1M35Q716
GV2ME01	LE1D09P7	LE1D35E7	LE1M35Q721
GV2ME02	LE1D09P7A04	LE1D35F7	LE1M35Q722
GV2ME03	LE1D09P7A05	LE1D35M7	LE1M35R705
GV2ME04	LE1D09P7A09	LE1D35N7	LE1M35R706
GV2ME05	LE1D09P7A13	LE1D35P7	LE1M35R708
GV2ME06	LE1D09P7A13T	LE1D35P7A04	LE1M35R710
GV2ME07	LE1D09P7A95	LE1D35P7A05	LE1M35R714
GV2ME08	LE1D09P7T	LE1D35Q7	LE1M35R716
GV2ME10	LE1D09Q7	LE1D35R7	LE1M35R721
GV2ME14	LE1D09Q7A04	LE1D35U7	LE1M35R722
GV2ME16	LE1D09Q7A05	LE1D35V7	LE1M35U706
GV2ME20	LE1D09Q7A13	LE1D40AFE7	LE1M35U707
GV2ME21	LE1D09R7	LE1D40AP7	LE1M35U708
GV2ME22	LE1D09U7	LE1D40AQ7	LE1M35U710
GV2MP01	LE1D09U7A13	LE1D50AFE7	LE1M35U712
GV2MP02	LE1D09V7	LE1D50AP7	LE1M35U714
GV2MP03	LE1D09V7A04	LE1D50AP7A04	LE1M35U716
GV2MP04	LE1D09V7A09	LE1D50AQ7	LE1M35U721
GV2PC01	LE1D09V7A13	LE1D65AP7	LE1M35U722
GV2PC02	LE1D12E7	LE1D65AP7A04	LE1M35V7
GV2SN23	LE1D12F7	LE1D65AQ7	LE1M35V706
GV2SN24	LE1D12M7	LE1GVMEK	LE1M35V707
GV2SN33	LE1D12M7A04	LE1GVMEKA59	LE1M35V708
GV2SN34	LE1D12M7A09	LE1M35B705	LE1M35V710
GV2V01	LE1D12N7	LE1M35B706	LE1M35V712
GV3PC01	LE1D12P7	LE1M35B707	LE1M35V714
GV3PC02	LE1D12P7A04	LE1M35B710	LE1M35V716
GVAX115	LE1D12P7A05	LE1M35B712	LE1M35V721
GVAX116	LE1D12P7A13	LE1M35B714	LE1M35V722
GVAX225	LE1D12Q7	LE1M35B716	LE2D09M7
GVAX226	LE1D12R7	LE1M35F710	LE2D09N7
GVAX385	LE1D12U7	LE1M35M7	LE2D09P7
GVAX386	LE1D12U7A09	LE1M35M705	LE2D09Q7
GVAX415	LE1D12V7	LE1M35M706	LE2D09U7
KAD1PZ	LE1D12V7A04	LE1M35M707	LE2D09V7
KCC1Y	LE1D12V7A05	LE1M35M708	LE2D12B7
KZ101	LE1D12V7A09	LE1M35M710	LE2D12N7
KZ103	LE1D12V7A13	LE1M35M712	LE2D12Q7
KZ106	LE1D18E7	LE1M35M714	LE2D12U7
KZ13	LE1D18F7	LE1M35M716	LE2D12V7
KZ14	LE1D18M7	LE1M35M721	LE2D18M7
KZ15	LE1D18N7	LE1M35M722	LE2D18N7

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LE2D25M7	LE4D18F7	LG1K065Q705	LG7K06Q7
LE2D25N7	LE4D18M7	LG1K065Q706	LG7K06Q702
LE2D25P7	LE4D18N7	LG1K065Q706A37	LG7K06Q704
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LE3D12M7	LE6D12B7	LG7D12P716	LG8K06M704
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LE3D12P7A04	LE6D18B7	LG7D18B720	LG8K06M707
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LE4D09P7	LG1K065M703	LG7K06M705	LG8K12Q716
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LE4D09P7A05	LG1K065M705A37	LG7K06M705A29	LJ7K06Q702
LE4D09Q7	LG1K065M706	LG7K06M706	LJ7K06Q703
LE4D09R7	LG1K065M707	LG7K06M707	LJ7K06Q705
LE4D09U7A05	LG1K065M707A37	LG7K06M707A04	LJ7K06Q705A04
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LJ8K06Q704	VBD02	VCD1	VZ02
LJ8K06Q705	VBD1	VCD2	VZ1
LJ8K06Q706	VBD2	VCDN12	VZ10
LJ8K06Q707	VBDN12	VCDN20	VZ11
LJ8K06Q707A04	VBDN20	VCF0	VZ12
LJ8K06Q708	VBFO	VCF01	VZ13
LJ8K06Q710	VBFO1	VCF01GE	VZ14
LJ8K09Q7	VBFO1GE	VCF01GEGP	VZ15
LJ8K09Q714	VBFO2	VCF02	VZ16
LR2K0301	VBFO2GE	VCF02GE	VZ17
LR2K0302	VBFOGE	VCF02GEGP	VZ17L127
LR2K0303	VBFO1	VCF0GE	VZ17L69
LR2K0304	VBFO1GE	VCF0GEGP	VZ18
LR2K0305	VBFO2	VCF1	VZ2
LR2K0306	VBFO2GE	VCF1GE	VZ20
LR2K0307	VBFO3	VCF1GEGP	VZ26
LR2K0308	VBFO3GE	VCF1YZ	VZ27
LR2K0310	VBFO4	VCF2	VZ28
LR2K0312	VBFO4GE	VCF2GE	VZ29
LR2K0314	VBFO5	VCF3	VZ3
LR2K0316	VBFO5GEN	VCF3GE	VZ30
LR2K0321	VBFO6	VCF4	VZ31
LR2K0322	VBFO6GEN	VCF4GE	VZ4
LRD01	VBFXGE1	VCF5	VZ45
LRD02	VBFXGE2	VCF5GEN	VZ7
LRD03	VBFXGE4	VCF6	VZ8
LRD04	VBFXGE6	VCF6GEN	VZ9
LRD05	VC1GUN	VCFN12GE	VZN05
LRD06	VC2GUN	VCFN20GE	VZN06
LRD07	VC3GUN	VCFN25GE	VZN08
LRD08	VC4GUN	VCFN32GE	VZN11
LRD10	VC5GUN	VCFN40GE	VZN12
LRD12	VC6GUN	VCFXGE1	VZN14
LRD14	VCCD0	VCFXGE2	VZN17
LRD16	VCCD01	VCFXGE4	VZN19
LRD21	VCCD02	VCFXGE6	VZN20
LRD22	VCCD1	VGP1	VZN26
LRD32	VCCD2	VGPCLIP1	VZN30
LRD35	VCCDN12	VN12	Z01
NSYTRAC22BL	VCCDN20	VN20	ZB5AA331
NSYTRV62BL	VCCF0	VVD0	ZB5AD2
V0	VCCF01	VVD1	ZB5AD3
V01	VCCF02	VVD2	ZB5AD5
V02	VCCF1	VVD3	ZB5AL432
V1	VCCF2	VVD4	ZENL1111
V2	VCCF3	VVE0	ZENL1121
V3	VCCF4	VVE1	
V4	VCCF5	VVE2	
V5	VCCF6	VVE3	

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