The essential guide of Motor control and Protection

2013



Schneider Electric

Schneider Electric has been leading the way in the motor starter market for more than 80 years. Its TeSys products offer an extensive range of innovative motor protection and power control solutions.

TeSys

Protect your machines and installations with TeSys - a comprehensive range of contactors, circuit-breakers, starters, motor starters and power control components.



Contents

This document is a selection of the top selling products.
For more information:
http://www.schneider-electric.com

Motor control components

Selection guide ..... 2 and 3

TeSys contactors ..... 4 to 11

Contactors **TeSys K, D, F**

TeSys protection components

Motor circuit-breakers **TeSys GV2, GV3, GV7** ..... 12 to 18
Fuse carriers **TeSys DF, LS1, GK1** ..... 19 to 21
Switch-disconnector-fuses **TeSys GS** ..... 22 to 24
Thermal overload relays **TeSys K, D** ..... 25 and 26
Electronic thermal overload relays **TeSys LR9** 27
Motor management system **TeSys T** ..... 28 and 29
Electronic protection relays **TeSys LT3, LT6** 30
Switch disconnectors **Mini Vario and Vario** 31

TeSys starters

Combination motor starters **TeSys GV2/GV3 + LC** ..... 32 and 33
Starter-controller **TeSys U** ..... 34 and 35
Controller **TeSys LUTM** ..... 36 and 37
Enclosed motor starters ..... 38 and 39

Complementary products selection guides

Universal enclosures ..... 40 and 41
Power distribution and connection systems ..... 42 and 43
Incoming protection and switching ..... 44 and 45
Short circuit and overload protection ..... 46 and 47
Indication and metering ..... 48 and 49

Selection guide

Motor protection and control

⇨ *Applications:*

Motor control circuit designed with separate components

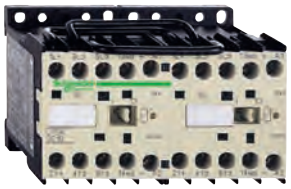
		Fuse switch disconnector	Contactor	Thermal overload relay
		ISFT	TeSys K, D, F	TeSys LRK, LRD
				
Function		Disconnection and short-circuit protection	Motor power control	Overload protection, to be associated with a contactor
Characteristics	Rated insulation voltage (Ui)	440 V DC 690 V AC	690 V to 1000 V AC DC	690 V AC
	Breaking capacity (on 400-415 V)	80 kA (Icn)	–	
	Rated operational current (on 415 V AC)	100 to 300 A (Ie)	–	
	Ie max AC3	–	6 to 16 A (TeSys K) 9 to 150 A (TeSys D) 185 to 800 A (TeSys F)	–
	Ie max AC1	–	12 to 20 A (TeSys K) 20 to 200 A (TeSys D) 275 to 1400 A (TeSYs F)	–
	Motor current In	–		0.1 to 16 A
Standards and certifications		IEC	IEC, UL, CSA	IEC, UL, CSA
Pages		More information: www.schneider-electric.com	4/4 to 4/11	4/25 to 4/26

⇨ *Applications:*

Motor control circuit designed with multifunction components

	Thermal magnetic circuit-breakers			ON-OFF Motor controller	Normal-Reverse Motor controller
	TeSys GV2	**TeSys GV3**	**TeSys GV7**	**TeSys U**	**TeSys U**
					
	Disconnection, short-circuit and overload protection. Manual power control, automatic when associated with a contactor			Full protection and ON-OFF control of motor circuit. Communication ability	Full protection Normal, Reverse control of motor circuit. Communication ability
	690 V AC				
	10 to 100 kA (Icu)	50 to 100 kA (Icu)	35 to 70 kA (Icu)	50 kA (Icu)	
	0.1 to 32 A (Ith)	9 to 65 A (Ith)	12 to 220 A (Ith)	12 to 32 A (400 V AC)	
	–				
	–				
	–				
	IEC for certain models IEC, UL, CSA		IEC		
	4/12 to 4/13	4/14	4/16	4/34 to 4/35	





Connections				
screw clamp terminals				
Rated operational current	Ie max AC-3 (Ue ≤ 440 V)	6 A	9 A	12 A
	Ie AC-1 (θ ≤ 40° C)	-	20 A	-
Rated operational power	220/240 V	1.5 kW	2.2 kW	3 kW
in category AC3	380/400 V…415/440 V	2.2 kW	4 kW	5.5 kW
	660/690 V…500 V	3 kW	4 kW	4 kW
Contactor type (1)*	∿	**LC1K06••**	**LC1K09••**	**LC1K12••**
	⎓	**LP1K06••** or **LP4K06••**	**LP1K09** or **LP4K09••**	**LP1K12** or **LP4K12••**
Reversing contactor type *	∿	**LC2K06**	**LC2K09**	**LC2K12**
with mechanical interlock	⎓	**LP2K06** or **LP5K06**	**LP2K09** or **LP5K09**	**LP2K12** or **LP5K12**
Spring terminals				
Add the figure **3** before the voltage code. Example: **LC1K0610••** becomes **LC1K06103••**				
Faston connectors, 1 x 6.35 or 2 x 2.8				
Add the figure **7** before the voltage code. Example: **LC1K0610••** becomes **LC1K06107••**				
Solder pins for printed circuit boards				
Add the figure **5** before the voltage code. Example: **LC1K0610••** becomes **LC1K06105••**				

(1) Basic reference, to be completed by adding **01** for NC auxiliary contact, or **10** for NO auxiliary contact.

* Basic reference to be completed by adding the coil voltage code

Standard control circuit voltages																	
∿ supply																	
Contactors LC1K (0.8…1.15 Uc) *(0.85…1.1 Uc)*																	
Volts	12	20	24	36	42	48	110	115	120	127	200/208		*220/230*		230	*230/240*	
50/60 Hz	**J7**	**Z7**	**B7**	**C7**	**D7**	**E7**	**F7**	**FE7**	**G7**	**FC7**	**L7**		***M7***		**P7**	***U7***	
Volts	256	277	*380/400*		400	*400/415*		440	480	500	575	600	*660/690*				
50/60 Hz	**W7**	**UE7**	***Q7***		**V7**	***N7***		**R7**	**T7**	**S7**	**SC7**	**X7**	***Y7***				
Example of complete reference: **LC1K0910P7**																	
⎓ supply																	
Contactors LP1K (0.8…1.15 Uc)																	
Volts	12	20	24	36	48	60	72	100	110	125	155	174	200	220	230	240	250
Code	**JD**	**ZD**	**BD**	**CD**	**ED**	**ND**	**SD**	**KD**	**FD**	**GD**	**PD**	**QD**	**LD**	**MD**	**MPD**	**MUD**	**UD**
Coil with integral suppression device available, add **3** to the code required. Example: **JD3**																	
Low consumption																	
Contactors LP4K (0.7…1.30 Uc), coil suppression as standard																	
Volts	12		20		24		48		72		110		120				
Code	**JW3**		**ZW3**		**BW3**		**EW3**		**SW3**		**FW3**		**GW3**				
Example of complete reference: **LC1K0910BD**																	







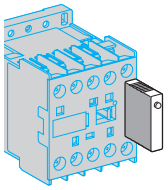
Auxiliary contact blocks

instantaneous, screw clamp connections

	■ for LC1, LP1K, LP4			■ for LC1, LP1K				
Composition	2NO	- 2NC	1NO 1NC	4NO	3NO 1NC	2NC 2NC	1NO 3NC	- 4NC
Reference	**LA1KN20**	**LA1KN02**	**LA1KN11**	**LA1KN40**	**LA1KN31**	**LA1KN22**	**LA1KN13**	**LA1KN04**

electronic time delay

Relay outputs, with common point changeover contact, ∿ or ⎓ 24…48, 2 A maximum		
Control voltage 0.85…1.1 Uc		
Maximum switching capacity 250 VA or 150 W		
Operating temperature -10…+ 60°C		
Reset time: 1.5 s during the time delay period, 0.5 s after time delay period		
Type	On-delay	
Timing range	1…30 s	
Composition	1	
Voltage	∿ or ⎓ 24…48 V	∿ 110…240
Reference	**LA2KT2E**	**LA2KT2U**



Suppressor modules

For LC1, LP1-K

Type	Varistor (∿ and ⎓)				Diode (⎓) + Zener		RC (∿)
Voltage	12…24 V	32…48 V	50…129 V	130…250 V	12…24 V	32…48 V	220…250 V
Reference	**LA4KE1B**	**LA4KE1E**	**LA4KE1FC**	**LA4KE1UG**	**LA4KC1B**	**LA4KC1E**	**LA4KA1U**





Connections							
screw clamp terminals or connectors							
Rated operational voltage		690 V					
Rated operational current	Ie max AC-3 (Ue ≤ 440 V)	9 A	12 A	18 A	25 A	32 A	38 A
	Ie AC-1 (θ ≤ 60° C)	25 A		32 A	40 A	50 A	
Rated operational power	220/240 V	2.2 kW	3 kW	4 kW	5.5 kW	7.5 kW	9 kW
in category AC3	380/400 V	4 kW	5.5 kW	7.5 kW	11 kW	15 kW	18.5 kW
	415/440 V	4 kW	5.5 kW	9 kW	11 kW	15 kW	18.5 kW
	500 V	5.5 kW	7.5 kW	10 kW	15 kW	18.5 kW	18.5 kW
	660/690 V	5.5 kW	7.5 kW	10 kW	15 kW	18.5 kW	18.5 kW
	1000 V	–	–	–	–	–	–
Contactor type *		**LC1D09**	**LC1D12**	**LC1D18**	**LC1D25**	**LC1D32**	**LC1D38**
Reversing contactor type * **with mechanical interlock**		**LC2D09**	**LC2D12**	**LC2D18**	**LC2D25**	**LC2D32**	**LC2D38**
spring terminals (1)							
Add the figure **3** before the voltage code. Example: **LC1D09P7** becomes **LC1-093P7**							
lug-clamps (2)							
Add the figure **6** before the voltage code. Example: **LC1D09P7** becomes **LC1-096P7**							
Faston connectors (3) **2 x 6.35** (power) **and 1 x 6.35** (control) **up to D12 only**							
Add the figure **9** before the voltage code. Example: **LC1D09P7** becomes **LC1-099P7**							

* Basic reference to be completed by adding the coil voltage code



(1)



(2)



(3)

Standard control circuit voltages													
∼ supply													
Volts	24	42	48	110	115	220	230	240	380	400	415	440	500
Contactors LC1D09…D150 (coils D115 and D150 with integral suppression device fitted as standard)													
50/60 Hz	**B7**	**D7**	**E7**	**F7**	**FE7**	**M7**	**P7**	**U7**	**Q7**	**V7**	**N7**	**R7**	**S7**
Contactors LC1D80…D115													
50 Hz	**B5**	**D5**	**E5**	**F5**	**FE5**	**M5**	**P5**	**U5**	**Q5**	**V5**	**N5**	**R5**	**S5**
60 Hz	**B6**	**-**	**E6**	**F6**	**-**	**M6**	**-**	**U6**	**Q6**	**-**	**-**	**R6**	**-**
⎓ supply													
Volts	12	24	36	48	60	72	110	125	220	250	440		
Contactors LC1D09…D65A (coils with integral suppression device fitted as standard)													
U 0.75…1.25 Uc	**JD**	**BD**	**CD**	**ED**	**ND**	**SD**	**FD**	**GD**	**MD**	**UD**	**RD**		
Contactors LC1D80…D95													
U 0.85…1.1 Uc	**JD**	**BD**	**CD**	**ED**	**ND**	**SD**	**FD**	**GD**	**MD**	**UD**	**RD**		
U 0.75…1.2 Uc	**JW**	**BW**	**CW**	**EW**	**-**	**SW**	**FW**	**-**	**MW**	**-**	**-**		
Contactors LC1D115 and D150 (coils with integral suppression device fitted as standard)													
U 0.75…1.2 Uc	**-**	**BD**	**-**	**ED**	**ND**	**SD**	**FD**	**GD**	**MD**	**UD**	**RD**		
Low consumption													
Contactors LC1D09…D38 (coils with integral suppression device fitted as standard)													
Volts ⎓	5	12	20	24	48	110	120	250					
U 0.7…1.25 Uc	**AL**	**JL**	**ZL**	**BL**	**EL**	**FL**	**ML**	**UL**					

Example of complete reference: **LC1D09P7**







	690 V			1000 V on ∿ supply, 690 V on ⎓ supply			
	40 A	50 A	65 A	80 A	95 A	115 A	150 A
	60 A	80 A	80 A	125 A		200 A	
	11 kW	15 kW	18.5 kW	22 kW	25 kW	30 kW	40 kW
	18.5 kW	22 kW	30 kW	37 kW	45 kW	55 kW	75 kW
	22 kW	25 kW	30 kW	45 kW	45 kW	59 kW	80 kW
	22 kW	30 kW	37 kW	55 kW	55 kW	75 kW	90 kW
	30 kW	33 kW	37 kW	45 kW	45 kW	80 kW	100 kW
	–	–	–	45 kW	45 kW	75 kW	90 kW
	LC1D40A	**LC1D50A**	**LC1D65A**	**LC1D80**	**LC1D95**	**LC1D115**	**LC1D150**
	LC2D40A	**LC2D50A**	**LC2D65A**	**LC2D80**	**LC2D95**	**LC2D115**	**LC2D150**

Mounting accessories for 3-pole reversing contactors

2 identical contactors with screw clamp terminals or connectors, horizontally mounted

Mechanical interlock	Set of connections	Mechanical interlock
■ **with an electrical interlocking kit for the contactors**		
LC1-D09…D38	**LAD-9R1V**	included
■ **with integral electrical interlocking**		
LC1-D80 and D95 (∿)	**LA9D8069**	**LA9D4002**
LC1-D80 and D95 (⎓)	**LA9D8069**	**LA9D8002**
LC1-D115 and D150	**LA9D11569**	**LA9D11502**
■ **without electrical interlocking**		
LC1-D09…D38	**LA99R1**	included
LC1-D40A…D65A	**LAD9R3**	included
LC1-D80 and D95 (∿)	**LA9D8069**	**LA9D50978**
LC1-D80 and D95 (⎓)	**LA9D8069**	**LA9D80978**



Mechanical latch blocks

Clip-on front mounting, manual or electrical unlatching control

For use on contactor	Reference	Standard control circuit voltages
LC1D09…D65A ∿ or ⎓, **LC1DT20…DT80** ∿ or ⎓	**LAD6K10•**	**B E F M Q**
LC1D80…D150 3P ∿, **LC1D80** and **D115** 3P ∿, **LC1D115** 4P ⎓	**LA6DK20•**	**B E F M Q**



Contact type			Instantaneous, connection by screw terminals	
Block mounting			Front mounting	Side mounting
References	Contact	1 NO	**LADN10**	–
		1 NC	**LADN01**	–
		1 NO + 1 NC	**LADN11**	**LAD8N11**
		2 NO	**LADN20**	**LAD8N20**
		2 NC	**LADN02**	**LAD8N02**
		2 NO + 2 NC	**LADN22**	–
		1 NO + 3 NC	**LADN13**	–
		3 NO + 1 NC	**LADN31**	–
		4 NO	**LADN40**	–
		4 NC	**LADN04**	–

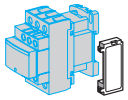


Contact type		Time delay, connection by screw terminals		
Block mounting		Front mounting		
Time delay12		0.1…3 s	0.1…30 s	10…180 s
References	On-delay	LADT0	LADT2	LADT4
	Off-delay	LADR0	LADR2	LADR4

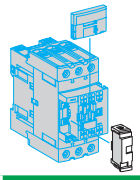
Maximum number of auxiliary contacts that can be fitted

Type	Number of poles and size		Instantaneous				Time delay
			Side mounting		Front mounting		Front mounting
			on left side	on right side	1 contact	2 contacts 4 contacts	
AC	3P	LC1D09…D38	1	– and	–	1 or 1	or 1
		LC1D40A…D65A	1	or 1 and	–	1 or 1	or 1
		LC1D80…95 (50/60 Hz)	1	1 or	2	and 1 or 1	or 1
		LC1D80…95 (50 or 60 Hz)	1	1 and	2	and 1 or 1	or 1
		LC1D115 and D150	1	– and	–	1 or 1	or 1
	4P	LC1DT20…DT40	1	– and	–	1 or 1	or 1
		LC1DT60A…D80A	1	or 1 and	–	1 or 1	or 1
		LC1D115	1	1 and	1	or 1 or 1	or 1
DC	3P	LC1D09…D38	–	–	–	1 or 1	or 1
		LC1D40A…D65A	1	or 1 and	–	1 or 1	or 1
		LC1D80 and 95	–	–	1	or 1 or 1	or 1
		LC1D115 and D150	1	– and	–	1 or 1	or 1
	4P	LC1DT20…DT40	–	–	–	1 or 1	or 1
		LC1DT60A…D80A	–	–	–	1 or 1	or 1
		LC1D115	1	1	–	and 1 or 1	or 1
DC low consumption	3P	LC1D09…D38	–	–	–	1 –	–
	4P	LC1DT20…DT40	–	–	–	1 –	–

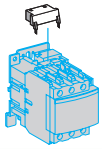
Contactors
Suppressor modules



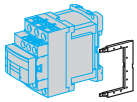
Type of module			RC circuits (Resistor-Capacitor)		
Mounting			Side clip-on	Front clip-on	Screw fixing
For use with contactor			D09…D38(3P) DT20…DT40(4P)	D40A…D65A(3P) DT60A…DT80A(4P)	D80…D150(3P) D40…D115(4P)
References	Voltage	24…48 V AC	**LAD4RCE**	**LAD4RC3E**	**LA4DA2E**
		50…127 V AC	**LAD4RCG**	**LAD4RC3G**	**LA4DA2G**
		110…240 V AC	**LAD4RCU**	**LAD4RC3U**	**LA4DA2U**
		380…415 V AC	–	**LAD4RC3N**	**LA4DA2N**



Type of module			Varistors (peak limiting)		
Mounting			Side clip-on	Front clip-on	Screw fixing
For use with contactor			D09…D38(3P) DT20…DT40(4P)	D40A…D65A(3P) DT60A…DT80A(4P)	D80…D150(3P) D40…D115(4P)
References	Voltage	24…48 V AC	**LAD4VE**	**LAD4V3E**	**LA4DE2E**
		50…127 V AC	**LAD4VG**	**LAD4V3G**	**LA4DE2G**
		110…240 V AC	**LAD4VU**	**LAD4V3U**	**LA4DE2U**
		24…48 V DC	–	–	**LAD4DE3E** (AC and DC)
		50…127 V DC	–	–	**LAD4DE3G** (AC and DC)
		110…240 V DC	–	–	**LAD4DE3U** (AC and DC)



Type of module			Flywheel diodes		
Mounting			Side clip-on	Front clip-on	Screw fixing
For use with contactor			D09…D38(3P) DT20…DT40(4P)	D40A…D65A(3P) DT60A…DT80A(4P)	D80…D150(3P) D40…D115(4P)
References	Voltage	24…250 V DC	**LAD4DDL**	**LAD4D3U**	**LAD4DC3U**



Type of module			Bidirectional peak limiting diode		
Mounting			Side clip-on	Front clip-on	Screw fixing
For use with contactor			D09…D38(3P) DT20…DT40(4P)	D40A…D65A(3P) DT60A…DT80A(4P)	D80…D150(3P) D40…D115(4P)
References	Voltage	24 V AC	**LAD4TB**	**LAD4T3B**	**LA4DB2B**
		24 V DC	**LAD4TBDL**	**LAD4T3B**	**LA4DB2S**
		72 V AC	**LAD4TS**	**LAD4T3S**	**LA4DB3B**
		72 V DC	**LAD4TSDL**	**LAD4T3S**	**LA4DB3S**
		125 V DC	**LAD4TGDL**	**LAD4T3G** (AC and DC)	–
		250 V DC	**LAD4TUDL**	**LAD4T3U** (AC and DC)	–
		600 V DC	**LAD4TXDL**	**LAD4T3R** (AC and DC)	–

Contactors
90…450 kW





Rated operational current	Ie max AC-3 (Ue ≤ 440 V)	185 A	225 A	265 A	330 A
	Ie AC-1 (θ ≤ 40° C)	275 A	315 V	350 A	400 A
Rated operational voltage		1 000 V	1 000 V	1 000 V	1 000 V
Number of poles		3 or 4	3 or 4	3 or 4	3 or 4
Rated operational power	220/240 V	55 kW	63 kW	75 kW	100 kW
in category AC3	380/400 V	90 kW	110 kW	132 kW	160 kW
	415 V	100 kW	110 kW	140 kW	180 kW
	440 V	100 kW	110 kW	140 kW	200 kW
	500 V	110 kW	129 kW	160 kW	200 kW
	660/690 V	110 kW	129 kW	160 kW	220 kW
	1000 V	100 kW	100 kW	147 kW	160 kW
Contactor type*		**LC1F185**	**LC1F225**	**LC1F265**	**LC1F330**
Reversing contactor type*		**LC2F185**	**LC2F225**	**LC2F265**	

* Basic reference to be completed by adding the coil voltage code

Standard control circuit voltages

~ supply													
Volts	24	48	110	115	120	208	220	230	240	380	400	415	440
Contactors LC1F115…F225 *(0.85…1.1 Uc)*													
50 Hz (coil LX1)	**B5**	**E5**	**F5**	**FE5**	**-**	**-**	**M5**	**P5**	**U5**	**Q5**	**V5**	**N5**	**-**
60 Hz (coil LX1)	**-**	**E6**	**F6**	**-**	**G6**	**L6**	**M6**	**-**	**U6**	**Q6**	**-**	**-**	**R6*U7***
40…400 Hz (coil LX9)	**-**	**E7**	**F7**	**FE7**	**G7**	**L7**	**M7**	**P7**	**U7**	**Q7**	**V7**	**N7**	**R7**
Contactors LC1F265…F330*U7*													
40…400 Hz (coil LX1)	**B7**	**E7**	**F7**	**FE7**	**G7**	**L7**	**M7**	**P7**	**U7**	**Q7**	**V7**	**N7**	**R7**
Contactors LC1F400…F630*U7*													
40…400 Hz (coil LX1)	**-**	**E7**	**F7**	**FE7**	**G7 (1)**	**L7**	**M7**	**P7**	**U7**	**Q7**	**V7**	**N7**	**R7**
Contactor LC1F780*U7*													
40…400 Hz (coil LX1)	**-**	**-**	**F7**	**FE7**	**F7**	**L7**	**M7**	**P7**	**U7**	**Q7**	**V7**	**N7**	**R7**
Contactor LC1F800*U7*													
40…400 Hz (coil LX1)	**-**	**-**	**FE7**	**FE7**	**FE7**	**-**	**P7**	**P7**	**P7**	**V7**	**V7**	**V7**	**V7*Y7***
⎓ supply													
Volts	24	48	110	125	220	230	250	400	440				
Contactors LC1F115…F330 *(0.85…1.1 Uc)*													
(coil LX4-F)	**BD**	**ED**	**FD**	**GD**	**MD**	**MD**	**UD**	**-**	**RD**				
Contactors LC1F400…F630 *(0.85…1.1 Uc)*													
(coil LX4-F)	**-**	**ED**	**FD**	**GD**	**MD**	**-**	**UD**	**-**	**RD**				
Contactor LC1F780 *(0.85…1.1 Uc)*													
(coil LX4-F)	**-**	**-**	**FD**	**GD**	**MD**	**-**	**UD**	**-**	**RD**				
Contactor LC1F800 *(0.85…1.1 Uc)*													
(coil LX4-F)	**-**	**-**	**FW**	**FW**	**MW**	**MW**	**-**	**QW**	**-**				
Contactor LC1F1250													
(coil LX4F)	**-**	**ED**	**FD**	**-**	**MD**	**-**	**UD**	**-**	**-**	**-**	**-**	**-**	**-**
Contactor LC1F1400													
(coil LX4F)	**-**	**-**	**FD**	**GD**	**MD**	**-**	**UD**	**-**	**RD**	**-**	**-**	**-**	**-**

Example: For a 630 A contactor with a 110 V ~ coil, order **LC1F630F7**

(1) F7 for LC1-F630






	400 A	500 A	630 A	780 A	800 A	-	-
	500 A	700 A	1 000 A	1 600 A	1 000 A	1260	1400
	1 000 V	1 000 V	1 000 V	1 000 V	1 000 V	1000	1000
	2, 3 or 4	2, 3 or 4	2, 3 or 4	3 or 4	3	3	3
	110 kW	147 kW	200 kW	220 kW	250 kW	Sans objets	Sans objets
	200 kW	250 kW	335 kW	400 kW	450 kW	en AC1	en AC1
	220 kW	280 kW	375 kW	425 kW	450 kW	-	-
	250 kW	295 kW	400 kW	425 kW	450 kW	-	-
	257 kW	355 kW	400 kW	450 kW	450 kW	-	-
	280 kW	335 kW	450 kW	475 kW	475 kW	-	-
	185 kW	335 kW	450 kW	450 kW	450 kW	-	-
	LC1F400	**LC1F500**	**LC1F630**	**LC1F780**	**LC1F800**	**LC1F1250**	**LC1F1400**
		For customer assembly				-	-





Auxiliary contact blocks

instantaneous						dust & damp protected contacts		time delay 1 NO + 1 NC		
Composition	Reference	Composition	Reference	Composition	Reference	Composition	Reference	Type	Range	Reference
NO NC		NO NC		NO NC		NO NC				
1 -	**LADN10**	1 1	**LADN11**	2 2	**LADN22**	2 - - -	**LA1DX20**	On-delay	0.1…3 s	**LADT0**
- 1	**LADN01**	2 -	**LADN20**	1 3	**LADN13**	2 2 - -	**LA1DY20**		0.1…30 s	**LADT2**
		- 2	**LADN02**	4 -	**LADN40**	2 - 2 -	**LA1DZ40**		10…180 s	**LADT4**
				- 4	**LADN04**	2 - 1 1	**LA1DZ31**		1…30 s	**LADS2**
				3 1	**LADN31**			Off-delay	0.1…3 s	**LADR0**
				2 2	**LADC22**				0.1…30 s	**LADR2**
									10…180 s	**LADR4**

Mounting accessories for 3-pole reversing contactors for motor control

2 identical contactors, horizontally mounted

Mechanical interlock with an electrical interlocking kit for the contactors

Contactor type	Set of connections	Mechanical interlock
LC1F115	**LA9FF976**	**LA9FF970**
LC1F150	**LA9F15076**	**LA9FF970**
LC1F185	**LA9FG976**	**LA9FG970**
LC1F225	**LA9F22576**	**LA9FG970**
LC1F265	**LA9FH976**	**LA9FJ970**
LC1F330	**LA9FJ976**	**LA9FJ970**
LC1F400	**LA9FJ976**	**LA9FJ970**
LC1F500	**LA9FK976**	**LA9FJ970**
LC1F630 or **LC1F800**	**LA9FL976**	**LA9FL970**
LCIF1250	-	-
LCIF1400	-	-

Motor circuit-breakers
Thermal-magnetic 0.06…15 kW



Thermal-magnetic circuit-breakers GV2-ME and GV2-P for connection by screw clamp terminals

GV2-ME with pushbutton control, GV2-P control by rotary knob

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3									Setting range	Magnetic	Reference	
400/415 V			500 V			690 V			of thermal	tripping		
P	Icu	Ics (1)	P	Icu	Ics (1)	P	Icu	Ics (1)	trips	current		
kW	kA		kW	kA		kW	kA		A	A (d ± 20%)		
-	-	-	-	-	-	-	-	-	0.1…0.16	1.5	**GV2ME01**	**GV2P01**
0.06	★	★	-	-	-	-	-	-	0.16…0.25	2.4	**GV2ME02**	**GV2P02**
0.09	★	★	-	-	-	-	-	-	0.25…0.40	5	**GV2ME03**	**GV2P03**
0.12	★	★	-	-	-	0.37	★	★	0.40…0.63	8	**GV2ME04**	**GV2P04**
0.18	★	★	-	-	-	-	-	-	0.40…0.63	8	**GV2ME04**	**GV2P04**
0.25	★	★	-	-	-	0.55	★	★-	0.63…1	13	**GV2ME05**	**GV2P05**
0.37	★	★	0.37	★	★	-	-	-	1…1.6	22.5	**GV2ME06**	**GV2P06**
0.55	★	★	0.55	★	★	0.75	★	★	1…1.6	22.5	**GV2ME06**	**GV2P06**
-	-	-	0.75	★	★	1.1	★	★	1…1.6	22.5	**GV2ME06**	**GV2P06**
0.75	★	★	1.1	★	★	1.5	3	75	1.6…2.5	33.5	**GV2ME07**	
0.75	★	★	1.1	★	★	1.5	8	100	1.6…2.5	33.5		**GV2P07**
1.1	★	★	1.5	★	★	2.2	3	75	2.5…4	51	**GV2ME08**	
1.1	★	★	1.5	★	★	2.2	8	100	2.5…4	51		**GV2P08**
1.5	★	★	2.2	★	★	3	3	75	2.5…4	51	**GV2ME08**	
1.5	★	★	2.2	★	★	3	3	100	2.5…4	51		**GV2P08**
2.2	★	★	3	50	100	4	3	75	4…6.3	78	**GV2ME10**	
2.2	★	★	3	★	★	4	6	100	4…6.3	78		**GV2P10**
3	★	★	4	10	100	5.5	3	75	6…10	138	**GV2ME14**	
3	★	★	4	50	100	5.5	6	100	6…10	138		**GV2P14**
4	★	★	5.5	10	100	7.5	3	75	6…10	138	**GV2ME14**	
4	★	★	5.5	50	100	7.5	6	100	6…10	138		**GV2P14**
5.5	15	50	7.5	6	75	9	3	75	9…14	170	**GV2ME16**	
5.5	★	★	7.5	42	75	9	6	100	9…14	170		**GV2P16**
-	-	-	-	-	-	11	3	75	9…14	170	**GV2ME16**	
-	-	-	-	-	-	11	6	100	9…14	170		**GV2P16**
7.5	15	50	9	6	75	15	3	75	13…18	223	**GV2ME20**	
7.5	50	50	9	10	75	15	4	100	13…18	223		**GV2P20**
9	15	40	11	4	75	18.5	3	75	17…23	327	**GV2ME21**	
9	50	50	11	10	75	18.5	4	100	17…23	327		**GV2P21**
11	15	40	15	4	75	-	-	-	20…25	327	**GV2ME22** (2)	
11	50	50	15	10	75	-	-	-	20…25	327		**GV2P22**
15	10	50	18.5	4	75	22	3	75	24…32	416	**GV2ME32**	
15	50	50	18.5	10	75	22	4	100	24…32	416		**GV2P32**

H > 100 kA

(1) as % of Icu

(2) combined with a recommended contactor

Thermal-magnetic circuit-breakers GV2-ME for connection by spring terminals

Add the figure **3** to the end of the reference. Example: **GV2ME22** becomes **GV2ME223**

Thermal-magnetic circuit-breakers GV2-ME for connection by ring terminals

Add the figure **6** to the end of the reference. Example: **GV2ME32** becomes **GV2ME326**

TeSys extended rotary handles

These handles are suitable for the following products	GV2 -P and GV2 - L	GV3-P and GV3 - L	TeSys U
IP54 kit black handle	GV2APN01	GV3APN01	LU9APN21
IP54 kit red handle and yellow front	GV2APN02	GV3APN02	LU9APN22
IP65 kit red handle and yellow front	GV2APN04	GV3APN04	LU9APN24

Common accessories GV2 / GV3, see page 4/15

Motor circuit-breakers
Magnetic 0.06 to 15 kW



Magnetic circuit-breakers GV2-LE and GV2-L for connection by screw clamp terminals
GV2-LE control by rocker lever, GV2-L control by rotary knob

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3									Magnetic	Tripping	Use in association	Reference
400/415 V			500 V			690 V			protection	current	with thermal	
P	Icu	Ics (1)	P	Icu	Ics (1)	P	Icu	Ics (1)	rating	d ± 20%	overload relay	
kW	kA		kW	kA		kW	kA		A	A		
0.06	★	★	-	-	-	-	-	-	0.4	5	LR2K0302	**GV2LE03**
0.09	★	★	-	-	-	-	-	-	0.4	5	LR2K0304	**GV2LE03**
											or LRD03	**GV2L03**
0.12	★	★	-	-	-	0.37	★	★	0.63	8	LR2K0304	**GV2LE04**
											or LRD04	**GV2L04**
0.18	★	★	-	-	-	-	-	-	0.63	8	LR2K0305	**GV2LE04**
											or LRD04	**GV2L04**
-	-	-	-	-	-	0.55	★	★	1	13	LR2K0305	**GV2LE05**
											or LRD05	**GV2L05**
0.25	★	★	-	-	-	-	-	-	1	13	LR2K0306	**GV2LE05**
											or LRD05	**GV2L05**
-	-	-	-	-	-	0.75	★	★	1	13	LR2K0306	**GV2LE05**
											or LRD06	**GV2L05**
0.37	★	★	0.37	★	★	-	-	-	1	13	LR2K0306	**GV2LE05**
											or LRD05	**GV2L05**
0.55	★	★	0.55	★	★	1.1	★	★	1.6	22.5	LR2K0307	**GV2LE06**
											or LRD06	**GV2L06**
-	-	-	0.75	★	★	-	-	-	1.6	22.5	LR2K0307	**GV2LE06**
											or LRD06	**GV2L06**
0.75	★	★	1.1	★	★	1.5	3	75	2.5	33.5	LR2K0308	**GV2LE07**
0.75	★	★	1.1	★	★	1.5	4	100	2.5	33.5	LRD07	**GV2L07**
1.1	★	★	-	-	-	-	-	-	2.5	33.5	LR2K0308	**GV2LE08**
											or LRD08	**GV2L08**
1.5	★	★	1.5	★	★	3	3	75	4	51	LR2K0310	**GV2LE08**
1.5	★	★	1.5	★	★	3	4	100	4	51	LRD08	**GV2L08**
-	-	-	2.2	★	★	-	-	-	4	51	LR2K0312	**GV2LE08**
											or LRD08	**GV2L08**
2.2	★	★	3	50	100	4	3	75	6.3	78	LR2K0312	**GV2LE10**
2.2	★	★	3	★	★	4	4	100	6.3	78	LRD10	**GV2L10**
3	★	★	4	10	100	5.5	3	75	10	138	LR2K0314	**GV2LE14**
3	★	★	4	10	100	5.5	4	100	10	138	LRD12	**GV2L14**
4	★	★	5.5	10	100	-	-	-	10	138	LR2K0316	**GV2LE14**
											or LRD14	**GV2L14**
-	-	-	-	-	-	7.5	3	75	10	138	LRD14	**GV2LE14**
-	-	-	-	-	-	7.5	4	100	10	138	LRD14	**GV2L14**
-	-	-	-	-	-	9	3	75	14	170	LRD16	**GV2LE16**
-	-	-	-	-	-	9	4	100	14	170	LRD16	**GV2L16**
5.5	15	50	7.5	6	75	11	3	75	14	170	LR2K0321	**GV2LE16**
5.5	50	50	7.5	10	75	11	4	100	14	170	LRD16	**GV2L16**
7.5	15	50	9	6	75	15	3	75	18	223	LRD21	**GV2LE20**
7.5	50	50	9	10	75	15	4	100	18	223	LRD21	**GV2L20**
9	15	40	11	4	75	18.5	3	75	25	327	LRD22	**GV2LE22**
9	50	50	11	10	75	18.5	4	100	25	327	LRD22	**GV2L22**
11	15	40	15	4	75	-	-	-	25	327	LRD22	**GV2LE22**
11	50	50	15	10	75	-	-	-	25	327	LRD22	**GV2L22**
15	10	50	18.5	4	75	22	3	75	32	416	LRD32	**GV2LE32**
15	50	50	18.5	10	75	22	4	100	32	416	LRD32	**GV2L32**

H > 100 kA

(1) as % of Icu

Common accessories GV2 / GV3, see page 4/15

Motor circuit-breakers
Thermal-magnetic 5.5…30 kW with EverLink terminal blocks



Thermal-magnetic circuit-breakers GV3-P for connection by EverLink terminal blocks (2)
Control by rotary knob

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3									Setting range	Reference
400/415 V			500 V			660/690 V			of thermal	
P	Icu	Ics (1)	P	Icu	Ics (1)	P	Icu	Ics (1)	trips	
kW	kA		kW	kA		kW	kA		A	
5.5	100	50	7.5	12	50	11	6	50	9…13	**GV3P13**
7.5	100	50	11	12	50	15	6	50	12…18	**GV3P18**
11	100	50	15	12	50	18.5	6	50	17…25	**GV3P25**
15	100	50	18.5	12	50	22	6	50	23…32	**GV3P32**
18.5	50	50	22	10	50	30	5	60	30…40	**GV3P40**
22	50	50	30	10	50	37	5	60	37…50	**GV3P50**
30	50	50	37	10	50	45	5	60	48…65	**GV3P65**

(1) as % of Icu

Thermal-magnetic circuit-breakers GV3-P for connection by ring terminals

Add the figure **6** to the end of the reference. Example: GV3-P13 becomes GV3-P13**6**

Thermal-magnetic circuit-breakers GV3-P for connection by only 1 EverLink terminal block

Add the figure **1** to the end of the reference. Example: GV3P65 becomes GV3P65**1**



Magnetic 11…30 kW with EverLink terminal blocks

Magnetic circuit-breakers GV3-L for connection by EverLink terminal blocks (2)
Control by rotary knob

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3									Associated equipment	Circuit-breaker	
400/415 V			500 V			690 V			Thermal	Short-circuit	
P	Icu	Ics	P	Icu	Ics	P	Icu	Ics	overload	protection	
kW	kA		kW	kA		kW	kA		relay	Rating A	Reference
11	100	50	15	12	50	18.5	6	50	LRD325	25	**GV3L25**
15	100	50	18.5	12	50	22	6	50	LRD332	32	**GV3L32**
18.5	50	50	22	10	50	30	5	60	LRD340	40	**GV3L40**
22	50	50	30	10	50	45	5	60	LRD350	50	**GV3L50**
30	50	50	37	10	50	45	5	60	LRD365	65	**GV3L65**

Magnetic circuit-breakers GV3-L for connection by ring terminals

Add the figure **6** to the end of the reference. Example: GV3-L25 becomes GV3-L25**6**

Magnetic circuit-breakers GV3-L for connection by only 1 EverLink terminal block

Add the figure **1** to the end of the reference. Example: GV3L65 becomes GV3L65**1**

(2) 4 mm BTR screw

Add-on blocks and accessories (3)

Add-on blocks (front)	Fault signalling contact + instantaneous auxiliary contact	
Contact type	NO (fault) + NC	NO (fault) + NO
References (4)	**GV-AED011**	**GV-AED101**

Accessories	**Cover**			**Busbars**		
Type	IP20 for lug type terminals	IP20 for lug type terminals when used with contactor	"Wide spacing" UL 508 type E	Set of 3-pole 115 A busbars for 2 circuit-breakers	Set of 3-pole 115 A busbars for 3 circuit-breakers	"S" form for side by side mounted circuit-breaker/ contactor
References	**LAD96570**	**LAD96575**	**GV3G66**	**GV3G264**	**GV3G364**	**GV3S**

(3) Common add-on blocks and accessories GV2 / GV3, see page 4/15

(4) For spring terminal version add **3** to the end of the reference. Example: GV-AED011 becomes GV-AED011**3**

Motor circuit-breakers
Accessories





(TeSys rotating handles)

Combination block GV2				
For mounting on		LC1-K or LP1-K	LC1-D09…D38	LAD-31 and LC1-D09…D38
		GV2AF01	**GV2AF3**	**GV2AF4**
Sets of 3-pole busbars GV2				
63 A	Pitch	45 mm	54 mm	72 mm
Number of tap-offs	2	**GV2G245**	**GV2G254**	**GV2G272**
	3	**GV2G345**	**GV2G354**	
	4	**GV2G445**	**GV2G454**	**GV2G472**
	5		**GV2G554**	
Protective end cover GV2				
For unused busbar outlets		**GV1G10**		
Terminal blocks GV2				
For supply to one or more GV2-G busbar sets		Connection from the top	Can be fitted with current limiter gv1-l3 (gv2-me and gv2-p)	
		GV1G09	**GV1G05**	
Padlockable external operator for GV2 and GV3 (150 to 290 mm)				
Padlocking		In “On” and “Off” position	In “Off” position	
Handle		Black	Red	
Legend plate		Blue	Yellow	
IP 54	For GV2-ME/P/L	**GV2AP01**	**GV2AP02**	
	For GV2-LE	**GV2AP03**	–	
	For GV3-P/L	**GV3AP01**	**GV3AP02**	

TeSys rotating handles for	**GV2-P**	**GV3-P**
IP54 kit black handle	**GV2APN01**	**GV3APN01**
IP54 kit red/yellow handle	**GV2APN02**	**GV3APN02**
IP65 kit red/yellow handle	**GV2APN04**	**GV3APN04**

Contact blocks common to GV2 / GV3			**NO + NC**	**NO + NC**	**NO + NO**	**(fault) + NC**	**(fault) + NO**	**CO common**
Instantaneous auxiliary contacts								point
Mounting	front		**GVAE1**	**GVAE11**	**GVAE20**			
	LH side			**GVAN11**	**GVAN20**			
Fault signalling contact + instantaneous auxiliary contact								
	LH side	NO (fault)				**GVAD1001**	**GVAD1010**	
		NC (fault)				**GVAD0101**	**GVAD0110**	
Short-circuit signalling contact								
	LH side							**GVAM11**

Electric trips for GV2 and GV3 : undervoltage or shunt (1)			
Side mounting (1 block on RH side of circuit-breaker)		50 Hz	60 Hz
Voltage	24 V	**GVA•025**	**GVA•026**
	48 V	**GVA•055**	**GVA•056**
	100 V	**GVA•107**	
	100…110 V		**GVA•107**
	110…115 V	**GVA•115**	**GVA•116**
	120…127 V	**GVA•125**	
	127 V		**GVA•115**
	200 V	**GVA•207**	
	200…220 V		**GVA•207**
	220…240 V	**GVA•225**	**GVA•226**
	380…400 V	**GVA•385**	**GVA•386**
	415…440 V	**GVA•415**	
	415 V		**GVA•416**
Padlocking device			
For use with up to 4 padlocks (padlocks not supplied) Ø 6 mm shank max		**GV2V03**	

(1) Undervoltage trips: replace the • with **U**, shunt trips: replace the • with **S**

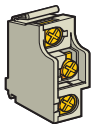
Motor circuit-breakers
Thermal-magnetic 0.75…90 kW



Thermal-magnetic circuit-breakers GV7-R for connection by screw clamp terminals
Control by rocker lever

Standard power ratings of 3-phase motors 50/60 Hz in category AC-3									Setting range	Reference
400/415 V			500 V			660/690 V			of thermal	
P	Icu	Ics (1)	P	Icu	Ics (1)	P	Icu	Ics (1)	trips	
kW	kA		kW	kA		kW	kA		A	
7.5	25	100	9	18	100	11	8	100	12…20	**GV7RE20**
9	25	100	11	18	100	15	8	100		
7.5	70	100	9	50	100	11	10	100	12…20	**GV7RS20**
9	70	100	11	50	100	15	10	100		
9	25	100	11	18	100	15	8	100	15…25	**GV7RE25**
11	25	100	15	18	100	18.5	8	100		
9	70	100	11	50	100	15	10	100	15…25	**GV7RS25**
11	70	50	15	50	100	18.5	10	100		
18.5	25	100	18.5	18	100	22	8	100	25…40	**GV7RE40**
			22	18	100					
18.5	70	100	18.5	50	100	22	10	100	25…40	**GV7RS40**
22	25	100	30	18	100	30	8	100	30…50	**GV7RE50**
37	25	100	45	18	100	55	8	100	48…80	**GV7RE80**
			55	18	100					
37	70	100	45	50	100	55	10	100	48…80	**GV7RS80**
			55	50	100					
45	25	100	-	18	100	75	8	100	60…100	**GV7RE100**
45	70	100	-	50	100	75	10	100	60…100	**GV7RS100**
55	35	100	75	30	100	90	8	100	90…150	**GV7RE150**
75	70	100	90	30	100	110	8	100		
55	70	100	75	50	100	90	10	100	90…150	**GV7RS150**
75	70	100	90	50	100	110	10	100		
90	35	100	110	30	100	160	8	100	132…220	**GV7RE220**
110	35	100	132	30	100	200	8	100		
			160	30	100					
90	70	100	110	50	100	160	10	100	132…220	**GV7RS220**

(1) as % of Icu



Add-on blocks

Contact blocks

Auxiliary contacts						
Contact type		CO				
		GV7AE11				
Thermal or magnetic fault discrimination						
		≂ 24…48 V or ⎓ 24…72 V		≂ 110…240 V		
		GV7AD111		**GV7AD112**		
Electric trips						
Voltage	50/60 Hz	48 V	110… 130 V	200… 240 V	380…440 V	
	50 Hz					525 V
Undervoltage trip (1)		**GV7AU055**	**GV7AU107**	**GV7AU207**	**GV7AU387**	**GV7AU525**
Shunt trip (1)		**GV7AS055**	**GV7AS107**	**GV7AS207**	**GV7AS387**	**GV7AS525**

(1) For mounting of a GV7-AD or a GV7-AU or AS

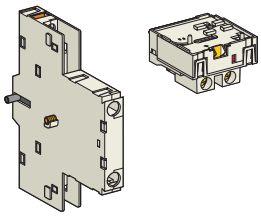
Accessories

Terminal shields IP 405				
Supplied with sealing accessory		**GV7AC01**		
Phase barriers				
Safety accessories		**GV7AC04**		
used when fitting of shields is impossible				
Insulating screens				
Ensure insulation between		**GV7AC05**		
the connections and the backplate				
Kit for combination with contactor				
Allowing link between the circuit-breaker and the contactor		LC1-F115 to F185	LC1-F225 and F26	LC1-D115 and D150
		GV7AC06	**GV7AC07**	**GV7AC08**
Rotary handles				
Handle		black		red
Legend plate		black		yellow
■ **direct**	IP 40	**GV7AP03**		**GV7AP04**
■ **extended**	IP 55	**GV7AP01**		**GV7AP02**
Conversion accessory				
For mounting on enclosure door	IP 43	**GV7AP05**		
Locking device				
For circuit-breaker not fitted with a rotary handle		**GV7V01**		



Thermal-magnetic circuit-breakers GV3-ME for connection by screw clamp terminals										
Pushbutton control										
Standard power ratings of 3-phase motors 50/60 Hz in category AC-3									Setting range	Reference
400/415 V			500 V			660/690 V			of thermal	
P	Icu	Ics (1)	P	Icu	Ics (1)	P	Icu	Ics (1)	trips	
kW	kA		kW	kA		kW	kA		A	
37	15	50	45	4	100	55	2	100	56…80	**GV3ME80**

(1) as % of Icu



Add-on blocks for GV3-ME							
Contact blocks							
Instantaneous auxiliary contacts (1 per breaker)							
Normal early break type contacts		NC + NO	NO + NO	NC + NO + NO	NO + NO + NO	NO + NO (1)	NC + NO (1)
		GV3A01	**GV3A02**	**GV3A03**	**GV3A05**	**GV3A06**	**GV3A07**
Fault signalling contact							
Normal early break type contacts		NC			NO		
		GV3A08			**GV3A09**		
Electric trips							
Voltage	50 Hz	110, 120, 127 V		220, 240 V		380, 415 V	
	60 Hz	120, 127 V		277 V		440, 480 V	
Undervoltage trip		**GV3B11**		**GV3B22**		**GV3B38**	
Shunt trip		**GV3D11**		**GV3D22**		**GV3D38**	
Padlocking device							
Start button (for bare device)		**GV1V02**					

(1) + 2 volt free terminals

Fuse carriers
0…125 A



Type			Fuse carriers without “blown fuse” indicator			
Rated insulation voltage (Ui)			500 V	690 V		
Fuse size			8.5 x 31.5 mm	10 x 38 mm	14 x 51 mm	22 x 58 mm
Conventional thermal current (Ith)			25 A	32 A	50 A	125 A
References	Number of poles	1P	**DF81**	**DF101**	**DF141**	**DF221**
		N	**DF10N**	**DF10N**	**DF14N**	**DF22N**
		1P+N	**DF81N**	**DF101N**	**DF141N**	**DF221N**
		2P	**DF82**	**DF102**	**DF142**	**DF222**
		3P	**DF83**	**DF103**	**DF143C**	**DF223C**
		3P+N	**DF83N**	**DF103N**	**DF143NC**	**DF223NC**



Type			Fuse carriers with “blown fuse” indicator			
Rated insulation voltage (Ui)			500 V	690 V		
Fuse size			8.5 x 31.5 mm	10 x 38 mm	14 x 51 mm	22 x 58 mm
Conventional thermal current (Ith)			25 A	32 A	50 A	125 A
References	Number of poles	1P	**DF81V**	**DF101V**	**DF141V**	**DF221V**
		1P + N	**DF81NV**	**DF10NV**	**DF14NV**	**DF22NV**
		2P	**DF82V**	**DF102V**	**DF142V**	**DF222V**
		3P	**DF83V**	**DF103V**	**DF143VC**	**DF223VC**
		3P + N	**DF83NV**	**DF103NV**	**DF143NVC**	**DF223NVC**

Accessories

Type	Auxiliary early break and blown fuse signalling contacts			
Fuse carrier to be equipped	DF14		DF22	
Fuse size	14 x 51 mm		22 x 58 mm	
Number of poles	3P or 3P + N		3P or 3P + N	
Number of contacts	1	2	1	2
References	**DF14AM1**	**DF14AM2**	**DF22AM1**	**DF22AM2**

Type	Fuse carrier assembly kits			
Fuse carrier to be assembled	DF8	DF10	DF14	DF22
Fuse size	8.5 x 31.5 mm	10 x 38 mm	14 x 51 mm	22 x 58 mm
Kit contents	1 pin, 2 clips		1 pin, 3 clips	
References	**DF10AP**		**DF14AP**	**DF22AP**

Fuse carriers
0…125 A





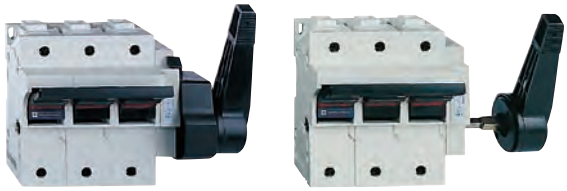
Type	3-pole fuse carriers					
Rated insulation voltage (Ui)	690 V					
Rating	25 A	32 A	50 A		125 A	
Fuse size	10 x 38	10 x 38	14 x 51		22 x 58	
Connection	Spring terminals	Screw clamp terminals or connectors				
Single-phase protection device	Without	Without	Without	With	Without	With
Number of early break contacts	–	–	1		1	
Reference	**LS1D323**	**LS1D32**	**GK1K**	**GK1EV**	**GK1FK**	**GK1FV**
Number of early break contacts			2		2	
Reference			**GK1ES**	**GK1EW**	**GK1FS**	**GK1FW**





Type	4-pole fuse carriers				
Rated insulation voltage (Ui)	690 V				
Rating	32 A	50 A		125 A	
Fuse size	10 x 38	14 x 51		22 x 58	
Connection	Screw clamp terminals or connectors				
Single-phase protection device	Without	Without	With	Without	With
Number of early break contacts	–	1		1	
Reference	**LS1D32 + LA8D324**	**GK1EM**	**GK1EY**	**GK1FM**	**GK1FY**
Number of early break contacts		2		2	
Reference		**GK1ET**	**GK1EX**	**GK1FT**	**GK1FX**

Fuse carriers
Accessories



Type	Early break auxiliary contact blocks			
Fuse carrier rating	32 A		25 A	
For use with fuse carrier	LS1D32		LS1D323	
Contact type	NO + NC	NO + NO	NO + NC	NO + NO
References	**GVAE11**	**GVAE20**	**GVAE113**	**GVAE203**

Type	Direct operator handle		
Fuse carrier rating	125 A		32, 50, 125 A
For mounting on	RH side	LH side	Front
References	**GK1AP07**	**GK1AP08**	Fitted as standard

Type	External operator handle					
Fuse carrier rating	32 A		50 A		125 A	
For mounting on	RH side	LH side	RH side	LH side	RH side	LH side
References	**LS1D32005**	**LS1D32006**	**GK1AP05**	**GK1AP06**	**GK1AP07**	**GK1AP08**

Type	Padlocking devices				
Fuse carrier rating	32 A	50 A			
Number of poles	3 or 4	3		4	
Single-phase protection device	Without	Without	With	Without	With
References	Integrated	**GK1AV07**	**GK1AV08**	**GK1AV08**	**GK1AV09**

Type	Tubular links		
Fuse carrier rating	32 A	50 A	125 A
References	**DK1CB92**	**DK1EB92**	**DK1FA9**

Switch-disconnector-fuses
32…1250 A





Type		Switch-disconnector-fuse switch bodies for use with NF C or DIN fuses Handle to be ordered separately (see previous page)			
Rated insulation voltage (Ui)		690 V			
Conventional thermal current (Ith)		32 A	50 A	63 A	100 A
Fuse size		10 x 38	14 x 51	Size 00C (1)	22 x 58
External front-mounted and	3-pole	**GS1DD3**	**GS2F3**	**GS2G3**	**GS2J3**
RH side-mounted operator	4-pole	**GS1DD4** (2)	**GS2F4**	**GS2G4**	**GS2J4**
External LH side-mounted	3-pole	**GS1DD3**	**GS2FG3**	**GS2GG3**	**GS2JG3**
operator	4-pole	**GS1DD4** (2)	**GS2FG4**	**GS2GG4**	**GS2JG4**
Direct RH side-mounted	3-pole	**GS1DD3** (3)	**GS1FD3**	**GS1GD3**	**GS1JD3**
operator	4-pole	**GS1DD4** (2) (3)	**GS1FD4**	**GS1GD4**	**GS1JD4**

(1) Compact fuse for German market

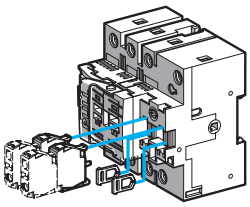
(2) 3-pole + switched neutral

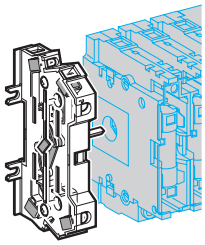
(3) Direct front-mounted operator

Type		Switch-disconnector-fuse switch bodies for use with BS fuses Handle to be ordered separately (see previous page)			
Rated insulation voltage (Ui)		690 V			
Conventional thermal current (Ith)		32 A	32 A	63 A	100 A
Fuse size		A1	A1	A2-A3	A4 (Ø ≤ 31 mm)
External front-mounted and	3-pole	**GS1DDB3**	**GS2DB3**	**GS2GB3**	**GS2JB3**
RH side-mounted operator	4-pole	**GS1DDB4** (2)	**GS2DB4**	**GS2GB4**	**GS2JB4**

(2) 3-pole + switched neutral

Accessories





Type		Auxiliary contacts Early break and/or O, I and Test signalling		O and I signalling	
Switch rating		32…1250 A		50…1250 A	
Number of contacts		1 NO	1 NC	1 NO + NC	2 NO + 2 NC
Operator	External front-mounted or RH side-mounted	**GS1AM110**	**GS1AM101**	**GS1AN11**	**GS1AN22**
	External LH side-mounted	**GS1AM110**	**GS1AM101**	**GS1AN11G**	**GS1AN22G**
	Direct RH side-mounted	–	–	**GS1AN11**	**GS1AN22**
	Direct front-mounted	–	–	–	–

Type		Auxiliary “blown fuse” signalling contacts for use with NF C and DIN fuses			
Number of contacts		1 NO/NC			
Switch rating		50 A	100 and 125 A	160 A	250 and 400 A
Fuse size		14 x 51	22 x 58	Size 0	Size 1 and Size 2
References	3-pole	**GS1AF1**	**GS1AF23**	**GS1AF33**	**GS1AF43**
	4-pole	**GS1AF1**	**GS1AF24**	**GS1AF34**	**GS1AF44**

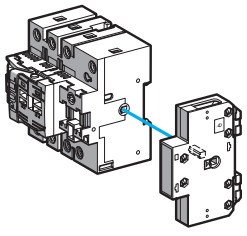


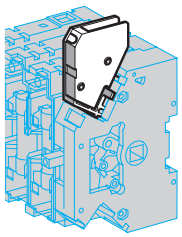




Switch-disconnector-fuse switch bodies for use with NF C or DIN fuses Handle to be ordered separately (see previous page)							
690 V							
125 A		160 A		250 A	400 A	630 A	1250 A
22 x 58	Size 00	Size 00	Size 0	Size 1	Size 2	Size 3	Size 4
GS2K3	**GS2KK3**	**GS2LL3**	**GS2L3**	**GS2N3**	**GS2QQ3**	**GS2S3**	**GS2V3**
GS2K4	**GS2KK4**	**GS2LL4**	**GS2L4**	**GS2N4**	**GS2QQ4**	**GS2S4**	**GS2V4**
GS2KG3	**GS2KKG3**	**GS2LLG3**	**GS2LG3**	**GS2NG3**	**GS2QQG3**	**GS2SG3**	**GS2VG3**
GS2KG4	**GS2KKG4**	**GS2LLG4**	**GS2LG4**	**GS2NG4**	**GS2QQG4**	**GS2SG4**	**GS2VG4**
GS1KD3	**GS1KKD3**	**GS1LLD3**	**GS1LD3**	**GS1ND3**	**GS1QQD3**	**GS2S3** (3)	**GS2V3** (3)
GS1KD4	**GS1KKD4**	**GS1LLD4**	**GS1LD4**	**GS1ND4**	**GS1QQD4**	**GS2S4** (3)	**GS2V4** (3)

Switch-disconnector-fuse switch bodies for use with BS fuses Handle to be ordered separately (see previous page)								
690 V								
160 A		200 A	250 A	315 A	400 A	630 A	800 A	1250 A
A4	B1-B2	B1-B2	B1…B3	B1…B3	B1…B4	C1-C2	C1…C3	D1
GS2LLB3	**GS2LB3**	**GS2MMB3**	**GS2NB3**	**GS2PPB3**	**GS2QQB3**	**GS2SB3**	**GS2TB3**	**GS2VB3**
GS2LLB4	**GS2LB4**	**GS2MMB4**	**GS2NB4**	**GS2PPB4**	**GS2QQB4**	**GS2SB4**	**GS2TB4**	**GS2VB4**





Auxiliary contacts O, I and Test signalling		Early break and O and I signalling			
50…400 A		32 A		50…400 A	
1 NO + NC	2 NO + 2 NC	1 NO/NC	2 NO/NC	1 NO/NC	2 NO/NC
GS1ANT11	**GS1ANT22**	–	–	–	–
–	–	–	–	–	–
–	–	–	–	**GS1AM1**	**GS1AM2**
–	–	**GS1AM111**	**GS1AM211**	–	–

Auxiliary “blown fuse” signalling contacts for use with NF C and DIN fuses		
		2nd NO/NC
630 A	1250 A	50…1250 A
Size 3	Size 4	–
GS2AF63	**GS2AF73**	**GS1AF**
GS2AF64	**GS2AF74**	**GS1AF**

Switch-disconnector-fuses
Handles



Type		IP65 handles for external front-mounted operators			
Switch rating		32…63 A	100…400 A	630…800 A	1250 A
References	Black/grey	**GS2AH510** (1)	**GS2AH530** (1)	**GS2AH550**	**GS2AH570**
	Red/yellow	**GS2AH520** (1)	**GS2AH540** (1)	**GS2AH560**	**GS2AH580**

(1) For external front operators with Test facility, insert the letter **T** in the reference. Example: GS2AH510 becomes GS2AH**T**510

Type		IP65 handles for external RH side-mounted operators (2)		
Switch rating		32…63 A	100…400 A	630…1250 A
References	Black/grey	**GS2AH210**	**GS2AH230**	**GS2AH250**
	Red/yellow	**GS2AH220**	**GS2AH240**	**GS2AH260**

(2) For external LH side-mounted operators, replace the number 2 in the reference by **3**. Example: GS2AH210 becomes GS2AH**3**10

Type			Shafts for external operators		
Switch rating			32 A	50…400 A	630…1250 A
References	Length of shaft	200 mm	**GS2AE82**	**GS2AE22**	**GS2AE52**
		320 mm	**GS2AE8**	**GS2AE2**	**GS2AE5**
		400 mm	**GS2AE81**	**GS2AE21**	**GS2AE51**



Type	Handles for direct operators				
Switch rating	32 A	50 and 63 A	100…400 A	630 and 800 A	1250 A
Type of operator	Front	RH side	RH side	Front	Front
References	**GS1AH103**	**GS1AH01**	**GS1AH02**	**GS2AH104**	**GS2AH105**

Thermal overload relays
0.11…11.5 A



Thermal overload relays, TeSys K adjustable from 0.11 to 12 A				
Connection by screw clamp terminals, direct mounting on contactors LC1-K, manual or automatic reset				
Relay setting range	Fuses to be used with selected relay			Reference
Class 10A	aM	gG	BS88	
0.11…0.16 A	0.25 A	0.5 A	-	**LR2K0301**
0.16…0.23 A	0.25 A	0.5 A	-	**LR2K0302**
0.23…0.36 A	0.5 A	1 A	-	**LR2K0303**
0.36…0.54 A	1 A	1.6 A	-	**LR2K0304**
0.54…0.8 A	1 A	2 A	-	**LR2K0305**
0.8…1.2 A	2 A	4 A	6 A	**LR2K0306**
1.2…1.8 A	2 A	6 A	6 A	**LR2K0307**
1.8…2.6 A	2 A	6 A	10 A	**LR2K0308**
2.6…3.7 A	4 A	10 A	16 A	**LR2K0310**
3.7…5.5 A	6 A	16 A	16 A	**LR2K0312**
5.5…8 A	8 A	20 A	20 A	**LR2K0314**
8…11.5 A	10 A	25 A	20 A	**LR2K0316**

Thermal overload relays for use on class 10A unbalanced loads: for above references LR2-K0305 to LR2-K0316 only, replace the prefix LR2 with **LR7**.
Example: **LR7**-K0310.

Accessories		
Prewiring kit		
Allowing direct connection of the NC contact	For use on	
of relay LRD-01…35 or LR3-D01… D35 to the contactor	LC1D09…D18	**LAD7C1**
	LC1D25…D38	**LAD7C2**
Terminal blocks (1)		
For clip-on mounting on 35 mm mounting rail (AM1-DP200)	LRD01…35 and LR3D01…D35	**LAD7B10**
or screw fixing	LRD3•••, LR3D3•••, LRD35••	**LA7D3064** (2)
For independent mounting of the relay	LR2K••••	**LA7K0064**
EverLink Terminal blocks		
Separate terminal block	LRD313… LRD365	**LAD9R3**
Terminal block adapter		
For mounting a relay beneath an LC1-D115 or D150 contactor	LRD3•••, LR3D3•••, LRD35••	**LA7D3058**
Stop or electrical reset		
Remote (3)	LRD01…35 and LR3D01…D35	**LAD703•** (4)
Tripping or electrical reset device		
Remote (3)	All relays except LRD01…35 and LR3D01…D35	**LA7D03•** (4)

(1) Terminal blocks are supplied with terminals protected against direct finger contact and screws in the open “ready-to-tighten” position.
(2) To order a terminal block for connection by lug-clamps, the reference becomes LA7-D30646.
(3) The time for which the coil of remote tripping or electrical resetting device LA7-D03 or LAD-703 can remain energised depends on its rest time: 1 s pulse duration with 9 s rest time; maximum pulse duration of 20 s with a rest time of 300 s. Minimum pulse time 200 ms.
(4) Reference to be completed by adding the code indicating the control circuit voltage.

Standard control circuit voltages								
~ supply								
Volts	12	24	48	96	110	220/230	380/400	415/440
50/60 Hz. Consumption, inrush and sealed < 100 VA	**-**	**B**	**E**	**-**	**F**	**M**	**Q**	**N**
⎓ supply								
Consumption, inrush and sealed < 100 W	**J**	**B**	**E**	**DD**	**F**	**M**	**-**	**-**

Thermal overload relays
0.1…140 A





Thermal overload relays, TeSys D
adjustable from 0.1 to 140 A

Compensated relays with manual or automatic reset, with relay trip indicator, for a.c. or d.c.

	Relay setting range	Fuses to be used with selected relay			With contactor	Reference
Connection by screw clamp terminals or connectors		aM	gG	BS88		
Class 10A	0.10…0.16 A	0.25 A	2 A	-	LC1D09…D38	**LRD01** (1)
	0.16…0.25 A	0.5 A	2 A	-	LC1D09…D38	**LRD02** (1)
	0.25…0.40 A	1 A	2 A	-	LC1D09…D38	**LRD03** (1)
	0.40…0.63 A	1 A	1.6 A	-	LC1D09…D38	**LRD04** (1)
	0.63…1 A	2 A	4 A	-	LC1D09…D38	**LRD05** (1)
	1…1.7 A	2 A	4 A	6 A	LC1D09…D38	**LRD06** (1)
	1.6…2.5 A	4 A	6 A	10 A	LC1D09…D38	**LRD07** (1)
	2.5…4 A	6 A	10 A	16 A	LC1D09…D38	**LRD08** (1)
	4…6 A	8 A	16 A	16 A	LC1D09…D38	**LRD10** (1)
	5.5…8 A	12 A	20 A	20 A	LC1D09…D38	**LRD12** (1)
	7…10 A	12 A	20 A	20 A	LC1D09…D38	**LRD14** (1)
	9…13 A	16 A	25 A	25 A	LC1D12…D38	**LRD16** (1)
	12…18 A	20 A	35 A	32 A	LC1D18…D38	**LRD21** (1)
	16…24 A	25 A	50 A	50 A	LC1D25…D38	**LRD22** (1)
	23…32 A	40 A	63 A	63 A	LC1D25…D38	**LRD32** (1)
	30…38 A	50 A	80 A	80 A	LC1D32 and D38	**LRD35** (1)
	55…70 A	80 A	125 A	125 A	D50…D95	**LRD3361** (1)
	63…80 A	80 A	125 A	125 A	D65…D95	**LRD3363** (1)
	80…104 A	100 A	160 A	160 A	D80 and D95	**LRD3365** (1)
	80…104 A	125 A	200 A	160 A	D115 and D150	**LRD4365** (1)
	95…120 A	125 A	200 A	200 A	D115 and D150	**LRD4367** (1)
	110…140 A	160 A	250 A	200 A	D150	**LRD4369** (1)
	80…104 A	100 A	160 A	160 A	Independent mtg.	**LRD33656** (1)
	95…120 A	125 A	200 A	200 A	Independent mtg.	**LRD33676** (1)
	110…140 A	160 A	250 A	200 A	Independent mtg.	**LRD33696** (1)
Class 20	6 A	10 A	16 A		LC1D09…D32	**LRD1508** (1)
	4…6 A	8 A	16 A	16 A	LC1D09…D32	**LRD1510** (1)
	5.5…8 A	12 A	20 A	20 A	LC1D09…D32	**LRD1512** (1)
	7…10 A	16 A	20 A	25 A	LC1D09…D32	**LRD1514** (1)
	9…13 A	16 A	25 A	25 A	LC1D12…D32	**LRD1516** (1)
	12…18 A	25 A	35 A	40 A	LC1D18…D32	**LRD1521** (1)
	17…25 A	32 A	50 A	50 A	LC1D25 and D32	**LRD1522** (1)
	23…28 A	40 A	63 A	63 A	LC1D25 and D32	**LRD1530** (1)
	25…32 A	40 A	63 A	63 A	LC1D25 and D32	**LRD1532** (1)
	55…70 A	100 A	125 A	125 A	D65…D95	**LR2D3561** (1)
	63…80 A	100 A	160 A	125 A	D80 and D95	**LR2D3563** (1)
Connection by EverLink terminal blocks, with BTR screws						
Class 10A	9…13 A	16 A	25 A	25 A	LC1D40A…D65A	**LRD313** (2)
	12…18 A	20 A	32 A	35 A	LC1D40A…D65A	**LRD318** (2)
	17…25 A	25 A	50 A	50 A	LC1D40A…D65A	**LRD325** (2)
	23…32 A	40 A	63 A	63 A	LC1D40A…D65A	**LRD332** (2)
	30…40 A	40 A	80 A	80 A	LC1D40A…D65A	**LRD340** (2)
	37…50 A	63 A	100 A	100 A	LC1D40A…D65A	**LRD350** (2)
	48…65 A	63 A	100 A	100 A	LC1D40A…D65A	**LRD365** (2)
Class 20	9…13 A	20 A	32 A	35 A	LC1D40A…D65A	**LRD313L** (2)
	12…18 A	25 A	40 A	40 A	LC1D40A…D65A	**LRD318L** (2)
	17…25 A	32 A	50 A	50 A	LC1D40A…D65A	**LRD325L** (2)
	23…32 A	40 A	63 A	63 A	LC1D40A…D65A	**LRD332L** (2)
	30…40 A	50 A	80 A	80 A	LC1D40A…D65A	**LRD340L** (2)
	37…50 A	63 A	100 A	100 A	LC1D40A…D65A	**LRD350L** (2)
	48…65 A	80 A	125 A	125 A	LC1D40A…D65A	**LRD365L** (2)

Class 10A with connection by lug-clamps:
Select overload relay with screw clamp terminals or connectors from the table above and add one of the following suffixes:
■ figure **6** for relays LRD01 to LRD35 and LRD313 to LRD365.
■ **A66** for relays LRD3361 to LRD3365.
Relays LRD43 are suitable as standard, for use with lug-clamps.
(1) For independent mounting on a DIN rail, order an EverLink LAD7B106 terminal block.

Thermal overload relays for use with unbalanced loads Class 10A with connection by screw clamp terminals and lug-clamp terminals:
In the reference selected above, change LRD (except LRD4●●●) to **LR3D**
Example: LRD01 becomes **LR3D**01
Example with EverLink terminals: LRD340 becomes **LR3D**340
Example with lug-clamp terminals: LRD3406 becomes **LR3D**3406
(2) For independent mtg. on a DIN rail, order an EverLink LAD96560 terminal block.

Electronic thermal overload relays
60…630 A





For use with contactor	LC1-D	LC1-F
Motor current	60…150 A	30…630 A
Basic reference, to be completed	**LR9D**	**LR9F**

Relay setting range	Fuse to be used with selected relay		For mounting beneath contactor LC1-	Compensated and differential		With alarm
	aM	gG		Class 10	Class 20	Class 10 or 20
60…100	100	160	D115 and D150	**LR9D5367**	**LR9D5567**	
90…150	160	250	D115 and D150	**LR9D5369**	**LR9F5569**	
30…50	50	80	F115…F185	**LR9F5357**	**LR9F5557**	**LR9F57**
48…80	80	125	F115…F185	**LR9F5363**	**LR9F5563**	**LR9F63**
60…100	100	200	F115…F185	**LR9F5367**	**LR9F5567**	**LR9F67**
90…150	160	250	F115…F185	**LR9F5369**	**LR9F5569**	**LR9F69**
132…220	250	315	F185…F400	**LR9F5371**	**LR9F5571**	**LR9F71**
200…330	400	500	F225…F500	**LR9F7375**	**LR9F7575**	**LR9F75**
300…500	500	800	F225…F500	**LR9F7379**	**LR9F7579**	**LR9F79**
380…630	630	800	F400…F630 and F800	**LR9F7381**	**LR9F7581**	**LR9F81**

Accessories

Remote control		
Function	Reset	Stop and/or Reset
Electrical reset (1)	**LA7D03•** (2)	
Reset by flexible cable (length 0.5 m)	**LA7D305**	
Adapter for door interlock mechanism		**LA7D1020**
Operating head for pushbutton		
Spring return	**ZA2BL639**	**ZA2BL432**
Rod with snap-off end		
Adjustable from 17 to 120 mm	**ZA2BZ13**	
Insulated terminal blocks		
For relays LR9-F5•57, F5•63, F5•67, F5•69, F57, F63, F67 and F69	Set of 2 blocks	
	LA9F103	

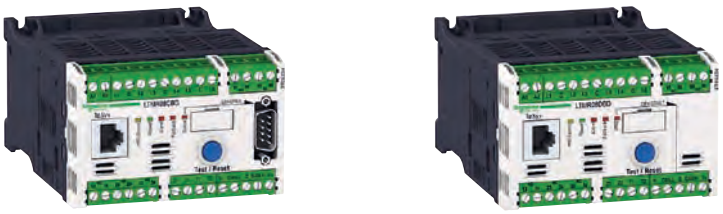
(1) The time for which the coil of remote electrical reset device LA7-D03 can remain energised depends on its rest time: 1 s pulse with 9 s rest time; 5 s pulse duration with 30 s rest time; 10 s pulse duration with 90 s rest time: maximum pulse duration 20 s with rest time of 300 s. Minimum pulse time: 200 ms.

(2) Reference to be completed by adding the coil voltage code, see page 4/25

Controllers



Type of fieldbus			Ethernet		Modbus		Profibus DP	
Supply voltage			24 V DC	100…240 V AC	24 V DC	100…240 V AC	24 V DC	100…240 V AC
References	Current range	0.4…8 A	LTMR08EBD	LTMR08EFM	LTMR08MBD	LTMR08MFM	LTMR08PBD	LTMR08PFM
		1.35…27 A	LTMR27EBD	LTMR27EFM	LTMR27MBD	LTMR27MFM	LTMR27PBD	LTMR27PFM
		5…100 A	LTMR100EBD	LTMR100EFM	LTMR100MBD	LTMR100MFM	LTMR100PBD	LTMR100PFM



Type of fieldbus			CANopen		DeviceNet	
Supply voltage			24 V DC	100…240 V AC	24 V DC	100…240 V AC
References	Current range	0.4…8 A	LTMR08CBD	LTMR08CFM	LTMR08DBD	LTMR08DFM
		1.35…27 A	LTMR27CBD	LTMR27CFM	LTMR27DBD	LTMR27DFM
		5…100 A	LTMR100CBD	LTMR100CFM	LTMR100DBD	LTMR100DFM

Extension module



Type of module	Extension 4 additional inputs + voltage measuring		Ethernet external port Modbus RTU / Modbus TCP/IP
Inputs voltage	24 V DC	100…240 V AC	24 V DC
References	LTMEV40BD	LTMEV40FM	TCSEQM113M13M

Control unit



Type of terminal	Compact display
Supply voltage	24 V DC
Reference	LTMCU

Current transformers



Type of transformer		External			
Operational current	primary	100 A	200 A	400 A	800 A
	secondary	1 A			
References		LT6CT1001	LT6CT2001	LT6CT4001	LT6CT8001

Earth fault toroids

Type of toroid	Closed						Split	
Maximum current	65 A	85 A	160 A	250 A	400 A	630 A	85 A	250 A
Internal diameter	Ø 30	Ø 50	Ø 80	Ø 120	Ø 200	Ø 300	Ø 46	Ø 110
References	TA30	PA50	IA80	MA120	SA200	GA300	POA	GOA

PTC thermistor probe

Type of probe	Triple							
Operating temperature	90°C	110°C	120°C	130°C	140°C	150°C	160°C	170°C
References	DA1TT090	DA1TT110	DA1TT120	DA1TT130	DA1TT140	DA1TT150	DA1TT160	DA1TT170

Accessories (1)





Type of accessory	Connecting cable Controller / Extension module		
Length of cable	0.04 m	0.3 m	1 m
References	LTMCC004	LU9R03	LU9R10





Type of accessory	Connecting cable Controller/ Display			Connection kit PC serial port
Length of cable	1 m	3 m	5 m	–
References	VW3A1104R10	VW3A1104R30	VW3A1104R50	VW3A8106

(1) For other connection accessories, see www.schneider-electric.com

Electronic protection relays for use with PTC thermistor probes
0…800 A



Relay type	PTC thermistor probes	
For use with contactor	LC1-D or LC1-F	LC1-D or LC1-F
Motor current	No limit	1…5 A
Basic reference, to be completed	**LT3S**	**LT6P0M0•5FM**

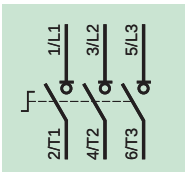
Protection unit

Type Without fault memory		With automatic reset with thermistor short-circuit detection		
Connection		Voltage	Output contact	Reference
by cage connectors	∿ 50/60 Hz	115 V	NC	**LT3SE00F**
		230 V	NC	**LT3SE00M**
	⎓	24 V	NC	**LT3SE00F**
On front panel: fault and voltage signalling indicator				
	∿ 50/60 Hz	115/230 V	NC + NO	**LT3SA00M**
	⎓	24/48 V	NC + NO	**LT3SA00ED**
	∿ 50/60 Hz or ⎓	24…230 V	2 CO	**LT3SA00MW**
With fault memory				
On front panel: fault and voltage signalling indicator, Test and Reset button				
	∿ 50/60 Hz	400 V	NC + NO	**LT3SM00V**
		24/48 V	NC + NO	**LT3SM00E**
		115/230 V	NC + NO	**LT3SM00M**
	⎓	24/48 V	NC + NO	**LT3SM00ED**
	∿ 50/60 Hz or ⎓	24…230 V	2 CO	**LT3SM00MW**

Accessories

Type	PTC thermistor probes for LT3 relays							
Normal operating temperature (NOT)	90 °C	110 °C	120 °C	130 °C	140 °C	150 °C	160 °C	170 °C
Integrated triple probes	**DA1TT090**	**DA1TT110**	**DA1TT120**	**DA1TT130**	**DA1TT140**	**DA1TT150**	**DA1TT160**	**DA1TT170**
Normal operating temperature (NOT)	60 °C	70 °C	80 °C	90 °C	100 °C			
Surface probes	**DA1TS060**	**DA1TS070**	**DA1TS080**	**DA1TS090**	**DA1TS100**			

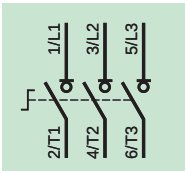
Switch disconnectors
12…175 A







Type		Mini-Vario for standard applications		
		Door mounting		Backplate mounting in enclosure
Colour: Handle / Front plate		Red / Yellow	Black / Black	Red / Yellow
Front plate dimensions (mm)		60 x 60		60 x 60
Fixing		Ø 22.5 mm		Ø 22.5 mm
Degree of protection		IP 20		IP 20
Rated insulation voltage (Ui)		690 V		690 V
Thermal current in open air (Ith)	12 A	**VCDN12**	**VBDN12**	**VCCDN12**
	20 A	**VCDN20**	**VBDN20**	**VCCDN20**











Type		Vario for high performance applications							
		Door mounting					Backplate mounting in enclosure		
Colour: Handle / Front plate		Red / Yellow	Black / Black	Red / Yellow	Black / Black	Red / Yellow	Red / Yellow		
Front plate dimensions (mm)		60 x 60		60 x 60		90 x 90	60 x 60		90 x 90
Fixing		Ø 22.5 mm		4 screws		4 screws	Ø 22.5 mm	4 screws	4 screws
Degree of protection		IP 20		IP 20		IP 20	IP 20	IP 20	IP 20
Rated insulation voltage (Ui)		690 V		690 V		690 V	690 V	690 V	690 V
Thermal current in open air (Ith)	12 A	**VCD02**	**VBD02**	**VCF02**	**VBF02**	–	**VCCD02**	**VCCF02**	–
	20 A	**VCD01**	**VBD01**	**VCF01**	**VBF01**	–	**VCCD01**	**VCCF01**	–
	25 A	**VCD0**	**VBD0**	**VCF0**	**VBF0**	–	**VCCD0**	**VCCF0**	–
	32 A	**VCD1**	**VBD1**	**VCF1**	**VBF1**	–	**VCCD1**	**VCCF1**	–
	40 A	**VCD2**	**VBD2**	**VCF2**	**VBF2**	–	**VCCD2**	**VCCF2**	–
	63 A	–	–	**VCF3**	**VBF3**	–	–	**VCCF3**	–
	80 A	–	–	**VCF4**	**VBF4**	–	–	**VCCF4**	–
	125 A	–	–	–	–	**VCF5**	–	–	**VCCF5**
	175 A	–	–	–	–	**VCF6**	–	–	**VCCF6**









Add-on modules Main pole modules	For mini-Vario		For Vario						
Switch rating	12 A	20 A	12 A	20 A	25 A	32 A	40 A	63 A	80 A
References	**VZN12**	**VZN20**	**VZ02**	**VZ01**	**VZ0**	**VZ1**	**VZ2**	**VZ3**	**VZ4**
Neutral pole module with early make and late break contacts									
Switch rating	12…20 A		12…40 A		63 and 80 A		125 and 175 A		
References	**VZN11**		**VZ11**		**VZ12**		**VZ13**		
Earthing module									
Switch rating	12…20 A		12…40 A		63 and 80 A		125 and 175 A		
References	**VZN14**		**VZ14**		**VZ15**		**VZ16**		
Auxiliary contact block modules									
Contact type	NO	NC	NO + NC		NO + NO				
References	**VZN05**	**VZN06**	**VZ7**		**VZ20**				

Combination motor starters
0.06…15 kW



D.O.L. starters						
		with circuit-breaker			with fuse protection
Level of service	Coordination:	Type 1			Type 2
Power at 400 V	Up to:	5.5 kW		15 kW	37 kW
Type of components		Combination automatic motor starter with overload protection			Fuse carrier +
		incorporated in the circuit-breaker			plate-mounted contactor
Basic reference, to be completed		**GV2ME**	**GV2DM**	**GV2DP**	**LC4D**



Starters GV2-ME								
							Non-reversing	Reversing
Standard power ratings			Setting	Fixed	For customer assembly		Factory assembled	
of 3-phase motors			range of	magnetic	Motor	Contactor	Basic reference, to be completed with	
50/60 Hz in category AC-3 (kW)			thermal trips	tripping current	circuit-breaker		code indicating control circuit voltage	
400/415 V	440 V	500 V		13 Irth				
0.37	0.37	0.37	1…1.6	22.5	GV2ME06	LC1K06	**GV2ME06K1••**	**GV2ME06K2••**
0.55	0.55	0.55						
-	-	0.75						
0.75	0.75	-	1.6…2.5	33.5	GV2ME07	LC1K06	**GV2ME07K1••**	**GV2ME07K2••**
-	1.1	1.1						
1.1	-	1.5	2.5…4	51	GV2ME08	LC1K06	**GV2ME08K1••**	**GV2ME08K2••**
1.5	1.5	2.2						
2.2	2.2	-	4…6.3	78	GV2ME10	LC1K06	**GV2ME10K1••**	**GV2ME10K2••**
-	-	3						
3	-	4	6…10	138	GV2ME14	LC1K09	**GV2ME14K1••**	**GV2ME14K2••**
4	4	5.5						
5.5	5.5	7.5	9…14	170	GV2ME16	LC1K12	**GV2ME16K1••**	**GV2ME16K2••**

Standard control circuit voltages (for other voltages, please consult our website http://www.schneider-electric.com)						
Volts	24	110	220/230	230	230/240	380/400
∼ 50…400 Hz	**B7**	**F7**	**M7**	**P7**	**U7**	**Q7**
⎓ (1)	**BW3**	**-**	**-**	**-**	**-**	**-**

(1) Low consumption coil (1.5 W), wide range (0.7…1.3 Uc) and with integral suppression device as standard.



D.O.L. starters GV2DM and GV3-DP

						Non-reversing	Reversing
Standard power ratings			Setting	Fixed	For customer assembly		Factory assembled	
of 3-phase motors			range of	magnetic	Motor	Contactor	Basic reference, to be completed with	
50/60 Hz in category AC-3 (kW)			thermal trips	tripping current	circuit-breaker		code indicating control circuit voltage	
400/415 V	440 V	500 V		13 Irth				
0.06	0.06	-	0.16…0.25	2.4	GV2ME02	LC1D09••	**GV2DM102••**	**GV2DM202••**
					GV2P02	LC1D09••	**GV2DP102••**	**GV2DP202••**
0.09	0.09	-	0.25…0.40	5	GV2ME03	LC1D09••	**GV2DM103••**	**GV2DM203••**
-	0.12	-			GV2P03	LC1D09••	**GV2DP103••**	**GV2DP203••**
0.12	-	-	0.40…0.63	8	GV2ME04	LC1D09••	**GV2DM104••**	**GV2DM204••**
0.18	0.18	-			GV2P04	LC1D09••	**GV2DP104••**	**GV2DP204••**
0.25	0.25	-	0.63…1	13	GV2ME05	LC1D09••	**GV2DM105••**	**GV2DM205••**
0.37	0.37	-			GV2P05	LC1D09••	**GV2DP105••**	**GV2DP205••**
-	-	0.37	1…1.6	22.5	GV2ME06	LC1D09••	**GV2DM106••**	**GV2DM206••**
0.55	0.55	0.55			GV2P06	LC1D09••	**GV2DP106••**	**GV2DP206••**
-	-	0.75						
0.75	0.75	-	1.6…2.5	33.5	GV2ME07	LC1D09••	**GV2DM107••**	**GV2DM207••**
-	1.1	1.1			GV2P07	LC1D09••	**GV2DP107••**	**GV2DP207••**
1.1	-	1.5	2.5…4	51	GV2ME08	LC1D09••	**GV2DM108••**	**GV2DM208••**
1.5	1.5	2.2			GV2P08	LC1D09••	**GV2DP108••**	**GV2DP208••**
2.2	2.2	-	4…6.3	78	GV2ME10	LC1D09••	**GV2DM110••**	**GV2DM210••**
-	3	3			GV2P10	LC1D09••	**GV2DP110••**	**GV2DP210••**
3	-	4	6…10	138	GV2ME14	LC1D09••	**GV2DM114••**	**GV2DM214••**
4	4	5.5			GV2P14	LC1D09••	**GV2DP114••**	**GV2DP214••**
5.5	5.5	7.5	9…14	170	GV2ME16	LC1D12••	**GV2DM116••**	**GV2DM216••**
-	7.5	9			GV2P16	LC1D25••	**GV2DP116••**	**GV2DP216••**
7.5	9	-	13…18	223	GV2ME20	LC1D18••	**GV2DM120••**	**GV2DM220••**
					GV2P20	LC1D25••	**GV2DP120••**	**GV2DP220••**
9	11	11	17…23	327	GV2ME21	LC1D25••	**GV2DM121••**	**GV2DM221••**
					GV2P21	LC1D25••	**GV2DP121••**	**GV2DP221••**
11	-	15	20…25	327	GV2ME22	LC1D25••	**GV2DM122••**	**GV2DM222••**
					GV2P22	LC1D25••	**GV2DP122••**	**GV2DP222••**
15	15	18.5	24…32	416	GV2ME32	LC1D32••	**GV2DM132••**	**GV2DM232••**
					GV2P32	LC1D32••	**GV2DP132••**	**GV2DP232•**

D.O.L. starters GV3 + LC1D

						Non-reversing	Reversing
Standard power ratings			Setting	Fixed	For customer assembly			
of 3-phase motors			range of	magnetic	Motor	Contactor	Reference of accessory to be ordered	
50/60 Hz in category AC-3 (kW)			thermal trips	tripping current	circuit-breaker		for assembly of motor starter (2)	
400/415 V	440 V	500 V		13 Irth				
18,5	18,5	–	30…40	560	**GV3P401** (1)	LC1D40A••	–	**LAD9R3**
–	22	22	30…40	560	**GV3P401** (1)	LC1D40A••	–	**LAD9R3**
22	–	30	37…50	700	**GV3P501** (1)	LC1D50A••	–	**LAD9R3**
30	30	37	48…65	910	**GV3P651** (1)	LC1D65A••	–	**LAD9R3**

(1) Circuit-breaker GV3P without downstream EverLink terminal block. A standard GV3P can also be used by removing the downstream terminal block.

(2) For side by side circuit-breaker/contactor mounting, order accessory GV3S.

Standard control circuit voltages (for other voltages, please consult our website http://www.schneider-electric.com)			
Volts	24	220	230
∼ 50…400 Hz	**B7**	**M7**	**P7**
⎓ (3)	**BD**	–	–

(3) Low consumption coil, wide range (0.7 to 1.25 Uc) and with suppression device as standard (bidirectional peak limiting diode).

Starter-controller for 3-phase motors

STANDARD motor starter




Function characteristics, LUB… + LUCA…	Maximum motor power < 400/415 V	Power base Non-reversing	Reversing (1)	Standard control unit Class 10 (2)	Setting range
- Thermal overload protection against:	0.09 kW	LUB12	LU2B12●●	LUCA6X●●	0.15…0.6 A
short-circuit, overcurrent,	0.25 kW	LUB12	LU2B12●●	LUCA1X●●	0.35…1.4 A
phase failure or imbalance,	1.5 kW	LUB12	LU2B12●●	LUCA05●●	1.25…5 A
insulation breaks (equipment only).	5.5 kW	LUB12	LU2B12●●	LUCA12●●	3…12 A
- Manual reset following thermal fault.	7.5 kW	LUB32	LU2B32●●	LUCA18●●	4.5…18 A
	15 kW	LUB32	LU2B32●●	LUCA32●●	8…32 A

ADVANCED motor starter




Function characteristics, LUB… + LUCA…	Maximum motor power < 400/415 V	Power base Non-reversing	Advanced control unit Class 10 (2) (3)	Class 20 (2)	Setting range
- Thermal overload protection against:	0.09 kW	LUB120	LUCB6X●●	LUCD6X●●	0.15…0.6 A
short-circuit, overcurrent,	0.25 kW	LUB120	LUCB1X●●	LUCD1X●●	0.35…1.4 A
phase failure or imbalance,	1.5 kW	LUB120	LUCB05●●	LUCD05●●	1.25…5 A
insulation breaks (equipment only).	5.5 kW	LUB120	LUCB12●●	LUCD12●●	3…12 A
- Manual reset following thermal fault.	7.5 kW	LUB320	LUCB18●●	LUCD18●●	4.5…18 A
- Thermal overload test function.	15 kW	LUB320	LUCB32●●	LUCD32●●	8…32 A

(3) For single-phase-motors, replace LUC**B●●●●** by LUC**C●●●●**.

MULTIFUNCTION motor starter




Function characteristics, LUB… + LUCA…	Maximum motor power < 400/415 V	Power base Non-reversing	Multifunction control unit Class 5 to 30	Setting range
- Thermal overload protection against:	0.09 kW	LUB120	LUCM6XBL	0.15…0.6 A
short-circuit, overcurrent,	0.25 kW	LUB120	LUCM1XBL	0.35…1.4 A
phase failure or imbalance,	1.5 kW	LUB120	LUCM05BL	1.25…5 A
insulation breaks (equipment only).	5.5 kW	LUB120	LUCM12BL	3…12 A
- Manual, automatic or remote reset,	7.5 kW	LUB320	LUCM18BL	4.5…18 A
- Thermal overload test function,	15 kW	LUB320	LUCM32BL	8…32 A
- Overtorque and no-load running, alarm,				
- Motor operation log,				
- Motor parameters display on LUCM.., PC or HMI,				
- Integrated Modbus communication.				

(1) Complete the references of the power bases according to the following table.	Example: **LU2B12**	●●
(2) Complete the references of the control units according to the following table.	Example: **LUCA/B/D/M6X**	●●

Standard control circuit voltages	
24 V DC	**BL**
24 V AC	**B**
48 V AC / 48…72 V DC	**ES**
110…240 V AC / 110…220 V DC	**FU**

Starter-controller for 3-phase motors

Function modules





Type of optional function	Thermal overload alarm	Thermal fault signalling			Motor load indication
Compatible with LUCA	NO	NO	NO	NO	NO
Compatible with LUCL	NO	NO	NO	NO	NO
Compatible with LUCB, LUCD	YES	YES	YES	YES	YES
Compatible with LUCM	NO	NO	NO	NO	YES
Output signal	1 NO	1 NO +1 NC	1 NC	1 NO	4…20 mA
Reset	NA	Manual	Automatic or remote		NA
References	**LUFW10**	**LUFDH11**	**LUFDA01**	**LUFDA10**	**LUFV2**

Communication modules









Type of communication	Modbus	Modicon STB	Profibus DP	CANopen	DeviceNet	AS-Interface	Parallel wiring
Only compatible with 24 V DC control units LUCA..BL, LUCB..BL, LUCD..BL, LUCM..BL	YES	YES	YES	YES	YES	YES	YES
Transfer speed	19.2 Kbps	Dpg. on NIM (1)	9.6…12 Mbps	20 K…1 Mbps	125…500 Kbaud	167 Kbps	NA
Number of slaves	31 per Modbus master	Dpg. on Network Interface Module	125 per Profibus DP module	128 per CANopen module	63 per DeviceNet module	62 per AS-Interface master	8 per LU9GC02 splitter box
Pre-wired coil connection (A1 A2)	LU9BN11C, LU9MRC	LU9BN11L, LU9MRL	LU9BN11L, LU9MRL	LU9BN11L, LU9MRL	LU9BN11L, LU9MRL	LU9BN11C, LU9MRC	LU9Rxx
Connecting cable to PC	VW3 A8 306 R●●	LU9RCD●●, LU9RDD●●	TSXPBSCA●●	TSXCANC●●	DeviceNet standard	XZCG0142	TSXCDP●●●
References	**LUFC033**	**LULC15**	**LULC07**	**LULC08**	**LULC09**	**ASILUFC51**	**LUFC00**

(1) Network Interface Module.

Information carried by the Modbus, Modicon STB or CANopen bus			
Type of control unit	**LUCA●●BL**	**LUCB●●BL, LUCD●●BL**	**LUCM●●BL**
Start and Stop commands	**X**	**X**	**X**
Starter status (ready, running, fault)	**X**	**X**	**X**
Thermal alarm		**X**	**X**
Remote reset via the bus		**X**	**X**
Indication of motor load		**X**	**X**
Signalling and fault differentiation		**X**	**X**
Alarms (overcurrent, …)			**X**
Remote programming and monitoring of all the functions			**X**
“Log” function			**X**
Monitoring function			**X**

Contact blocks




Type of contact block		Add-on		Auxiliary		
Signalling contacts	of any fault	NC (95-96)	NO (97-98)	–	–	–
	position of control handle	NO (17-18)	NO (17-18)	–	–	–
2 auxiliary contacts module		–	–	NO (33-34)	NC (31-32)	NC (31-32)
		–	–	NO (43-44)	NO (43-44)	NC (41-42)
References	Screw clamp terminals	**LUA1C11**	**LUA1C20**	**LUFN20**	**LUFN11**	**LUFN02**
	Without connections	**LUA1C110**	**LUA1C200**	–	–	–

TeSys
LUTM

Controller for 3-phase motors
MULTIFUNCTION protection



Function characteristics	Control base for use with contactors		Multifunction control unit
	TeSys D (LC1D..)	TeSys F (LC1F..)	Class 5 to 35
- Thermal overload protection against: short-circuit, overcurrent, phase failure or imbalance, insulation breaks (equipment only). - Manual, automatic or remote reset, - Thermal overload test function, - Overtorque and no-load running, alarm, - Motor operation log, - Motor parameters display on LUCM.., PC or HMI, - Integrated Modbus communication.	**LUTM10BL**	**LUTM20BL**	**LUCMT1BL**

ADVANCED protection



Function characteristics	Control base for use with contactors		Advanced control unit	
	TeSys D (LC1D..)	TeSys F (LC1F..)	Class 10	Class 20
- Thermal overload protection against: short-circuit, overcurrent, phase failure or imbalance, insulation breaks (equipment only). - Manual reset following thermal fault. - Thermal overload test function.	**LUTM10BL**	**LUTM20BL**	**LUCBT1BL**	**LUCDT1BL**

Current transformers

Type of transformer							
Supply voltage		24 V DC					
Operating current	Primary	30 A	50 A	100 A	200 A	400 A	800 A
	Secondary	1 A					
References		**LUTC0301**	**LUTC0501**	**LUTC01001**	**LUTC02001**	**LUTC04001**	**LUTC05001**

Above 32 A, the TeSys U controller provides a motor starter management system solution identical to that provided by the **TeSys** U starter-controller.

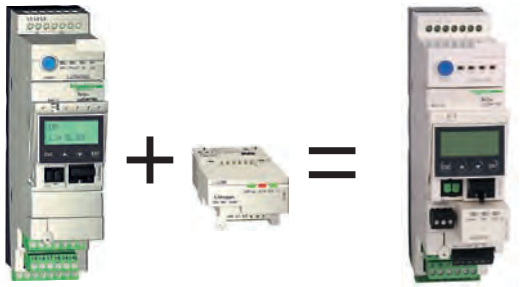
Used in conjunction with a short-circuit protection device and a contactor, it provides a motor starter whose functions are the same as those of a **TeSys** U starter-controller and, in particular, provides the following functions: overload protection, motor starter control and application monitoring.

It comprises a control unit, whose adjustment range is compatible with the secondary of current transformers, and a control base that also enables the fitting of a function module or communication module.

It requires a 24 V DC external power supply.

Controller for 3-phase motors

Function modules







Type of optional function	Thermal overload alarm	Motor load indication
Compatible with LUCA	NO	NO
Compatible with LUCL	NO	NO
Compatible with LUCB, LUCD	YES	YES
Compatible with LUCM	NO	YES
Output signal	1 NO	4…20 mA
Reset	NA	NA
References	**LUFW10**	**LUFV2**



TeSys rotating handles for	TeSys U
IP54 kit black handle	**LU9APN21**
IP54 kit red handle and yellow front	**LU9APN22**
IP65 kit red handle and yellow front	**LU9APN24**

Communication modules











Type of communication	Modbus	Modicon STB	CANopen	DeviceNet	Parallel wiring
Only compatible with 24 V DC control units LUCA..BL, LUCB..BL, LUCD..BL, LUCM..BL	YES	YES	YES	YES	YES
Transfer speed	19.2 Kbps	Dpg. on NIM (1)	20 K…1 Mbps	125…500 Kbaud	NA
Number of slaves	31 per Modbus master	Dpg. on Network Interface Module	128 per CANopen module	63 per DeviceNet module	8 per LU9GC02 splitter box
Pre-wired coil connection (A1 A2)	LU9BN11C, LU9MRC	LU9BN11L, LU9MRL	LU9BN11L, LU9MRL	LU9BN11L, LU9MRL	LU9Rxx
Connecting cable to PC	VW3 A8 306 R●● LU9RDD●●	LU9RCD●●	TSXCANC●●	DeviceNet standard	TSXCDP●●●
References	**LUFC033**	**LULC15**	**LULC08**	**LULC09**	**LUFC00**

(1) Transmission speed depending on the Network Interface Module.

Information carried by the Modbus, Modicon STB or CANopen bus		
Type of control unit	**LUCBT1BL, LUCDT1BL**	**LUCMT1BL**
Start and Stop commands	**X**	**X**
Starter status (ready, running, fault)	**X**	**X**
Thermal alarm	**X**	**X**
Remote reset via the bus	**X**	**X**
Indication of motor load	**X**	**X**
Signalling and fault differentiation	**X**	**X**
Alarms (overcurrent, …)		**X**
Remote programming and monitoring of all the functions		**X**
“Log” function		**X**
Monitoring function		**X**

Enclosed motor starters
0.06…132 kW






Starters		D.O.L.				
		■ standard				
Standard power ratings of 3-phase motors in category AC3 400/415 V		4…37 kW	0.06…37 kW	0.55…30 kW	0.37…5.5 kW	0.25…45 kW
Starters	Manual	●	●	●	-	-
	Auto	-	-	-	●	●
Isolating device	Switch-disconnector-fuse	●	-	-	-	-
	Circuit-breaker	-	●	●	●	-
	Fuse carrier	-	-	-	-	-
Protection	Short-circuit	-	●	●	●	-
	Overload	-	●	-	●	●
Communication		-	-	-	-	-
Basic reference	Non-reversing	**V•F•GE**	**GV2ME**	**GV2LC**	**LE1GVME**	**LE1M**
		VCFN•GE	**GV3PC**	**GV-NGC**		**LE1D**
		V•FXGE•	**GV3CE**			
	Reversing					**LE2K**
						LE2D








						2 stage	
		■ safety applications			■ AS-Interface bus	standard star-delta	
	2.2…45 kW	0.06…11 kW	0.06…9 kW	0.06…9 kW	0.06…5.5 kW	5.5…132 kW	7.5…75 kW
	-	●	-	-	-	-	-
	●	-	●	●	●	●	●
	-	-	●	-	-	-	-
	-	●	●	●	●	-	-
	●	-	-	-	-	-	●
	●	●	●	●	●	-	●
	●	●	●	●	●	●	●
	-	-	-	-	●	-	-
	LE4K	**GV2ME**	**LG1K**	**LG7K**	**LF3M**	**LE3K**	**LE6D**
	LE4D		**LG1D**	**LG7D**	**LF3P**	**LE3D**	**LE3D**
				LJ7K	**LF7P**	**LE3F**	
	LE8K			**LG8K**	**LF4M**		
	LE8D			**LJ8K**	**LF4P**		
	LE2D				**LF8P**		

Selection guide

For more information:
http://www.schneider-electric.com

Universal Enclosures

Spacial Steel

Boxes
From 74 x 74 mm
to 720 x 540 mm



SBM Industrial boxes
S44 Industrial boxes IP 66
S57 Screw fixed cover boxes IP 66
S24 Safety boxes IP 55

Wall-mounting enclosures
From 300 x 200 mm
to 1200 x 1000 mm



S3D Wall-mounting steel
S3DB Terminal enclosures
S3DBFL Terminal enclosures with FL21 cut-out
S3DM Distribution modular enclosures
VDM 19" enclosures
S3DEX Potentially explosive atmospheres
S3HF Electromagnetic compatibility

Floor-standing enclosures
From 500 x 500 mm
to 2200 x 1600 mm



SM Floor-standing compact
SF Floor-standing suitable for:
- Compartimentalised application
- Electronic application
- Prisma Plus application
- Automobile application

Human-Machine Interface enclosures



S3CM Control enclosures with suspension system
SD Compact control desks
SDF Control desks with console
SF PC rack

ClimaSys
Thermal management



CV-CA
Ventilation/Airing



CE
Exchangers

Spacial Stainless steel

Thalassa Insulating material



PLS Insulating modular boxes
TBP Polycarbonate industrial boxes
TBS ABS industrial boxes



S3X Wall-mounting
S3XEX Potentially explosive atmospheres



PLM Wall-mounting polyester
PLMEX Potentially explosive atmospheres



SMX Floor-standing monobloc
SFX Floor-standing



PLA Floor-standing polyester
PLD Floor-standing DIN polyester



SDX Control desk
SMX PC rack



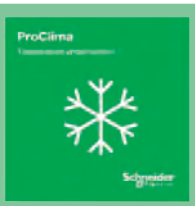
CU
Cooling Units



CR
Resistance Heaters



CC
Thermal control



ProClima 5.0
Thermal software



Spacial.pro
Graphic configurator



Digital Rules
Enclosure selector



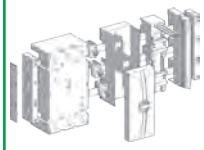
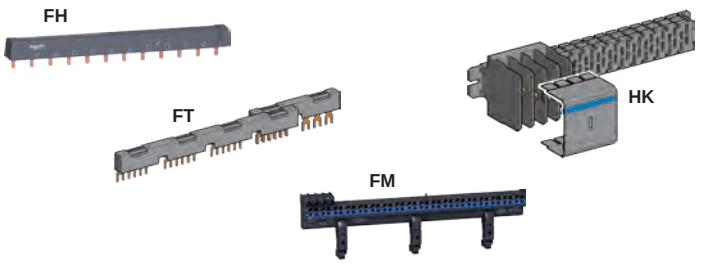
Spacial.conf
Services configurator

Selection guide

For more information:
http://www.schneider-electric.com

Power distribution and connection systems

Power busbars	Device feeders
⇨ *Applications:*	⇨ *Applications:*
This power busbar system is designed for distributing the power vertically to device feeders or as a horizontal device feeder for circuit-breakers, motor controllers, etc.	These device feeder systems are designed for feeding the power to modular and non-modular protection devices on single or multiple DIN rail rows.

Linergy BZ	Linergy FH	Linergy FT	Linergy FM	Linergy HK
				

		Linergy BZ	Linergy FH	Linergy FT	Linergy FM	Linergy HK
Description		630 A/60 mm busbar system for connection of circuit-breakers, contactors, motor controllers, etc. using a range of snap-on mounting plates and snap-on cable connectors. Suitable for both horizontal and vertical power distribution.	Insulated comb busbars, with accessories. FT simplifies cabling of TeSys motor starters. FH is specifically for Acti 9 miniature circuit-breakers, even when lateral auxiliaries are mounted.		Insulated busbars, with spring connectors and accessories. Quick connection simplifies phase balancing.	Insulated busbars, with plug-in pre-wired connectors and mounting plates, accessories. Hot-plug: Safely plug-in and unplug live connectors.
Characteristics	**Rating**	630 A	63 to 100 A		63, 80, 160 A	160 A
	Connection technology	–	–		–	–
	Cabling range (mm^2)	–	–		–	–
Standards and certifications		IEC - UL	IEC	IEC - UL	IEC	IEC - UL

	Distribution blocks			Terminal blocks			
	⇨ *Applications:* The wired power distribution is a flexible solution for feeding various components when their electrical connections are on multiple levels.			⇨ *Applications:* Screw, spring and push-in modular terminal blocks and earth/neutral bars offer a universal solution when a reliable and simple connection is needed in distribution and control panel boards.			
	Linergy DX	**Linergy DS**	**Linergy BS**	**Linergy TRV**	**Linergy TRR**	**Linergy TRP**	**Linergy TB**
							
	Quick distribution block, for flexible or rigid cables. Installation on rail (63 A) or mounting plate (125, 160 A)	Single and four pole multistage distribution blocks. Lateral upstream cable terminals for easier connection. Installation on DIN rail or mounting plate	Multistage distribution blocks. Plain or threaded holes in copper bars. Cabling accessories. Horizontal or vertical mounting.	Common range of accessories Copper bars with plain or threaded holes.	Common range of accessories For extra reliable connections	Common range of accessories Single-handed installation	Various lengths, accessories.
	63, 125, 160 A	100, 125, 160, 250 A	160, 250, 400, 630 A	Up to 309 A (IEC), 300 A (UL-CSA)	Up to 76 A (IEC), 85 A (UL-CSA)	Up to 20 A (IEC-UL-CSA)	–
	Spring	Screw	Screw	Screw	Spring	Push-in	Spring/screw
	6 to 16	1.5 to 120	M6 holes, 16 to 50 mm²	0.18 to 150	0.16 to 16	2.5, 4	2.5 to 16
	IEC	IEC	IEC	IEC - UL	IEC - UL	IEC - UL	IEC

Selection guide

For more information:
http://www.schneider-electric.com

Incoming protection and switching

		⇨ *Applications:* On-load switching of motors, resistive and inductive loads.	⇨ *Applications:* Control and disconnection of electrical distribution circuits.
		TeSys Vario	**Compact**
			
Description		Switch disconnectors Rotary switch with fully visible breaking	Switch disconnectors
	Isolation and Disconnection	●	
	Protection	–	
Characteristics	**Rated operational current (A)**	12 to 175	40 to 2500
	Number of poles	3 to 6	3 and 4
	Short-circuit making capacity at 400 V Icm (kA)	0.5 to 3	50 to 220
	Product name	V	INS
	Embedded metering	–	–
Standards and certifications		IEC 60947-3 UL508	IEC 60947-3 UL508

	⇨ *Applications:* Protection and switching of motors.	⇨ *Applications:* Protection in industrial and tertiary applications.	⇨ *Applications:* Feeder protection and circuit disconnection for multistandard motor circuit design.	⇨ *Applications:* Power circuit protection and disconnection in industrial, infrastructure and building applications.
	TeSys GS	**NG**	**Powerpact**	**Compact**
				
	Switch fuse disconnector	Circuit-breakers	Moulded case circuit-breakers with optional integrated communication and metering possibilities.	
	●	●		
	●	●		
	32 to 1250	10 to 125	15 to 600	16 to 3200
	5 to 90	10 to 50	18 to 65	25 to 150
	GS	NG125	NH, NJ, NL	NSX/NS
	–	–	Micrologic metering adapters	
	IEC 60947-3	IEC 60947-2	IEC 60947-2 UL508	IEC 60947-2

Selection guide

For more information:
http://www.schneider-electric.com

Short-circuit and overload protection

		⇨ *Applications:* DC circuit protection and disconnection: DC power supplies, generators, batteries, etc.			⇨ *Applications:* AC circuit protection and disconnection of machines, electrical distribution in buildings.		
		Acti 9		**Multi 9**	**Acti 9**		**Multi 9**
							
Description		Miniature circuit-breaker		Miniature circuit-breaker	Miniature circuit-breaker		Miniature circuit-breaker
Characteristics	**Voltage**	60 V DC/pole		250 V DC/pole	230 / 400 V AC		
	Number of poles	1 or 2			1, 2, 3 and 4		
	Nominal current (A)	1 to 63					80 to 125
	Breaking capacity (kA)	6		6	10		
	Type of loads / Tripping curve (1)	B, C, D		C	B, C, D		
	Width	18 mm/pole					27 mm/pole
	Product reference IEC	Acti 9 iC60N		Acti 9 C60H-DC	Acti 9 iC60N		Multi 9 C120N
	IEC/UL	Multi 9 C60N		Multi 9 C60H-DC	Multi 9 C60N		–

(1) Tripping curve: B (3 In < Im < 5 In) standard.
C (5 In < Im < 10 In) inrush current.
D (10 In < Im < 14 In) electronics or long cable length.

					Earth leakage protection						**Surge protection**	
	⇨ *Applications:* Protection and disconnection of electrical circuits				⇨ *Applications:* Protection of operators against electrical shocks in event of direct or indirect contact with live equipment.		⇨ *Applications:* Protection of operators against electrical shocks in event of direct or indirect contact with live equipment.		⇨ *Applications:* Protection of operators against electrical shocks in event of direct or indirect contact with live equipment.		⇨ *Applications:* Protection of sensitive equipments against voltage surges due to lightning, high power switching, etc.	
	TeSys DF				**Acti 9**		**Multi 9**		**Acti 9**		**Multi 9**	
												
	Fuse holder				RCBO (3)		RCBO (3)		RCCB (4)		Surge arreste	
	500 V AC	690 V AC			230/400 V AC							
	–				1P+N		2, 3 and 4P					
	25 8 x 32 mm	32 10 x 38 mm	50 14 x 51 mm	25 22 x 58 mm	6 to 32				25 to 63		–	
	20	120			–		–		–		20	
	–				C class A 30 or 300 mA				C class A 30 or 300 mA		Type 2	
	–				36 mm		27 to 63 mm		36 to 72 mm		72 to 120 mm	
	–				Acti 9 DPN Vigi		Acti 9 Vigi iC60 blocks (2)		Acti 9 RCCB ID		Quick PRD 20r	
	DF8	DF10	DF14	DF22	–		–		Multi9 GFP		–	

Selection guide

For more information:
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Indication and metering

	Current transformers	Basic meters	
	⇨ *Applications:* Current sensor: the current value is converted into a 0 to 5 A scale. To be used with ammeter, power meter, energy metering.	⇨ *Applications:* Display of simple electrical values, volts or amps. Meters for mounting on DIN rails.	⇨ *Applications:* Display of simple electrical values, volts or amps. Meters for mounting on front panels.
	CT	**iVLT iAMP**	**VLT AMP**
			
Description	Current transformers	Voltmeter Ammeter	Voltmeter Ammeter
Electrical indications	–	I / U	I / U
Characteristics Measurement accuracy	Class 0.5 to 3	Class 1.5	Class 1.5
Installation	On conductor (cable, bar..)	DIN rail 4 x 18 mm modules	Flush mounted 72 x 72 mm / 96 x 96 mm
Voltage measurement	Maximum rated operational voltage: 720 V AC	VLT: 500 V AC direct or external VT	VLT: 500 V AC direct or external VT
Current measurement	Ranges from 40/5 A to 6000/5 A	AMP: 30 A direct or external CT	AMP: external CT
Communication ports	–	–	–
Inputs / Outputs	–		–
Memory capacity	–	–	–

	Basic energy meters			Basic multi-function metering			
	⇨ *Applications:* Recording and display of energy consumption.The meters are mounted on a DIN rail.			⇨ *Applications:* Simple indication of the current passing through a Compact NSX circuit-breaker.	⇨ *Applications:* Full indication of electrical values and energy metering of a circuit protected by a Compact NSX circuit-breaker.	⇨ *Applications:* Full indication of electrical values and energy metering of a circuit.	
	iEM2000 / iEM2010 / IEM2000T	**iME1**	**iEM3000 Series**	**Micrologic A trip unit**	**Micrologic E trip unit**	**PM3200 / PM3210 / PM3250 / PM3255**	**PM5100 / PM5300 / PM5500**
							
	Kilowatt-hour meters	Kilowatt-hour meters	Kilowatt-hour meters	Ammeter	Power meter	Metering & sub-metering Class 0.5S IEC 62053-22 Class 1 IEC 62053-21 Class 2IEC 62053-23	Metering & sub-metering Class 0.5S IEC 62053-22 Class 0.2S (PM55●●) IEC 62053-22 Class 1/2 IEC 62053-24
	E			I	I, U, F, P, Q, S, PF, E	I, U, F, P, Q, S, PF, E (Power demand and current demand)	I, U, F, P, Q, S, PF, E (Power demand and current demand)
	Class 1			Current: class 1	Current: class 1 Voltage: 0.5% Power: class 2	Class 0.5	Class 0.2S (PM55●●) Class 0.5S
	DIN rail 1.2 or 4 x 18 mm modules			Embedded into circuit-breaker. Remote LCD display available	Embedded into circuit-breaker, remote LCD display available	DIN rail	Flush mounted 96 mm x 96 mm
	400 V AC direct				690 V AC	50 V to 330 V AC (Ph-N) 80 V to 570 V AC (Ph-Ph) up to 1 MV AC (ext. VT)	20 V L-N / 35 V L-L to 277 V L-N /480 V L-L /600 V L-L (PM55●●)
	40 to 63 A direct or external CT			0.2 x In .... 1.2 x In of circuit-breaker	0.2 x In .... 1.2 x In of circuit-breaker	External CT	External CT
	–			1	1	1	2
	–			–	–	–	4 I/O 6 I/O (PM55●●)
	–			–	–	–	256 KB 1.1 MB (PM55●●)

The essential guide of Motor control and Protection

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2013

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