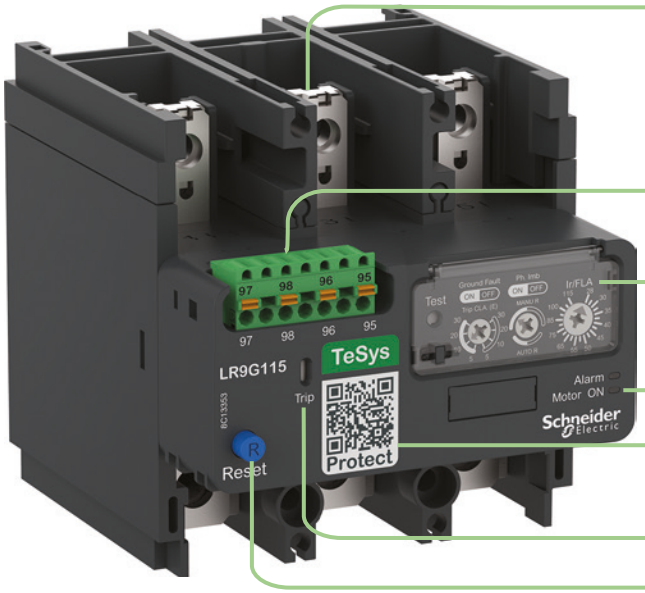
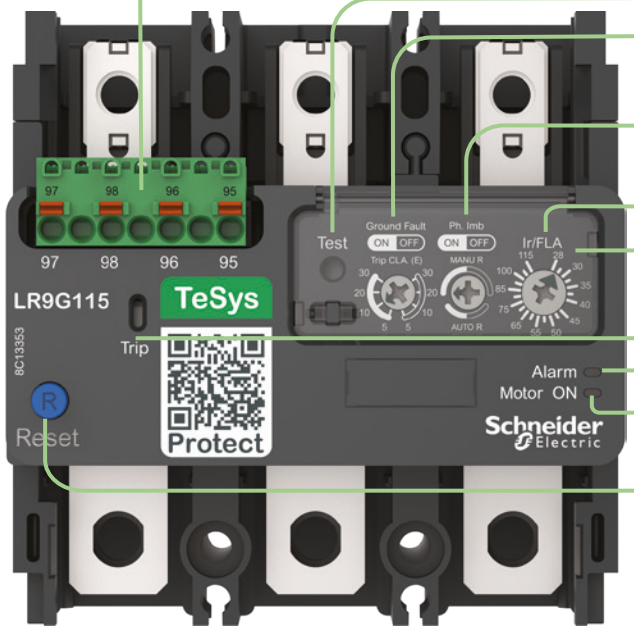
> Intelligent design for greater advantages



- Pole pitch aligned with TeSys Giga Contactor
- Push-in type control terminals
- Wide range of overload setting with trip class & ground fault protection
- Motor ON and trip Alarm indicators
- Unique QR code providing quick access to complete product data
- Relay trip indication
- Manual Reset button



- 1 NO + 1 NC trip contacts with push-in type terminals
- Test button
- 5E…30E trip class selection with ground fault protection option
- Manual/auto reset selection with phase imbalance protection option
- Setting dial for current Ir
- Transparent cover with seal protection
- Trip indicator
- Trip alarm LED indication
- Motor ON LED indication
- Manual reset button

Perfect selection for your motor protection

Range
- A comprehensive range of TeSys Giga Electronic overload relays in 3 sizes
- Direct mounting of relay with contactors saving in panel space and installation time

28…115 A and 57…225 A

125…500 A

160...630 A

Overload relays
- Advanced electronic monitoring with high accuracy
- Thermal compensation for ambient temperatures up to 60 °C
- Wide range of current settings, 0.25...1 Ir setting
- Direct and separately mountable to manage panel design
- Pole pitch alignment with contactors, enabling direct mounting
- Push-in terminals for quick and easy control wiring options
- 4 references covering the complete range means less inventory
- Manual and auto reset to suit your needs
- Multiple reset options: Manual, Automatic & Remote
- Protection against phase loss
- Selectable protection against imbalanced load
- Selectable protection against ground fault
- ON status and overload alarm signaling by LED
- TRIP indicator

Certifications
- Multiple standards
- International certifications

Trip class
- Selectable, from class 5E to class 30E to suit different application needs

Product references – coding principle

LR9	G	630
Electronic overload relay	TeSys Giga series	**Protection settings** 115: 28…115 A 225: 57…225 A 500: 125…500 A 630: 160…630 A

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LR9G225

TeSys Giga Electronic overload relays

- Electronic overload relay
- Suitable for independent mounting or direct mounting with TeSys Giga contactors
- Ergonomic rotary switches for thermal and protection settings
- Trip class selection: 5E/10E/20E/30E
- Overload, phase imbalance, phase loss and ground fault protections
- Manual and auto reset options
- LED indicator for Motor ON and pre-trip alarm
- Thermal memory and compensation
- Push-in terminals for control connections

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Direct mounting with TeSys Giga Contactor

Relay setting range	Fuses to be used with selected relay		For direct mounting beneath contactor LC1G	Reference
	aM /gG/aR	kA		
A	A			
Class 5E...30E				
28…115	125 aM	100	LC1G115…225	**LR9G115**
57…225	250 aM	100	LC1G115…225	**LR9G225**
125…500	630 aM	100	LC1G265…500	**LR9G500**
	630 gG	80		
	630 aR	25		
160…630	800 aR	100	LC1G630	**LR9G630**
	800 aR	80		
	800 aR	25		

Overload relay accessories

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LA9G3650

LA9G82_ISO.eps

LA9G82

PB121626.eps

LA9G3704

Mounting and wiring accessories

Description	Reference
Mounting base for alignment of LR9G115-225 with LC1G115-225 (2)	**LA9G3650**
Mounting base for alignment of LR9G500 with LC1G265-330 (2)	**LA9G3651**
Mounting base for alignment of LR9G500 with LC1G400-500 (2)	**LA9G3652**
Mounting base for alignment of LR9G630 with LC1G630-800 (2)	**LA9G3653**
Push-in connection adapter	**LA9G82**

Front protection cover

Description	Compatible with contactors	Quantity	Reference
Front protection cover (3)	LR9G115 / LR9G225	1	**LA9G3704**
	LR9G500	1	**LA9G3705**
	LR9G630	1	**LA9G3706**

(2) Used for independent mounting of Overload Relay beneath contactor to align main power pole connections.
(3) Used to cover main power connection terminals between contactor and overload with direct mounting option.

Overload relays

Introduction: pages B11/11 to B11/12
Characteristics: pages B11/44 to B11/46
Dimensions: page B11/47

Characteristics

Environment

Contactor type			LR9G115	LR9G225	LR9G500	LR9G630
Conforming to standards			IEC/EN 60947-4-1, IEC/EN 60947-5-1, UL 60947-4-1, CSA C22.2 n° 60947-4-1, UL 60947-5-1, CSA C22.2 n° 60947-5-1, GB/T 14048.4			
Product certifications			CB Scheme, CCC, cULus, UKCA, ATEX, EU-RO-MR by DNV			
Degree of protection	Conforming to IEC 60529 / VDE 0106		IP 20 on front of relay with accessories LA9G37●●			
Climatic withstand			according to IACS E10			
Ambient air temperature around the device (conforming to IEC 60255-8)	Storage	**°C**	-55...+80			
	Normal operation	**°C**	-25…+60			
Maximum operating altitude	Without derating	**m**	3000			
Net weight		**kg**	1.2		1.7	2.8
Operating positions without derating	In relation to normal vertical mounting plane		Any position			
Shock resistance 11 ms	Permissible acceleration conforming to IEC 60068-2-7		15 gn			
Vibration resistance 5 to 300 Hz	Permissible acceleration conforming to IEC 60068-2-6		6 gn			
Rated impulse withstand voltage (Uimp)	Conforming to IEC 60947-4-1	**kV**	8			
Surge withstand	Conforming to IEC 61000-4-5	**kV**	4			
Resistance to electrostatic discharge	Conforming to IEC 61000-4-2	**kV**	8 (in air) 6 (in direct mode)			
Resistance to radiated radio-frequency disturbance	Conforming to IEC 61000-4-3	**V/m**	20			
Resistance to fast transient currents	Conforming to IEC 61000-4-4	**kV**	4			
Electromagnetic compatibility	EN 50081-1 and 2, EN 50082-2		Conforming			

Characteristics

Power circuit - Electrical characteristics

Relay type			LR9G115	LR9G225	LR9G500	LR9G630
Rated insulation voltage (Ui)	Conforming to IEC 60947-4-1 Over-voltage category III, degree of pollution: 3	**V**	1000			
Rated impulse withstand voltage (Uimp)	Conforming to IEC 60947-1	**kV**	8			
Rated operational current (Ie)		**A**	28 to 630			
Short-circuit protection and coordination			See pages A5/7 to A5/8, A5/23 to A5/26 and A5/38 to A5/39.			
Frequency limits of the operating current		**Hz**	50 / 60			
Power circuit connections	Width of terminal lug	**mm**	18	18	30	48
	Clamping screw		M8	M8	M10	M12
	Tightening torque	**N.m**	18	18	35	58

Auxiliary contact electrical characteristics

Conventional thermal current		**A**	5						
Short-circuit protection	By gG fuses	**A**	6						
Connection (Push-in type)			**Min.**	**Max.**					
Flexible cable	1 conductor with cable end	**mm²**	0.25	2.5					
	2 conductors with Dual Sleeve	**mm²**	0.5	1					
Solid cable	1 conductor	**mm²**	0.2	2.5					
	Stripping length	**mm**	10	10					
Rated operational contact power	a.c. supply AC-15	**V**	**24**	**48**	**120**	**240**	**380**	**480**	**500**
		A	4	4	3	1.5	0.95	0.75	0.72
		VA	96	192	360	360	361	360	360
	d.c. supply DC-13	**V**	**24**	**48**	**125**	**250**	**–**	**–**	**–**
		A	2	0.7	0.22	0.11	–	–	–
		W	48	33.6	27.5	27.5	–	–	–
Maximum operational voltage	a.c., category AC-15	**V**	500	500	500	500	500	500	500
	d.c., category DC-13	**V**	250	250	250	250	250	250	250

Introduction: pages B11/11 to B11/12
References: pages B11/13 to B11/14
Dimensions: page B11/47

Characteristics

Operating characteristics

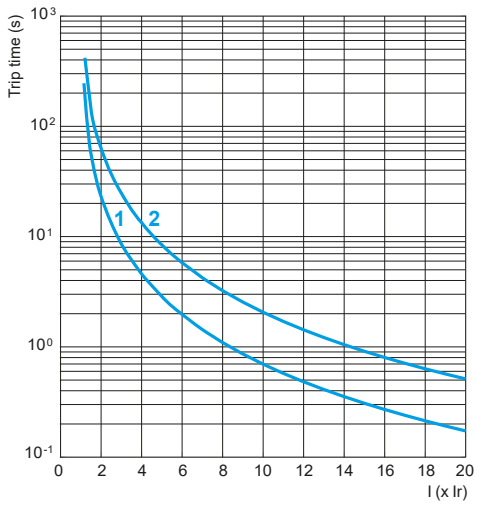
Tripping class	Conforming to IEC 60947-4-1			5E/10E/20E/30E
Operating temperature			°C	-40…+60 (1)
Reset				auto and manual
Trip alarm and fault indication				On front of relay
Test function				On front of relay
Tripping thresholds	Conforming to IEC 60947-4-1	Alarm		≥ 90% of permissible thermal state
		Tripping	A	1.2 ± 0.05 Ir
Sensitivity to phase loss	Conforming to IEC 60947-4-1			Tripping in 4 s ± 1 s in the event of phase loss
Phase imbalance	Conforming to IEC 60947-1			Tripping in 5 s ± 1 s if imbalance ratio ≥ 40 % according to Annex T5.5
Ground fault	Conforming to IEC 60947-4-1			Ig = 0.75 Ir Tripping 1 s ± 20 % if I ≥ 1.1 Ig
Adjustment (nominal motor current)				Setting dial on front of relay (64 settings)
Security sealing				Yes

(1) Adjustment of dial setting(s): -25...+60 °C.

LR9G tripping curves

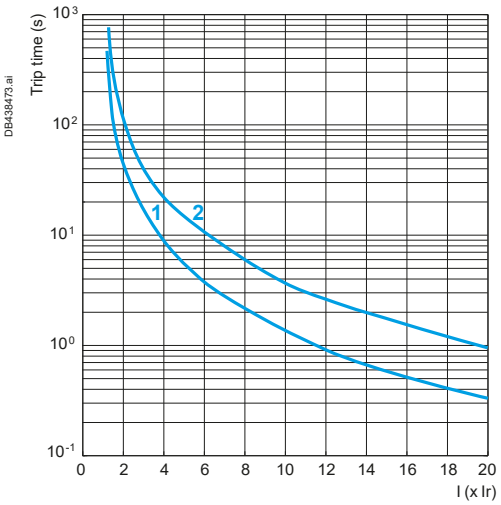
Average operating times depending on multiples of the setting current

Class 5E



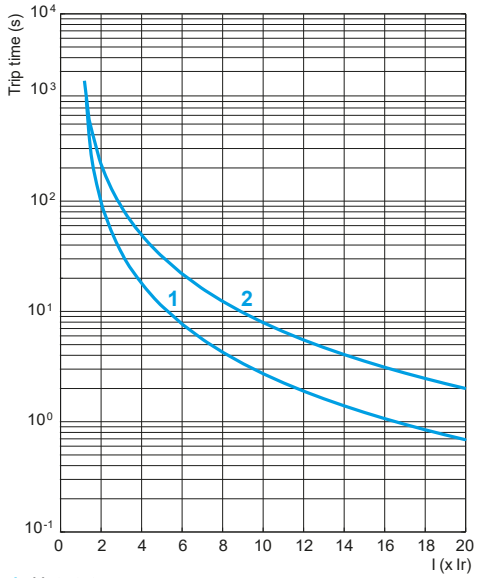
1 Hot state
2 Cold state

Class 10E



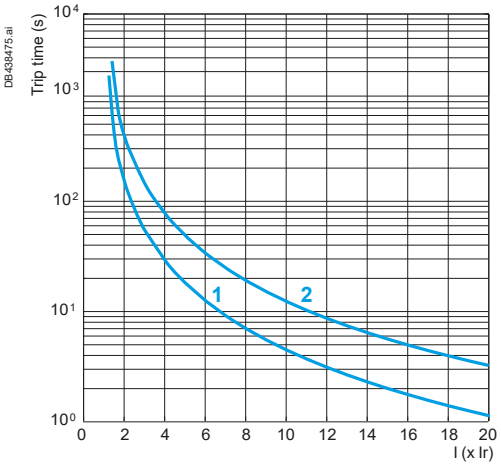
1 Hot state
2 Cold state

Class 20E



1 Hot state
2 Cold state

Class 30E



1 Hot state
2 Cold state

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page B11/47

Dimensions and diagram

Dimensions

LR9G115...630

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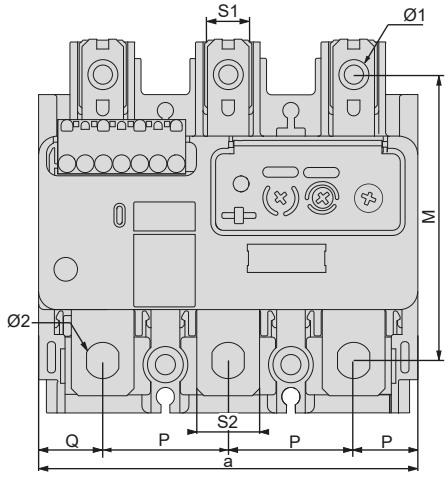

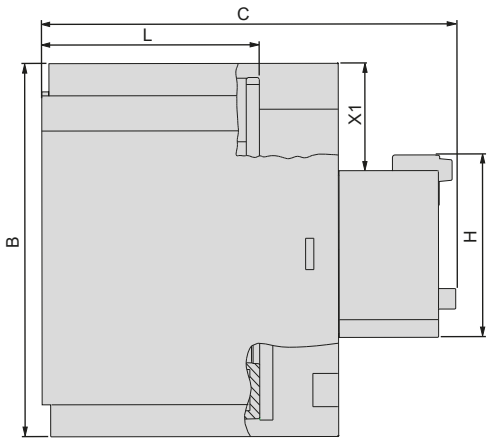

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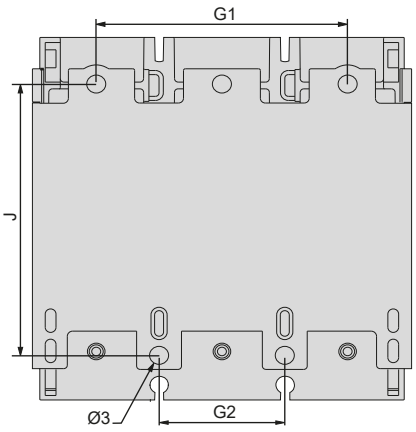

LR9G	115-225	500	630
a	105.7	140	210
b	109.55	115.65	149.45
c	126.2	139.2	185.9
G1	70	119.3	186.2
G2	35	45	70
J	80.1	68.25	86
M	78	83	100
H	52	52	52
L	66	79	107
P	35	45	70
Q	18	25	35
S1	11.5	22.5	22.5
S2	17.5	30.5	50
Ø1	8.3	10.6	13
Ø2	9	10.6	13
Ø3	5.3	5.3	8.5
X1	30	33	50

Diagram

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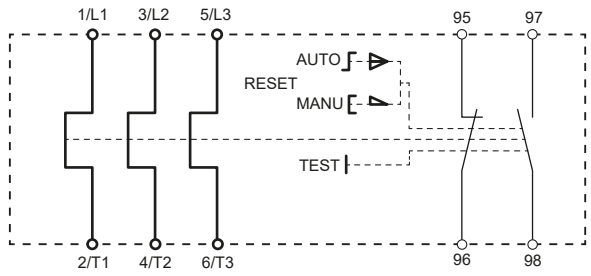

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