
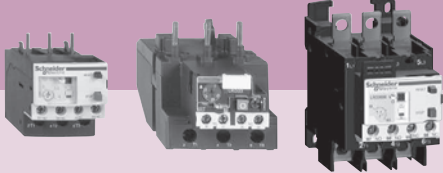



Thermal overload relays - For use with TeSys K contactors

Type of product	Range		Pages
Adjustable thermal overload relays For motors TeSys LRK	From 0.16 to 16 A		B11/2
Adjustable thermal overload relays For unbalanced loads TeSys LRK	From 0.8 to 16 A		B11/3


Thermal overload relays Class 10 - For use with TeSys D contactors

Adjustable thermal overload relays For motors TeSys LRD	From 0.16 to 140 A		B11/4
Adjustable thermal overload relays For unbalanced loads TeSys LRD	From 0.16 to 140 A		B11/4


Thermal overload relays Class 20 - For use with TeSys D contactors

Adjustable thermal overload relays For motors TeSys LRD	From 0.63 to 80 A		B11/6
Adjustable thermal overload relays For unbalanced loads TeSys LRD	From 0.63 to 32 A		B11/6


Electronic thermal overload relays - For use with TeSys F contactors

Compensated and differential overload relays, with or without alarm TeSys LR9F	From 50 to 630 A		B11/10
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Single pole magnetic over current relays

Latching or non latching overload relays TeSys RM1	From 1.15 to 630 A		B11/14
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Thermistor-type protection units - For use detection of motor overheating

Protection units and PTC probes, with or without fault memory TeSys LT3	From 90 to 170 °C		B11/16
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Electronic over current relays - For machine protection

Predefined or adjustable starting times, Manual reset	From 1.5 to 34 A		B11/18
Automatic, electric or manual reset	From 0.5 to 50 A		B11/18

Technical Data for Designers

B11/19

Protection components

TeSys LRK thermal overload relays, adjustable from 0.11 to 16 A

Overload relays

3-pole relays with screw clamp terminals

These overload relays are designed for the protection of motors. They are compensated and phase failure sensitive. Resetting can either be manual or automatic.

Direct mounting: under the contactor for versions with screw clamp terminals only; pre-wired terminals, see pages B11/26 and B11/28.

Separate mounting: using terminal block LA7 K0064 (see below).

On the front face of the overload relay:

- selection of reset mode: Manual (marked H) or Automatic (marked A),
- red pushbutton: Trip Test function,
- blue pushbutton: Stop and manual Reset,
- yellow trip flag indicator: overload relay tripped.

Protection by magnetic circuit breaker GV2 LE, see pages A5/11 and A5/20.

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

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

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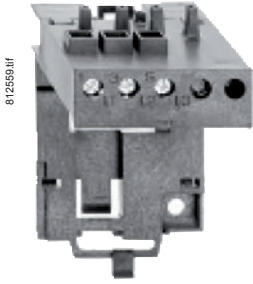


LR2 K0307

Protection components

TeSys LRK thermal overload relays,
adjustable from 0.11 to 16 A

Overload relays



8125595.tif

LA7 K0064

Overload relays for unbalanced loads

Class 10 A: to order, replace the prefix **LR2** by **LR7** in the references selected from above (only applicable to overload relays **LR2 K0305** to **LR2 K0322**).
Example: **LR7 K0308**.

Accessory

Description	Type of connection	Reference
Terminal block for separate clip-on mounting of the overload relay on 35 mm rail	Screw clamp	LA7K0064

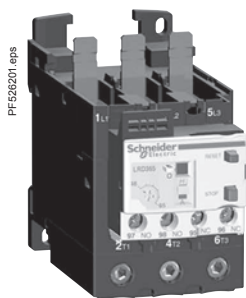
TeSys protection components

TeSys LRD, 3-pole thermal overload relays

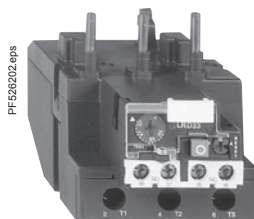
Overload relays



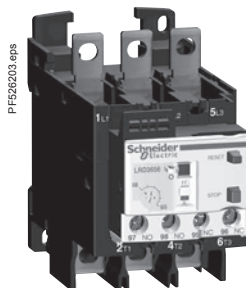
LRD 01



LRD 300



LRD 330



LRD 3006

Differential thermal overload relays for screw clamp connectors and lugs for use with fuses or magnetic circuit breakers GV2 L and GV3 L

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

Relay setting range (A)	Fuses to be used with selected relay			For use with contactor LC1	Reference	Weight kg
	aM (A)	gG (A)	BS88 (A)			
Class 10 A ⁽¹⁾ for connection by screw clamp terminals or connectors						
0.10...0.16	0.25	2	–	D09...D38	LRD01	0.124
0.16...0.25	0.5	2	–	D09...D38	LRD02	0.124
0.25...0.40	1	2	–	D09...D38	LRD03	0.124
0.40...0.63	1	2	–	D09...D38	LRD04	0.124
0.63...1	2	4	–	D09...D38	LRD05	0.124
1...1.6	2	4	6	D09...D38	LRD06	0.124
1.6...2.5	4	6	10	D09...D38	LRD07	0.124
2.5...4	6	10	16	D09...D38	LRD08	0.124
4...6	8	16	16	D09...D38	LRD10	0.124
5.5...8	12	20	20	D09...D38	LRD12	0.124
7...10	12	20	20	D09...D38	LRD14	0.124
9...13	16	25	25	D12...D38	LRD16	0.124
12...18	20	35	32	D18...D38	LRD21	0.124
16...24	25	50	50	D25...D38	LRD22	0.124
23...32	40	63	63	D25...D38	LRD32	0.124
30...38	40	80	80	D32 and D38	LRD35	0.124
Class 10 A ⁽¹⁾ for connection by EverLink[®] BTR screw connectors ⁽³⁾						
9...13	16	25	25	D40A...D65A	LRD313	0.375
12...18	20	32	35	D40A...D65A	LRD318	0.375
17...25	25	50	50	D40A...D65A	LRD325	0.375
23...32	40	63	63	D40A...D65A	LRD332	0.375
30...40	40	80	80	D40A...D65A	LRD340	0.375
37...50	63	100	100	D40A...D65A	LRD350	0.375
48...65	63	100	100	D50A and D65A	LRD365	0.375
Class 10 A ⁽¹⁾ for connection by screw clamp terminals or connectors						
17...25	25	50	50	D80 and D95	LRD3322	0.510
23...32	40	63	63	D80 and D95	LRD3353	0.510
30...40	40	100	80	D80 and D95	LRD3355	0.510
37...50	63	100	100	D80 and D95	LRD3357	0.510
48...65	63	100	100	D80 and D95	LRD3359	0.510
55...70	80	125	125	D80 and D95	LRD3361	0.510
63...80	80	125	125	D80 and D95	LRD3363	0.510
80...104	100	160	160	D80 and D95	LRD3365	0.510
80...104	125	200	160	D115 and D150	LRD4365	0.900
95...120	125	200	200	D115 and D150	LRD4367	0.900
110...140	160	250	200	D150	LRD4369	0.900
80...104	100	160	160	⁽²⁾	LRD33656	1.000
95...120	125	200	200	⁽²⁾	LRD33676	1.000
110...140	160	250	200	⁽²⁾	LRD33696	1.000

Class 10 A ⁽¹⁾ for connection by lugs

Select the appropriate overload relay with screw clamp terminals or connectors from the table above and add one of the following suffixes:

- figure 6 for relays LRD 01 to LRD 35 and relays LRD 313 to LRD 365.
- **A66** for relays LRD 3322 to LRD 3363.

Relays LRD 43000 are suitable, as standard, for use with lug-clamps.

Thermal overload relays for use with unbalanced loads

Class 10 A ⁽¹⁾ for connection by screw clamp terminals or lugs

In the references selected above, change the prefix **LRD** (except **LRD 40000**) to **LR3 D**.

Example: **LRD 01** becomes **LR3 D01**.

Example with EverLink[®] connectors: **LRD 340** becomes **LR3 D340**.

Example with lugs: **LRD 3406** becomes **LR3 D3406**.

⁽¹⁾ Standard IEC 60947-4-1 specifies a tripping time for 7.2 times the setting current I_R : class 10 A: between 2 and 10 seconds.

⁽²⁾ Independent mounting of the contactor.

⁽³⁾ BTR screws: hexagon socket head. In accordance with local BTR electrical wiring regulations, a size 4 insulated Allen key must be used (reference **LAD ALLEN4**, see page B8/21).

Overload relays



LRD ●●3

Differential thermal overload relays for spring terminals for use with fuses or magnetic circuit breakers GV2 L and GV3 L

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

Relay setting range (A)	Fuses to be used with selected relay			For use with contactor LC1	Reference
	aM (A)	gG (A)	BS88 (A)		
Classes 10 A ⁽¹⁾ for connection by spring terminals (only for direct mounting beneath the contactor)					
0.10...0.16	0.25	2	–	D09...D38	LRD013
0.16...0.25	0.5	2	–	D09...D38	LRD023
0.25...0.40	1	2	–	D09...D38	LRD033
0.40...0.63	1	2	–	D09...D38	LRD043
0.63...1	2	4	–	D09...D38	LRD053
1...1.6	2	4	6	D09...D38	LRD063
1.6...2.5	4	6	10	D09...D38	LRD073
2.5...4	6	10	16	D09...D38	LRD083
4...6	8	16	16	D09...D38	LRD103
5.5...8	12	20	20	D09...D38	LRD123
7...10	12	20	20	D09...D38	LRD143
9...13	16	25	25	D12...D38	LRD163
12...18	20	35	32	D18...D38	LRD213
16...24	25	50	50	D25...D38	LRD223

Class 10 A with connection by EverLink® BTR screw connectors ⁽²⁾ and control by spring terminals

9...13	16	25	25	D40A...D65A	LRD3133
12...18	20	32	35	D40A...D65A	LRD3183
17...25	25	50	50	D40A...D65A	LRD3253
23...32	40	63	63	D40A...D65A	LRD3323
30...40	40	80	80	D40A...D65A	LRD3403
37...50	63	100	100	D40A...D65A	LRD3503
48...65	63	100	100	D50A and D65A	LRD3653

Thermal overload relays for use with unbalanced loads

Classes 10 A ⁽¹⁾ for connection by BTR screw connectors ⁽²⁾ and control by spring terminals

In the references selected above, replace **LRD 3** with **LR3 D3**.

Example: **LRD 3653** becomes **LR3 D3653**.

Thermal overload relays for use on 1000 V supplies

Classes 10 A ⁽¹⁾ for connection by screw clamp terminals

For relays LRD 06 to LRD 35 only, for an operating voltage of 1000 V, and only for independent mounting, the reference becomes **LRD 33●●A66**.

Order an **LA7 D3064** terminal block separately, see page B11/9.

Standard relay	Relay for 1000 V network
LRD06	LRD3306A66
LRD07	LRD3307A66
LRD08	LRD3308A66
LRD10	LRD3310A66
LRD12	LRD3312A66
LRD14	LRD3314A66
LRD16	LRD3316A66
LRD21	LRD3321A66
LRD22	LRD3322A66
LRD32	LRD3353A66
LRD35	LRD3355A66

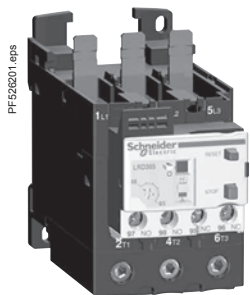
⁽¹⁾ Standard IEC 60947-4-1 specifies a tripping time for 7.2 times the setting current I_p ; class 10 A: between 2 and 10 seconds.

⁽²⁾ BTR screws: hexagon socket head. In accordance with local electrical wiring regulations, a size 4 insulated Allen key must be used (reference **LAD ALLEN4**, see page B8/21).

Overload relays



LRD 04L...LRD 32L



LRD 3...L



LR2 D35...L

Differential thermal overload relays for screw clamp connectors and lugs for use with fuses or magnetic circuit breakers GV2 L and GV3 L

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

Relay setting range (A)	Fuses to be used with selected relay			For use with contactor LC1	Reference
	aM (A)	gG (A)	BS88 (A)		
Classes 20 ⁽¹⁾ for connection by screw clamp terminals					
0.4...0.63	1	2	-	D09...D38	LRD04L
0.63...1	2	4	-	D09...D38	LRD05L
1...1.6	2	4	6	D09...D38	LRD06L
1.6...2.5	4	6	10	D09...D38	LRD07L
2.5...4	6	10	16	D09...D38	LRD08L
4...6	8	16	16	D09...D38	LRD10L
5.5...8	12	20	20	D09...D38	LRD12L
7...10	12	20	20	D09...D38	LRD14L
9...13	16	25	25	D12...D38	LRD16L
12...18	20	35	32	D18...D38	LRD21L
17...24	25	50	50	D25...D38	LRD22L
23...32	40	63	63	D25...D38	LRD32L
Class 20 ⁽¹⁾ for connection by EverLink[®] BTR screw connectors ⁽²⁾					
9...13	20	32	35	D40A...D65A	LRD313L
12...18	25	40	40	D40A...D65A	LRD318L
17...25	32	50	50	D40A...D65A	LRD325L
23...32	40	63	63	D40A...D65A	LRD332L
30...40	50	80	80	D40A...D65A	LRD340L
37...50	63	100	100	D40A...D65A	LRD350L
48...65	80	125	125	D50A and D65A	LRD365L
Classes 20 ⁽¹⁾ for connection by screw clamp terminals					
17...25	32	50	50	D80 and D95	LR2D3522
23...32	40	63	63	D80 and D95	LR2D3553
30...40	40	100	80	D80 and D95	LR2D3555
37...50	63	100	100	D80 and D95	LR2D3557
48...65	80	125	100	D80 and D95	LR2D3559
55...70	100	125	125	D80 and D95	LR2D3561
63...80	100	160	125	D80 and D95	LR2D3563

Class 20 ⁽¹⁾ for connection by lugs

For relays LRD 04L to LRD 32L and relays LRD 313L to LRD 365L, select the appropriate overload relay with screw clamp terminals or connectors from the table above and add the suffix 6.

Example: **LRD 04L** becomes **LRD 04L6**.

Thermal overload relays for use with unbalanced loads

Class 20 ⁽¹⁾ for connection by screw clamp terminals or lugs

For relays LRD 04L to LRD 32L and relays LR2 D3522 to LR2 D3563, select the appropriate overload relay with screw clamp terminals or connectors from the table above and change the prefix LRD or LR2 D to **LR3 D**. Example: **LRD 04L** becomes **LR3D 04L**.

⁽¹⁾ Standard IEC 60947-4-1 specifies a tripping time for 7.2 times the setting current I_R :
class 20: between 6 and 20 seconds

⁽²⁾ BTR screws: hexagon socket head. In accordance with local electrical wiring regulations, a size 4 insulated Allen key must be used (reference **LAD ALLEN4**, see page B8/21).

Overload relays

Differential thermal overload relays for screw clamp connectors and springs for use with fuses or magnetic circuit breakers GV2 L and GV3 L

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

Relay setting range (A)	Fuses to be used with selected relay			For mounting beneath contactor LC1	Reference
	aM (A)	gG (A)	BS88 (A)		
Class 20 ⁽¹⁾ with connection by EverLink[®] BTR screw connectors ⁽²⁾ and control by spring terminals					
9...13	20	32	35	D40A...D65A	LRD313L3
12...18	25	40	40	D40A...D65A	LRD318L3
17...25	32	50	50	D40A...D65A	LRD325L3
23...32	40	63	63	D40A...D65A	LRD332L3
30...40	50	80	80	D40A...D65A	LRD340L3
37...50	63	100	100	D40A...D65A	LRD350L3
48...65	80	125	125	D50A and D65A	LRD365L3

Differential thermal overload relays for bars and connectors for use with fuses or magnetic circuit breakers NSX

- Compensated relays, with relay trip indicator
- for a.c.
- for direct mounting on contactor or independent mounting ⁽³⁾.

Relay setting range (A)	Fuses to be used with selected relay		For mounting beneath contactor LC1	Reference
	aM (A)	gG (A)		
Classes 10 or 10A ⁽¹⁾ for connection using bars or connectors				
60...100	100	160	D115 and D150	LR9D5367
90...150	160	250	D115 and D150	LR9D5369
Classes 20 ⁽¹⁾ for connection using bars or connectors				
60...100	125	160	D115 and D150	LR9D5567
90...150	200	250	D115 and D150	LR9D5569

Electronic thermal overload relays for use with balanced or unbalanced loads

- Compensated relays
- with separate outputs for alarm and tripping.

Relay setting range (A)	Fuses to be used with selected relay		For mounting beneath contactor LC1	Reference
	aM (A)	gG (A)		
Classes 10 or 20 ⁽¹⁾ selectable, for connection using bars or connectors				
60...100	100	160	D115 and D150	LR9D67
90...150	160	250	D115 and D150	LR9D69

⁽¹⁾ Standard IEC 60947-4-1 specifies a tripping time for 7.2 times the setting current I_R :

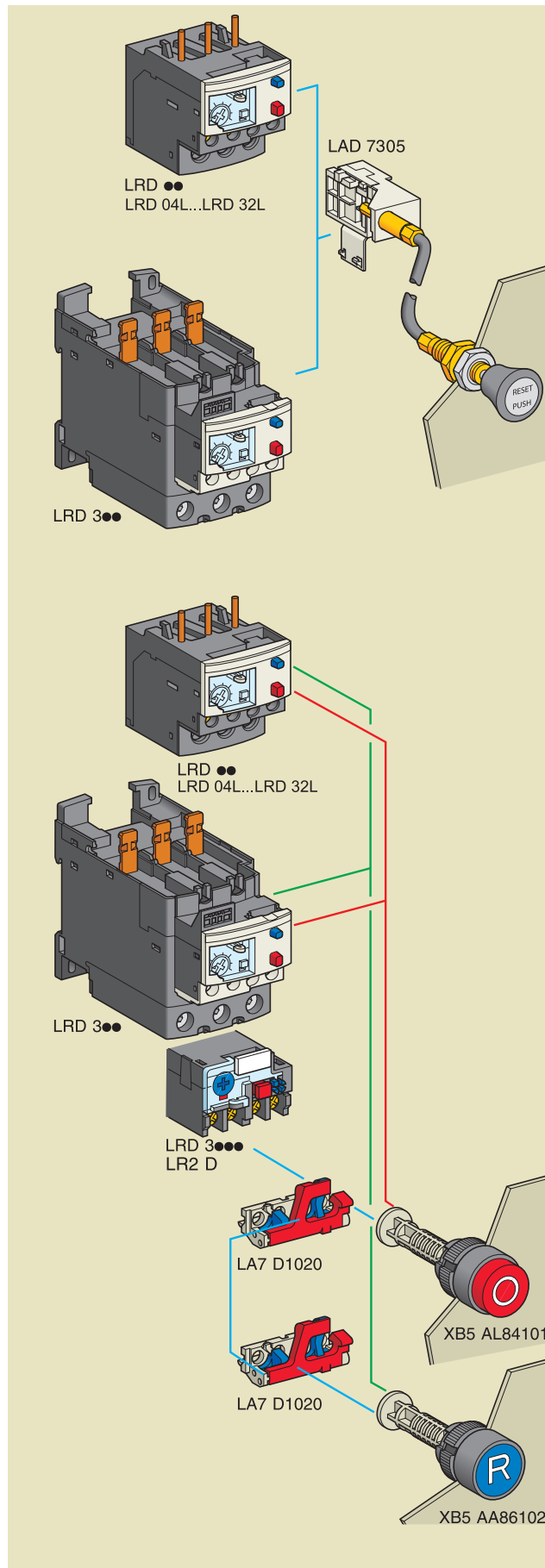
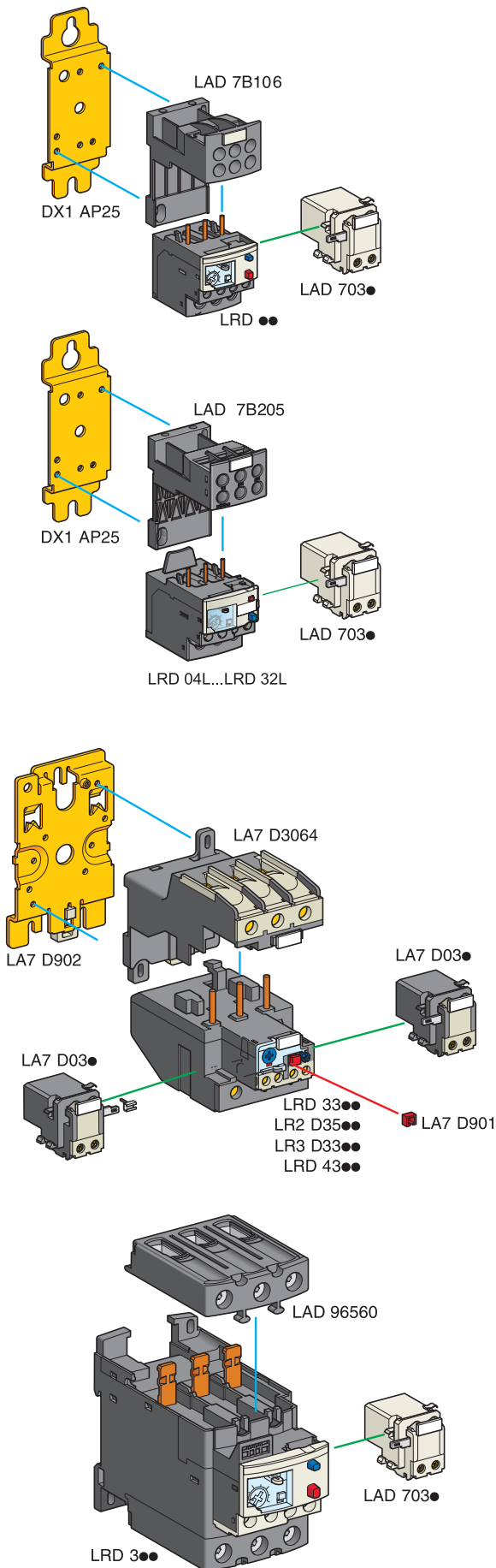
class 10: between 4 and 10 seconds,
class 10 A: between 2 and 10 seconds,
class 20: between 6 and 20 seconds

⁽²⁾ BTR screws: hexagon socket head. In accordance with local electrical wiring regulations, a size 4 insulated Allen key must be used (reference LAD ALLEN4, see page B8/21).

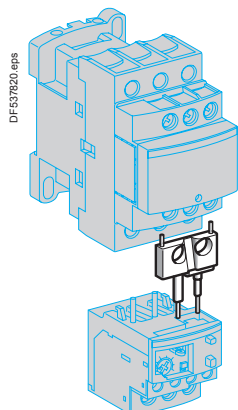
⁽³⁾ Power terminals can be protected against direct finger contact by the addition of shrouds and/or insulated terminal blocks, to be ordered separately (see page B8/20).

Other versions

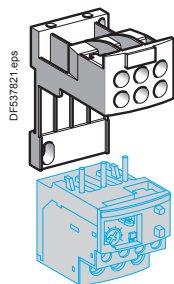
Thermal overload relays for resistive circuits in category AC-1.
Please consult your Regional Sales Office.



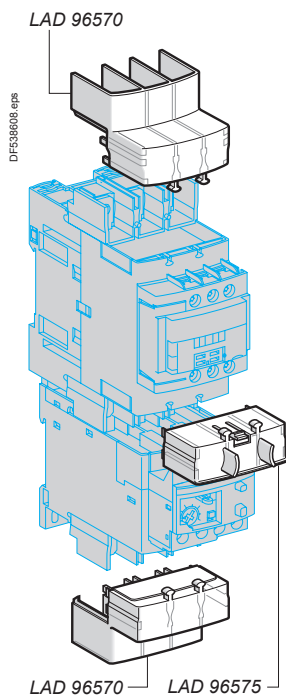
Overload relays



LAD 7C●



LAD 7B106



LAD 96570 — LAD 96575

Separate components for relays

Description	For use with	Sold in lots of	Unit reference
Pre-wiring kit allowing direct connection of the N/C contact of relay LRD 01...35 or LR3 D01...D35 to the contactor	LC1 D09...D18 LC1 D25...D38	10 10	LAD7C1 ⁽¹⁾ LAD7C2 ⁽¹⁾
Terminal block ⁽²⁾ for clip-on mounting on 35 mm rail (AM1 DP200) or screw fixing; for fixing centres, see pages B11/35 to B11/37	LRD 01...35 and LR3 D01...D35 LRD04L...LRD32L, LR3D04L...LR3D32L	1 1	LAD7B106 LAD7B205
EverLink® terminal block for independent mounting	LRD 43●●, LRD 33●●●, LR3 D33●●●, LR2 D35●●	1	LA7D3064 ⁽³⁾
Size 4 Allen key, insulated, 1000 V	LRD 3●●, LRD 3●●L and LR3 D3●●	5	LADALLEN4
Terminal block adapter for mounting a relay beneath an LC1 D115 or D150 contactor	LRD 3●●, LR3 D3●●●, LRD 35●●	1	LA7D3058 ⁽³⁾
Mounting plates ⁽⁴⁾ for screw fixing on 110 mm centres	LRD 01...35, LR3 D01...D35, LRD04L...LRD32L, LR3D04L...LR3D32L	10	DX1AP25
	LRD 3●●●, LR3 D3●●●, LR2 D35●●	1	LA7D902
Marker holders, snap-in 8 x 18 mm	LRD 3●●	100	LAD90
	All relays except LRD 01...35, LRD 04L...32L, LR3D04L...D32L, LR3 D01...D35, LRD 3●●, LRD 3●●L and LR3 D3●●	100	LA7D903
Bag of 400 blank legends (self-adhesive, 7 x 16 mm)	All relays	1	LA9D91
Stop button locking device	All relays except LRD 01...35, LRD 04L...32L, LR3D04L...D32L, LR3 D01...D35, LR9 D and LRD 313...LRD 365	10	LA7D901
Remote Stop or electrical reset device ⁽⁵⁾	LRD 01...35, LR3 D01...D35, LRD 04L...32L, LR3D04L...D32L and LRD 313...LRD 365	1	LAD703● ^{(6) (7)}
Remote tripping or electrical reset device ⁽⁶⁾	All relays except LRD 01...35, LRD 04L...32L, LR3D04L...D32L, LR3 D01...D35, LRD 3●●, LRD 3●●L and LR3 D3●●	1	LA7D03● ⁽⁶⁾
Block of insulated terminals	LR9 D	2	LA9F103
IP 20 cover for lug type terminals for independent mounting	LRD 3136...3656	1	LAD96570
IP 20 cover for lug type terminals for mounting with contactor LC1 D40A6...D65A6	LRD 3136...3656	1	LAD96575
Terminal block for lug type terminals for independent mounting	LRD 3136...3656	1	LAD96566

Remote control

"Reset" function

Description	For use with	Sold in lots of	Unit reference
By flexible cable (length = 0.5 m)	LRD 01...35, LR3 D01...D35, LR3D04L...D32L and LRD 313...LRD 365, LRD 04L...LRD 32L	1	LAD7305 ⁽⁷⁾
	All relays except LRD 01...35, LR3 D01...D35, LRD 3●●, LRD 04L...32L, LR3D04L...D32L, LRD 3●●L and LR3 D3●●	1	LA7D305

"Stop" and/or "Reset" functions

The terminal protection shroud must be removed and the following 3 products must be ordered separately:

Adapter for door mounting	LRD 33●●, LR2 D	1	LA7D1020	
Operating heads for spring return pushbutton	Stop	All relays	1	XB5AL84101
	Reset	All relays	1	XB5AA86102

- (1) These pre-wiring kits cannot be used with reversing contactors.
- (2) Terminal blocks are supplied with terminals protected against direct finger contact and screws in the open, "ready-to-tighten" position.
- (3) To order a terminal block for connection by lugs, the reference becomes LA7 D30646.
- (4) Remember to order the terminal block corresponding to the type of relay.
- (5) 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; 5 s pulse duration with 30 s rest time; 10 s pulse duration with 90 s rest time; maximum pulse duration 20 s with a rest time of 300 s. Minimum pulse time: 200 ms.
- (6) Reference to be completed by adding the code indicating the control circuit voltage.
Standard control circuit voltages (for other voltages, please consult your Regional Sales Office):

Volts	12	24	48	96	110	220/230	380/400	415/440
50/60 Hz	—	B	E	—	F	M	Q	N
Consumption, inrush and sealed: < 100 VA								
---	J	B	E	DD	F	M	—	—
Consumption, inrush and sealed: < 100 W.								

(7) Not compatible with 2-pole relays fitted with contactors.

Overload relays

Protection components

3-pole electronic thermal overload relays, TeSys LR9 F for motor protection

Compensated and differential overload relays

Thermal overload relays:

- compensated and differential,
- with relay trip indicator,
- for a.c.,
- for direct mounting on contactor or independent mounting ⁽¹⁾.

Relay setting range	Fuses to be used with selected relay		For direct mounting beneath contactor LC1	Reference	Weight
	aM	gG			
A	A	A			kg
Class 10 ⁽²⁾					
30...50	50	80	F115...F185	LR9F5357	0.885
48...80	80	125	F115...F185	LR9F5363	0.900
60...100	100	200	F115...F185	LR9F5367	0.900
90...150	160	250	F115...F185	LR9F5369	0.885
132...220	250	315	F185...F400	LR9F5371	0.950
200...330	400	500	F225...F500	LR9F7375	2.320
300...500	500	800	F225...F500	LR9F7379	2.320
380...630	630	800	F400...F630 and F800	LR9F7381	4.160
Class 20 ⁽²⁾					
30...50	50	80	F115...F185	LR9F5557	0.885
48...80	80	125	F115...F185	LR9F5563	0.900
60...100	100	200	F115...F185	LR9F5567	0.900
90...150	160	250	F115...F185	LR9F5569	0.885
132...220	250	315	F185...F400	LR9F5571	0.950
200...330	400	500	F225...F500	LR9F7575	2.320
300...500	500	800	F225...F500	LR9F7579	2.320
380...630	630	800	F400...F630 and F800	LR9F7581	4.160

⁽¹⁾ When mounting overload relays up to size **LR9 F5371** directly beneath the contactor, they may be additionally supported by a mounting plate (see page B11/13). Above this size it is always necessary to use the mounting plate.

Power terminals can be protected against direct finger contact by the addition of shrouds and/or insulated terminal blocks, to be ordered separately (see page B11/13).

⁽²⁾ Standard IEC 60947-4 specifies a tripping time for 7.2 times the setting current I_n :

- class 10: between 4 and 10 seconds,
- class 20: between 6 and 20 seconds.



LR9 F53●●



LR9 F73●●

Protection components

3-pole electronic thermal overload relays, TeSys LR9 F for motor protection

Compensated overload relays, class 10 or 20 with alarm

Thermal overload relays:

- compensated,
- with relay trip indicator,
- for a.c.,
- for direct mounting on contactor or independent mounting ⁽¹⁾,
- class 10 or 20 by selector switch,
- protection of 3-phase or single-phase circuits by selector switch,
- with alarm function that enables tripping to be forestalled.



LR9 F57

Relay setting range	Fuses to be used with selected relay		For direct mounting beneath contactor LC1	Reference	Weight
	aM	gG			
A	A	A			kg
30...50	50	80	F115...F185	LR9F57	0.885
48...80	80	125	F115...F185	LR9F63	0.900
60...100	100	200	F115...F185	LR9F67	0.900
90...150	160	250	F115...F185	LR9F69	0.885
132...220	250	315	F185...F400	LR9F71	0.950
200...330	400	500	F225...F500	LR9F75	2.320
300...500	500	800	F225...F500	LR9F79	2.320
380...630	630	800	F400...F630 and F800	LR9F81	4.160

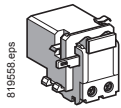
⁽¹⁾ When mounting overload relays up to size **LR9 F71** directly beneath the contactor, they may be additionally supported by a mounting plate (see page B11/13). Above this size it is always necessary to use the mounting plate.
Power terminals can be protected against direct finger contact by the addition of shrouds and/or insulated terminal blocks, to be ordered separately (see page B11/13).

Protection components

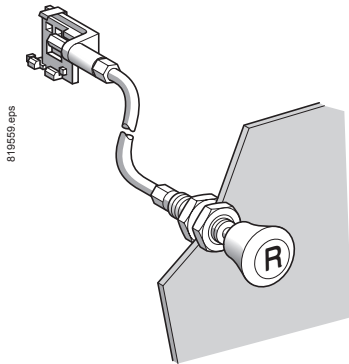
3-pole electronic thermal overload relays, TeSys LR9 F

Accessories (to be ordered separately)

Overload relays



LA7 D03●



LA7 D305

Control accessories

Description	Sold in lots of	Unit reference
Remote electrical reset device ⁽¹⁾	1	LA7D03● ⁽²⁾
Remote Reset function control by flexible cable (length = 0.5 m)	1	LA7D305
Remote Stop and/or Reset function control	1	LA7D1020
Adapter for door mounted operator		
Rod (snap-off end to obtain required length, between 17 and 120 mm)	10	ZA2BZ13
Operating head for spring return pushbutton	1	ZA2B●●●● ⁽³⁾

Connection accessories

For mounting an LR9 F5●71 thermal overload relay together with an LC1 F185 contactor

Description	Reference
Set of 3 busbars	LA7F407

For mounting a thermal overload relay beneath a reversing contactor or star-delta contactors

Application	For contactor	Width of terminal lug	Set of 3 busbars Reference
For relay		mm	
LR9 F5●57, F5●63, F5●67, LC1 F115 F5●69, F69, F71		15	LA7F401
LR9 F5●57, F5●63	LC1 F150, F185	20	LA7F402
LR9 F5●71, LR9 F71	LC1 F185	25	LA7F407
LR9 F5●71, LR9 F71	LC1 F225, F265	25	LA7F403
LR9 F7●75, F7●79, LR9 F75, F79	LC1 F225...F400	25	LA7F404
LR9 F7●81, LR9 F81	LC1 F400	25	LA7F404
LR9 F7●75, F7●79, F7●81, LR9 F75, F79, F81	LC1 F500	30	LA7F405
LR9 F7●81, LR9 F81	LC1 F630, F800	40	LA7F406

⁽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 duration 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 of 20 s with rest time of 300 s. Minimum pulse time: 200 ms.

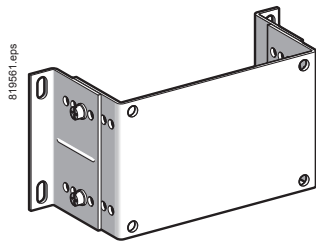
⁽²⁾ Reference to be completed by adding the coil voltage code.
Standard control circuit voltages,
(for other voltages, please consult your Regional Sales Office):

Volts	12	24	48	96	110	220/ 230	380/ 400	415/ 440
~ 50/60 Hz	–	B	E	–	F	M	Q	N
Consumption, inrush and sealed: < 100 VA								
---	J	B	E	DD	F	M	–	–

Consumption, inrush and sealed: < 100 W.

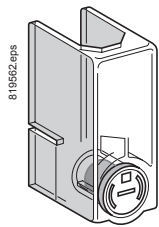
⁽³⁾ Stop: ZA2 BL432 and Reset: ZA2 BL639.

Overload relays



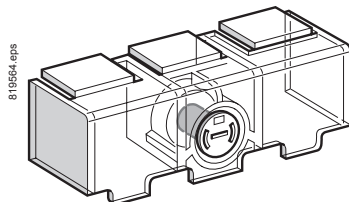
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LA7 F90●



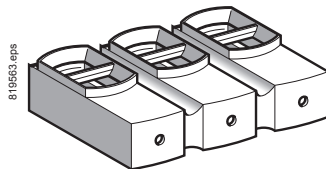
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LA9 F70●



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LA7 F70●



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LA9 F103

Mounting plates for overload relay

For use with relays	Reference
LR9 F5●57, F5●63, F5●67, F5●69, F5●71, LR9 F57, F63, F67, F69, F71	LA7F901
LR9 F7●75, F7●79, F7●81, LR9 F75, F79, F81	LA7F902

Sets of power terminal protection shrouds, single-pole

For use with relays	Number of shrouds per set	Set reference
LR9 F5●57, LR9 F57	6	LA9F701
LR9 F5●63, F5●67, F5●69, LR9 F63, F67, F69	6	LA9F702
LR9 F5●71, LR9 F71	6	LA9F705
LR9 F7●75, F7●79, F7●81, LR9 F75, F79, F81	6	LA9F703

Power terminal protection shrouds, 3-pole

For use with relays	Reference
LR9 F5●57, F5●63, F5●67, F5●69, LR9 F57, F63, F67, F69	LA7F701
LR9 F5●71, LR9 F71	LA7F702
LR9 F7●75, F7●79, F7●81, LR9 F75, F79, F81	LA7F703

Insulated terminal blocks

For use with relays	Set of 2 blocks Reference
LR9 F5●57, F5●63, F5●67, F5●69, LR9 F57, F63, F67, F69	LA9F103

Marking accessories

Description	Sold in lots of	Unit reference
Clip-in marker holder	100	LA7D903
Bag of 400 blank self-adhesive legends 7 x 16 mm	1	LA9D91