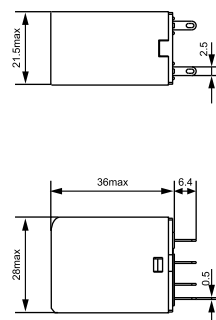


DRM Auxiliary Relay

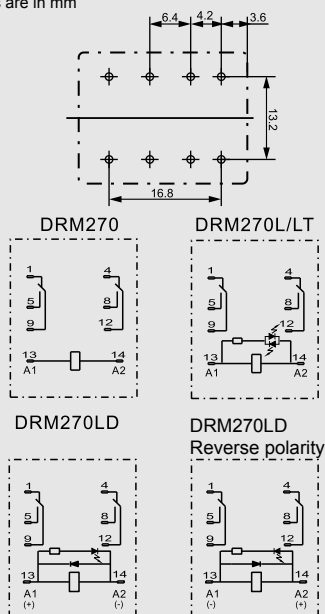
DRM 270 Relay

2 change over contacts
AC/DC coil

- Small size with high sensitivity
- Reasonable structure with wide usage
- Various types available
- Approvals with 



Circuit diagram
PIN top view
Dimensions are in mm



Output

Load (resistive)	10 A / 250 Vac
Switching power (resistive)	2500 VA, 300W
Contact resistance (initial)	≤ 50 mΩ
Min. load voltage / current	12 V / 10 mA or 5 V / 1 mA (gold plated contact)
Contact material	Silver alloy or silver alloy with gold plating
Electrical endurance / Mechanical endurance	> 25×10 ⁴ (1800 Ops/h) / > 2×10 ⁷ (18000 Ops/h)
Response / dropout delay at rated voltage	≤ 20 ms / ≤ 20 ms
Dielectric strength: Between Coil-contacts / open contacts / adjacent contacts	2000VAC/1min / 1000VAC/1min / 2000VAC/1min (leakage current: 1mA)

Input

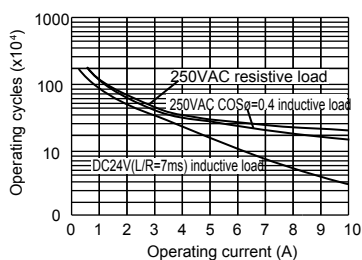
Response voltage @ 25°C	DC: ≥ 75% of rated voltage, AC: ≥ 80% of rated voltage
Dropout voltage @ 25°C	DC: ≥ 10% of rated voltage, AC: ≥ 30% of rated voltage
Max. voltage @ 25°C	110% of rated voltage
Insulation resistance	≥ 1000 MΩ
Coil power consumption	DC: ≤ 0.9 W, AC: 1.2 VA

General

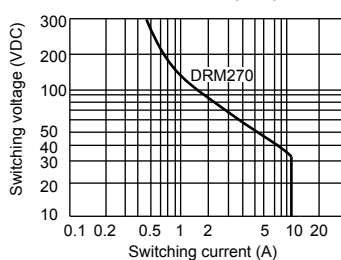
Ambient temperature	DC: -40 °C...+60°C, AC: -40 °C...+55°C
Storage temperature	-40 °C...+70°C
Humidity	35%~85% RH
Atmospheric pressure	86-106KPa
Shock resistance	10G (half wave of sine pulse: 11ms)
Vibration resistance	10~55Hz dual amplitude: 1.0mm 10~55Hz
Mounting	Push-in connection or PCB welding
Weight	35 g
Min. in package	20 pcs

Application

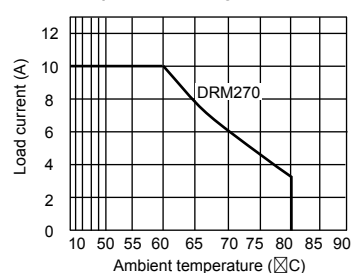
DRM270 electrical life



Max. DC load break capacity



Temperature derating curve



DRM Auxiliary Relay

DRM 270 Relay
2 change over contacts
AC/DC coil

Type code

Type DRM

Type of construction
2 change over contact

Coil voltage

006 6Vdc / 012 12Vdc
024 24Vdc / 048 48Vdc
110 110Vdc / 220 220Vdc
524 24Vac / 548 48Vac
615 115Vac / 730 230Vac

LED L (Red for AC coil; green for DC coil)

Test lever T (Red for AC coil; green for DC coil)

Suppressor diode D

DRM					
Type DRM					
Type of construction					
2 change over contact					
Coil voltage					
006 6Vdc / 012 12Vdc					
024 24Vdc / 048 48Vdc					
110 110Vdc / 220 220Vdc					
524 24Vac / 548 48Vac					
615 115Vac / 730 230Vac					
LED L (Red for AC coil; green for DC coil)					
Test lever T (Red for AC coil; green for DC coil)					
Suppressor diode D					

Ordering information

Input

Rated voltage	24 V AC
Rated current (50Hz / 60Hz)	62.4mA/52.2mA
Coil resistance	160Ω ±10%
Response / dropout voltage	19.2V / 7.2V
Max. voltage	26.4V
Power consumption	1.0~1.2VA(60Hz)

24 V AC 2CO

48 V AC 2CO

115 V AC 2CO

230 V AC 2CO

Ordering information

Standard	Type	DRM270524
	Order No.	7760056055
With LED	Type	DRM270524L
	Order No.	7760056064
With LED and test lever	Type	DRM270524LT
	Order No.	7760056073
With LED, gold plated contact	Type	
	Order No.	
With LED and test lever, gold plated contact	Type	
	Order No.	

DRM270524

7760056055

DRM270524L

7760056064

DRM270524LT

7760056073

DRM270548

7760056056

DRM270548L

7760056065

DRM270548LT

7760056074

DRM270615

7760056057

DRM270615L

7760056066

DRM270615LT

7760056075

DRM270730

7760056058

DRM270730L

7760056067

DRM270730LT

7760056076

DRM270730L Au

7760056184

DRM270730LT Au

7760056186

Note

Ordering information

Input

Rated voltage	12 V DC
Rated current	75mA
Coil resistance	160Ω ±10%
Response / dropout voltage	9V / 1.2V
Max. voltage	13.2V
Power consumption	0.9W

12 V DC 2CO

24 V DC 2CO

48 V DC 2CO

110 V DC 2CO

220 V DC 2CO

12 V DC

75mA

160Ω ±10%

9V / 1.2V

13.2V

0.9W

24 V DC

36.9mA

650Ω ±10%

18V / 2.4V

26.4V

0.9W

48 V DC

18.5mA

2,600Ω ±10%

36V / 4.8V

52.8V

0.9W

110V DC

10mA

11,000Ω ±10%

82.5V / 11V

121.0V

0.9W

220V DC

5.2mA

44,000Ω ±10%

165V / 22V

242V

0.9W

Ordering information

Relay

Standard	Type	DRM270012
	Order No.	7760056050
With LED	Type	DRM270012L
	Order No.	7760056059
With LED and test lever	Type	DRM270012LT
	Order No.	7760056068
With LED and suppressor diode	Type	
	Order No.	
With LED, gold plated contact	Type	
	Order No.	
With LED and test lever, gold plated contact	Type	
	Order No.	

DRM270012

7760056050

DRM270012L

7760056059

DRM270012LT

7760056068

DRM270024

7760056051

DRM270024L

7760056060

DRM270024LT

7760056069

DRM270024LD

7760056077

DRM270024L Au

7760056183

DRM270024LT Au

7760056185

DRM270048

7760056052

DRM270048L

7760056061

DRM270048LT

7760056070

DRM270110

7760056053

DRM270110L

7760056062

DRM270110LT

7760056071

DRM270220

7760056054

DRM270220L

7760056063

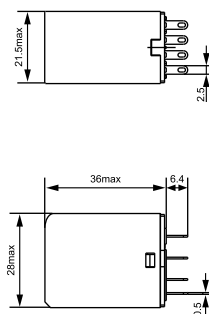
DRM270220LT

7760056072

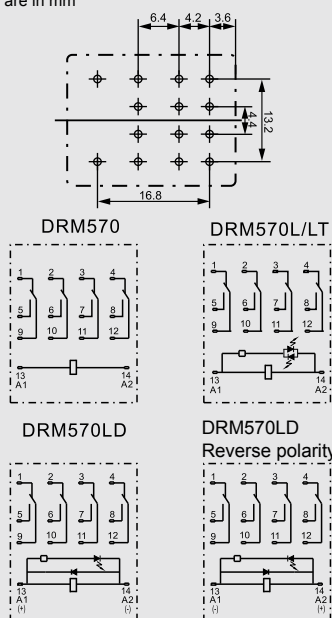
DRM Auxiliary Relay

DRM 570 Relay
4 change over contacts
AC/DC coil

- Small size with high sensitivity
- Reasonable structure with wide usage
- Various types available
- Approvals with 



Circuit diagram
PIN top view
Dimensions are in mm



Output

Load (resistive)	10 A / 250 Vac
Switching power (resistive)	2500 VA, 300W
Contact resistance (initial)	≤ 50 mΩ
Min. load voltage / current	12 V / 10 mA or 5 V / 1 mA (gold plated contact)
Contact material	Silver alloy or silver alloy with gold plating
Electrical endurance / Mechanical endurance	> 25×10 ⁴ (1800 Ops/h) / > 2×10 ⁷ (18000 Ops/h)
Response / dropout delay at rated voltage	≤ 20 ms / ≤ 20 ms
Dielectric strength: Between Coil-contacts / open contacts / adjacent contacts	2000VAC/1min / 1000VAC/1min / 2000VAC/1min (leakage current: 1mA)

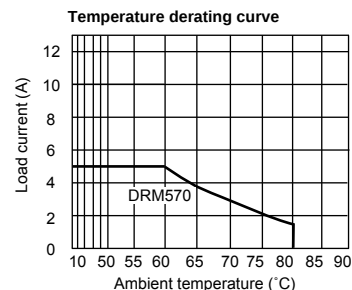
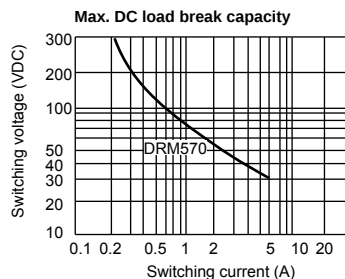
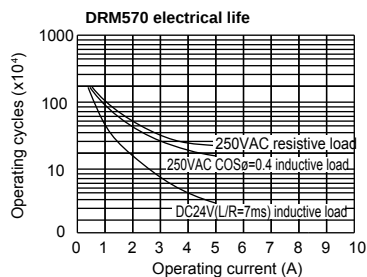
Input

Response voltage @ 25°C	DC: ≥ 75% of rated voltage, AC: ≥ 80% of rated voltage
Dropout voltage @ 25°C	DC: ≥ 10% of rated voltage, AC: ≥ 30% of rated voltage
Max. voltage @ 25°C	110% of rated voltage
Insulation resistance	≥ 1000 MΩ
Coil power consumption	DC: ≤ 0.9 W, AC: 1.2 VA

General

Ambient temperature	DC: -40 °C...+60°C, AC: -40 °C...+55°C
Storage temperature	-40°C...+70°C
Humidity	35%~85% RH
Atmospheric pressure	86-106KPa
Shock resistance	10G (half wave of sine pulse: 11ms)
Vibration resistance	10~55Hz dual amplitude: 1.0mm 10~55Hz
Mounting	Push-in connection or PCB welding
Weight	35 g
Min. in package	20 pcs

Application



DRM Auxiliary Relay

DRM 570 Relay
4 change over contacts
AC/DC coil

Type code

Type DRM

Type of construction
4 change over contact

Coil voltage

006 6Vdc / 012 12Vdc
024 24Vdc / 048 48Vdc
110 110Vdc / 220 220Vdc
524 24Vac / 548 48Vac
615 115Vav / 730 230Vac

LED L (Red for AC coil; green for DC coil)

Test lever T (Red for AC coil; green for DC coil)

Suppressor diode D

DRM

Relay

Ordering information

Input

Rated voltage	24 V AC
Rated current (50Hz / 60Hz)	62.4mA/52.2mA
Coil resistance	160Ω ±10%
Response / dropout voltage	19.2V / 7.2V
Max. voltage	26.4V
Power consumption	1.0~1.2VA(60Hz)

24 V AC 4CO

48 V AC 4CO

115 V AC 4CO

230 V AC 4CO

Ordering information

Standard	Type	DRM570524
	Order No.	7760056083
With LED	Type	DRM570524L
	Order No.	7760056092
With LED and test lever	Type	DRM570524LT
	Order No.	7760056101
With LED, gold plated contact	Type	
	Order No.	
With LED and test lever, gold plated contact	Type	
	Order No.	

DRM570524

7760056083

DRM570524L

7760056092

DRM570524LT

7760056101

DRM570548

7760056084

DRM570548L

7760056093

DRM570548LT

7760056102

DRM570615

7760056085

DRM570615L

7760056094

DRM570615LT

7760056103

DRM570730

7760056086

DRM570730L

7760056095

DRM570730LT

7760056104

DRM570730L Au

7760056188

DRM570730LT Au

7760056190

Note

Ordering information

Input

Rated voltage	12 V DC
Rated current	75mA
Coil resistance	160Ω ±10%
Response / dropout voltage	9V / 1.2V
Max. voltage	13.2V
Power consumption	0.9W

12 V DC 4CO

24 V DC 4CO

48 V DC 4CO

110 V DC 4CO

220 V DC 4CO

Ordering information

Standard	Type	DRM570012
	Order No.	7760056078
With LED	Type	DRM570012L
	Order No.	7760056087
With LED and test lever	Type	DRM570012LT
	Order No.	7760056096
With LED and suppressor diode	Type	
	Order No.	
With LED, gold plated contact	Type	
	Order No.	
With LED and test lever, gold plated contact	Type	
	Order No.	

DRM570012

7760056078

DRM570012L

7760056087

DRM570012LT

7760056096

DRM570024

7760056079

DRM570024L

7760056088

DRM570024LT

7760056097

DRM570024LD

7760056105

DRM570024L Au

7760056187

DRM570024LT Au

7760056189

DRM570048

7760056080

DRM570048L

7760056089

DRM570048LT

7760056098

DRM570110

7760056081

DRM570110L

7760056090

DRM570110LT

7760056099

DRM570220

7760056082

DRM570220L

7760056091

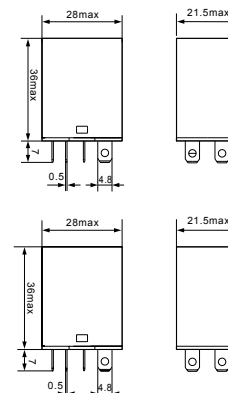
DRM570220LT

7760056100

DRL Power Relay

DRL Power Relay
1 or 2 change over contacts, AC/DC coil

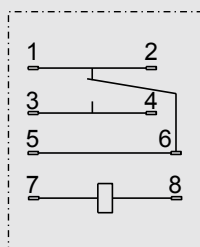
- Arc shield
- High dielectric strength: 2,000 V
- Approvals with 



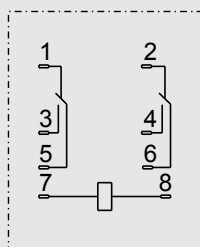
Circuit diagram

PIN top view
Dimensions are in mm

1CO



2CO



Output

Max. switching voltage	250 V AC
Continuous current	16 A @ 1CO / 10 A @ 2CO
Contact material	AgCdO
Min. load voltage / current	12 V / 100 mA
Contact resistance (initial)	< 50 mΩ
Electrical endurance	> 10 × 10 ⁴ cycles (1,800 cycles / hour)
Response / dropout delay	< 20 ms / < 20 ms

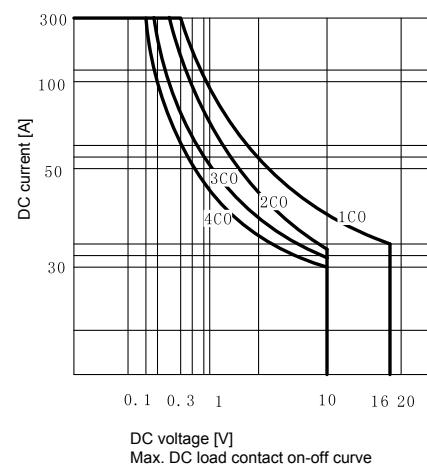
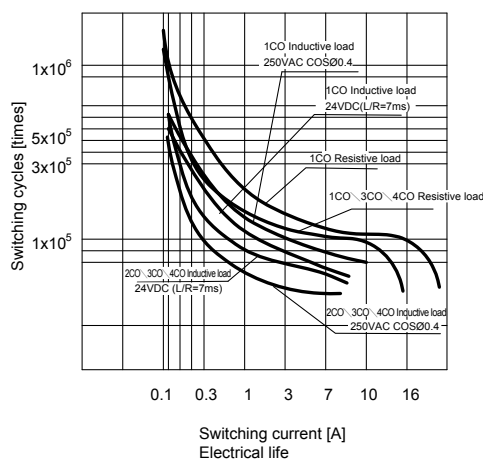
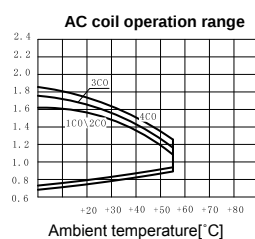
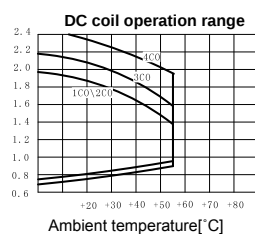
Input

Response voltage @ 25°C	AC: ≤ 80% of rated voltage DC: ≤ 75% of rated voltage
Dropout voltage @ 25°C	AC: ≥ 30% of rated voltage DC: ≥ 10% of rated voltage
Max. voltage @ 25°C	110% of rated voltage
Coil power consumption	1.2 VA / 0.9 W

General

Operation temperature	- 25 ... 55°C
Storage temperature	- 25 ... 55°C
Humidity	35 ... 85 %
Dielectric strength	Coil-contact Between N.O. contacts Between adjacent contacts
Clearance / creepage distance	1.5 mm / 4 mm
Insulation IEC60664	

Rated voltage	250 V
Pollution category	3
Over voltage category	III
Vibration resistance	10~55Hz dual amplitude: 1.0mm
Shock resistance	10G (half wave of sine pulse: 11ms)
Approval	CE; TÜV; UL
Weight	35 g
Min. in package	20 pcs
Dimension	
Length x Width x Height	28 x 21.5 x 43 mm



DRL Power Relay

DRL Power Relay
1 or 2 change over contacts, AC/DC coil

Type code **DRL**

Type code
Type DRL
Type of construction
170 1 change over contact
270 2 change over contacts

Coil voltage
012 12Vdc / 024 24Vdc
048 48Vdc / 110 110Vdc
220 220Vdc / 524 24Vac
615 115Vac / 730 230Vac

LED indicator

Ordering information	12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Input					
Rated voltage	12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Response / dropout voltage	9 V / 1.2 V	18 V / 2.4 V	36 V / 4.8 V	82.5 V / 11 V	165 V / 22 V
Power consumption	0.9 W	0.9 W	0.9 W	0.9 W	0.9 W
Rated coil current	75 mA	36.9 mA	18.5 mA	10 mA	5.2 mA
Coil resistance	160Ω ±10%	650Ω ±10%	2,600Ω ±10%	11,000Ω ±10%	42,000Ω ±10%

Ordering information					
1 change over contact 1CO Type	DRL170012L	DRL170024L	DRL170048L	DRL170110L	DRL170220L
Order No.	1133450000	1133460000	1133470000	1133480000	1133490000
2 change over contact 2CO Type	DRL270012L	DRL270024L	DRL270048L	DRL270110L	DRL270220L
Order No.	1133510000	1133520000	1133530000	1133540000	1133550000

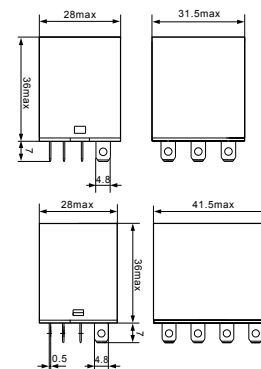
Ordering information	24 V AC	115 V AC	230 V AC		
Input					
Rated voltage	24 V AC	115 V AC	230 V AC		
Response / dropout voltage	19.2 V / 7.2 V	92 V / 34.5 V	184 V / 69 V		
Power consumption	1.2 VA	1.2 VA	1.2 VA		
Rated coil current (50 Hz)	54 mA	12.9 mA	6.8 mA		
Coil resistance	160Ω ±10%	3,750Ω ±10%	13,000Ω ±10%		

Ordering information					
1 change over contact 1CO Type	DRL170524L	DRL170615L	DRL170730L		
Order No.	1133840000	1133850000	1133860000		
2 change over contact 2CO Type	DRL270524L	DRL270615L	DRL270730L		
Order No.	1133870000	1133880000	1133890000		

DRL Power Relay

DRL Power Relay
3 or 4 change over contacts, AC/DC coil

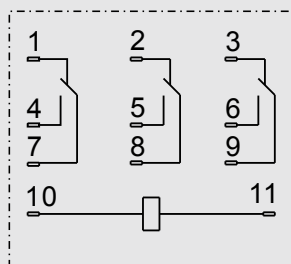
- Arc shield
- High dielectric strength: 2,000 V
- Approvals with 



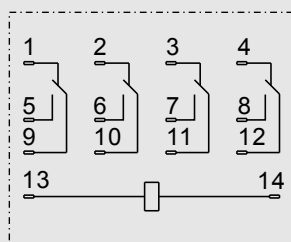
Circuit diagram

PIN top view
Dimensions are in mm

3CO



4CO



Output

Max. switching voltage	250 V AC
Continuous current	10A
Contact material	AgCdO
Min. load voltage / current	12 V / 100 mA
Contact resistance (initial)	< 50 mΩ
Electrical endurance	> 10 × 10 ⁴ cycles (1,800 cycles / hour)
Response / dropout delay	< 20 ms / < 20 ms

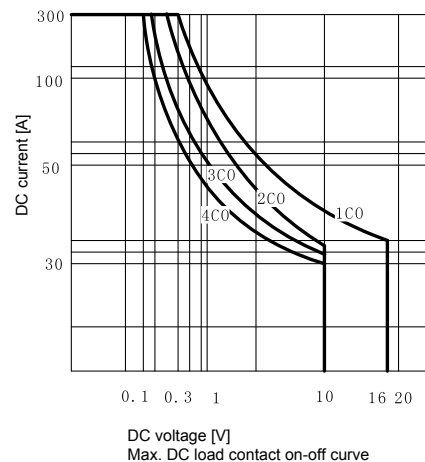
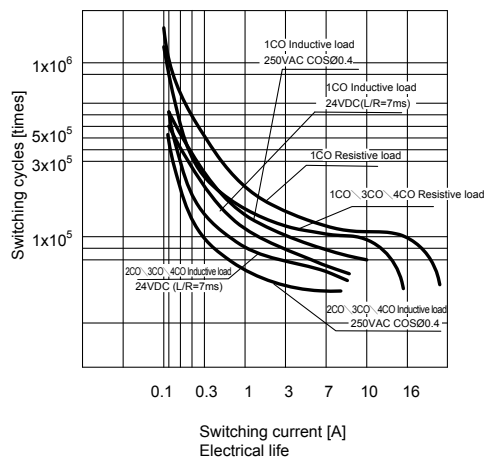
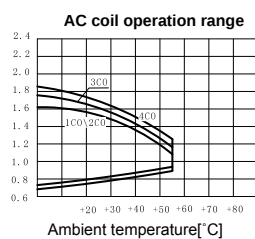
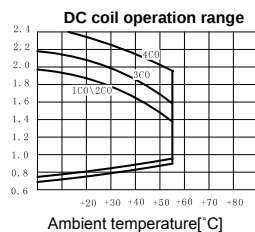
Input

Response voltage @ 25 °C	AC: ≤ 80% of rated voltage DC: ≤ 75% of rated voltage
Dropout voltage @ 25 °C	AC: ≥ 30% of rated voltage DC: ≥ 10% of rated voltage
Max. voltage @ 25 °C	110% of rated voltage
Coil power consumption	3CO: 2 VA / 1.4 W; 4CO: 2.5 VA / 1.5 W

General

Operation temperature	- 25 ... 55°C
Storage temperature	- 25 ... 55°C
Humidity	35 ... 85 %
Electrical strength	Coil-contact Between N.O. contacts Between adjacent contacts
Clearance / creepage distance	1.5 mm / 4 mm
Insulation IEC60664	
Rated voltage	250 V
Pollution category	3
Over voltage category	III

Vibration resistance	10~55Hz dual amplitude: 1.0mm
Shock resistance	10G (half wave of sine pulse: 11ms)
Approval	CE; TÜV; UL
Weight	3CO: 50g; 4CO: 65g
Min. in package	10
Dimension	
Length x Width x Height	28 x 21.5 x 43 mm



DRL Power Relay

DRL Power Relay
3 or 4 change over contacts, AC/DC coil

Type code **DRL**

Type code
Type DRL
Type of construction
370 3 change over contact
570 4 change over contacts

Coil voltage
012 12Vdc / 024 24Vdc
048 48Vdc / 110 110Vdc
220 220Vdc / 524 24Vac
615 115Vac / 730 230Vac

LED indicator

Relay

Ordering information	12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Input					
Rated voltage	12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Response / dropout voltage	9 V / 1.2 V	18 V / 2.4 V	36 V / 4.8 V	82.5 V / 11 V	165 V / 22 V
	3CO 4CO	3CO 4CO	3CO 4CO	3CO 4CO	3CO 4CO
Power consumption	1.4 W 1.5 W	1.4 W 1.5 W	1.4 W 1.5 W	1.4 W 1.5 W	1.4 W 1.5 W
Rated coil current	120 mA 125 mA	60 mA 66.7 mA	30 mA 31.2 mA	13.1 mA 16.2 mA	6.7 mA 7.6 mA
Coil resistance	100Ω ±10% 96Ω ±10%	400Ω ±10% 360Ω ±10%	1,600Ω ±10% 1,540Ω ±10%	8,400Ω ±10% 6,800Ω ±10%	33,000Ω ±10% 29,000Ω ±10%

Ordering information					
3 change over contact 3CO Type	DRL370012L	DRL370024L	DRL370048L	DRL370110L	DRL370220L
Order No.	1133570000	1133580000	1133590000	1133600000	1133610000
4 change over contact 4CO Type	DRL570012L	DRL570024L	DRL570048L	DRL570110L	DRL570220L
Order No.	1133620000	1133630000	1133640000	1133650000	1133660000

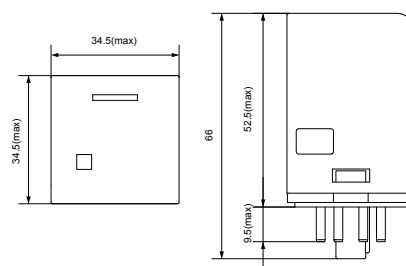
Ordering information	24 V AC	115 V AC	230 V AC		
Input					
Rated voltage	24 V AC	115 V AC	230 V AC		
Response / dropout voltage	19.2 V / 7.2 V	92 V / 34.5 V	184 V / 69 V		
	3CO 4CO	3CO 4CO	3CO 4CO		
Power consumption	2 VA 2.5 VA	2 VA 2.5 VA	2 VA 2.5 VA		
Rated coil current (50 Hz)	80 mA 93.5 mA	16 mA 25.5 mA	10 mA 13.1 mA		
Coil resistance	102Ω ±10% 80Ω ±10%	2,300Ω ±10% 1,680Ω ±10%	8,600Ω ±10% 6700Ω ±10%		

Ordering information					
3 change over contact 3CO Type	DRL370524L	DRL370615L	DRL370730L		
Order No.	1133910000	1133920000	1133930000		
4 change over contact 4CO Type	DRL570524L	DRL570615L	DRL570730L		
Order No.	1133940000	1133950000	1133960000		

DRR Power Relay

DRR Power Relay
2 change over contacts, AC/DC coil

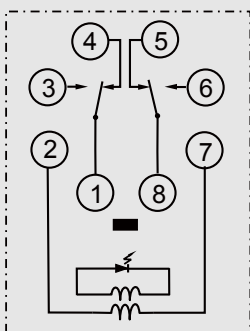
- 2500 VA switchover capacity
- 8-pin plug in DIN rail installation
- Approvals with TÜV CE



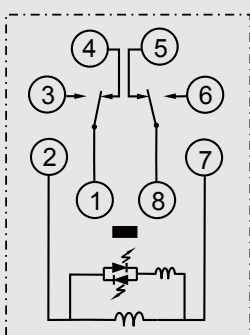
Circuit diagram

PIN top view
Dimensions are in mm

AC



DC



Output

Max. switching voltage	250 V AC
Continuous current	10A
Contact material	AgCdO
Min. load voltage / current	12 V / 100 mA
Contact resistance (initial)	< 50 mΩ
Electrical endurance	> 10 × 10 ⁴ cycles (1,800 cycles / hour)
Response / dropout delay	< 30 ms / < 20 ms

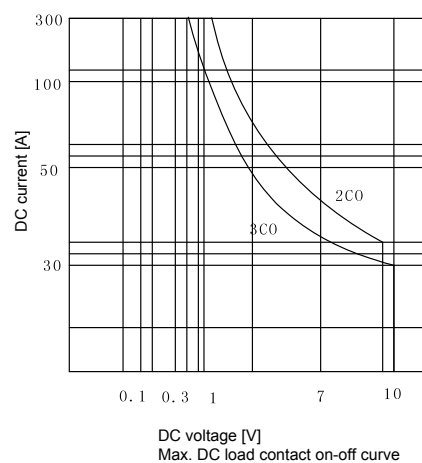
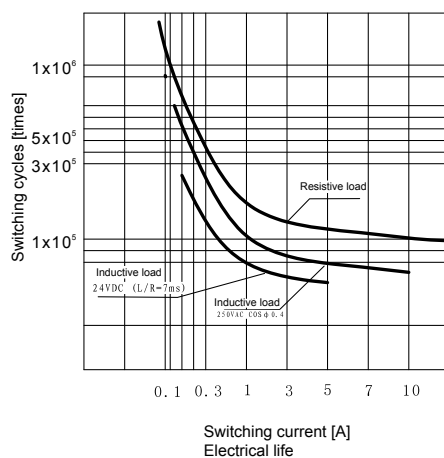
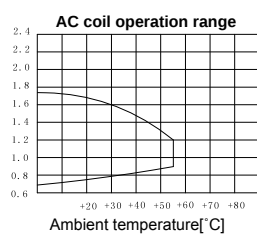
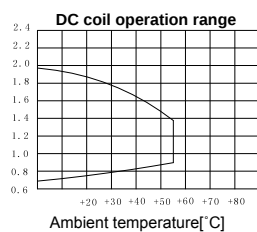
Input

Response voltage @ 25°C	AC: ≤ 80% of rated voltage DC: ≤ 75% of rated voltage
Dropout voltage @ 25°C	AC: ≥ 30% of rated voltage DC: ≥ 15% of rated voltage
Max. voltage @ 25°C	110% of rated voltage
Coil power consumption	2.7 VA / 1.5 W

General

Operation temperature	- 25 ... 55°C
Storage temperature	- 25 ... 55°C
Humidity	5 ... 85 %
Electrical strength	Coil-contact Between N.O. contacts Between adjacent contacts
Clearance / creepage distance	1.5 mm / 4 mm
Insulation IEC60664	

Rated voltage	250 V
Pollution category	3
Over voltage category	III
Vibration resistance	10~55Hz dual amplitude: 1.0mm
Shock resistance	10G (half wave of sine pulse: 11ms)
Approval	CE; TÜV; UL
Weight	75g
Min. in package	10
Dimension	
Length x Width x Height	34.5 x 34.5 x 66 mm



DRR Power Relay

DRL Power Relay
2 change over contacts, AC/DC coil

Type code **DRR**
Type code
Type DRR
Type of construction
270 2 change over contacts

Coil voltage
012 12Vdc / 024 24Vdc
048 48Vdc / 110 110Vdc
220 220Vdc / 524 24Vac
615 115Vac / 730 230Vac

LED indicator

Ordering information	12 V DC 2CO	24 V DC 2CO	48 V DC 2CO	110 V DC 2CO	220 V DC 2CO
Input					
Rated voltage	12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Response / dropout voltage	9 V / 1.8 V	18 V / 3.6 V	36 V / 7.2 V	82.5 V / 16.5 V	165 V / 33 V
Power consumption	1.5 W	1.5 W	1.5 W	1.5 W	1.5 W
Rated coil current	125 mA	55.8 mA	29.3 mA	14.9 mA	7.5 mA
Coil resistance	96Ω ±10%	430Ω ±10%	1640Ω ±10%	7360Ω ±10%	29500Ω ±10%

Ordering information					
Type	DRR270012L	DRR270024L	DRR270048L	DRR270110L	DRR270220L
Order No.	1133360000	1133370000	1133380000	1133390000	1133400000

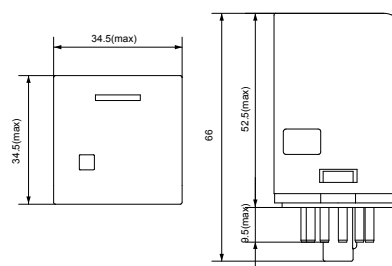
Ordering information	24 V AC 2CO	115 V AC 2CO	230 V AC 2CO		
Input					
Rated voltage	24 V AC	115 V AC	230 V AC		
Response / dropout voltage	19.2 V / 7.2 V	92 V / 34.5 V	184 V / 69 V		
Power consumption	2.7 VA	2.7 VA	2.7 VA		
Rated coil current (50 Hz/60Hz)	130 mA/116 mA	29.8 mA/25.4 mA	14.9 mA/12.7 mA		
Coil resistance	62.5Ω ±10%	1250Ω ±10%	6500Ω ±10%		

Ordering information					
Type	DRR270524L	DRR270615L	DRR270730L		
Order No.	1133760000	1133780000	1133800000		

DRR Power Relay

DRR Power Relay
3 change over contacts, AC/DC coil

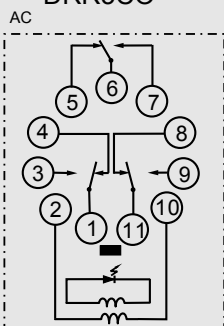
- 2500 VA switchover capacity
- 11-pin plug in DIN rail installation
- Approvals with TÜV CE



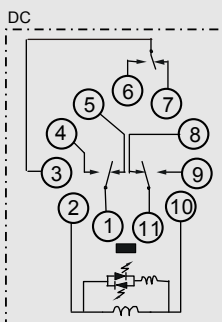
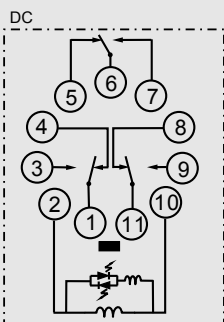
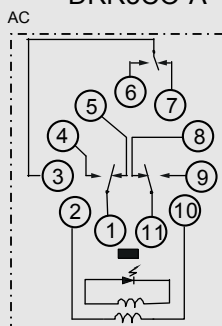
Circuit diagram

PIN top view
Dimensions are in mm

DRR3CO



DRR3CO-A



Output

Max. switching voltage	250 V AC
Continuous current	10A
Contact material	AgNi 90/10
Min. load voltage / current	12 V / 100 mA
Contact resistance (initial)	< 50 mΩ
Electrical endurance	> 10 × 10 ⁴ cycles (1,800 cycles / hour)
Response / dropout delay	< 30 ms / < 20 ms

Input

Response voltage @ 25°C	AC: ≤ 80% of rated voltage DC: ≤ 80% of rated voltage
Dropout voltage @ 25°C	AC: ≥ 30% of rated voltage DC: ≥ 15% of rated voltage

Max. voltage @ 25°C	110% of rated voltage
Coil power consumption	2.7 VA / 1.5 W

General

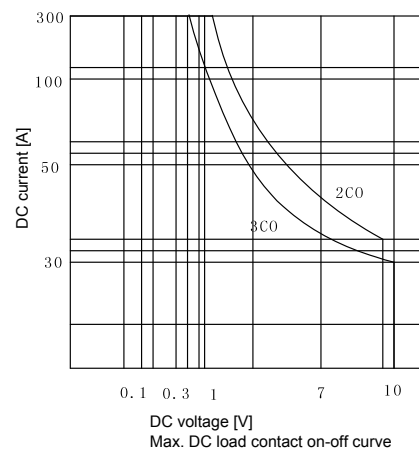
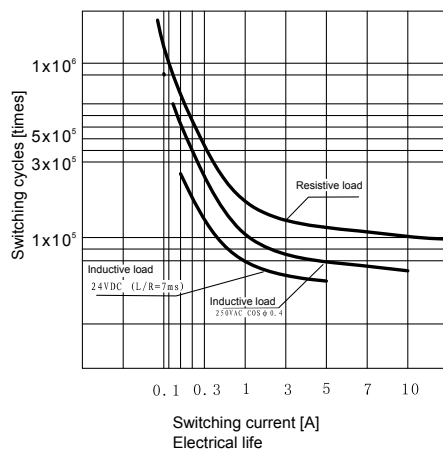
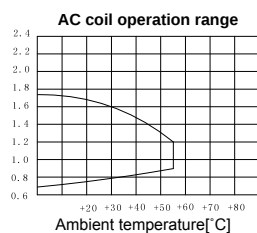
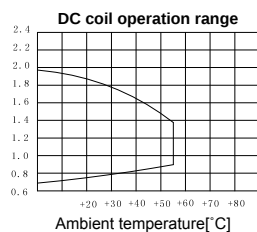
Operation temperature	- 25 ... 55°C
Storage temperature	- 25 ... 55°C
Humidity	5 ... 85 %
Electrical strength	Coil-contact Between N.O. contacts Between adjacent contacts
Clearance / creepage distance	1.5 mm / 4 mm
Insulation IEC60664	

Rated voltage	250 V
Pollution category	3
Over voltage category	III

Vibration resistance	10-55Hz dual amplitude: 1.0mm
Shock resistance	10G (half wave of sine pulse: 11ms)
Approval	CE; TÜV; UL
Weight	75g
Min. in package	10

Dimension

Length x Width x Height	34.5 x 34.5 x 66 mm
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DRR Power Relay

DRL Power Relay
3 change over contacts, AC/DC coil

Type code	DRR			
Type DRR				
Type of construction	370 3 change over contacts			
Coil voltage	012 12Vdc / 024 24Vdc 048 48Vdc / 110 110Vdc 220 220Vdc / 524 24Vac 615 115Vac / 730 230Vac			
LED indicator				

Ordering information	12 V DC 3CO	24 V DC 3CO	48 V DC 3CO	110 V DC 3CO	220 V DC 3CO
Input					
Rated voltage	12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Response / dropout voltage	9 V / 1.8 V	18 V / 3.6 V	36 V / 7.2 V	82.5 V / 16.5 V	165 V / 33 V
Power consumption	1.5 W	1.5 W	1.5 W	1.5 W	1.5 W
Rated coil current	125 mA	55.8 mA	29.3 mA	14.9 mA	7.5 mA
Coil resistance	96Ω ±10%	430Ω ±10%	1640Ω ±10%	7360Ω ±10%	29500Ω ±10%

Ordering information					
Type	DRR370012L	DRR370024L	DRR370048L	DRR370110L	DRR370220L
Order No.	1133410000	1133420000	1133430000	1133440000	1133560000
Type	DRR370012L-A	DRR370024L-A	DRR370048L-A	DRR370110L-A	DRR370220L-A
Order No.	7760056250	7760056251	7760056252	7760056253	7760056254

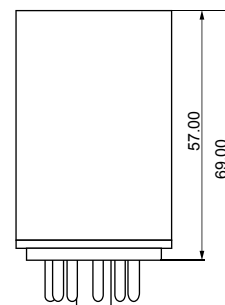
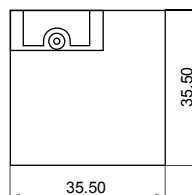
Ordering information	24 V AC 3CO	115 V AC 3CO	230 V AC 3CO		
Input					
Rated voltage	24 V AC	115 V AC	230 V AC		
Response / dropout voltage	19.2 V / 7.2 V	92 V / 34.5 V	184 V / 69 V		
Power consumption	2.7 VA	2.7 VA	2.7 VA		
Rated coil current (50 Hz/60Hz)	130 mA/116 mA	29.8 mA/25.4 mA	14.9 mA/12.7 mA		
Coil resistance	62.5Ω ±10%	1250Ω ±10%	6500Ω ±10%		

Ordering information					
Type	DRR370524L	DRR370615L	DRR370730L		
Order No.	1133810000	1133820000	1133830000		
Type	DRR370524L-A	DRR370615L-A	DRR370730L-A		
Order No.	7760056255	7760056256	7760056257		

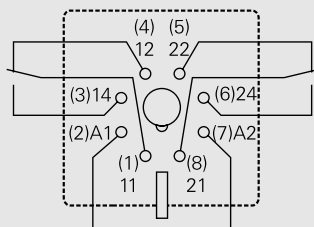
RRD Power Relay

RRD Relay
2 change over contacts
AC/DC coil

- 2500 VA switchover capacity
- With test lever
- Approvals with CE VDE cURus



Circuit diagram
PIN top view
Dimensions are in mm



Output

Max. switching voltage	250 V AC
Continuous current	10A
Contact material	AgNi 90/10
Mechanical endurance	20x10 ⁶ switching cycles
Response / dropout delay at rated voltage	12 ms / 5 ms

General

Operation temperature	- 45°C ... 55°C
UL 94 fire retardant class	V-0
Approval	cURus; CE; VDE

Insulation coordination

Electrical strength

Coil-contact	2,500V AC / 1 min
Between N.O. contacts	1,500V AC / 1 min
Between adjacent contacts	2,500V AC / 1 min
Clearance / creepage distance	2.8 mm / 4 mm

Insulation IEC60664

Rated voltage	250 V
Pollution category	3
Over voltage category	III

Insulation VDE 0110b (2/79)

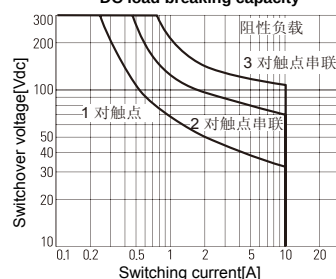
Dielectric index of relay socket	CTI 175
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Dimension

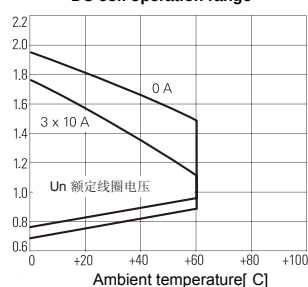
Length x Width x Height	35.5 x 35.5 x 57 mm
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Application

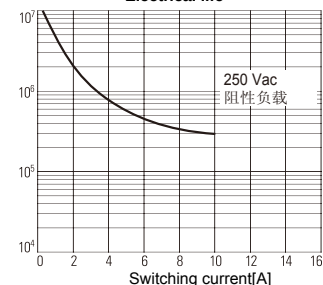
DC load breaking capacity



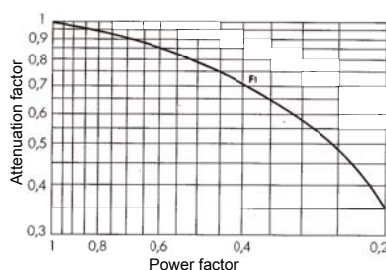
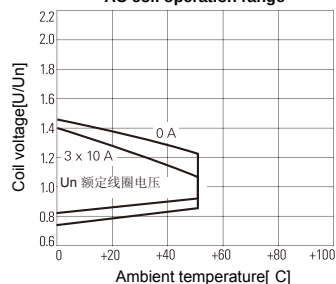
DC coil operation range



Electrical life



AC coil operation range



Derating curve at $\cos\phi < 1$ (inductive load)
Actual action times = action times in resistive load x factor in the table

RRD Power Relay

RRD Relay
2 change over contacts
AC/DC coil

Type code

Type RIDER Round

Contacts

- 2 2 change over contact, 8-pin
- 3 3 change over contacts, 11-pin

Contact material

2 AgNi 90/10

Type of construction

- 1 DC with test lever
- 3 DC with test lever and bipolar LED
- 6 AC with test lever
- 8 AC with test lever and bipolar LED

RRD

DC Coil

- 006 6 V DC
- 012 12 V DC
- 024 24 V DC
- 048 48 V DC
- 060 60 V DC
- 110 110 V DC
- 220 220 V DC

Free wheel diode

AC Coil

- 506 6 V AC
- 512 12 V AC
- 524 24 V AC
- 548 48 V AC
- 615 115 V AC
- 730 230 V AC

Ordering information

Input

Rated voltage	24 V DC
Response / dropout voltage	18.0 V / 2.4 V
Power consumption	1,2 W
Rated coil current	50.5 mA
Coil resistance	475 $\Omega \pm 10\%$

24 V DC 2CO

48 V DC 2CO

110 V DC 2CO

220 V DC 2CO

Ordering information

With test lever Type
AgNi 90/10 Order No.

RRD221024

RRD221048

RRD22 1110

RRD223220

With test lever and LED Type
AgNi 90/10 Order No.

RRD223024

RRD223048

RRD2231 10

RRD223220

Type
Order No.

Ordering information

Input

Rated voltage	24 V AC
Response / dropout voltage	19.2 V / 9.6 V
Power consumption	2,3 VA
Rated coil current	94.2 mA
Coil resistance	86 $\Omega \pm 10\%$

24 V AC 2CO

48 V AC 2CO

115 V AC 2CO

230 V AC 2CO

Ordering information Relay

With test lever Type
AgNi 90/10 Order No.

RRD226024

RRD226048

RRD2261 15

RRD226230

With test lever and LED Type
AgNi 90/10 Order No.

RRD228024

RRD228048

RRD2281 15

RRD228230

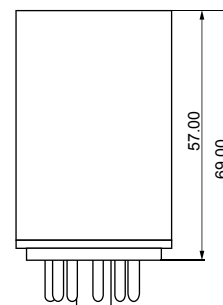
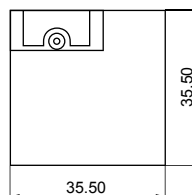
Type
Order No.

Note

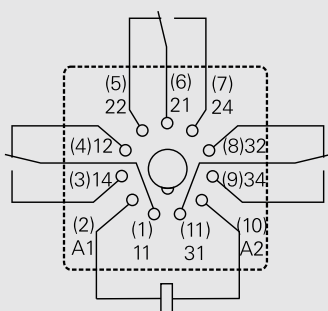
RRD Power Relay

RRD Relay
3 change over contacts
AC/DC coil

- 2500 VA switchover capacity
- With test lever
- Approvals with CE VDE cURus



Circuit diagram
PIN top view
Dimensions are in mm



Output

Max. switching voltage	250 V AC
Continuous current	10A
Contact material	AgNi 90/10
Mechanical endurance	20x10 ⁶ switching cycles
Response / dropout delay at rated voltage	12 ms / 5 ms

General

Operation temperature	AC Coil- 45°C ... 50°C/DC Coil- 45°C ... 60°C
UL 94 fire retardant class	V-0
Approval	cURus; CE; VDE

Insulation coordination

Electrical strength	
Coil-contact	2,500V AC / 1 min
Between N.O. contacts	1,500V AC / 1 min
Between adjacent contacts	2,500V AC / 1 min
Clearance / creepage distance	2.8 mm / 4 mm

Insulation IEC60664

Rated voltage	250 V
Pollution category	3
Over voltage category	III
Insulation VDE 0110b (2/79)	C / 250
Dielectric index of relay socket	CTI 175

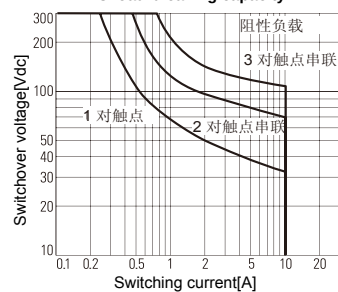
Dimension

Length x Width x Height 35.5 x 35.5 x 57 mm

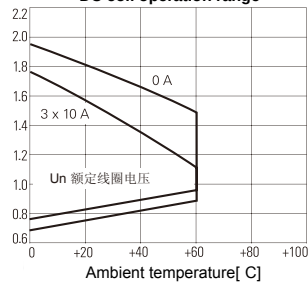
Note

Application

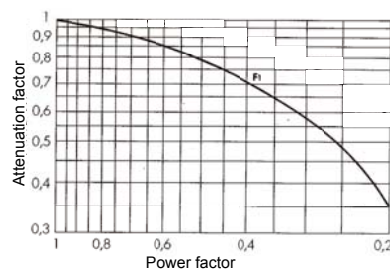
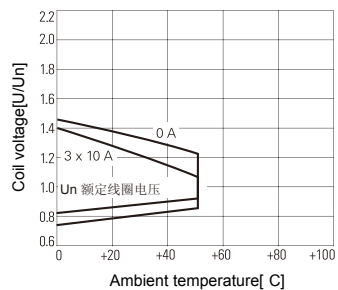
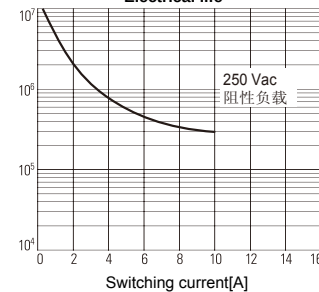
DC load breaking capacity



DC coil operation range



Electrical life



Derating curve at $\cos\phi < 1$ (inductive load)
Actual action times = action times in resistive load x factor in the table

RRD Power Relay

RRD Relay
3 change over contacts
AC/DC coil

Type code

Type RIDER Round

Contacts

- 2 2 change over contact, 8-pin
- 3 3 change over contacts, 11-pin

Contact material

2 AgNi 90/10

Type of construction

- 1 DC with test lever
- 3 DC with test lever and bipolar LED
- 6 AC with test lever
- 8 AC with test lever and bipolar LED

DC Coil

006	6 V DC	
012	12 V DC	
024	24 V DC	0C4
048	48 V DC	0E8
060	60 V DC	0G0
110	110 V DC	1B0
220	220 V DC	2C0

AC Coil

506	6 V AC	
512	12 V AC	
524	24 V AC	
548	48 V AC	
615	115 V AC	
730	230 V AC	

Free wheel diode

Ordering information

Input

	12 V DC 3CO	24 V DC 3CO	110 V DC 3CO	220 V DC 3CO
Rated voltage	12 V DC	24 V DC	110 V DC	220 V DC
Response / dropout voltage	9 V / 1.2 V	18 V / 2.4 V	82.5 V / 11.5 V	165 V / 22 V
Power consumption	1.2 W	1.2 W	1.2 W	1.2 W
Rated coil current	109.1 mA	50.5 mA	11 mA	5.5 mA
Coil resistance	110 $\Omega \pm 10\%$	475 $\Omega \pm 10\%$	10000 $\Omega \pm 12\%$	40000 $\Omega \pm 15\%$

Ordering information

With test lever	Type	RRD321012	RRD321024	RRD321110	RRD321220
AgNi 90/10	Order No.	8799030000	8690610000	8690650000	7940007742
With test lever and LED	Type		RRD323024	RRD323110	RRD323220
AgNi 90/10	Order No.		8690620000	8690660000	8798610000
With test lever and suppressing diode	Type		RRD3210C4	RRD3211B0	RRD3212C0
AgNi 90/10	Order No.		8797650000	8797640000	8797610000
With LED, test lever and suppressing diode	Type		RRD3230C4		RRD3232C0
AgNi 90/10	Order No.		7940007732		8829400000

Note

Ordering information

Input

	24 V AC 3CO	48 V AC 3CO	115 V AC 3CO	230 V AC 3CO
Rated voltage	24 V AC	48 V AC	115 V AC	230 V AC
Response / dropout voltage	19.2 V / 9.6 V	38.4 V / 19.2 V	92 V / 46 V	184 V / 92 V
Power consumption	2.3 VA	2.3 VA	2.3 VA	2.3 VA
Rated coil current	94.2 mA	47.5 mA	20.6 mA	10.1 mA
Coil resistance	86 $\Omega \pm 10\%$		2000 $\Omega \pm 10\%$	8300 $\Omega \pm 12\%$

Ordering information

With test lever	Type	RRD326024	RRD326048	RRD326115	RRD326230
AgNi 90/10	Order No.	8690450000	8690470000	8690550000	8690570000
With test lever and LED	Type	RRD328024	RRD328048	RRD328115	RRD328230
AgNi 90/10	Order No.	8690460000	8690480000	8690560000	8690580000
	Type				
	Order No.				

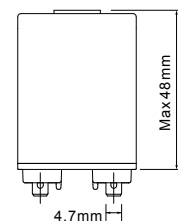
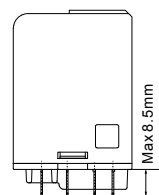
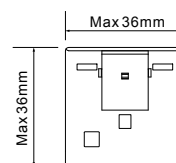
Note

DRH DC Relay

DRH DC Relay

1 N.O. contact and 1 N.C. contact
AC / DC coil

- Suitable to switch heavy DC load
- Arc shield
- With LED and test lever
- Approval with CE cULus TÜV

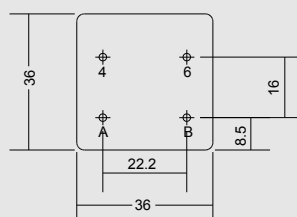


Circuit diagram

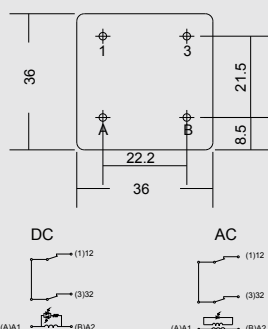
PIN top view

Dimensions are in mm

1NO



1NC



Output

Max. switching voltage	AC: 500 V; DC: 220 V
Continuous current	16 A@ 500 VAC; 10 A@ 220 VDC
Contact material	AgSnO ₂
Min. load voltage / current	12 VDC / 100 mA
Contact resistance (initial)	< 50 mΩ
Electrical endurance	> 10 × 10 ⁴ cycles
Response / dropout delay	< 20 ms / < 20 ms
Max. switching frequency at rated load	1 Hz

Input

Response voltage @ 25°C	AC: ≤ 80% of rated voltage DC: ≤ 75% of rated voltage
Dropout voltage @ 25°C	AC: ≥ 30% of rated voltage DC: ≥ 10% of rated voltage

Max. voltage @ 25°C	110% of rated voltage
Coil power consumption	2.5 VA / 1.5 W

General

Operation temperature	-40°C ... 60°C
Storage temperature	-40°C ... 60°C
Humidity	35 ... 85 %
Electrical strength	Coil-contact: 4,000V AC / 1 min Between N.O. contacts: 2,500V AC / 1 min Between adjacent contacts: 4,000V AC / 1 min
Clearance / creepage distance	1.5 mm / 4 mm
Insulation IEC60664	

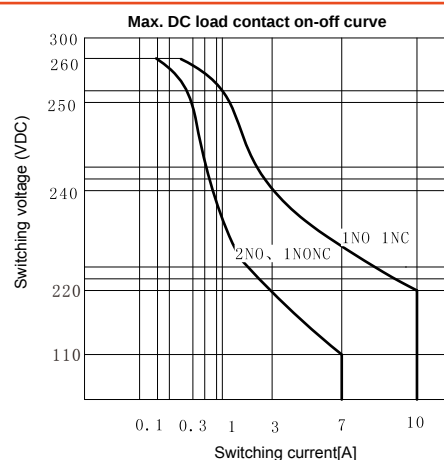
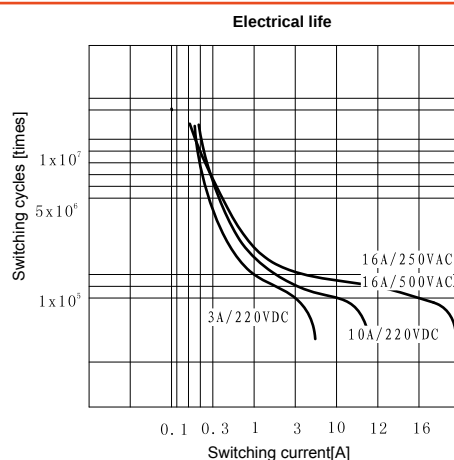
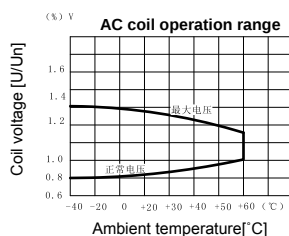
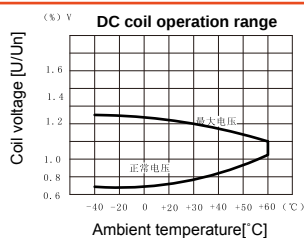
Rated voltage	400 V
Pollution category	3
Over voltage category	III

Vibration resistance	10~55Hz dual amplitude: 1.0mm
Shock resistance	10G (half wave of sine pulse: 11ms)
Approval	CE; TÜV; UL

Weight	48 g
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Dimension

Length x Width x Height	36 x 36 x 48 mm
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DRH DC Relay

DRH DC Relay
1 N.O. contact and 1 N.C. contact
AC / DC coil

Type code **DRH**

Type DRH

Type of construction

173 1NO

174 1NC

Coil voltage

012 12Vdc / 024 24Vdc

048 48Vdc / 110 110Vdc

220 220Vdc / 524 24Vac

548 48Vac / 615 115Vac

730 230Vac

With LED or test lever

LT

Ordering information

Input

	12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Rated voltage	12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
DC response / dropout voltage	9 V / 1.2 V	18 V / 2.4 V	36 V / 4.8 V	82.5 V / 11 V	165 V / 22 V
Power consumption	1.5 W	1.5 W	1.5 W	1.5 W	1.5 W
DC rated current	120 mA	60 mA	30 mA	13.03 mA	6.7 mA
Coil resistance	100Ω ±10%	400Ω ±10%	1,600Ω ±10%	8,400Ω ±10%	33,000Ω ±10%

Ordering information

1 N.O. contact	Type	DRH173012LT	DRH173024LT	DRH173048LT	DRH173110LT	DRH173220LT
Order No.		1219840000	1219850000	1219860000	1219870000	1219880000
1 N.C. contact	Type	DRH174012LT	DRH174024LT	DRH174048LT	DRH174110LT	DRH174220LT
Order No.		1219940000	1219950000	1219960000	1219970000	1219980000
With test lever locking clip	Type	Test lever block for DRH/DRW	Test lever block for DRH/DRW	Test lever block for DRH/DRW	Test lever block for DRH/DRW	Test lever block for DRH/DRW
Order No.		7760056249	7760056249	7760056249	7760056249	7760056249

Ordering information

Input

	24 V AC	48 V AC	115 V AC	230 V AC
Rated voltage	24 V AC	48 V AC	115 V AC	230 V AC
AC response / dropout voltage	19.2V / 7.2 V	38.4 V / 14.4 V	92 V / 34.5 V	184 V / 69 V
Power consumption	2.5 VA	2.5 VA	2.5 VA	2.5 VA
AC rated current	101.7 mA	51.04 mA	21.2 mA	10.61 mA
Coil resistance	100Ω ±10%	350Ω ±10%	2,200Ω ±10%	8,000Ω ±10%

Ordering information

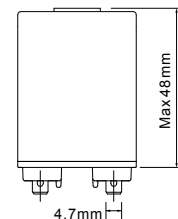
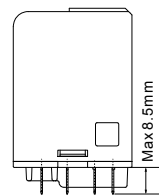
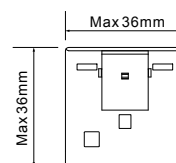
1 N.O. contact	Type	DRH173524LT	DRH173548LT	DRH173615LT	DRH173730LT
Order No.		1219890000	1219910000	1219920000	1219930000
1 N.C. contact	Type	DRH174012LT	DRH174024LT	DRH174048LT	DRH174110LT
Order No.		1219990000	1220010000	1220020000	1220030000
With test lever locking clip	Type	Test lever block for DRH/DRW	Test lever block for DRH/DRW	Test lever block for DRH/DRW	Test lever block for DRH/DRW
Order No.		7760056249	7760056249	7760056249	7760056249

DRH DC Relay

DRH DC Relay

2 N.O. contact and 1 N.O./1 N.C. contact
AC / DC coil

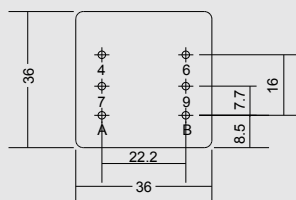
- Suitable to switch heavy DC load
- Arc shield
- With LED and test lever
- Approval with CE cULus TÜV



Circuit diagram

PIN top view
Dimensions are in mm

2NO



DC

(7)11 (4)14

(9)31 (8)34

(A)A1 (B)A2

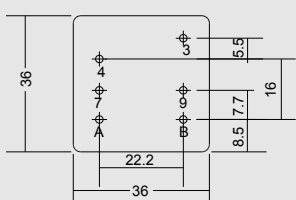
AC

(7)11 (4)14

(9)31 (8)34

(A)A1 (B)A2

1NO/1NC



DC

(7)11 (4)14

(9)31 (3)32

(A)A1 (B)A2

AC

(7)11 (4)14

(9)31 (3)32

(A)A1 (B)A2

Output

Max. switching voltage	AC: 250 V; DC: 220 V
Continuous current	2NO 16 A@ 250 VAC; 3 A@ 220 VDC; 7A@110VDC
	1NO/1NC 16 A@ 250 VAC; 3 A@ 220 VDC; 7A@110VDC
Contact material	AgSnO ₂
Min. load voltage / current	12 VDC / 100 mA
Contact resistance (initial)	< 50 mΩ
Electrical endurance	> 10 × 10 ⁴ cycles
Response / dropout delay	< 20 ms / < 20 ms
Max. switching frequency at rated load	1 Hz

Input

Response voltage @ 25°C	AC: ≤ 80% of rated voltage DC: ≤ 75% of rated voltage
Dropout voltage @ 25°C	AC: ≥ 30% of rated voltage DC: ≥ 10% of rated voltage
Max. voltage @ 25°C	110% of rated voltage
Coil power consumption	2.5 VA / 1.5 W

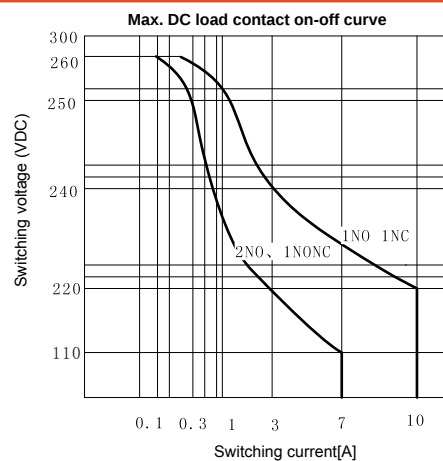
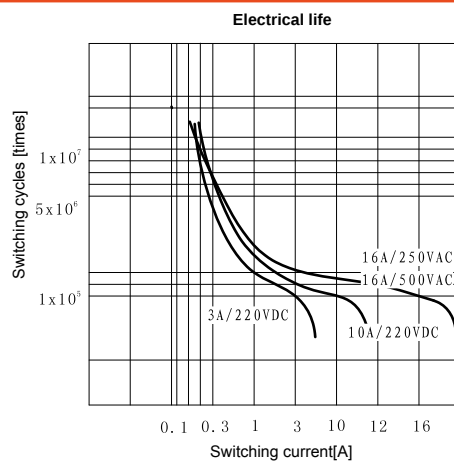
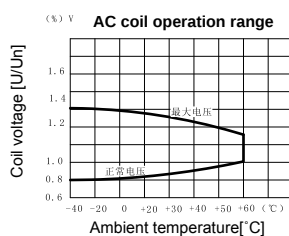
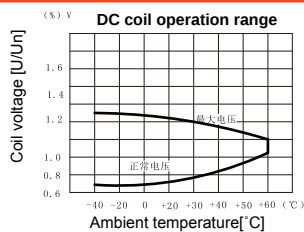
General

Operation temperature	- 40 ... 60°C
Storage temperature	- 40 ... 60°C
Humidity	35 ... 85 %
Electrical strength	Coil-contact 4,000V AC / 1 min Between N.O. contacts 2,500V AC / 1 min Between adjacent contacts 4,000V AC / 1 min
Clearance / creepage distance	1.5 mm / 4 mm
Insulation IEC60664	
Rated voltage	400 V
Pollution category	3
Over voltage category	III

Vibration resistance	10~55Hz dual amplitude: 1.0mm
Shock resistance	10G (half wave of sine pulse: 11ms)
Approval	CE; TÜV; UL
Weight	48 g

Dimension

Length x Width x Height	36 x 36 x 48 mm
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DRH DC Relay

DRH DC Relay
2 N.O. contact and 1 N.C. contact
AC / DC coil

Type code **DRH**

Type DRH

Type of construction
275 1NO/1NC
276 2NO

Coil voltage

012 12Vdc / 024 24Vdc
048 48Vdc / 110 110Vdc
220 220Vdc / 524 24Vac
548 48Vac / 615 115Vac
730 230Vac

With LED or test lever
LT

Ordering information

Input

	12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Rated voltage	12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
DC response / dropout voltage	9 V / 1.2 V	18 V / 2.4 V	36 V / 4.8 V	82.5 V / 11 V	165 V / 22 V
Power consumption	1.5 W	1.5 W	1.5 W	1.5 W	1.5 W
DC rated current	120 mA	60 mA	30 mA	13.03 mA	6.7 mA
Coil resistance	100Ω ±10%	400Ω ±10%	1,600Ω ±10%	8,400Ω ±10%	33,000Ω ±10%

Ordering information

1 N.O. contact/ 1 N.C. contact	Type Order No.	DRH275012LT 1220040000	DRH275024LT 1220050000	DRH275048LT 1220060000	DRH275110LT 1220070000	DRH275220LT 1220080000
2 N.O. contact	Type Order No.	DRH276012LT 1220140000	DRH276024LT 1220150000	DRH276048LT 1220170000	DRH276110LT 1220180000	DRH276220LT 1220190000
With test lever locking clip	Type Order No.	Test lever block for DRH/DRW 7760056249	Test lever block for DRH/DRW 7760056249	Test lever block for DRH/DRW 7760056249	Test lever block for DRH/DRW 7760056249	Test lever block for DRH/DRW 7760056249

Ordering information

Input

	24 V AC	48 V AC	115 V AC	230 V AC
Rated voltage	24 V AC	48 V AC	115 V AC	230 V AC
DC response / dropout voltage	19.2V / 7.2 V	38.4 V / 14.4 V	92 V / 34.5 V	184 V / 69 V
Power consumption	2.5 VA	2.5 VA	2.5 VA	2.5 VA
DC rated current	101.7 mA	51.04 mA	21.2 mA	10.61 mA
Coil resistance	100Ω ±10%	350Ω ±10%	2,200Ω ±10%	8,000Ω ±10%

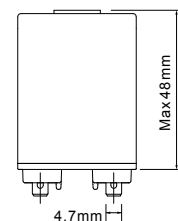
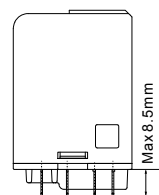
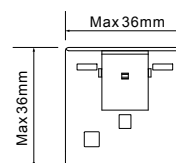
Ordering information

1 N.O. contact/ 1 N.C. contact	Type Order No.	DRH275524LT 1220090000	DRH275548LT 1220110000	DRH275615LT 1220120000	DRH275730LT 1220130000
2 N.O. contact	Type Order No.	DRH276524LT 1220200000	DRH276548LT 1220210000	DRH276615LT 1220220000	DRH276730LT 1220230000
With test lever locking clip	Type Order No.	Test lever block for DRH/DRW 7760056249	Test lever block for DRH/DRW 7760056249	Test lever block for DRH/DRW 7760056249	Test lever block for DRH/DRW 7760056249

DRW Power Relay

DRW power relay
2CO / 3CO contacts
AC / DC coil

- Suitable to switch high voltage load
- With LED and test lever
- Approval with CE cULUS TÜV

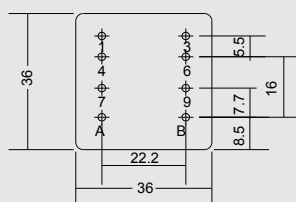


Circuit diagram

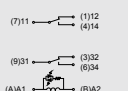
PIN top view

Dimensions are in mm

2CO



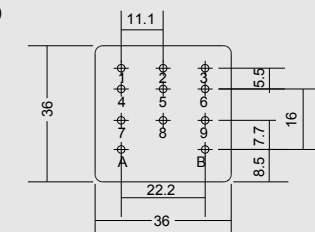
DC



AC



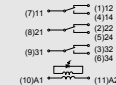
3CO



DC



AC



Output

Max. switching voltage	400 V AC
Continuous current	16 A@ 400 VAC; 16 A@ 30 VDC
Contact material	AgCdO
Min. load voltage / current	12 VDC / 100 mA
Contact resistance (initial)	< 50 mΩ
Electrical endurance	> 10 × 10 ⁴ cycles
Response / dropout delay	< 20 ms / < 10 ms
Max. switching frequency at rated load	1 Hz

Input

Response voltage @ 25°C	AC: ≤ 80% of rated voltage DC: ≤ 75% of rated voltage
Dropout voltage @ 25°C	AC: ≥ 30% of rated voltage DC: ≥ 10% of rated voltage
Max. voltage @ 25°C	110% of rated voltage
Coil power consumption	2.5 VA / 1.5 W

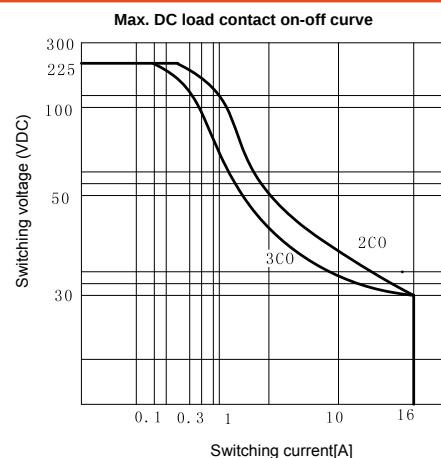
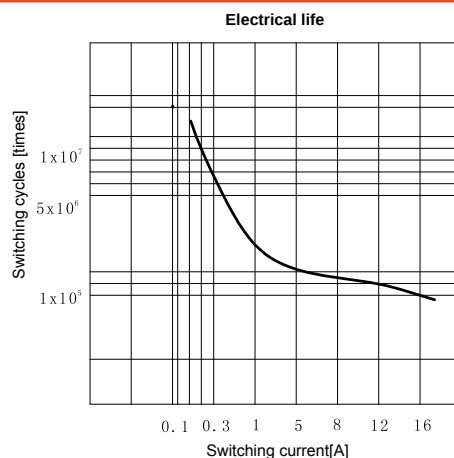
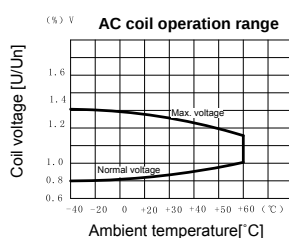
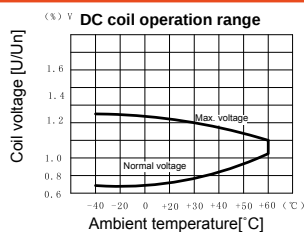
General

Operation temperature	2CO: -40 ... 60°C; 3CO: -40 ... 50°C;
Storage temperature	-40 ... 60°C
Humidity	35 ... 85 %
Electrical strength	Coil-contact: 4,000V AC / 1 min Between N.O. contacts: 2,500V AC / 1 min Between adjacent contacts: 4,000V AC / 1 min
Clearance / creepage distance	3.5 mm / 6 mm
Insulation IEC60664	
Rated voltage	400 V
Pollution category	3
Over voltage category	III

Vibration resistance	10-55Hz dual amplitude: 1.0mm
Shock resistance	10G (half wave of sine pulse: 11ms)
Approval	CE; TÜV; UL
Weight	51 g

Dimension

Length x Width x Height	36 x 36 x 48 mm
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DRW Power Relay

DRW power relay
2CO / 3CO contacts
AC / DC coil

Type code **DRW**

Type DRW

Type of construction

270 2CO

174 1NC

Coil voltage

012 12Vdc / 024 24Vdc

048 48Vdc / 110 110Vdc

220 220Vdc / 524 24Vac

548 48Vac / 615 115Vac

730 230Vac / 900 400Vac

With LED or test lever

LT

Relay

Ordering information

Input	12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
Rated voltage	12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
DC response / dropout voltage	9 V / 1.2 V	8 V / 2.4 V	36 V / 4.8 V	82.5 V / 11 V	115 V / 22 V
Power consumption	1.5 W	1.5 W	1.5 W	1.5 W	1.5 W
DC rated current	120 mA	60 mA	30 mA	13.03 mA	6.7 mA
Coil resistance	100Ω ±10%	400Ω ±10%	1,600Ω ±10%	8,400Ω ±10%	33,000Ω ±10%

Ordering information

2CO contact	Type	DRW270012LT	DRW270024LT	DRW270048LT	DRW270110LT	DRW270220LT
	Order No.	1219730000	1219740000	1219750000	1219760000	1219770000
3CO contact	Type	DRW370012LT	DRW370024LT	DRW370048LT	DRW370110LT	DRW370220LT
	Order No.	1219780000	1219790000	1219810000	1219820000	1219830000
With test lever locking clip	Type	Test lever block for DRH/DRW	Test lever block for DRH/DRW	Test lever block for DRH/DRW	Test lever block for DRH/DRW	Test lever block for DRH/DRW
	Order No.	7760056249	7760056249	7760056249	7760056249	7760056249

Ordering information

Input	24V AC	48V AC	115V AC	230V AC	400V AC
Rated voltage	24 V AC	48 V AC	115 V AC	230 V AC	400 V AC
AC response / dropout voltage	19.2V / 7.2 V	38.4 V / 14.4 V	92 V / 34.5 V	184 V / 69 V	320 V / 120 V
Power consumption	2.5 VA	2.5 VA	2.5 VA	2.5 VA	2.5 VA
AC rated current	101.7 mA	51.04 mA	21.2 mA	10.61 mA	6.1 mA
Coil resistance	100Ω ±10%	350Ω ±10%	2,200Ω ±10%	8,000Ω ±10%	30,000Ω ±10%

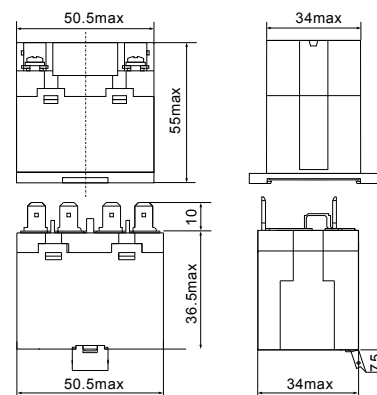
Ordering information

2CO contact	Type	DRW270524LT	DRW270548LT	DRW270615LT	DRW2701730LT	DRW270900LT
	Order No.	1219350000	1219360000	1219370000	1219380000	1219390000
3CO contact	Type	DRW370524LT	DRW370548LT	DRW370615LT	DRW370730LT	DRW370900LT
	Order No.	1219410000	1219420000	1219430000	1219440000	1219450000
With test lever locking clip	Type	Test lever block for DRH/DRW	Test lever block for DRH/DRW	Test lever block for DRH/DRW	Test lever block for DRH/DRW	Test lever block for DRH/DRW
	Order No.	7760056249	7760056249	7760056249	7760056249	7760056249

PWR High Power Relay

PWR high power relay
1 N.O. contact
AC / DC coil

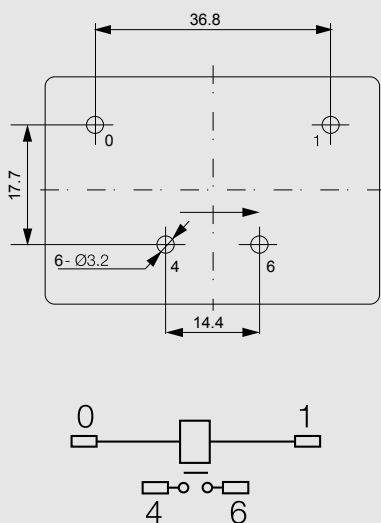
- Max. load current: 30 A
- Various mounting methods available
- Approval with CE TÜV



Circuit diagram

PIN top view
Dimensions are in mm

1NO



Output

Max. switching voltage	277 V AC
Continuous current	30 A
Contact material	Ag alloy
Min. load voltage / current	12 VDC / 100 mA
Contact resistance (initial)	< 50 mΩ
Electrical endurance	> 10 × 10 ⁴ cycles
Response / dropout delay	< 20 ms / < 10 ms

Input

Response voltage @ 25°C	AC: ≤ 75% of rated voltage DC: ≤ 75% of rated voltage
Dropout voltage @ 25°C	AC: ≥ 15% of rated voltage DC: ≥ 15% of rated voltage
Max. voltage @ 25°C	110% of rated voltage
Coil power consumption	2.5 VA / 1.9 W

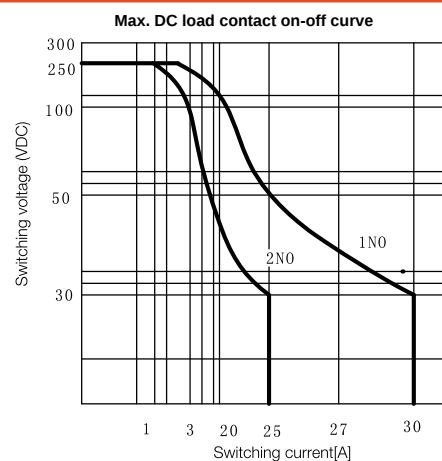
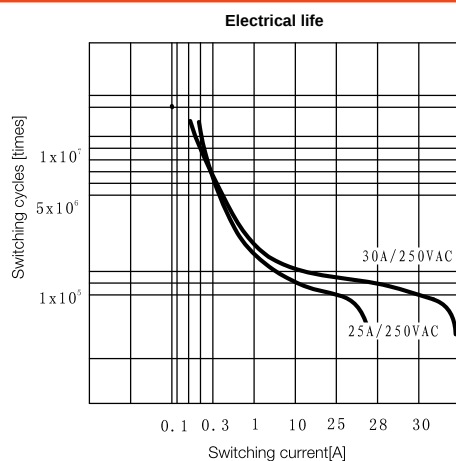
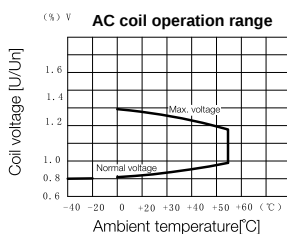
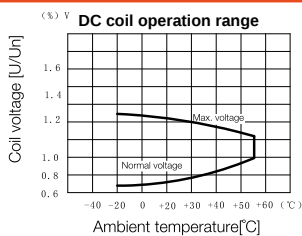
General

Operation temperature	- 25 ... 55°C
Storage temperature	- 25 ... 55°C
Humidity	35 ... 85 %
Electrical strength	Coil-contact Between N.O. contacts Between adjacent contacts
Clearance / creepage distance	3.5 mm / 6 mm
Insulation IEC60664	
Rated voltage	250 V
Pollution category	3
Over voltage category	III

Vibration resistance	10-55Hz dual amplitude: 1.0mm
Shock resistance	10G (half wave of sine pulse: 11ms)
Approval	CE; TÜV
Weight	Push-in connection/PCB welding: 90g; DIN-rail mounting: 120g

Dimension

Length x Width x Height	34 x 50.5 x 36.5 mm
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PWR High Power Relay

PWR high power relay
1 N.O. contact
AC / DC coil

Type code

PWR

Type PWR

Type of construction and mounting

153 1N.O. contact, push-in connection

173 1N.O. contact, DIN-rail mounting

Coil voltage

006 6Vdc / 012 12Vdc

024 24Vdc / 048 48Vdc

110 110Vdc / 220 220Vdc

524 24Vac / 548 48Vac

615 115Vac / 730 230Vac

880 380Vac

L with LED

T with test lever

P PCB welding

Relay

Ordering information

Input	6 V DC 1NO	12 V DC 1NO	24 V DC 1NO	48 V DC 1NO	110 V DC 1NO	220 V DC 1NO
Rated voltage	6 V DC	12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
DC response / dropout voltage	4.5 V / 0.9 V	9 V / 1.8 V	18 V / 3.6 V	36 V / 7.2 V	82.5 V / 16.5 V	165 V / 33 V
Power consumption	1.9 W	1.9 W	1.9 W	1.9 W	1.9 W	1.9 W
DC rated current	317 mA	160 mA	79.2 mA	39.3 mA	17.3 mA	8.6 mA
Coil resistance	18.9Ω ±10%	75Ω ±10%	303Ω ±10%	1,220Ω ±10%	6,360Ω ±10%	25,474Ω ±10%

Ordering information

plug-in , need socket	Type	PWR153006LT	PWR153012LT	PWR153024LT	PWR153048LT	PWR153110LT	PWR153220LT
	Order No.	1219590000	1219610000	1219620000	1219630000	1219640000	1219650000
Din rail installation,no need socket	Type	PWR173006L	PWR173012L	PWR173024L	PWR173048L	PWR173110L	PWR173220L
	Order No.	1219460000	1219470000	1219480000	1219490000	1219510000	1219520000
PCB soldering	Type	PWR153006P	PWR153012P	PWR153024P	PWR153048P	PWR153110P	PWR153220P
	Order No.	1233010000	1233020000	1233030000	1233040000	1233050000	1233060000

Ordering information

Input	24 V AC 1NO	48 V AC 1NO	115 V AC 1NO	230 V AC 1NO	380 V AC 1NO	
Rated voltage	24 V AC	48 V AC	115 V AC	230 V AC	115 V AC	
AC response / dropout voltage	18V / 3.6 V	36 V / 7.2 V	86.3 V / 17.3 V	172.5 V / 34.5 V	285 V / 57 V	
Power consumption	2.5 VA	2.5 VA	2.5 VA	2.5 VA	2.5 VA	
AC rated current	87.3 mA	43.6 mA	22.1 mA	11.0 mA	6.1 mA	
Coil resistance	275Ω ±10%	1,100Ω ±10%	5,200Ω ±10%	21,000Ω ±10%	62,650Ω ±10%	

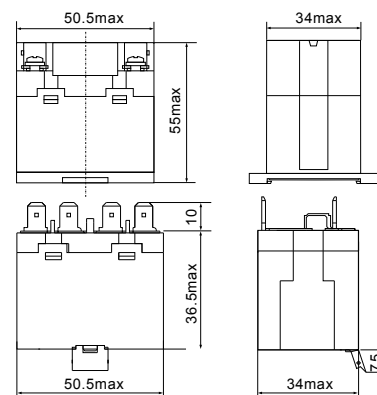
Ordering information

Din-rail mounting without socket	Type	PWR153524LT	PWR153548LT	PWR153615LT	PWR153730LT	PWR153880LT	
	Order No.	1219230000	1219240000	1219250000	1219260000	1219270000	
Push-in connection with socket	Type	PWR173524L	PWR173548L	PWR173615L	PWR173730L	PWR173880L	
	Order No.	1219090000	1219120000	1219130000	1219140000	1219150000	
PCB welding	Type	PWR153524P	PWR153548P	PWR153615P	PWR153730P	PWR153880P	
	Order No.	1232860000	1232870000	1232880000	1232890000	1232900000	

PWR High Power Relay

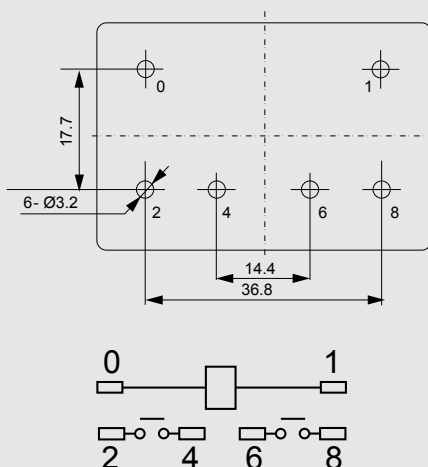
PWR high power relay
2 N.O. contact
AC / DC coil

- Max. load current: 25 A
- Various mounting methods available
- Approval with CE TÜV



Circuit diagram
PIN top view
Dimensions are in mm

2NO



Output

Max. switching voltage	277 V AC
Continuous current	25 A
Contact material	Ag alloy
Min. load voltage / current	12 VDC / 100 mA
Contact resistance (initial)	< 50 mΩ
Electrical endurance	> 10 × 10 ⁴ cycles
Response / dropout delay	< 30 ms / < 30 ms

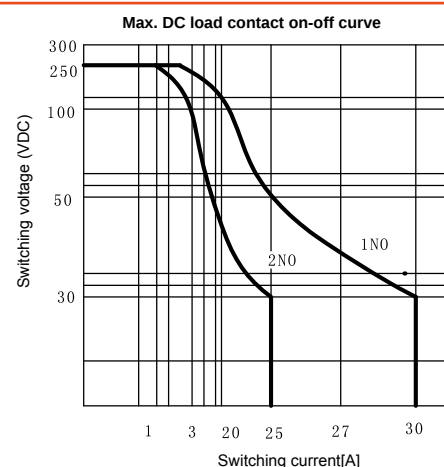
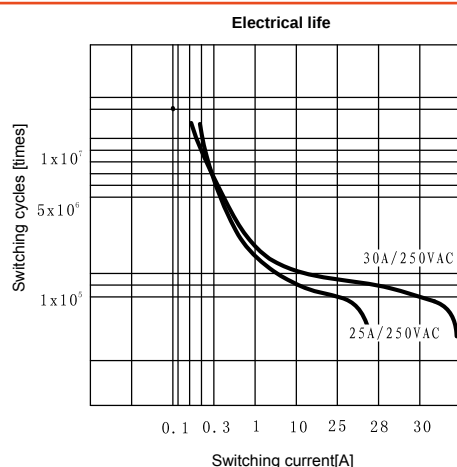
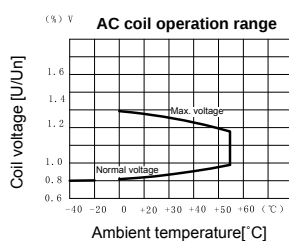
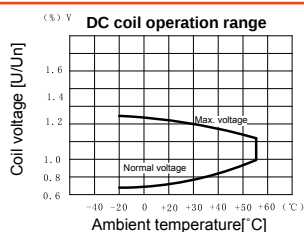
Input

Response voltage @ 25°C	AC: ≤ 75% of rated voltage DC: ≤ 75% of rated voltage
Dropout voltage @ 25°C	AC: ≥ 15% of rated voltage DC: ≥ 15% of rated voltage

Max. voltage @ 25°C	110% of rated voltage
Coil power consumption	2.5 VA / 1.9 W

General

Operation temperature	- 25 ... 55°C
Storage temperature	- 25 ... 55°C
Humidity	35 ... 85 %
Electrical strength	Coil-contact Between N.O. contacts Between adjacent contacts
Clearance / creepage distance	1.5 mm / 4 mm
Insulation IEC60664	
Rated voltage	250 V
Pollution category	3
Over voltage category	III
Vibration resistance	10-55Hz dual amplitude: 1.0mm
Shock resistance	10G (half wave of sine pulse: 11ms)
Approval	CE; TÜV
Weight	Push-in connection/PCB welding: 90g; DIN-rail mounting: 120g
Dimension	
Length x Width x Height	34 x 50.5 x 36.5 mm



PWR High Power Relay

PWR high power relay
2 N.O. contact
AC / DC coil

Type code	PWR				
Type PWR					
Type of construction and mounting	256 2N.O. contact, push-in connection 276 2N.O. contact, DIN-rail mounting				
Coil voltage	006 6Vdc / 012 12Vdc 024 24Vdc / 048 48Vdc 110 110Vdc / 220 220Vdc 524 24Vac / 548 48Vac 615 115Vac / 730 230Vac 880 380Vac				
L	with LED				
T	with test lever				
P	PCB welding				

Ordering information	6 V DC 2NO	12 V DC 2NO	24 V DC 2NO	48 V DC 2NO	110 V DC 2NO	220 V DC 2NO
Input						
Rated voltage	6 V DC	12 V DC	24 V DC	48 V DC	110 V DC	220 V DC
DC response / dropout voltage	4.5 V / 0.9 V	9 V / 1.8 V	18 V / 3.6 V	36 V / 7.2 V	82.5 V / 16.5 V	165 V / 33 V
Power consumption	1.9 W	1.9 W	1.9 W	1.9 W	1.9 W	1.9 W
DC rated current	317 mA	160 mA	79.2 mA	39.3 mA	17.3 mA	8.6 mA
Coil resistance	18.9Ω ±10%	75Ω ±10%	303Ω ±10%	1,220Ω ±10%	6,360Ω ±10%	25,474Ω ±10%

Ordering information							
plug-in , need socket	Type	PWR256006LT	PWR256012LT	PWR256024LT	PWR256048LT	PWR256110LT	PWR256220LT
	Order No.	1219660000	1219670000	1219680000	1219690000	1219710000	1219720000
Din rail installation,no need socket	Type	PWR276006L	PWR276012L	PWR276024L	PWR276048L	PWR276110L	PWR276220L
	Order No.	1219530000	1219540000	1219550000	1219560000	1219570000	1219580000
PCB soldering	Type	PWR256006P	PWR256012P	PWR256024P	PWR256048P	PWR256110P	PWR256220P
	Order No.	1233070000	1233080000	1233090000	1233110000	1233120000	1233130000

Ordering information	24 V AC 2NO	48 V AC 2NO	115 V AC 2NO	230 V AC 2NO	380 V AC 2NO	
Input						
Rated voltage	24 V AC	48 V AC	115 V AC	230 V AC	115 V AC	
AC response / dropout voltage	18V / 3.6 V	36 V / 7.2 V	86.3 V / 17.3 V	172.5 V / 34.5 V	285 V / 57 V	
Power consumption	2.5 VA	2.5 VA	2.5 VA	2.5 VA	2.5 VA	
AC rated current	87.3 mA	43.6 mA	22.1 mA	11.0 mA	6.1 mA	
Coil resistance	275Ω ±10%	1,100Ω ±10%	5,200Ω ±10%	21,000Ω ±10%	62,650Ω ±10%	

Ordering information							
plug-in , need socket	Type	PWR256524LT	PWR256548LT	PWR256615LT	PWR256730LT	PWR256880LT	
	Order No.	1219280000	1219290000	1219320000	1219330000	1219340000	
Din rail installation,no need socket	Type	PWR276524L	PWR276548L	PWR276615L	PWR276730L	PWR276880L	
	Order No.	1219160000	1219170000	1219180000	1219190000	1219220000	
PCB soldering	Type	PWR256524P	PWR256548P	PWR256615P	PWR256730P	PWR256880P	
	Order No.	1232910000	1232920000	1232930000	1232940000	1232990000	

Relay Socket

Separated socket (for RCL relay)



Ordering information

Technical data		
Rated current	1CO/2CO	1 x 12A / 2 x 12A
Rated voltage		300 Vac
Coil/contact electrical strength		>4000 V _{rms}
Insulation (VDE 0110b)		C / 250 Vac
Ambient temperature		-40...+70°C
Protection level		IP 20
Electric shock prevention category		VBG 4
Wire cross section / with terminal		2 x 2.5 mm ² / 2 x 1.5 mm ²
Wiring torque / max.		0.5Nm / 0.8Nm
Packing unit		10 pcs.

Sockets connected by screws, DIN-rail mounting

Description	Type	Order No.
3.5mm pitch, DIN-rail mounting	SRC ECO 1CO*	7760056005
5mm pitch screw connected sockets, DIN-rail mounting	SRC ECO 2CO*	7760056006
Accessories		
Mark, for SRC ECO relay sockets	Mark SRC ECO	7760056178

* SRC ECO sockets already have plastic release clip and mark

Separated socket (for RCM and DRM relays)



Ordering information

Technical data		
Rated current		4 x 6 A, 3 x 10 A, 2 x 12 A
Rated voltage		300 Vac
Coil/contact electrical strength		>4000 V _{rms}
Insulation (VDE 0110b)		C / 250 Vac
Ambient temperature		-40...+70°C
Protection level		IP 20
Electric shock prevention category		VBG 4
Wire cross section / with terminal		2 x 2.5 mm ² / 2 x 1.5 mm ²
Wiring torque / max.		0.5 Nm / 0.8 Nm
Packing unit		10 pcs.

Sockets connected by screws, DIN-rail mounting

Description	Type	Order No.
Sockets connected by screws, DIN-rail mounting, 2CO	SCM 2CO	8690880000
	SCM ECO 2CO*	7760056007
Sockets connected by screws, DIN-rail mounting, 3CO	SCM 3CO	8690890000
Sockets connected by screws, DIN-rail mounting, 4CO	SCM 4CO	8690900000
	SCM ECO 4CO*	7760056008

* SRC ECO sockets already have plastic release clip and mark

Relay clips (plastic and metal)

Ordering information

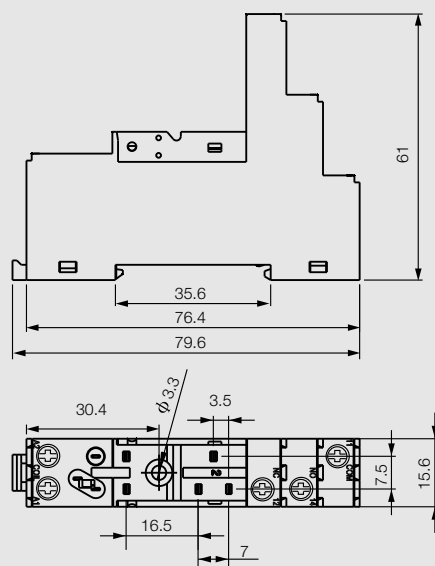
For SCM 2CO, SCM 3CO and SCM 4CO

Description	Type	Order No.
Plastic clip for RCM of 29 mm	SCM CLIP P	8691110000
Metal clip for RCM of 29 mm	SCM CLIP M	7760056039
Accessories		
Mark, for SRC ECO relay sockets	Mark SCM ECO	7760056179

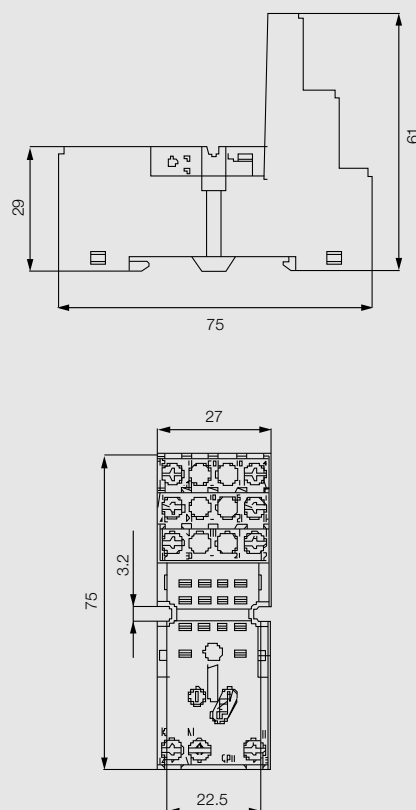
Circuit diagram

PIN top view

Dimensions are in mm



Dimensions are in mm

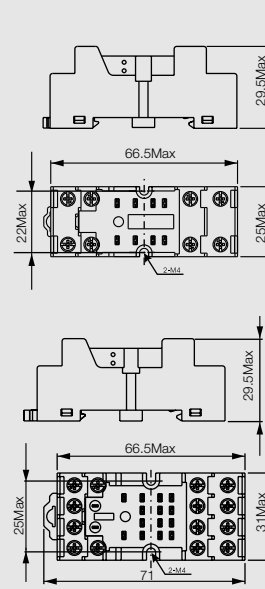


Relay Socket

Hybrid socket (for RCM and DRM relay)



Dimensions are in mm



Ordering information

Technical data	
Rated current	2CO/4CO
Rated voltage	
Dielectric withstand voltage / coil-contacts	
Dielectric withstand voltage / between contacts	
Wiring torque / max.	
Wire	
Environments	
Weight	2CO/4CO
Min. in package	

Description	
DIN-Rail mounting sockets	2CO
DIN-Rail mounting sockets	4CO

Accessories	
Mark, for SRC ECO relay sockets	

12A/10A
300Vac
2500Vrms
2500Vrms
0.5Nm/0.8Nm
0.5-2.5 mm ²
-40°C...+70°C
35g/43g
20pcs

Type	Qty.	Order No.
FS 2CO*	10	7760056106
FS 4CO	10	7760056107

Mark FS 7760056180

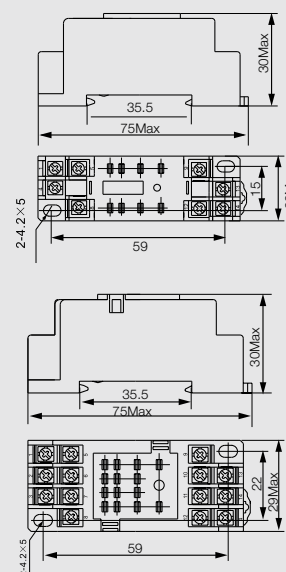
* Functional module is not suitable for this type of sockets.

Note: FS sockets already have marks.

Economic socket (for RCM and DRM relay)



Dimensions are in mm



Ordering information

Technical data	
Rated current	2CO/4CO
Rated voltage	
Dielectric withstand voltage / coil-contacts	
Dielectric withstand voltage / between contacts	
Wiring torque / max.	
Wire	
Environments	
Weight	2CO/4CO
Min. in package	

Description	
DIN-Rail mounting sockets	2CO
DIN-Rail mounting sockets	4CO
DIN-Rail mounting sockets with finger protection	2CO
DIN-Rail mounting sockets with finger protection	4CO

Note: functional module is not suitable for this type of sockets

10A/5A
300V
2000V
2000V
0.5Nm/0.8Nm
0.5-2.5mm ²
-40°C...+70°C
43g/56g
20pcs

Type	Qty.	Order No.
FS 2CO ECO	10	7760056126
FS 4CO ECO	10	7760056127
FS 2CO F ECO	10	1190740000
FS 4CO F ECO	10	1190750000

Metal clip (recommended for vibration occasion)

Type	Order No.
DRM clip M (for DRM relay)	7760056108
Metal clip set (for DRM relay, only with FS ECO sockets)	7760056128



DRM clip M

Metal clip set

Functional modules

Technical data	Type	Order No.
Suppressor diode 6...230Vdc	RIM 1 6/230VDC	7760056169
RC-combined protection 110...230 Vac	RIM 3 110/230VAC	7760056014
RC-combined protection 110...230Vac with LED *	RIM 3 110/230VAC LED	7760056045
Green LED 6...24 Vdc with suppressor diode	RIM 2 6/24VDC	7760056015
Green LED 24...60 Vdc with suppressor diode	RIM 2 24/60VDC	7760056016
Green LED 110...230 Vdc with suppressor diode	RIM 2 110/230VDC	7760056017
Green LED 6...24 Vdc / Vac	RIM 3 6/24VUC	7940018457
Green LED 24...60 Vdc / Vac	RIM 3 24/60VUC	7760056018
Green LED 110...230 Vdc / Vac	RIM 3 110/230VUC	7940018455

* For SCM/SRC sockets only, not for FS sockets.



Relay Socket

DRL relay socket SLD



Ordering information

Technical data			
Rated voltage	300 V		
Rated current	10 A		
Coil/contact electrical strength	2,000 V		
Electrical strength between contacts	2,500 V		
Operation temperature	-40 ... 85°C		
Pollution class	2		
Over voltage class	III		
Wiring torque	1.0 Nm		
Wire cross section	0.5 ... 2.5 mm²		
Protection level (IEC 61810)	IP10		
Weight	2CO: 50 g ; 3CO: 60 g ; 4CO: 76 g		
Approvals	CE		
Description	Type	Qty.	Order No.
DIN-rail mounted socket, 2CO	SLD 2CO	10	1132830000
DIN-rail mounted socket, 3CO	SLD 3CO	10	1132840000
DIN-rail mounted socket, 4CO	SLD 4CO	10	1132850000
Metal clips (pair)	SLD Clip M	10	7760056242

DRL relay socket SLD



Ordering information

Technical data		
Rated voltage	300 V	
Rated current	10 A	
Coil/contact electrical strength	2,000 V	
Electrical strength between contacts	2,500 V	
Operation temperature	-40 ... 85°C	
Pollution class	2	
Over voltage class	III	
Wiring torque	1.0 Nm	
Wire cross section	0.5 ... 2.5 mm²	
Protection level (IEC 61810)	IP20	
Approvals	CE	
Description	Type	Order No.
DIN-rail mounted socket, 2CO	SLD F 2CO	107760056225
DIN-rail mounted socket, 3CO	SLD F 3CO	107760056226
DIN-rail mounted socket, 4CO	SLD F 4CO	107760056227

Ordering information

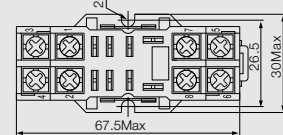
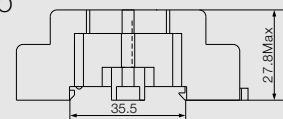
Technical data		Order No.
Metal clips SLD F 2CO	Metal clip	7760056108
Metal clips SLD F 3CO	SLD clip 3CO	7760056234
Metal clips SLD F 4CO	SLD clip 4CO	7760056235

Ordering information

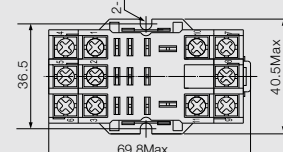
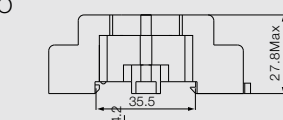
Technical data		Order No.
Suppressing diode 6...230Vdc, for SLD F 2CO/3CO	RIM 1 6/230Vdc	7760056169
Blocking modular 110...230 Vac, for SLD F 2CO/3CO	RIM 3 110/230Vac	7760056014
Blocking modular 6 ... 230 Vac, for SLD F 4CO	RIM 5 6/230Vac	1174670000
Suppressing diode 6...230 Vdc, for SLD F 4CO	RIM 5 6/230Vdc	1174650000

Dimensions are in mm

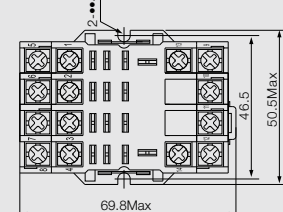
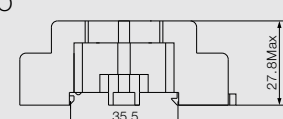
SLD 2CO



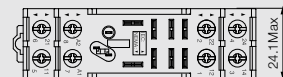
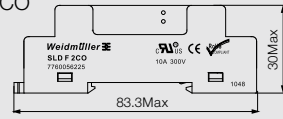
SLD 3CO



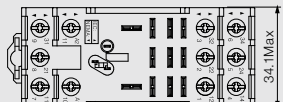
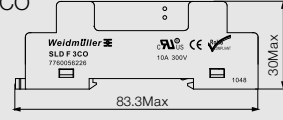
SLD 4CO



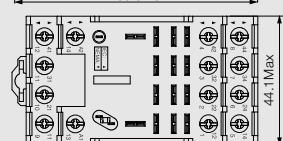
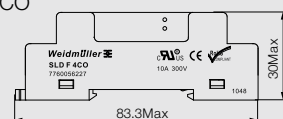
SLD F 2CO



SLD F 3CO



SLD F 4CO



Relay Socket

DRR/RRD relay sockets



Ordering information

Technical data			
Rated voltage	300 V		
Rated current	12 A		
Coil/contact electrical strength	4,000 V		
Electrical strength between contacts	2,500 V		
Operating temperature	-40 ... 85°C		
Pollution class	2		
Over voltage class	III		
Wiring torque	1.0 Nm		
Wire cross section	0.5 ... 2.5 mm²		
Protection level (IEC 61810)	IP20		
Weight	50 g		
Approvals	CE		
Description	Type	Qty.	Order No.
DIN-rail mounting rockets, 8-pin	SRD ECO 2CO	10	1132810000
DIN-rail mounting rockets, 11-pin	SRD ECO 3CO	10	1132820000

Metal clip

Description		Order No.
Metal clip for DRR relay sockets	DRR SOCKET METAL CLIP	1134160000
Metal clip for RRD relay sockets	SRD-I CLIP M	8869370000

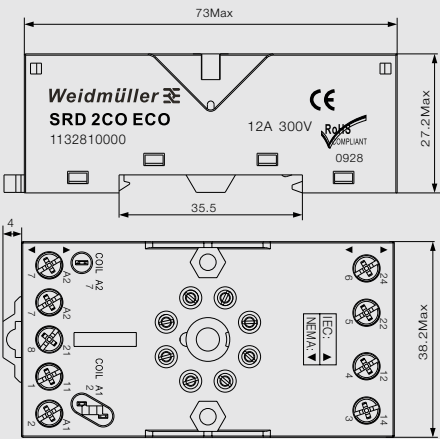


Functional modules

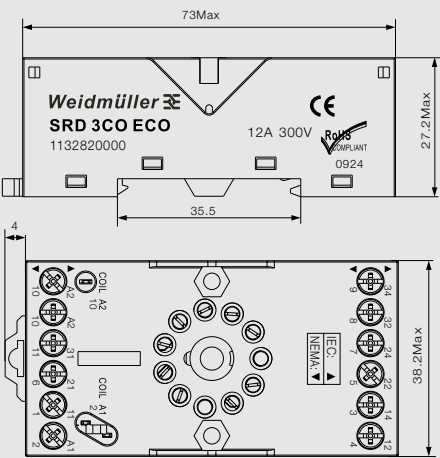
Technical data	Type	Order No.
RC combined protection 6 ... 230 Vac	RIM 5 6/230Vac	1174670000
Protective diode 6 ... 230 Vdc	RIM 5 6/230Vdc	1174650000

Dimensions are in mm

SRD ECO 2CO



SRD ECO 3CO



Relay Socket

PWR relay socket



Product performance

Technical data	
Rated current	30 A
Rated voltage	400 V AC
Medium withstand voltage	2500 V/S
Screw torque	1.0Nm
External wire	20-10/0.5-5.5AWG/mm ²
Environments	-40~+85°C
Weight	56g

Assembled relays and accessories

Technical data		
Product type	Relay type	Order No.
PWR relay socket	SWR	1220240000

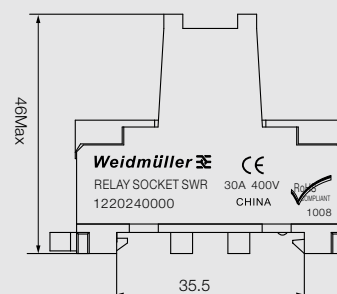
DRH and DRW relay socket



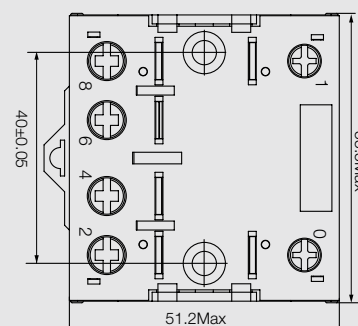
Ordering information

Technical data			
Rated voltage	400 V AC		
Rated current	16 A		
Coil/contact electrical strength	4,000 V		
Electrical strength between contacts	4,000 V		
Operation temperature	-40 ... 60°C		
Pollution class	2		
Over voltage class	II		
Wiring torque/max.	1.2 Nm		
Wire cross section	0.5 ... 4 mm ²		
Protection level (IEC 61810)	IP20		
Weight	64g		
Approvals	CE, UL		
Description	Type	Qty.	Order No.
Relay socket, for DRH and DRW relays	SPW ECO 3CO	10	1220250000
Metal clip	Metal clip DRH/DRW	10	1220260000

Shape

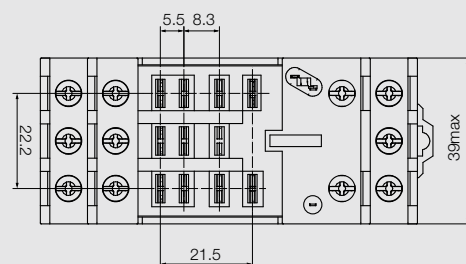
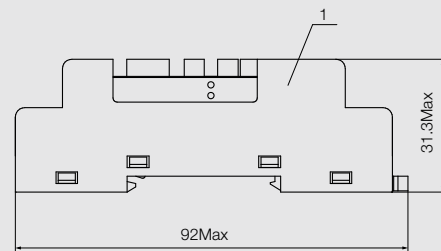


Mounting



Dimensions are in mm

SPW ECO 3CO



Relay



12 A		
2 x 12 A		
300 V AC		
- 40 °C ... +80 °C		
Type	Qty.	Order No.
SRC 05 PCB	20	7760056110
SRC 08 PCB	20	7760056111



10 A		
250 V AC		
- 40 °C ... +80 °C		
Type	Qty.	Order No.
SCM 08 PCB	10	7760056112
SCM 11 PCB	10	1132790000
SCM 14 PCB	10	7760056113
metal clip DRM PCB		1209690000

10 A		
250 VAC		
- 40 °C ... +70 °C		
Type	Qty.	Order No.
SRD 2CO PCB	25	8697750000
SRD 3CO PCB	25	8697730000



16 A		
400 VAC		
– 40 °C ... +70 °C		
Type	Qty.	Order No.
SPW PCB	10	1132800000
SPW METAL CLIP		1238770000

