



NEW!

PRODUCT INFORMATION

CL1015/02

1, 2 and 3 pole power contactors
for DC and AC applications



CL Series contactors are the economical solution for switching DC and AC currents in the medium power range.

The compact contactors come with an arc chute that has proven itself many times over and are suitable for universal use in the harsh environmental conditions of industrial applications as well as in AC and DC railway networks.

The switching devices guarantee reliable, low-wear switching of nominal voltages up to 1,500 V.

Features:

- 1, 2 and 3 pole versions
- Double-break NO contact
- DC versions with magnetic blowout
- Compact, rugged design
- Drives with coil tolerances according to railway standard
- Low maintenance and long life

Standards:

- IEC 60077, EN 50124-1

Applications:

- Precharge contactor for AC or DC
- Contactor for the medium power range

Specifications

Series	CL1115/02	CL1215/02	CL1315/02
Type of voltage	Version P and G: DC (unidirectional), Version X: AC (f < 60 Hz)		
Main contacts	1 x NO	2 x NO	3 x NO
Nominal voltage U_n	1,500 V	1,500 V	1,500 V
Rated operating voltage U_e	1,800 V	1,800 V	1,800 V
Rated insulation voltage U_{Nm}	2,200 V	2,200 V	2,200 V
Rated impulse withstand voltage U_{Ni}	12 kV	12 kV	12 kV
Pollution degree / Overvoltage category	PD3 / OV3	PD3 / OV3	PD3 / OV3
Conv. thermal current I_{th} at $T_a = 40^\circ\text{C} / T_a = 70^\circ\text{C}$	250 A / 200 A	250 A / 200 A	250 A / 200 A
Auxiliary contacts	2 x snap-action switches S870, DC13 (2 A at 24 V DC; 0.2 A at 110 V DC)		
Coil voltage U_s	24 / 36 / 72 / 110 V DC		
Mounting position	horizontal or vertical		
Dimensions (L x W x H)	(200 x 66 x 192.5) mm	(200 x 133.5 x 200.5) mm	(200 x 142 x 200.5) mm
Temperature	-40° C ... +70° C		
Mechanical endurance	> 3,000,000 operating cycles		

Technical Data		Contactor series CL1015 (2011-02-02)		
Series	CL1115/02	CL1215/02	CL1315/02	
Type of voltage	DC (unidirectional), AC	DC (unidirectional), AC	DC (unidirectional), AC	
Main contacts (number, configuration)	1x SPST-NO	2x SPST-NO	3x SPST-NO	
Nominal voltage U_n	1,500 V	1,500 V	1,500 V	
Rated operating voltage U_e	1,800 V	1,800 V	1,800 V	
Rated insulation voltage U_{Nm}	2,200 V	2,200 V	2,200 V	
Rated impulse withstand voltage U_{Ni}	12 kV	12 kV	12 kV	
Pollution degree / Overvoltage category	PD3 / OV3	PD3 / OV3	PD3 / OV3	
Switching overvoltages at $U_e = 1,800$ V	< 6 kV *	< 6 kV *	< 6 kV *	
Conventional free air thermal current I_{th} ($T_a = 40$ °C)	250 A	250 A	250 A	
Conventional free air thermal current I_{th} ($T_a = 70$ °C)	200 A	200 A	200 A	
Minimum wire gauge for I_{th}	95 mm ²	95 mm ²	95 mm ²	
Component category	A2	A2	A2	
Rated short-circuit making capacity I_{cm}	1.5 kA	1.5 kA	1.5 kA	
Rated short-circuit breaking capacity I_{cn} ($T_2 = 15$ ms)				
DC, $U_e = 720$ V	20 A	20 A	20 A	
DC, $U_e = 1,200$ V	15 A	15 A	15 A	
DC, $U_e = 1,800$ V	10 A	10 A	10 A	
Rated short-circuit breaking capacity I_{cn} ($T_2 < 1$ ms)				
DC, $U_e = 720$ V	400 A	400 A	400 A	
DC, $U_e = 1,200$ V	90 A	90 A	90 A	
DC, $U_e = 1,800$ V	50 A	50 A	50 A	
Rated short-circuit breaking capacity I_{cn} ($\cos\varphi = 0.8$)				
AC, $U_e = 720$ V ($f = 50$ Hz)	450 A	450 A	450 A	
AC, $U_e = 1,200$ V ($f = 50$ Hz)	250 A	250 A	250 A	
AC, $U_e = 1,800$ V ($f = 50$ Hz)	150 A	150 A	150 A	
Rated short-circuit breaking capacity I_{cn} ($\cos\varphi = 1$)				
AC, $U_e = 720$ V ($f = 50$ Hz)	800 A	800 A	800 A	
AC, $U_e = 1,200$ V ($f = 50$ Hz)	450 A	450 A	450 A	
AC, $U_e = 1,800$ V ($f = 50$ Hz)	250 A	250 A	250 A	
Rated short-time withstand current I_{cw}	3 kA	3 kA	3 kA	
Critical current range	none	none	none	
Main contacts				
Contact material	AgSnO ₂	AgSnO ₂	AgSnO ₂	
Terminals	M8	M8	M8	
Auxiliary contacts				
Number, configuration	2x S870			
Contact material	Silver (gold on request)			
Making / breaking capacity S870	DC13 (110 V: 0.2 A; 24 V: 2 A)			
Terminals	Flat quick connect 6.3 x 0.8 mm			
Magnetic drive				
Rated control supply voltage U_s	24 V; 36 V; 72 V; 110 V (or on request)			
Operating range of U_s	0.7 ... 1.25 x U_s			
Coil power dissipation ($T_a = 20$ °C / U_s)				
Cold coil	< 28 W	< 35 W	< 40 W	
Warm coil	< 20 W	< 25 W	< 30 W	
Maximum pull-in voltage ($T_a = 20$ °C)	0.6 x U_s			
Typical make-time ($T_a = 20$ °C)	< 80 ms			
Typical drop-off voltage ($T_a = 20$ °C)	0.1 ... 0.4 x U_s			
Typical break-time ($T_a = 20$ °C)	< 20 ms			
Suppression	Suppressor diode			
Terminals	Screw M3			
Degree of protection (EN 60529)	IP00			
Mechanical endurance	> 3.000.000 operating cycles			
Vibrations and shock (EN 61373)	Category 1, class B			
Mounting				
Position	Horizontal or vertical			
Fastening	Screws M6			
Environmental conditions				
Operating temperature	-40 °C ... +70 °C			
Storage temperature	-40 °C ... +85 °C			
Altitude	< 2,000 m above sea level			
Humidity (EN 50125-1)	< 75% yearly average			
Weight	< 2.7 kg	< 4.9 kg	< 7.6 kg	

* 7.5 kV for extremely inductive loads