

FDV – DOKUMENTASJON		Nr.: 038
		Rev.:
		Dato: 4.8.2015
Produktspesifikasjon	Kontaktor 3 og 4 pol	
Produktnavn	Serie CL	
Anvisning for drift	Ingen	
Vedlikehold	Produktet er vedlikeholdsfritt	
Henvisninger Vedlegg	Produktkatalog, dokumentasjon, brukerveiledning og tekniske data	
Produsent	General Electric	
Importør	EFA Elektro AS, Postboks 593, 1411 Kolbotn, Norway Tlf. 66812400 e-mail: post@efa.no - www.efa.no	

EFA Elektro AS



Serviceingeniør vern og startapparater

Conformity to standards

IEC/EN 60947-1	EN 50005	UNE 20109
IEC/EN 60947-4-1	CENELEC HD419	BS 5424 & 775
IEC/EN 60947-5-1	NF C63-110	NEMA ICS 1
UL 508	ASE 1025	VDE 0660/102
CSA 22.2/14		

Approvals

cULus	RINA	CE
SETI	IMQ (up to Ith:32A)	
Lloyd's Register	Bureau Veritas	

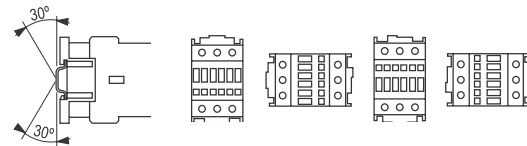
Ambient conditions

Storage temperature	-55°C to +80°C
Operation temperature	-40°C to +55°C
Altitude	up to 3000m Nominal values
	from 3000 up to 4000m 90%le 80%Ue
	from 4000 up to 5000m 80%le 75%Ue

Climatic resistance (IEC 68-2)

Continuous tests 40 / 125 / 56	Cyclic test (6 cycles)
Cold (72h)	Humid heat
Temperature -40°C	First half-cycle (12h)
Dry heat (96h)	Low temperature +25°C
Temperature +125°C	Relative humidity 93%
Relative humidity < 50%	Second half-cycle (12h)
Humid heat (56h)	Low temperature +55°C
Temperature +40°C	Relative humidity 95%
Relative humidity 95%	

Mounting positions



With the same pick-up and drop-out voltage
With the same rated power

Terminal capacity and tightening torque

		CL00 ... CL02	CL25	CL03 ... CL04	CL45	CL05 ... CL08	CL09 ... CL10
	Solid, stranded and finely stranded without end sleeve (mm²)	2 x 0.5 ... 2.5	2 x 0.5 ... 2.5	-	-	-	-
	Finely stranded with or without end sleeve (mm²)	2 x 1 ... 2.5	2 x 1 ... 2.5	-	-	-	-
	AWG wires	2 x 20 ... 12	2 x 20 ... 8	-	-	-	-
	Tightening torque (Nm)	1.6	2.2	-	-	-	-
	(Lb x in.)	15	20	-	-	-	-
	Solid, stranded and finely stranded without end sleeve (mm²)	-	-	0.75 ... 16	0.75 ... 16	1 ... 35	1.5 ... 50
	Finely stranded with end sleeve (mm²)	-	-	0.75 ... 16	0.75 ... 16	1 ... 35	1.5 ... 50
	Finely stranded w/o end sleeve (mm²)	-	-	1 ... 16	1 ... 16	1 ... 35	1.5 ... 50
	AWG wires	-	-	18 ... 6	18 ... 6	16 ... 2	16 ... 2
	Tightening torque (Nm)	-	-	1.4	1.8	4	5.6
	(Lb x in.)	-	-	12	16	35	50
	Solid (mm²)	-	-	0.75 ... 16	0.75 ... 16	1 ... 16	4 ... 35
	Stranded (mm²)	-	-	0.75 ... 16	0.75 ... 16	1 ... 25	4 ... 35
	Finely stranded w/o end sleeve (mm²)	-	-	0.75 ... 16	0.75 ... 16	1 ... 25	4 ... 35
	Finely stranded with end sleeve (mm²)	-	-	1 ... 16	1 ... 16	1 ... 25	4 ... 35
	AWG wires	-	-	18 ... 6	18 ... 6	16 ... 4	10 ... 1
	Tightening torque (Nm)	-	-	1.4	1.8	4	5.6
	(Lb x in.)	-	-	12	16	35	50
	Solid, stranded and finely stranded without end sleeve (mm²)	-	-	Max. 16	Max. 16	Max. 50 ... 4	Max. 50 ... 35
	Finely stranded w/o end sleeve (mm²)	-	-			Max. 25 ... 16	
	Finely stranded with end sleeve (mm²)	-	-			Max. 25 ... 16	
	AWG wires	-	-	Max. 6	Max. 6	Max. 25 ... 25	Max. 1
	Tightening torque (Nm)	-	-	1.4	1.8	Max. 2 ... 12	Max. 4 ... 4
	(Lb x in.)	-	-	12	16	35	50
	Ring terminals (Ø i)	3,6	4,2	4,2	4,2	6,2	6,2
	(acc. with IEC/EN 60947-1) (A)	8	10	10	10	12,5	12,5
	Tightening torque (Nm)	1,6	1,4	1,4	1,4	3	3
	(Lb x in.)	15	12	12	12	26	26

Power circuit

		CL00	CL01	CL02	CL25	CL03	CL04	CL45	CL05	CL06	CL07	CL08	CL09	CL10
Three pole version														
Rated thermal current I _{th} at $\theta \leq 55^\circ\text{C}$ (A)		25	25	32	45	45	60	60	-	90	110	110	140	140
Rated operational current I _e AC-3 (A)		9	12	18	25	25	32	40	-	50	65	80	95	105
Rated operational voltage U _e (V)		690	690	690	690	690	690	690	-	690	690	690	690	690
Four pole version (4NO and 2NO+2NC)														
Rated thermal current I _{th} at $\theta \leq 55^\circ\text{C}$ (A)		-	25	32	-	45	60	-	90	-	110	110	140	-
Rated operational voltage U _e (V)		-	690	690	-	690	690	-	690	-	690	690	690	-
Three and four pole version														
Rated insulation voltage U _i (V)		1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Maximum continuous current AC-1 (A)		25	25	32	45	45	60	60	90	90	110	110	140	140
Frequency limits (Hz)		25..400	25..400	25..400	25..400	25..400	25..400	25..400	25..400	25..400	25..400	25..400	25..400	25..400
Making capacity (RMS) (IEC 947) (A)		450	450	450	450	550	550	550	1000	1000	1000	1000	1280	1280
Breaking capacity (RMS) (IEC 947)														
U _e ≤ 400V (A)		250	250	250	350	450	450	450	920	920	920	920	1050	1050
U _e = 500V (A)		250	250	250	320	450	450	450	920	920	920	920	1050	1050
U _e = 690V (A)		130	130	130	170	205	205	205	780	780	780	780	950	950
Short-time current														
1 sec. (A)		455	455	570	630	1010	1010	1265	1580	1580	2530	2530	3300	3300
5 sec. (A)		205	205	254	280	450	450	565	710	710	1130	1130	1485	1485
10 sec. (A)		144	144	180	200	320	320	400	500	500	800	800	1050	1050
30 sec. (A)		85	85	104	115	185	185	230	290	290	460	460	600	600
1 min. (A)		60	60	74	80	130	130	165	205	205	325	325	430	430
3 min. (A)		35	35	46	50	90	90	100	120	120	185	185	250	250
Recovery time (min.)		10	10	10	10	10	10	10	10	10	10	10	10	10
Protec. against short-circuit with fuses without TOR														
Coordination type "1"														
gL/gG (A)		50	50	63	63	100	100	125	200	200	200	200	250	250
Coordination type "2"														
gL-gG (A)		25	35	35	50	63	63	80	100	100	125	125	160	200
Without welding														
gL-gG (A)		10	10	25	35	35	35	50	80	80	100	100	140	160
Impedance per pole (mΩ)		2.35	2.35	2.41	1.65	1.28	1.28	0.95	0.85	0.85	0.86	0.86	0.76	0.76
Power dissipation per pole														
AC-1 (W)		1.47	1.47	2.46	3.34	2.59	4.6	3.42	6.89	6.86	10.40	10.40	14.89	14.89
AC-3 (W)		0.19	0.34	0.78	1.03	0.80	1.31	1.52	1.36	2.12	3.63	5.5	6.86	8.37
Insulation resistance														
Between adjacent poles (mΩ)		>10	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10
Between poles and earth (mΩ)		>10	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10
Between input and output (mΩ)		>10	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10



Control circuit

		CL00 ... CL25	CL03 ... CL45	CL05 ... CL08	CL09 ... CL10
Alternating current					
Rated insulation voltage U_i	(V)	1000	1000	1000	1000
Standard voltages U_s 50 Hz	(V)	24...690	24...690	24...690	24...690
Standard voltages U_s 60 Hz	(V)	24...600	24...600	24...600	24...600
Voltage operating limits monofrequency coils					
Operating	x U_s	0.8...1.1	0.8...1.1	0.8...1.1	0.8...1.1
Pick-up	x U_s	0.6...0.8	0.65...0.8	0.65...0.8	0.65...0.8
Seal	x U_s	0.35...0.55	0.4...0.6	0.4...0.6	0.4...0.6
Voltage operating limits 50/60 Hz coils					
Operating 50 Hz	x U_s	0.8...1.1	0.8...1.1	0.8...1.1	0.8...1.1
Operating 60 Hz	x U_s	0.85...1.1	0.85...1.1	0.85...1.1	0.85...1.1
Pick-up 50 Hz	x U_s	0.5...0.8	0.6...0.8	0.6...0.8	0.6...0.8
Pick-up 60 Hz	x U_s	0.65...0.85	0.7...0.85	0.7...0.85	0.7...0.85
Seal 50 Hz	x U_s	0.3...0.55	0.35...0.60	0.35...0.60	0.35...0.60
Seal 60 Hz	x U_s	0.35...0.65	0.4...0.6	0.4...0.6	0.4...0.6
Consumption monofrequency coils					
Magnetic circuit closed	(VA)	6	9	15.5	15.5
Magnetic circuit opened (VA)		48	88	190	190
Consumption bifrequency coils					
Magnetic circuit closed (50 Hz/60 Hz)	(VA)	6.8 / 5.6	11.4 / 9.5	20 / 16.6	20 / 16.6
Magnetic circuit opened (50 Hz/60 Hz)	(VA)	53 / 44	120 / 100	245 / 204	245 / 204
Thermal power dissipation (50 Hz/60 Hz)	(W)	2.2 / 1.8	3.2 / 2.6	5.2 / 4.3	5.2 / 4.3
Power factor					
Magnetic circuit closed	cos φ	0.33	0.28	0.26	0.26
Magnetic circuit opened	cos φ	0.84	0.73	0.54	0.54
Opening and closing times					
Values between + 10 % U_s and - 20 % U_s					
Time on energisation (NO)	(ms)	6...20	7...25	9...35	9...35
Time on de-energisation (NO)	(ms)	6...13	5...25	9...15	9...15
Values at U_s					
Time on energisation (NO)	(ms)	8...20	10...19	15...30	15...30
Time on de-energisation (NO)	(ms)	6...13	5...25	9...15	9...15
Mechanical endurance					
Monofrequency coils	10 ⁶ ops.	15	15	15	15
Bifrequency coils (at 50 Hz)	10 ⁶ ops.	10	10	8	8
Maximum rate					
Monofrequency coils. No load	ops./h	9000	9000	9000	5000
AC-1 at rated power	ops./h	1200	1200	1200	1200
AC-2 at rated power	ops./h	1000	1000	1000	750
AC-3 at rated power	ops./h	1200	1200	1200	600
AC-4 at rated power	ops./h	360	360	200	200
Bifrequency coils. No load	ops./h	3600	3600	3600	3600

		Coils with electronic module				Coils with wide voltage range		
		CL00D ... CL25D	CL03D ... CL45D	CL05E ... CL08E	CL09E ... CL10E	CL00D..W ... CL25D..W	CL03D..W ... CL45D..W	CL05D..W ... CL10D..W
		Direct current						
Rated insulation voltage U_i	(V)	1000	1000	1000	1000	1000	1000	1000
Standard voltages U_s	(V)	12...440	12...440	24...440	24...440	12...440	12...440	12...440
Operating limits								
Operating	x U_s	0.8...1.1	0.8...1.1	0.8...1.1	0.8...1.1	0.7...1.3	0.7...1.3	0.7...1.3
Pick-up	x U_s	0.45...0.65	0.45...0.65	0.70...0.80	0.70...0.80	0.45...0.55	0.45...0.55	0.45...0.55
Drop-out	x U_s	0.15...0.3	0.15...0.3	0.4...0.6	0.4...0.6	0.15...0.3	0.15...0.3	0.15...0.3
Consumption								
Magnetic circuit closed	(W)	5.5	8	10	10	6.5	10.4	20
Magnetic circuit opened (W)		5.5	8	170	170	6.5	10.4	20
Opening and closing times								
Values between + 10 % U_s and – 20 % U_s								
Time on energisation (NO)	(ms)	35...65	35...70	60...80	60...80	26...55	30...65	64...133
Time on de-energisation (NO)	(ms)	6...15	40...65	40...50	40...50	6...15	5...10	20...23
Values at U_s								
Time on energisation (NO)	(ms)	35...45	40...55	50...60	50...60	35...45	40...55	75...95
Time on de-energisation (NO)	(ms)	7...12	30...65	55...60	55...60	7...12	6...8	20...22
Mechanical endurance	10 ⁶ ops.	15	15	12	12	15	15	12
Maximum rate								
No load	ops./h	3600	3600	2500	2500	3600	3600	3600
AC1 and AC3 at rated power	ops./h	1200	1200	1200	600	1200	1200	1200
AC4 at rated power	ops./h	360	360	200	200	360	360	200



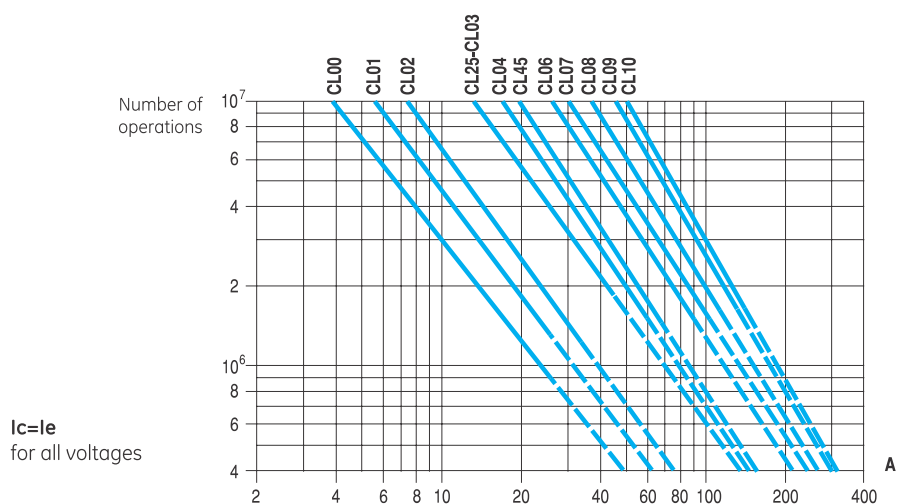
Electrical endurance

Mixed category AC4 / AC3

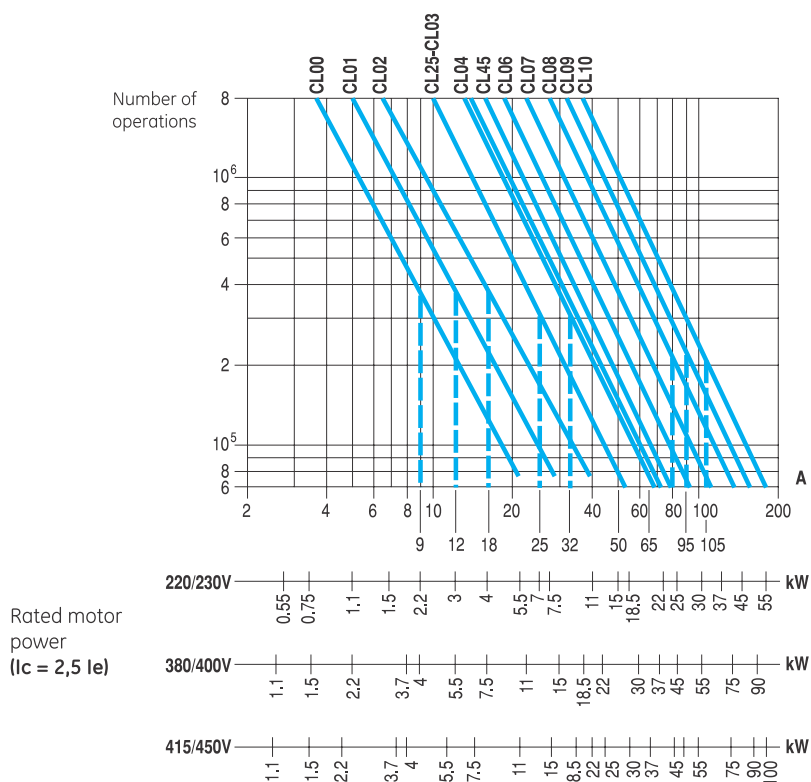
Electrical endurance for mixed category (AC-3/AC-4) is calculated with the following formula:

$$\text{Electrical endurance (AC-3/AC-4)} = \frac{\text{Electrical endurance (AC-3)}}{1 + \frac{\% \text{ oper AC-4}}{100} \times \left(\frac{\text{Elec.endur. (AC-3)}}{\text{Elec.endur. (AC-4)}} - 1 \right)}$$

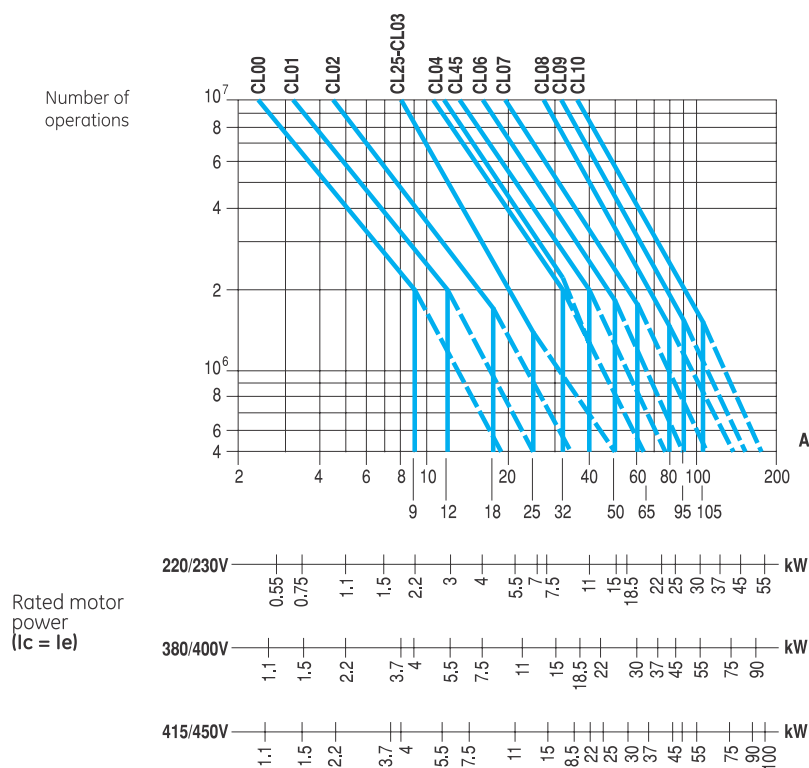
Category AC1



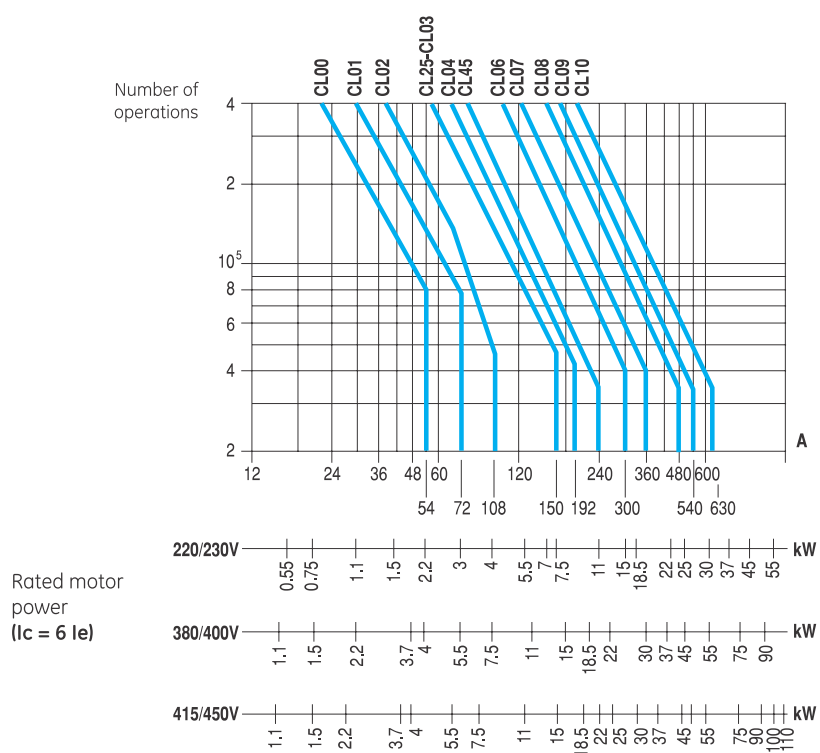
Category AC2



Category AC3



Category AC4



Internal auxiliary contacts

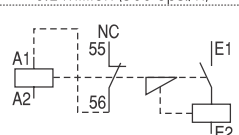
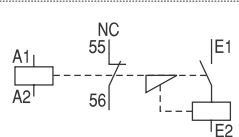
			CL00 ... CL02		CL03 ... CL04	
Rated insulation voltage Ui according to IEC 60947		(V)	1000		1000	
Rated thermal current Ith at θ ≤ 55°C		(A)	20		20	
Making capacity (r.m.s.) acc. to IEC 60947						
AC-15	Ue ≤ 400V, 50/60 Hz	(A)	250		250	
DC-13	Ue ≤ 220V DC	(A)	250		250	
Breaking capacity (r.m.s.) acc.to IEC 60947						
AC-15	Ue ≤ 400V, 50/60 Hz	(A)	250		250	
DC-13	Ue ≤ 220V DC	(A)	2		2	
AC-15	Rated voltage and current Ue-Ie	according to IEC	110/120V-10A	220/230V-10A	110/120V-10A	230/220V-10A
			400/380V-6A	415/450V-5A	400/380V-6A	415/450V-5A
			500V-4A	690/660V-2A	500V-4A	690/660V-2A
			A600		A600	
DC-13	Rated voltage and current Ue-Ie	according to IEC	24V-6A	48V-4A	24V-6A	48V-4A
			110V-2A	220V-0.7A	110V-2A	220V-0.7A
			440V-0.35A		440V-0.35A	
			P600		P600	
Electrical endurance		ops.	10 ⁶		10 ⁶	
Minimum operational power (operational safety)			17V - 5mA		17V - 5mA	
Short-circuit protect.	Max.fuse class gI-gG without welding	(A)	10		10	
Insulation resistance	Between contacts	(mΩ)	> 10		> 10	
	Between contacts and earth	(mΩ)	> 10		> 10	
	Between input and output	(mΩ)	> 10		> 10	
Guaranteed no overlap between NO and NC contacts						
	Space	(mm)	1.3		2.6	
	Time	(ms)	1.5		1.5	
Impedance of the contacts			(mΩ) 1.28		1.28	

Auxiliary contact blocks

			Instantaneous BCLF..., BCRF..., BCLL..., BRLL...		Timed blocks BTFL..., BTRF...		
Rated insulation voltage Ui according to IEC 60947			(V)	1000	1000		
Rated thermal current Ith at θ ≤ 55°C			(A)	10	10		
Making capacity (Ieff) according to IEC 60947							
AC-15	Ue ≤ 400V, 50/60 Hz	(A)		90	90		
DC-13	Ue ≤ 220V DC	(A)		90	90		
Breaking capacity (Ieff) according to IEC 60947							
AC-15	Ue ≤ 400V, 50/60 Hz	(A)		60	60		
DC-13	Ue ≤ 220V, DC	(A)		0.95	0.95		
AC-15	Rated voltage and current Ue-Ie	according to IEC		120/110V-6A	230/220V-6A	120/110V-6A	230/220V-6A
				400/380V-4A	440/415V-3.5A	400/380V-4A	440/415V-3.5A
				500V-2.5A	690/660V-1.5A	500V-2.5A	690/660V-1.5A
				according to UL, CSA	A600		A600
DC-13	Rated voltage and current Ue-Ie	according to IEC		24V-4A	48V-2A	24V-4A	48V-2A
				110V-0.7A	220V-0.3A	110V-0.7A	220V-0.3A
				440V-0.15A		440V-0.15A	
				according to UL, CSA	Q600		Q600
Electrical endurance		10 ⁶ ops.		1	1		
Mechanical endurance		10 ⁶ ops.		10	5		
Minimum operational current (operational safety)				17V - 5mA	17V - 5mA		
Short-circuit protect.	Max.fuse class gI-gG without welding	(A)		10	10		
Insulation resistance	Between contacts	(mΩ)		> 10	> 10		
	Between contacts and earth	(mΩ)		> 10	> 10		
	Between input and output	(mΩ)		> 10	> 10		
Guaranted no overlap between NO and NC contacts							
	Space	(mm)		1.3	1.3		
	Time	(ms)		1.5	5		
Impedance of the contacts			(mΩ)	1.28	1.28		
Timing (ambient temperature between – 25°C and + 55°C)							
	Accuracy			–	± 5%		
	Loss of accuracy 0.5 x 10 ⁶ ops.			–	+ 20%		
	Loss of accuracy per rise °C (0 - 55°C)			–	+ 0.75% per °C		

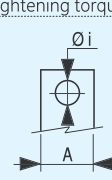


Mechanical latch blocks

	RMLF...	
Rated insulation voltage Ui	1000 V	
Standard voltages Us : 50 to 60 Hz and DC	24...690 V	
Operating limits	0.75...1.1 xUs	
Consumption for unlatching (auto cut-out)		
24 to 72 V	210 W / VA	
110 to 440 V	130 W / VA	
Electrical unlatching control ⁽¹⁾		
Minimum impulse	10 ms	
Maintained	auto cut-out by integral contact	
Manual unlatching control	by local push-button	
Electrical making control		
Minimum pulse	40 ms auto cut-out by integral contact	
Manual making control	by local push-button	
Auxiliary contact NC		
Utilisation AC-15 according to IEC	120V - 6A 230V/220V - 4A 400V/380V - 2.5A	500V - 1.5A 690V/660V - 1A
according to UL/CSA	A600	
Utilisation DC-13 according to IEC	24V - 3A 48V - 1.5A 110V - 0.6A	220V - 0.3A 400V - 0.15A
according to UL/CSA	Q600	
Mechanical endurance		
CL00...CL45	3 million (1200 ops./h)	
CL05...CL10	0.1 million (300 ops./h)	
Wiring diagram Alternating current		
Alternating current / Direct current		

(1) The contactor coil and the unlatch control must not be energised simultaneously

Terminal capacity

	Terminal: screw BCLF, BCLL, BTLF y RMLF	Terminal: ring terminal BCRF, BTRF
Solid	2 x 0.5 to 2.5 or 1 x 4	
Stranded and finely stranded without end sleeve	2 x 0.5 to 2.5 or 1 x 4	
Finely stranded with end sleeve	2 x 0.5 to 2.5 or 1 x 4	
AWG wires, solid and stranded	12 - 22 AWG 75°C	
Tightening torque	1.1 Nm / 10 Lb x in.	
	Ring terminal Ø i Tightening torque A	3.6 min. 6.5 max. 0.8 Nm / 7 Lb x in.

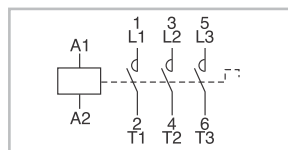
Contact sequence

		Basic contactor	Auxiliary contact blocks Front mounted		Auxiliary contact blocks Lateral mounted	
			BCLF 10 BCRF 10	BCLF 01 BCRF 01	BCLL 20 BRLL 20	BCLL 11 BRLL 11
Three pole contactors 3 NO	CL00... CL01... CL02...	0 3.3 4.7	0 3.2 4.7	0 1.4 4.7	0 3.2 4.7	0 3.2 4.7
	CL25...	0 3 5.1	0 3.7 5.1	0 1.6 5.1	0 3.7 5.1	0 3.7 5.1
	CL03... CL04...	0 4 5.6	0 3.7 5.6	0 1.6 5.6	0 3.7 5.6	0 3.7 5.6
	CL45...	0 4.3 6.5	0 3.7 6.5	0 1.6 6.5	0 3.7 6.5	0 3.7 6.5
	CL06...	0 5.4 8	0 3.7 8	0 1.6 8	0 3.7 8	0 3.7 8
	CL07... CL08...	0 4.8 8	0 3.7 8	0 1.6 8	0 3.7 8	0 3.7 8
	CL09...	0 5.6 8	0 3.7 8	0 1.6 8	0 3.7 8	0 3.7 8
	CL10...	0 5.6 8	0 3.7 8	0 1.6 8	0 3.7 8	0 3.7 8
Four pole contactors 4 NO	CL01... CL02...	0 3.3 4.7	0 3.2 4.7	0 1.4 4.7	0 3.2 4.7	0 3.2 4.7
	CL03... CL04...	0 4 5.6	0 3.7 5.6	0 1.6 5.1	0 3.7 5.6	0 3.7 5.6
	CL05...	0 5.4 8	0 3.7 8	0 1.6 8	0 3.7 8	0 3.7 8
	CL07...	0 4.8 8	0 3.7 8	0 1.6 8	0 3.7 8	0 3.7 8
	CL09...	0 5.6 8	0 3.7 8	0 1.6 8	0 3.7 8	0 3.7 8
Four pole contactors 2 NO + 2 NC	CL01... CL02...	0 3.3 4.7	0 3.2 4.7	0 1.4 4.7	0 3.2 4.7	0 3.2 4.7
	CL03... CL04...	0 4 5.6	0 3.7 5.6	0 1.6 5.1	0 3.7 5.6	0 3.7 5.6
	CL05...	0 5.4 8	0 3.7 8	0 1.6 8	0 3.7 8	0 3.7 8
	CL07... CL08...	0 4.8 8	0 3.7 8	0 1.6 8	0 3.7 8	0 3.7 8

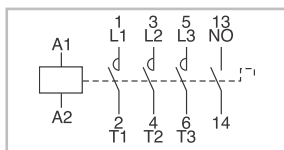
Terminal numbering

Three-pole and four-pole AC contactors

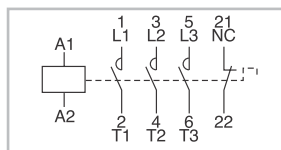
CL00A310 ... CL10A300 ...
CL25D300 ... CL45D300 ...
CL06E300 ... CL10E300 ...



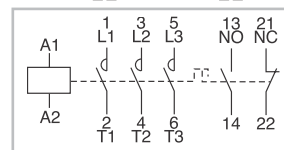
CL00_310 ... CL02_310 ...
CL03_310 ... CL04_310 ...



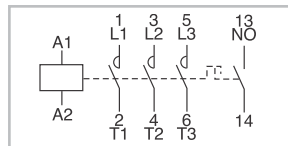
CL00_301 ... CL02_301 ...
CL03_301 ... CL04_301 ...



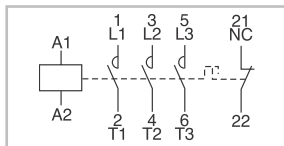
CL45A311 ... CL10A311 ...



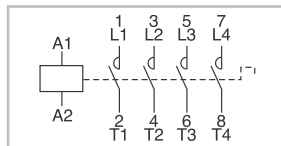
CL25_310 ...



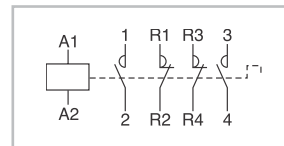
CL25_301 ...



CL00A400 ... CL08A400 ...
CL01D400 ... CL04D400 ...
CL05E400 ... CL09E400 ...

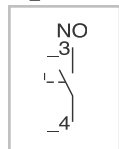


CL01AB00 ... CL08AB00 ...
CL01DB00 ... CL04DB00 ...
CL05EB00 ... CL08EB00 ...

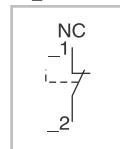


Auxiliary contact blocks. Front mounting

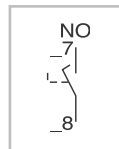
BC_F10



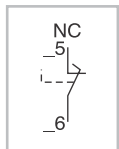
BC_F01



BCLF10G

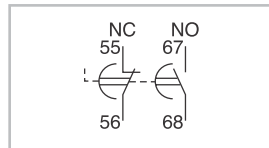


BCLF01G

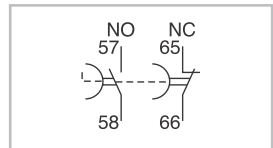


Pneumatic timer blocks

BT_F_C

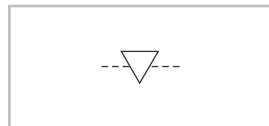


BT_F_D

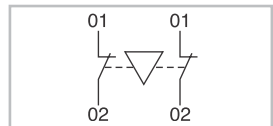


Mechanical and mechanical/electrical interlock

BELA

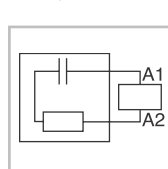


BELA02

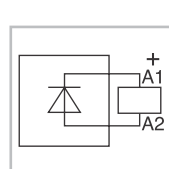


Voltage suppressor blocks

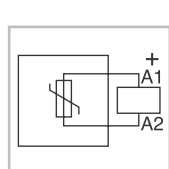
BSLR2, BSLR3



BSLDZ

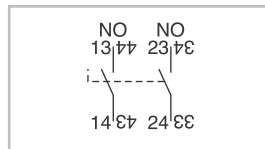


BSLV3

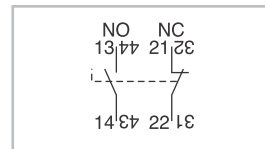


Auxiliary contact blocks. Lateral mounting

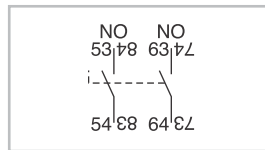
BCLL20



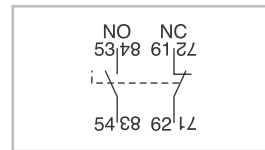
BCLL11



BRLL20

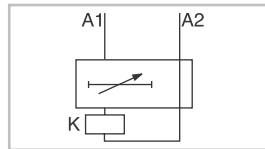


BRLL11

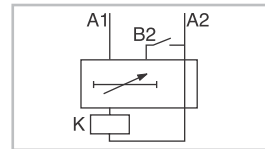


Electronic timer blocks

BETL_C

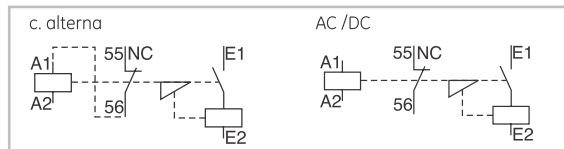


BETL_D



Mechanical latch block

RMLF



Terminal numbering according to EN 50012

		Auxiliary contacts		Possible basic contactors + Auxiliary contacts blocks to be added
		Combination		
		Description	NO	NC
Without auxiliary contact blocks				
	10E	1	0	CL00_310... - CL04_310...
	01E	0	1	CL00_301... - CL04_301...
Front mounting auxiliary contact blocks with one contact each				
	11E	1	1	CL00_310... - CL04_310... + BC_F01
	21E	2	1	CL00_310... - CL04_310... + BC_F01 + BC_F10
	12E	1	2	CL00_310... - CL04_310... + BC_F01 + BC_F01
	31E	3	1	CL00_310... - CL04_310... + BC_F01 + BC_F10 + BC_F10
	41E	4	1	CL00_310... - CL04_310... + BC_F01 + BC_F10 + BC_F10 + BC_F10
	22E	2	2	CL00_310... - CL04_310... + BC_F01 + BC_F01 + BC_F10
	32E	3	2	CL00_310... - CL04_310... + BC_F01 + BC_F01 + BC_F10 + BC_F10
	13E	1	3	CL00_310... - CL04_310... + BC_F01 + BC_F01 + BC_F01
	23E	2	3	CL00_310... - CL04_310... + BC_F01 + BC_F01 + BC_F01 + BC_F10
Lateral mounting auxiliary contact blocks with two contacts each				
	11E	1	1	CL25_300... - CL45_300... + BCLL11
	31E	3	1	CL25_300... - CL45_300... + BCLL11 + BCLL20
	22E	2	2	CL00_310... - CL45_310... + BCLL11 + BCLL11

The maximum number of auxiliary contacts is 4 for CL00 to CL25, 6 for CL03 -CL04 and 8 for CL45, CL06 to CL10. When using the pneumatic BTLF-block, these numbers are reduced to two, resp. four. (2 for CL00 to CL25, 4 for CL03 and CL04, etc.)

Terminal numbering according to EN 50012 (continued)

	Auxiliary contacts		Possible basic contactors	
	Combination	Description	NO	NC
Without auxiliary contact blocks				
			CL25_300... - CL45_300...	CL06_300... - CL10_300...
Front mounting auxiliary contact blocks with one contact each				
	10E	1 0	CL25_300... - CL45_300... + BC_F10	CL06_300... - CL10_300... + BC_F10
	01E	0 1	CL25_300... - CL45_300... + BC_F01	CL06_300... - CL10_300... + BC_F01
	11E	1 1	CL25_300... - CL45_300... + BC_F10 + BC_F01	CL06_300... - CL10_300... + BC_F10 + BC_F01
	21E	2 1	CL25_300... - CL45_300... + BC_F10 + BC_F01 + BC_F10	CL06_300... - CL10_300... + BC_F10 + BC_F01 + BC_F10
	12E	1 2	CL25_300... - CL45_300... + BC_F10 + BC_F01 + BC_F01	CL06_300... - CL10_300... + BC_F10 + BC_F01 + BC_F01
	31E	3 1	CL25_300... - CL45_300... + BC_F10 + BC_F01 + BC_F10 + BC_F01	CL06_300... - CL10_300... + BC_F10 + BC_F01 + BC_F10 + BC_F01
	41E	4 1	CL25_300... - CL45_300... + BC_F10 + BC_F01 + BC_F01 + BC_F10 + BC_F01	CL06_300... - CL10_300... + BC_F10 + BC_F01 + BC_F01 + BC_F10 + BC_F01
	22E	2 2	CL25_300... - CL45_300... + BC_F10 + BC_F01 + BC_F01 + BC_F10	CL06_300... - CL10_300... + BC_F10 + BC_F01 + BC_F01 + BC_F10
	32E	3 2	CL25_300... - CL45_300... + BC_F10 + BC_F01 + BC_F01 + BC_F10 + BC_F01	CL06_300... - CL10_300... + BC_F10 + BC_F01 + BC_F01 + BC_F10 + BC_F01
	13E	1 3	CL25_300... - CL45_300... + BC_F10 + BC_F01 + BC_F01 + BC_F01	CL06_300... - CL10_300... + BC_F10 + BC_F01 + BC_F01 + BC_F01
	23E	2 3	CL25_300... - CL45_300... + BC_F10 + BC_F01 + BC_F01 + BC_F01 + BC_F10	CL06_300... - CL10_300... + BC_F10 + BC_F01 + BC_F01 + BC_F01 + BC_F10
Lateral mounting auxiliary contact blocks with two contacts each				
	11E	1 1	CL25_300... - CL45_300... + BCLL11	CL06_300... - CL10_300... + BCLL11
	31E	3 1	CL25_300... - CL45_300... + BCLL11 + BCLL20	CL06_300... - CL10_300... + BCLL11 + BCLL20
	22E	2 2	CL25_300... - CL45_300... + BCLL11 + BCLL11	CL06_300... - CL10_300... + BCLL11 + BCLL11