

## Miniature and auxiliary contactor CEC

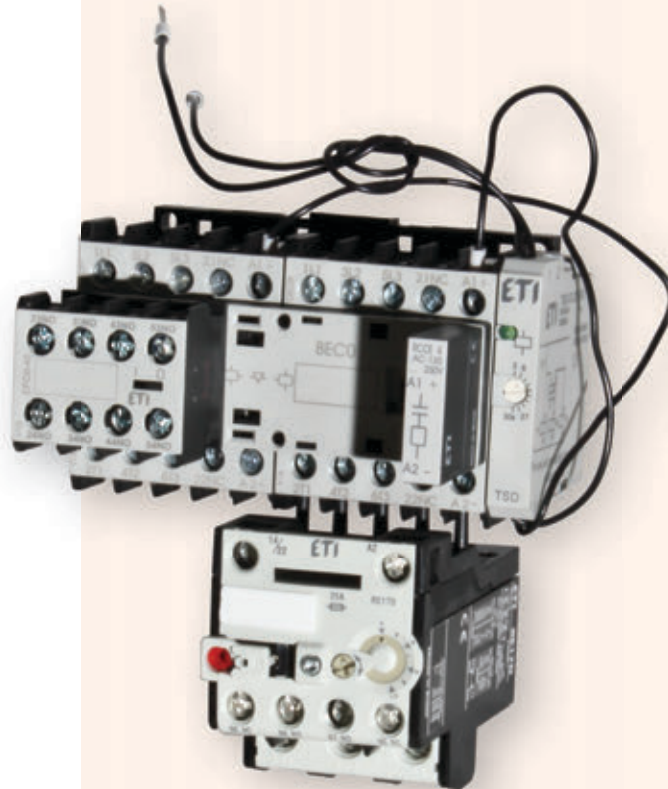
### Application:

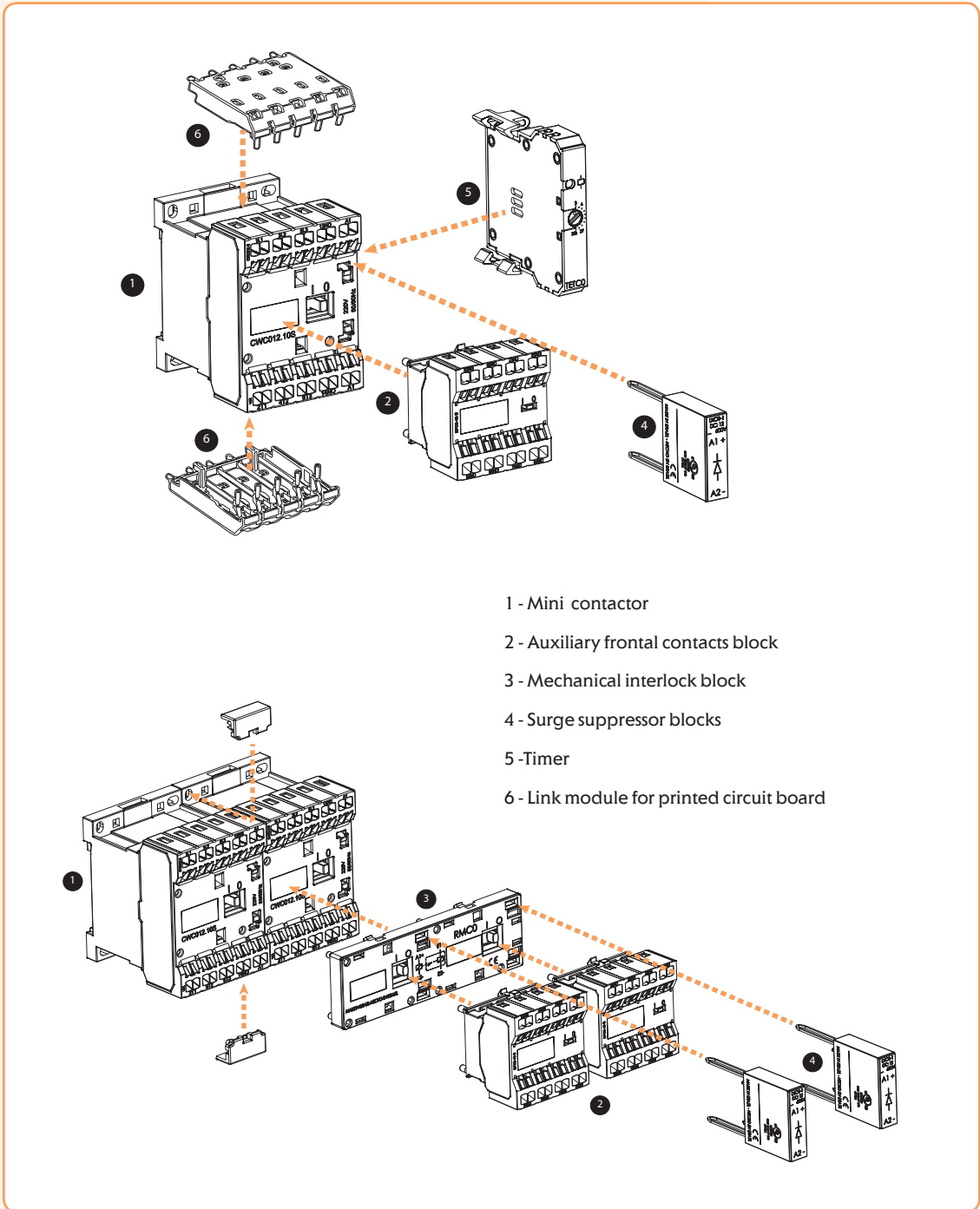
Miniature contactors are used to remotely control and protect (in combination with overload relays) electric motors and other electric loads with nominal power up to 7,5kW (at 400V AC3 duty), and auxiliary contactors are used for realizing a wide range of control circuits.

### Advantages:

- Mounting on DIN rail and mounting plates
- Small size and high technical performance
- Low power loss (current heat loss)
- Protection against direct contact from front (IEC 536) IP20
- Wide range of accessories
- Surge suppressor (as option)
- Reversing starter with mechanical interlock
- Control voltage 24VAC, 48VAC, 110VAC, 230VAC, 400VAC, 24 VDC, 48 VDC, 110 VDC, 220 VDC

### Example of CEC configuration:





- 1 - Mini contactor
- 2 - Auxiliary frontal contacts block
- 3 - Mechanical interlock block
- 4 - Surge suppressor blocks
- 5 - Timer
- 6 - Link module for printed circuit board



**Miniature contactors CEC07; 18A(AC1); 7A,3kW(AC3 400V)**

Type	Code No.	Wiring diagram	Weight [g]	Packaging [pcs]			
CEC07.10-24V-50/60Hz	004641050		180	1			
CEC07.10-42V-50/60Hz	004641051						
CEC07.10-48V-50/60Hz	004641052						
CEC07.10-110V-50/60Hz	004641053						
CEC07.10-230V-50/60Hz	004641054						
CEC07.10-400V-50/60Hz	004641055						
CEC07.10-24VDC	004641100						
CEC07.10-48VDC	004641130						
CEC07.10-110VDC	004641131						
CEC07.10-220VDC	004641132						
CEC07.01-24V-50/60Hz	004641056					180	1
CEC07.01-42V-50/60Hz	004641057						
CEC07.01-48V-50/60Hz	004641058						
CEC07.01-110V-50/60Hz	004641059						
CEC07.01-230V-50/60Hz	004641060						
CEC07.01-400V-50/60Hz	004641061						
CEC07.01-24VDC	004641101						
CEC07.01-48VDC	004641133						
CEC07.01-110VDC	004641134						
CEC07.01-220VDC	004641135						



**Miniature contactors CEC09; 20A(AC1); 9A,4kW(AC3, 400V)**

Type	Code No.	Wiring diagram	Weight [g]	Packaging [pcs]			
CEC09.10-24V-50/60Hz	004641062		180	1			
CEC09.10-42V-50/60Hz	004641063						
CEC09.10-48V-50/60Hz	004641064						
CEC09.10-110V-50/60Hz	004641065						
CEC09.10-230V-50/60Hz	004641066						
CEC09.10-400V-50/60Hz	004641067						
CEC09.10-24VDC	004641102						
CEC09.10-48VDC	004641136						
CEC09.10-110VDC	004641137						
CEC09.10-220VDC	004641138						
CEC09.01-24V-50/60Hz	004641068					180	1
CEC09.01-42V-50/60Hz	004641069						
CEC09.01-48V-50/60Hz	004641070						
CEC09.01-110V-50/60Hz	004641071						
CEC09.01-230V-50/60Hz	004641072						
CEC09.01-400V-50/60Hz	004641073						
CEC09.01-24VDC	004641103						
CEC09.01-48VDC	004641139						
CEC09.01-110VDC	004641140						
CEC09.01-220VDC	004641141						

## Miniature contactors CE and CEC

Technical data								
Type		CE07	CEC07	CEC09	CEC012	CEC016	CECA0	CAE04
Standards		IEC/EN 60 947, DIN VDE 0660, UL, CSA						
Rated insulation voltage $U_i$ according to IEC/EN 60947, DIN VDE 0660	V	415 V			690 V			415 V
Rated impulse withstand voltage $U_{imp}$					4 kV			
Rated operational frequency					25 - 400 Hz			
<b>Degree of protection</b>								
Main circuits					IP20			
Control circuits and auxiliary contacts					IP20			
<b>Ambient temperature</b>								
Operating temperature					-25 ... +55°C			
Storage temperature					-55 ... +80°C			
<b>Altitude</b>								
Normal values					< 3000 m			
90% $I_e$ / 80% $U_e$					3000 ... 4000 m			
80% $I_e$ / 75% $U_e$					4000 ... 5000 m			
<b>Overvoltage category / Pollution degree</b>								
Climatic proofing					III/3			
Number of main poles		3		3			4	4
Rated operational voltage $U_e$		400-415 V			690 V			400-415 V
Conv. thermal current $I_{th}$ at < 55°C								
rated operational current $I_e$ / AC-1		16 A	18 A	20 A	22 A	22 A	10 A	16 A
<b>AC3 Utilization category</b>								
Rated operational power								
230 V	kW	1,5	1,5	2,2	3	4	-	-
400/415 V	kW	3	3	4	5,5	7,5	-	-
440 V	kW	-	3,7	4,5	5,5	7,5	-	-
500 V	kW	-	3,7	4,5	5,5	7,5	-	-
690 V	kW	-	3,7	5,5	7,5	7,5	-	-
<b>AC4 Utilization category</b>								
Rated operational current $I_e$ AC-4 ( $U_e \leq 440V$ )			2,8	3,5	4,5	5		
Short circuit rating, max. fuse gG (A)		16	20	20	25	25	6	6
<b>Max. electrical operating frequency</b>								
AC-1	Ops/h	50			300		-	-
AC-3	Ops/h	300			600		-	-
AC-4	Ops/h	250			300		-	-
no load	Ops/h	2000			2500		2500	2500
Mechanical life span	Ops x 10 <sup>6</sup>				10			
Electrical life span	Ops x 10 <sup>6</sup>	0,8	1,4	1,3	1,2	1,1	1	1
Maximum number of auxiliary contacts					5			
<b>Rated operational current <math>I_e</math></b>								
AC-15	220-230 V	A	-	-	-	-	10	6
	380-400 V	A	-	-	-	-	6	4
	415 V	A	-	-	-	-	5	-
	500 V	A	-	-	-	-	4	-
	690 V	A					2	
DC-13	24 V	A	-	-	-	-	6,0	2,5
	48 V	A	-	-	-	-	4,0	1,5
	110 V	A	-	-	-	-	2	0,7
	220 V	A	-	-	-	-	0,7	0,35
<b>Auxiliary contacts reliability</b>								
Terminal capacity	mm <sup>2</sup>				1 x / 2 x (0,5...2,5)		$U_e$ min=17 V, $I_e$ min=5 mA	$U_e$ min=24 V, $I_e$ min=30 mA
Tightening torque	Nm	0,8			1...1,5			0,8