

Miniature and auxiliary contactor CEC

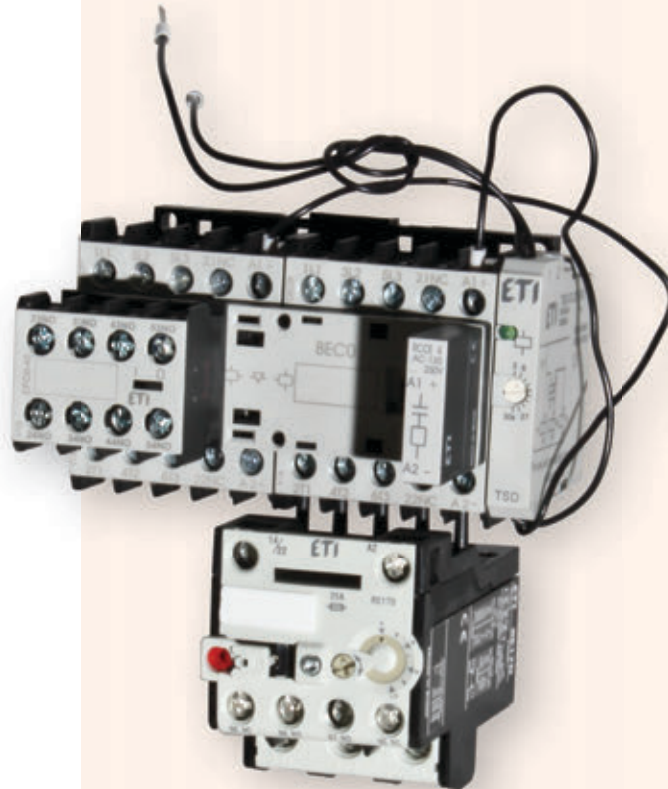
Application:

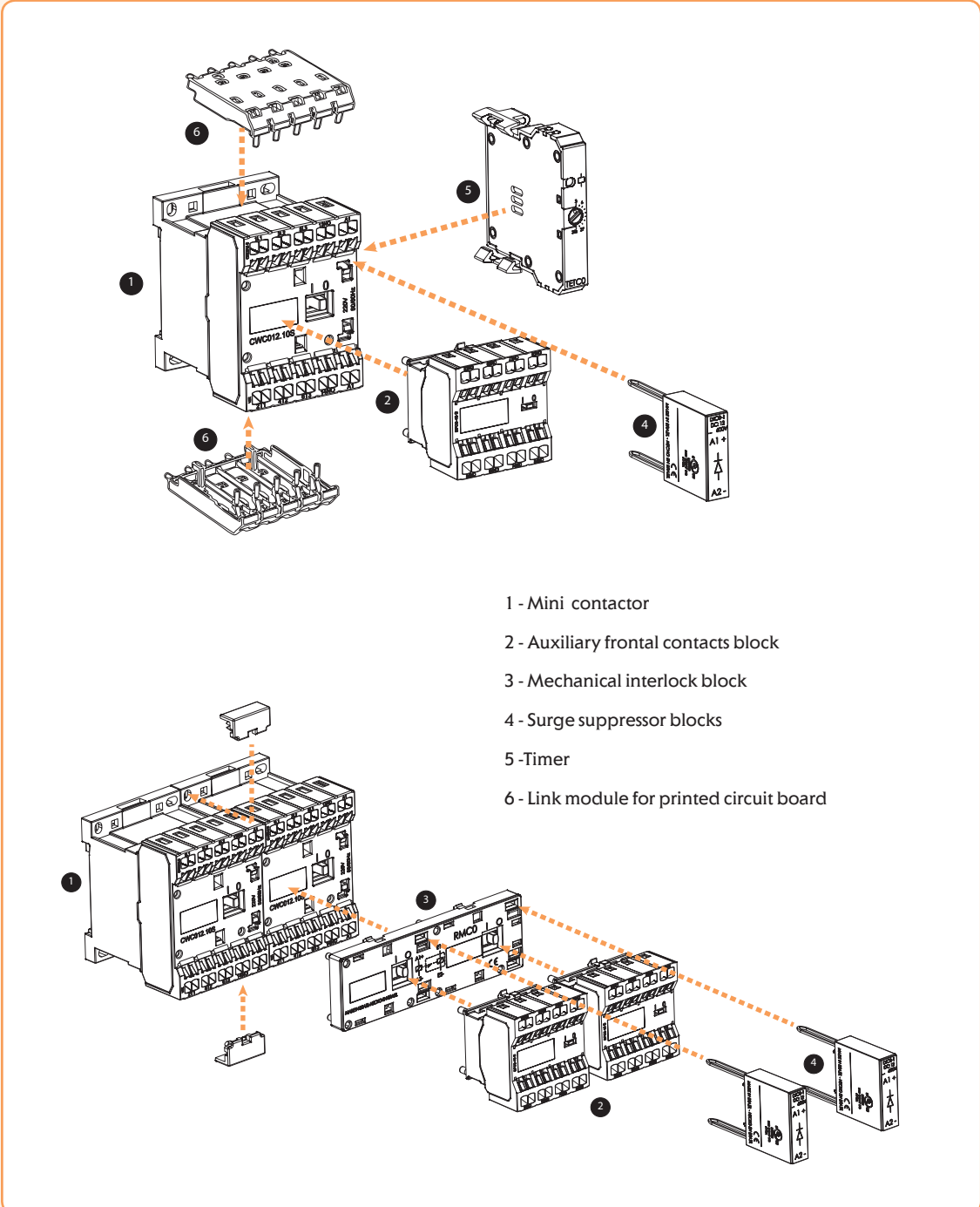
Miniature contactors are used to remotely control and protect (in combination with overload relays) electric motors and other electric loads with nominal power up to 7,5kW (at 400V AC3 duty), and auxiliary contactors are used for realizing a wide range of control circuits.

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



EFCO



EFCA



EFC4



Example of using EFCO and RCCE

Auxiliary contact blocks

Type	Code No.	Wiring diagram	For use with	Weight [g]	Packaging [pcs]			
EFCO-20	004641520		CECO 3 pole	28	1			
EFCO-11	004641521							
EFCO-02	004641522							
EFCO-40	004641523							
EFCO-22	004641524							
EFCO-04	004641525							
EFCO-31	004641526							
EFCO-13	004641527							
EFCA-20	004641530					CECA0	28	1
EFCA-11	004641531							
EFCA-02	004641532							
EFCA-40	004641533							
EFCA-22	004641534							
EFCA-04	004641535							
EFCA-31	004641536							
EFCA-13	004641537							
EFC4-20	004641540		CECO 4 pole	28	1			
EFC4-11	004641541							
EFC4-02	004641542							
EFC4-40	004641543							
EFC4-22	004641544							
EFC4-04	004641545							
EFC4-31	004641546							
EFC4-13	004641547							

Technical data

Auxiliary contact block			
Standards		IEC 60947-5-1, IEC 60947-4-1	
Rated Insulation voltage U_i	IEC, VDE 0660		1000
Rated operational voltage U_e	IEC, VDE 0660	(V)	690
Conv. thermal current I_{th}		A	10
Rated operational current (I_e)			
AC-15(IEC 60947-5-1)	$U_e \leq 240V$	(A)	10
	380-400V	(A)	6
	415-440V	(A)	6
	500V	(A)	4
	660-690V	(A)	-
UL, CSA 1)			A600
DC-13(IEC 60947-5-1)	24V	(A)	1,5
	60V	(A)	0,5
	110V	(A)	0,4
	220-240V	(A)	0,4
UL, CSA 1)			Q600
Short circuit protection max. fuse gL/gG		(A)	10
Control circuit reliability		(V / mA)	17 / 5
Electrical life span		c. op.	1.000.000
Mechanical life span		c. op.	10.000.000
Nr. of conductors and cross section	Stranded without end sleeve	mm ²	2x (0,5...2,5)
Tightening torque		Nm	0,8...1,5

Electronic timer blocks TOE, TOD, TSD

Inputs	Rated insulation voltage (U_i)	V	300	
	Supply voltage (U_c)	1 - 2 terminals	V	24...240 V AC/DC 50/60 Hz (TOE)
				24...60 V AC/DC 50/60 Hz (TOD)
				100...60 V AC/DC 50/60 Hz (TOD)
				220-240 V AC 50/60 Hz (TSD)
				110-130 V AC (TSD)
	Command (U_c) (only TOD)	2 - B1 terminals	V	24...60 V AC/DC 50/60 Hz (TOD) 100...240 V AC/DC 50/60 Hz (TOD)
Voltage limits			0,85 - 1,1 x U_c -> AC 0,8 - 1,25 x U_c -> DC	
Consumption		mA	≤ 5	
Time adjustment	Min. time for Reset	ms	100	
	Min. command time (only TOD)	ms	50	
	Setting accuracy (% of the full scale value)	%	+/-5	
	Repeat accuracy	%	+/-1	
Changeover time Y - Δ	ms		50	

Diagrams

Function	ON Delay TOE		OFF Delay TOD		Star - delta TSD	
Functional diagram						
LED on						
LED off						
Schemes	Terminals		Terminals		Terminals	
	1		(+)1		1	
	2		B1		2	
			(-)2		D	
		B2		Y		