

Motor contactor CES

ETICON CES SERIES

IEC 60947-4-1

Contact reliability

Contactors are used to remotely control and protect (in combination with overload relays) electric motors and other electric loads with nominal power up to 200kW (at 400V AC3 duty)

Auxiliary contacts

CES 6 to CES 45:

Up to 4 auxiliary contact blocks with 1 NO or 1 NC contact can be snapped onto the basic units (front).

CES 65 to CES 105:

Maximum 4 auxiliary contact blocks with 1 NO + 1 NC contacts (lateral) assembled.

When the contactors are energized, the NC contacts open before the NO contacts close.

CES 65..400 NOT POSSIBLE TO MOUNT ON DIN RAIL



Ordering:

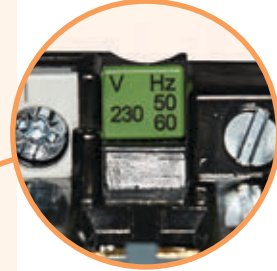
CES 9 . 0 1 - 230V - 50/60Hz
 1 2 3 4 5 6

- 1 - Contactor type
- 2 - Rated operational current I_e (AC3)
- 3 - Number and type NO auxiliary contacts
- 4 - Number and type NC auxiliary contacts
- 5 - Coil voltage
- 6 - Frequency

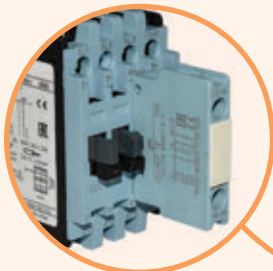
Advantages



→ Terminal clamps allow connection of different cross section cables.



→ Different voltage range of control circuit (coils).



→ Possible to mount auxiliary contacts on top



→ Design allows to mount contactor on DIN rail TH 35 or directly on panel



→ Overload relays (bimetal) tripping class 10



→ Possible to mount overload relay directly on contactor or DIN rail TH 35 with mounting adapter

Motor contactor CES 25; 42A(AC1); 25A/11kW(AC3, 400V)				
Type	Code No.	Wiring diagram	Weight [g]	Packaging [pcs]
CES 25.00-24V-50/60Hz	004646541		410	1
CES 25.00-110V-50/60Hz	004646542		410	1
CES 25.00-230V-50/60Hz	004646543		410	1
CES 25.00-400V-50Hz	004646544		410	1
CES 25.00-24V DC	004646545		660	1
CES 25.00-42V-50/60Hz	004646546		410	1

Auxiliary contacts top or side mounted must be ordered separately

Motor contactor CES 32; 42A(AC1); 32A/15kW(AC3, 400V)				
Type	Code No.	Wiring diagram	Weight [g]	Packaging [pcs]
CES 32.00-24V-50/60Hz	004646547		410	1
CES 32.00-110V-50/60Hz	004646548		410	1
CES 32.00-230V-50/60Hz	004646549		410	1
CES 32.00-400V-50Hz	004646550		410	1
CES 32.00-24V DC	004646551		660	1

Auxiliary contacts top or side mounted must be ordered separately

Motor contactor CES 40; 65A(AC1); 40A/18,5kW(AC3, 400V)				
Type	Code No.	Wiring diagram	Weight [g]	Packaging [pcs]
CES 40.00-24V-50/60Hz	004646552		670	1
CES 40.00-110V-50/60Hz	004646553		670	1
CES 40.00-230V-50/60Hz	004646554		670	1
CES 40.00-400V-50Hz	004646555		670	1

Auxiliary contacts top or side mounted must be ordered separately

Motor contactor CES 45; 65A(AC1); 45A/22kW(AC3, 400V)				
Type	Code No.	Wiring diagram	Weight [g]	Packaging [pcs]
CES 45.00-24V-50/60 Hz	004646556		640	1
CES 45.00-230V-50/60 Hz	004646557		640	1
CES 45.00-400V-50Hz	004646558		640	1
CES 45.00-110V-50/60 Hz	004646559		640	1

Auxiliary contacts top or side mounted must be ordered separately

Motor contactor CES 65; 90A(AC1); 65A/30kW(AC3, 400V)				
Type	Code No.	Wiring diagram	Weight [g]	Packaging [pcs]
CES 65.22-230V-50/60Hz	004646560		1.625	1
CES 65.22-24V-50/60Hz	004646561		1.625	1

Included side mounted auxiliary contacts 2xNO+2xNC

Motor contactor CES 75; 100A(AC1); 75A/37kW(AC3, 400V)				
Type	Code No.	Wiring diagram	Weight [g]	Packaging [pcs]
CES 75.22-24V-50/60 Hz	004646562		2.530	1
CES 75.22-230V-50/60 Hz	004646563		2.530	1

Included side mounted auxiliary contacts 2xNO+2xNC

Motor contactor CES 85; 120A(AC1); 85A/45kW(AC3, 400V)				
Type	Code No.	Wiring diagram	Weight [g]	Packaging [pcs]
CES 85.22-24V-50/60 Hz	004646564		2.530	1
CES 85.22-230V-50/60 Hz	004646565		2.530	1

Included side mounted auxiliary contacts 2xNO+2xNC

Motor contactor CES 105; 120A(AC1); 105A/55kW(AC3, 400V)				
Type	Code No.	Wiring diagram	Weight [g]	Packaging [pcs]
CES 105.22-230V-50/60Hz	004646566		3.758	1
CES 105.22-24V-50/60Hz	004646567		3.758	1

Included side mounted auxiliary contacts 2xNO+2xNC



CES 25...32



CES 40...45



CES 65...140

Technical data									
Contactor		Type		CES 6	CES 9	CES 12	CES 18	CES 25	CES 32
Load ratings of the contactors with AC									
Thermal load	10 s current ¹⁾		A	90	90	96	96	176	176
Power loss per conducting path	at I _e /AC-3		W	0.6	0.6	1.1	1.1	1.6	1.6
AC-1 duty, switching resistive load²⁾									
Rated operational currents I _e	at 40 °C to	690 V	A	25	25	25	25	38	38
	at 55 °C to	690 V	A	20	20	20	20	32	32
Minimum conductor cross-section at I _e load	at 40 °C		mm ²	4	4	4	4	10	10
	at 55 °C		mm ²	4	4	4	4	10	10
AC-2 and AC-3 duty									
Rated operational currents I _e	up to	400 V	A	6	9	12	18	25	32
		500 V	A	6	9	12	16	17	32
		690 V	A	6	6.6	8.8	12.2	12.2	27
Max. rating of slipping or squirrel-cage motors at 50 and 60 Hz	at	230 V	kW	1.5	2.4	3.3	4	5.5	8.5
		400 V	kW	2.2	4	5.5	7.5	11	15
		500 V	kW	3	5.5	7.5	9	11	21
		690 V	kW	4	5.5	7.5	11	11	23
AC-4 duty (contact endurance approx. 200.000 operating cycles I_a = 6 x I_e)									
Rated operational currents I _e	up to	400 V	A	3.1	3.3	4.3	7.7	8.5	15.6
		690 V	A	3.1	3.3	4.3	7.7	8.5	15.6
Ratings of squirrel-cage motors at 50 and 60 Hz	at	230 V	kW	0.8	0.85	1.15	2	2.2	4.3
Max. permitted rated operational current I _e /AC-4 = ^ I _e /AC-3 up to 500 V with endurance and operating frequency		400 V	kW	1.15	1.4	1.9	3.5	4	7.5
		690 V	kW	1.9	2.4	3.3	6	6.6	13
Contactor									
		Type		CES 40	CES 45	CES 65	CES 75	CES 85	CES 105
Load ratings of the contactors with AC									
Thermal load	10 s current ¹⁾		A	400	400	360	500	800	800
Power loss per conducting path	at I _e /AC-3		W	2.0	2.5	3.5	6	7.5	10
AC-1 duty, switching resistive load²⁾									
Rated operational currents I _e	at 40 °C to	690 V	A	65	65	90	100	105	105
	at 55 °C to	690 V	A	55	55	80	90	100	105
Minimum conductor cross-section at I _e load	at 40 °C		mm ²	16	16	35	35	50	50
	at 55 °C		mm ²	16	16	25	35	35	35
AC-2 and AC-3 duty									
Rated operational currents I _e	up to	400 V	A	40	45	65	75	85	105
		500 V	A	32	38	40	63	75	85
		690 V	A	27	27	40	63	75	75
		1000 V	A	--	--	6	6	30	30
Max. rating of slipping or squirrel-cage motors at 50 and 60 Hz	at	230 V	kW	11	15	18.5	22	26	37
		400 V	kW	18.5	22	30	37	45	55
		500 V	kW	21	25	30	41	50	59
		690 V	kW	23	23	39	56	67	67
1000 V	A	--	--	--	--	39	39		
AC-4 duty (contact endurance approx. 200.000 operating cycles I_a = 6 x I_e)									
Rated operational currents I _e	up to	400 V	A	18.5	24	28	34	42	54
		690 V	A	18.5	24	28	34	42	54
		1000 V	A	--	--	--	23	23	34
Ratings of squirrel-cage motors at 50 and 60 Hz	at	230 V	kW	5.2	7.3	8.5	10.3	12	16.3
Max. permitted rated operational current I _e /AC-4 = ^ I _e /AC-3 up to 500 V with endurance and operating frequency		400 V	kW	9	12.6	14.7	17.9	22	28.4
		690 V	kW	15.5	20.8	24.3	29.5	38	49
		1000 V	kW	--	--	--	30	30	45
Contactor									
		Type		CES 140	CES 170	CES 205	CES 250	CES 300	CES 400
Load ratings of the contactors with AC									
Thermal load	10 s current ¹⁾		A	1140	1360	1640	2500	2500	3400
Power loss per conducting path	at I _e /AC-3		W	14	14	20	16	23	40
AC-1 duty, switching resistive load²⁾									
Rated operational currents I _e	at 40 °C to	690 V	A	170	230	240	325	325	425
	at 55 °C to	690 V	A	160	210	220	300	300	400
Minimum conductor cross-section at I _e load	at 40 °C		mm ²	70	120	120	185	185	2x150
	at 55 °C		mm ²	70	95	120	185	185	240
AC-2 and AC-3 duty									
Rated operational currents I _e	up to	500 V	A	140	170	205	250	300	400
		690 V	A	110	170	170	250	250	400
		1000 V	A	42	68	68	95	95	180
Max. rating of slipping or squirrel-cage motors at 50 and 60 Hz	at	230 V	kW	45	56	66	82	96	131
		400 V	kW	75	95	115	142	168	232
		500 V	kW	98	118	145	178	210	289
		690 V	kW	105	163	163	245	245	397
1000 V	A	65	90	90	132	132	250		
AC-4 duty (contact endurance approx. 200.000 operating cycles I_a = 6 x I_e)									
Rated operational currents I _e	up to	690 V	A	68	75	96	110	125	150
		1000 V	A	34	42	42	57	57	80
Ratings of squirrel-cage motors at 50 and 60 Hz	at	230 V	kW	21	23	30	35	40	49
Max. permitted rated operational current I _e /AC-4 = ^ I _e /AC-3 up to 500 V with endurance and operating frequency		400 V	kW	36	40	52	61	69	85
		690 V	kW	63	69	90	105	119	147
		1000 V	kW	45	55	55	75	75	110

¹⁾ Acc. to IEC 60947-4-1.

²⁾ Industrial furnaces and electric heaters with resistance heating for example (higher current during heating-up allowed for).