

HC Modular Contactors



Technical Datasheet

Key Features

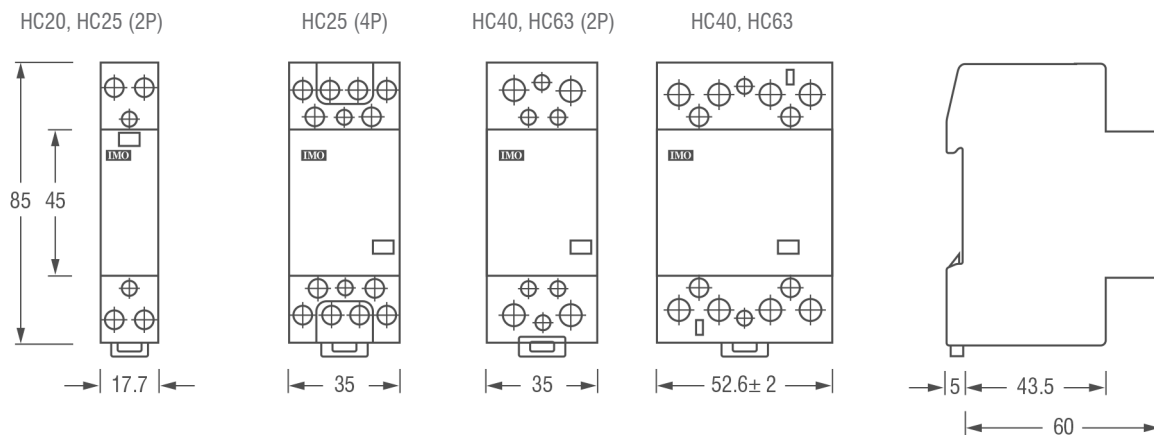
- Single & Three Phase applications
- Suitable for control of lamps, heating, air conditioning and motor control
- Suitable for panel or DIN rail mounting
- Available in 2 and 4 pole versions
- AC1 rating of 20-63Amps
- UL Certified



Options & Ordering Codes

HC		20 - 20		230	
Series		Coil Voltage			
Modular Contactor	HC	230	230V AC (Supply Voltage)		
		24	24V AC (Supply Voltage)		
Current Rating		Contact Configuration			
AC1 20 Amps	20	20	2 Pole NO Contacts		
AC1 25 Amps	25	11	1 NO, 1 NC Contacts		
AC1 40 Amps	40	02	2 Pole NC Contacts		
AC1 63 Amps	63	40	4 Pole NO Contacts		
		31	3 NO, 1 NC Contacts		
		13	1 NO, 3 NC Contacts		
		22	2 NO, 2 NC Contacts		
		04	4 Pole NC Contacts		

Dimensions (mm)



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Technical Data according to IEC 60947-4-1, IEC 60947-5-1, VDE 0660-5-1

Type	2-pole				4-pole			
	HC20	HC25	HC40	HC63	HC25	HC40	HC63	
Main Contacts 9(0/7)								
Rated insulation voltage U_i	V~	440 ²⁾	440 ²⁾	440 ²⁾	440 ²⁾	440 ²⁾	440 ²⁾	
Rated operation voltage U_e	V~	440	440	440	440	440	440	
Frequency of operations z	AC1, AC3	1/h300	300	600	600	300	600	
Mechanical life	S x 10 ⁶	1	1	1	1	1	1	
Utilization category AC1								
Rated operational current $I_e (=I_n)$ open	at 60°C A	20	25	40	63	25	40	63
Contact life	S x 10 ⁶	0.1	0.1	0.1	0.1	0.1	0.1	
Minimum switch voltage	V/mA	24/100	24/100	24/100	24/100	24/100	24/100	
Short time current	10s-current A	72	72	216	240	72	216	240
Power loss per pole at $I_e/AC1$	W	2	3	7	2	3	7	0.5
Utilization category AC3/AC7b Switching of three-phase motors								
Rated operational current I_e	A	-	-	-	-	9	27	30
Rated operational power of three-phase motors	220V kW	-	-	-	-	2.2	7.5	8
50-60Hz	230-240V kW	-	-	-	-	2.5	8	8.5
	380-415V kW	-	-	-	-	4	12.5	15
2-pole motors	230V kW	1.1	1.3	2.6	5	-	-	-
Contact life	S x 10 ⁶	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Power consumption of coils								
AC operated	inrush VA	7 - 9	7 - 9	5 - 7	5 - 7	20 - 25	33 - 45	33 - 45
	sealed VA	2.2 - 4.2	2.2 - 4.2			4 - 6	6 - 8	6 - 8
	W	0.8 - 1.6	0.8 - 1.6			1.5 - 2.5	2.6	2.6
Operation range of coils								
in multiples of control voltage U_s	(-40°C ~ +40°C)	0.85 - 1.1	0.85 - 1.1	0.85 - 1.1	0.85 - 1.1	0.85 - 1.1	0.85 - 1.1	0.85 - 1.1

1) Suitable for: earthed-neutral systems, overvoltage category I to IV, pollution degree 3 (standard-industry): $U_{imp} = 8kV$

2) Suitable for: earthed-neutral systems, overvoltage category I to III, pollution degree 3 (standard-industry): $U_{imp} = 4kV$

3) Maximum cable cross-section with prepaed conductor

5) Rated frequency 50/60Hz

6) Max. occ. switching overvoltage < 4kV

7) Duty cycle: 100%

Type	HC20	HC25 (2p)	HC25 (4p)	HC25-..VS	HC40	HC63	
Short circuit protection							
max. fuse Coordination-type "1" gL	(gG) A	35	35	35	35	63	80
Rated short circuit current	"r" kA	3	3	3	3	3	3
	"lq" kA	3	3	10	10	10	10
Switching time at control voltage $U_s \pm 10\%$							
	make time ms	7 - 16	7 - 16	9 - 15	17 - 24	11 - 15	11 - 15
	release time ms	6 - 12	6 - 12	4 - 8	17 - 23	6 - 13	6 - 13
	arc duration ms	10 - 15	10 - 15	10 - 15	10 - 15	10 - 15	10 - 15
Cable cross-sections							
Main connector	solid or stranded mm ²	1.5 - 10	1.5 - 10	1.5 - 10	1.5 - 10	2.5 - 25	2.5 - 25
	flexible mm ²	1.5 - 6	1.5 - 6	1.5 - 6	1.5 - 6	2.5 - 16	2.5 - 16
	flexible with multicore cable end mm ²	1.5 - 6	1.5 - 6	1.5 - 6	1.5 - 6	2.5 - 16	2.5 - 16
Clamps per pole		1	1	1	1	1	1
Magnetic coil	solid or stranded mm ²	0.75 - 2.5	0.75 - 2.5	0.75 - 2.5	0.75 - 2.5	0.75 - 2.5	0.75 - 2.5
	flexible mm ²	0.5 - 2.5	0.5 - 2.5	0.5 - 2.5	0.5 - 2.5	0.5 - 2.5	0.5 - 2.5
	flexible with multicore cable end mm ²	0.5 - 1.5	0.5 - 2.5	0.5 - 1.5	0.5 - 1.5	0.5 - 1.5	0.5 - 1.5
Clamps per pole		1	1	1	1	1	1

Technical Data according to UL508

Main Contacts (cULus)	HC20	HC25 (2p)	HC25 (4p)	HC40	HC63	
Rated operational current "General Use"	A	20	25	25	40	63
Rated operational power of three-phase motors at 60Hz (3hp)	110-120V hp	-	-	1	2	3
	200-208V hp	-	-	2	5	7½
	220-240V hp	-	-	3	7½	10
	265-277V hp	-	-	3	7½	10
Rated operational power of AC motors at 60Hz (1hp)	110-120V hp	½	½	½	1	1½
	200-208V hp	1	1	1	2	3
	220-240V hp	1½	1½	1½	3	5
	265-277V hp	1½	2	2	3	5
Fuses	A	40	40	40	80	80
Suitable for use on a capability of delivering not more than	rms A	5000	5000	5000	5000	5000
	V	300	300	300	300	300
Rated operation voltage	V~	300	300	300	300	300