

HDC3 AC Contactor

Overview

3SERIES
MORE VALUE FOR PRICE!



Product Overview

With the new generation of technical platform and automated production and testing equipment, the brand new HDC3 motor control and protection products effectively fit the actual customer application needs, becoming products with convenient use and international leading quality. The series include three major categories, namely HDC3 AC contactor, HDR3 thermal overload relay and HDZ3 contactor relay and their accessories.

Product range

- HDC3 AC contactor: 6-95A, totally 12 current specifications
Accessories: HPCs transparent dust cover, HFD6 top auxiliary contact, HFC6 side auxiliary contact, HFT6 air delayed head and HFR6 mechanical interlock
Certification: CB,CE, SEMKO
- HDR3 thermal overload relay: setting current covering 0.1~93A
Accessories: independent mounting base
Certification: CB,CE, SEMKO
- HDZ3 contactor relay: 2NO+2NC, 3NO+1NC, 4NO+0NC, 1NO+3NC and 0NO+4NC
Accessories: HPCs transparent dust cover, HFD6 top auxiliary contact and HFT6 air delayed head
Certification: CE

Standards met

- IEC 60947-1 General provisions
- IEC 60947-4-1 Contactors
- IEC 60947-5-1 Relays

Normal installation and operation conditions

Installation position:

The installation site shall be vertical, with inclination at all directions not exceeding $\pm 22.5^\circ$. (HDR3 of no greater than 5°); installation Class III;

Pollution class:

Class 3

Ambient temperature:

- In normal operation, the ambient temperature ranges between -5°C and $+40^\circ\text{C}$ with average value in 24h no more than $+35^\circ\text{C}$;
- Storage temperature: $-25^\circ\text{C} \sim +55^\circ\text{C}$, up to $+70^\circ\text{C}$ within a short time (24h)

Altitude:

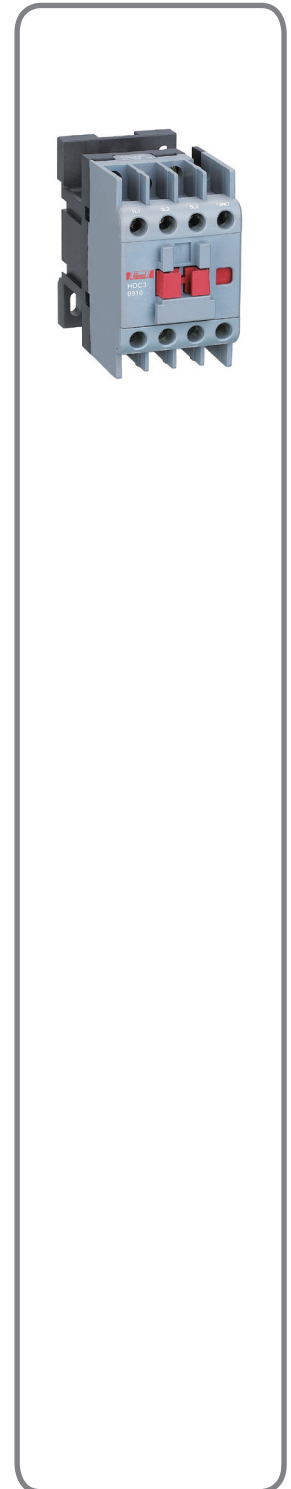
Altitude at normal installation position does not exceed 2000m.

Humidity

- The atmospheric relative humidity does not exceed 50% when the highest ambient temperature is $+40^\circ\text{C}$. It is allowed to have a relative higher humidity under lower temperature, e.g. up to 90% at $+20^\circ\text{C}$.
- For occasional dew due to changes of the temperature, preventive measures shall be taken.

Product protection grade:

IP20



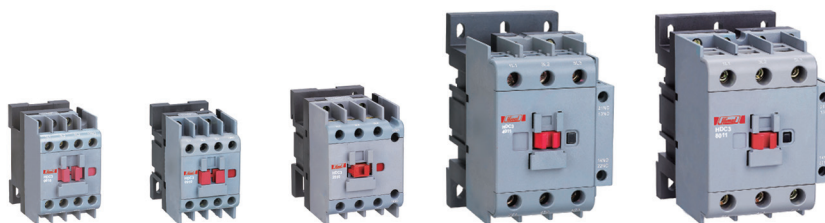
HDC3 AC contactor

Functions and features

3SERIES
MORE VALUE FOR PRICE!



Main Technical Parameters of HDC3



Contactor model			HDC3-06	HDC3-09	HDC3-12	HDC3-18	HDC3-25	HDC3-32	HDC3-38	HDC3-40	HDC3-50	HDC3-65	HDC3-80	HDC3-95			
Main circuit characteristics																	
Number of poles			3 poles														
Rated insulation voltage(Ui)			V														
Rated operational voltage(Ue)			V														
Conventional thermal current(Ith)			16	20	20	25	32	40	40	50	60	80	110	110			
Rated operational current(Ie)	AC-3,380/400V	A	6	9	12	18	25	32	38	40	50	65	80	95			
	AC-3,660/690V	A	3.8	6.6	8.9	12.0	18.0	22.0	22.0	34.0	39.0	42.0	49.0	49.0			
	AC-4,380/400V	A	2.6	3.5	5.0	7.7	8.5	12.0	14.0	18.5	24.0	28.0	37.0	44.0			
	AC-4,660/690V	A	1	1.5	2.0	3.8	4.4	7.5	8.9	9.0	12.0	14.0	17.3	21.3			
Rated operating power (Pe)	AC-3,380/400V	kW	2.2	4.0	5.5	7.5	11.0	15.0	18.5	18.5	22.0	30.0	37.0	45.0			
	AC-3,660/690V	kW	3	5.5	7.5	10.0	15.0	18.5	18.5	30.0	33.0	37.0	45.0	45.0			
	AC-4,380/400V	kW	1.1	2.2	3.0	4.0	5.5	7.5	7.5	7.5	11.0	15.0	18.5	22.0			
	AC-4,660/690V	kW	0.75	1.1	1.5	3.7	4.0	5.5	7.5	7.5	11.0	11.0	15.0	18.5			
Mechanical durabilities			10,000 times			1200			1000			900			650		
Electrical durabilities	AC-3	10,000 times	110						90						65		
	AC-4	10,000 times	22						22			17			11		
Operation frequency	AC-3	Time/hour	1200						600								
	AC-4	Time/hour	300						300								
Coil																	
Rated control circuit voltage (Us)	50Hz	V	24、36、48、110、127、220/230、240、380/400、415、440														
	50/60Hz	V	24、36、48、110、127、220/230、240、380/400、415、440														
Allowable control circuit voltage (Us)	Operation	V	85%~110% Us														
	Drop-out	V	20%~75% Us														
Coil power	Inrush	VA	50	60			70			200			200				
	Sealed	VA	6~9.5		6~9.5			6~9.5			15~20			15~20			
	Heat dissipation	W	1~3		1~3			1~3			6~10			6~10			
Main circuit terminal wiring capability																	
Flexible wire	1 wire	mm ²	1...4				1.5...6				2.5...25				4...50		
	Without terminal	2 wire	1...4				1.5...6				2.5...16				4...25		
Flexible wire	1 wire	mm ²	1...4				1...6				2.5...25				4...50		
	With terminal	2 wire	1...2.5				1...4				2.5...10				4...16		
Fixed wire	1 wire	mm ²	1...4			1.5...6			1.5...10			2.5...25			4...50		
	Without terminal	2 wire	1...4			1.5...6			1.5...6			2.5...10			4...25		
Auxiliary contact																	
Conventional thermal current (Ith)			A														
Rated operational voltage (Ue)	AC	V	380														
	DC	V	220														
Rated control capacity	AC-15	VA	360														
	DC-13	W	33														
Certification			CB、CE、SEMKO														

HDC3 AC contactor

Functions and features

3SERIES
MORE VALUE FOR PRICE!



Main Technical Parameters of HDC3-N

Contactor model	Rated insulation voltage	Rated operational voltage	Conventional thermal current	Intermittent periodic duty AC-4	
	Ui(V)	Ue(V)	Ith(A)	Ie(A)	Pe(kw)
HDC3-09N	690	380/400	20	3.5	1.5
		660/690		1.5	1.1
HDC3-12N	690	380/400	20	5	2.2
		660/690		2	1.5
HDC3-18N	690	380/400	25	7.7	3.3
		660/690		3.8	3
HDC3-25N	690	380/400	32	8.5	4
		660/690		4.4	4
HDC3-32N	690	380/400	40	12	5.4
		660/690		7.5	5.5
HDC3-38N	690	380/400	40	14	5.5
		660/690		8.9	6
HDC3-40N	690	380/400	50	18.5	7.5
		660/690		9	7.5
HDC3-50N	690	380/400	60	24	11
		660/690		12	10
HDC3-65N	690	380/400	80	28	15
		660/690		14	11
HDC3-80N	690	380/400	110	37	18.5
		660/690		17.3	15
HDC3-95N	690	380/400	110	44	22
		660/690		21.3	18.5



Motor Control and Protection

HDC3 AC contactor

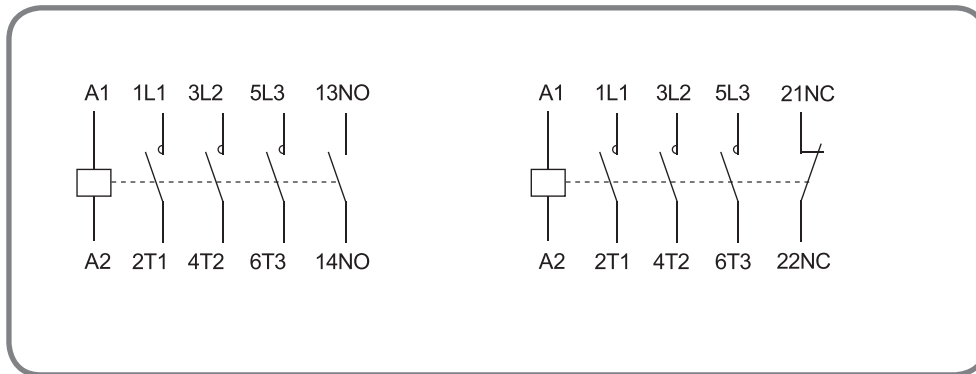
Functions and features

3SERIES
MORE VALUE FOR PRICE!

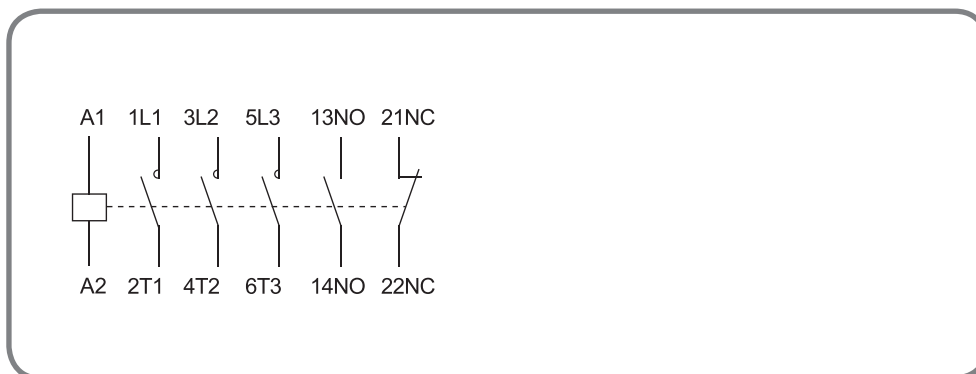


Wiring diagram

HDC3 6~38



HDC3 40~95



HDC3 AC contactor

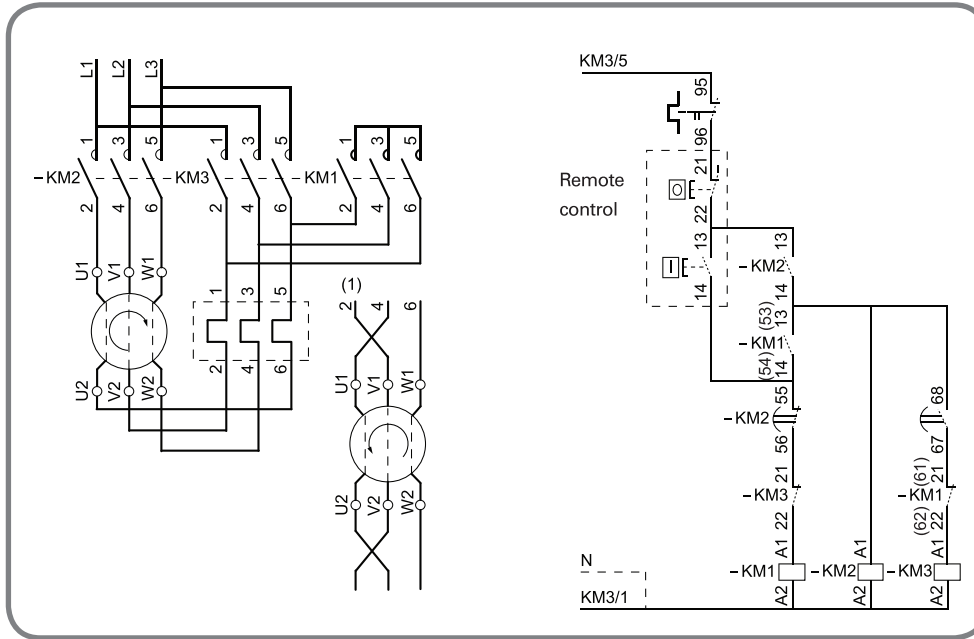
Functions and features

3SERIES
MORE VALUE FOR PRICE!



Wiring diagram

Wiring diagram for star-delta starter



HDC3 AC contactor

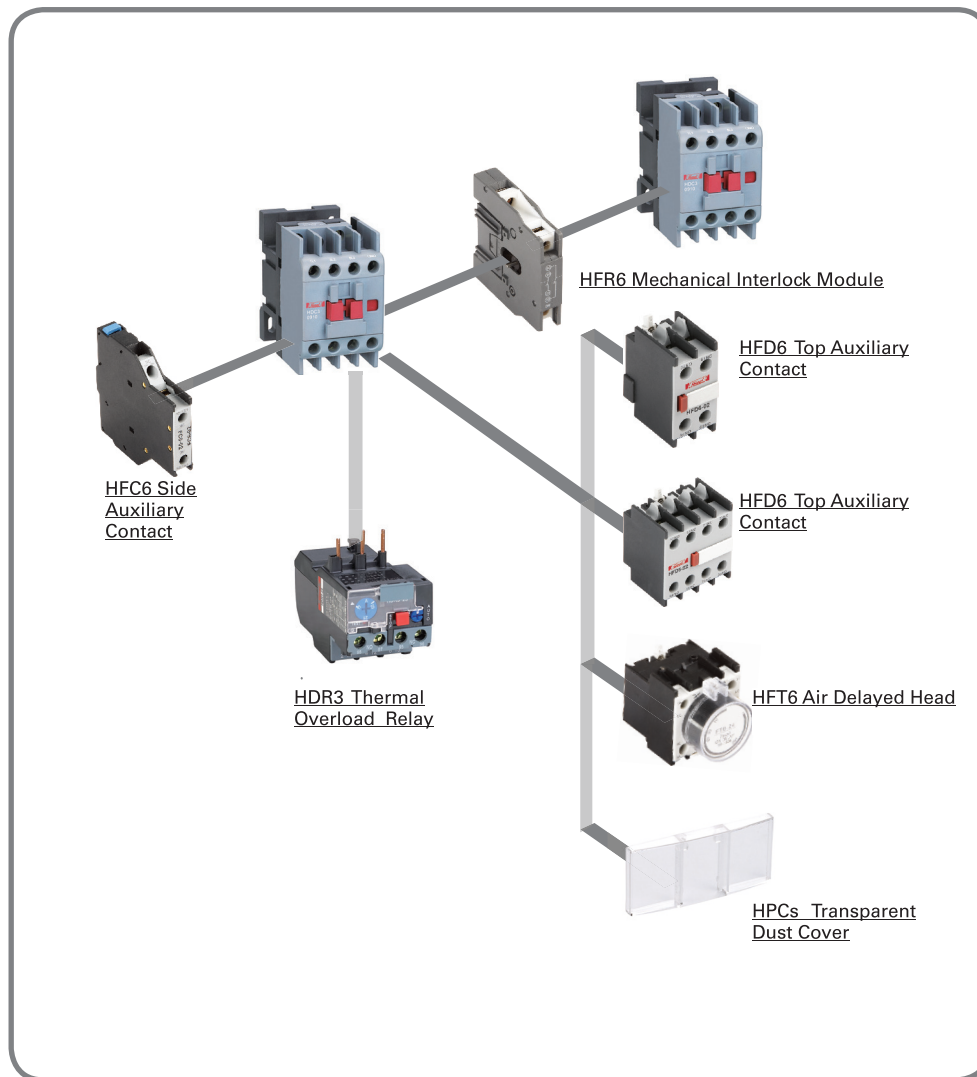
Functions and features

3SERIES
MORE VALUE FOR PRICE!



Schematic Diagram of Accessory Installation

HDC3 schematic diagram of accessories



Note: HDC3-06 cannot be equipped with side auxiliary contact and mechanical interlock module

HDC3 AC Contactor

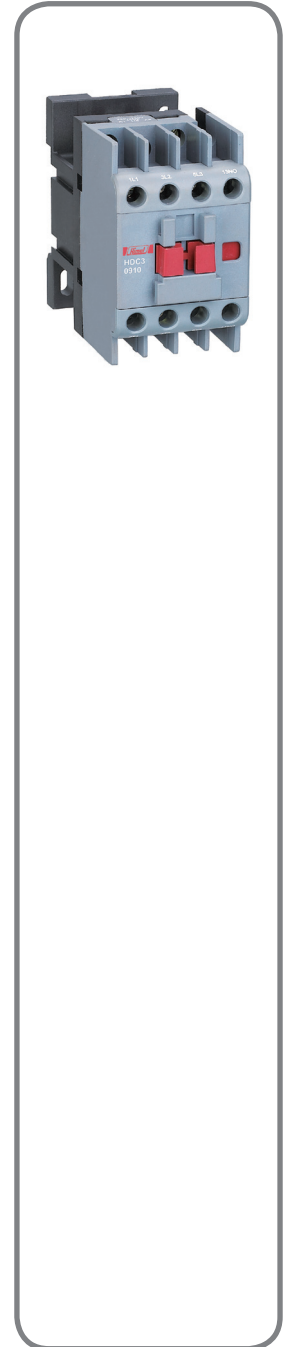
Order Information

3SERIES
MORE VALUE FOR PRICE!



HDC3 AC Contactor

Product Name	Current Specification	Auxiliary Contact	Coil Voltage	Coil frequency
HDC3	06	10	M	5
	↓	↓	↓	↓
	06:6A ... 95:95A	10:1NO+0NC 01:0NO+1NC 11:1NO+1NC	B:24V ... M:220V/230V ... Q:380V/400V ...	5:50Hz 7:50/60Hz



Motor power Pe(KW AC-3,380V)	Rated current Ie(A)	Auxiliary contact		Reference
		NO	NC	
2.2	6	1	0	HDC3 06 10 *
		0	1	HDC3 06 01 *
4	9	1	0	HDC3 09 10 *
		0	1	HDC3 09 01 *
5.5	12	1	0	HDC3 12 10 *
		0	1	HDC3 12 01 *
7.5	18	1	0	HDC3 18 10 *
		0	1	HDC3 18 01 *
11	25	1	0	HDC3 25 10 *
		0	1	HDC3 25 01 *
15	32	1	0	HDC3 32 10 *
		0	1	HDC3 32 01 *
18.5	38	1	0	HDC3 38 10 *
		0	1	HDC3 38 01 *
18.5	40	1	1	HDC3 40 11 *
22	50	1	1	HDC3 50 11 *
30	65	1	1	HDC3 65 11 *
37	80	1	1	HDC3 80 11 *
45	95	1	1	HDC3 95 11 *

Note: Only 3 poles is available

* means coil voltage code + frequency code

Coil voltage code										
Coil Voltage(V)	24	36	48	110	127	220/230	240	380/400	415	440
*	B	C	E	F	S	M	U	Q	L	X

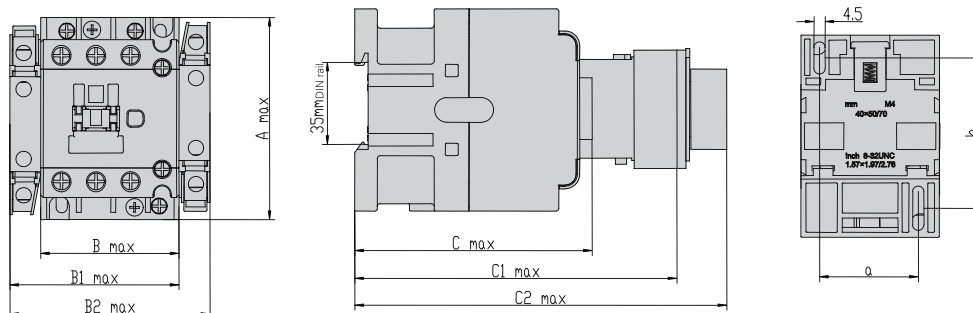
HDC3 AC Contactor

3SERIES
MORE VALUE FOR PRICE!

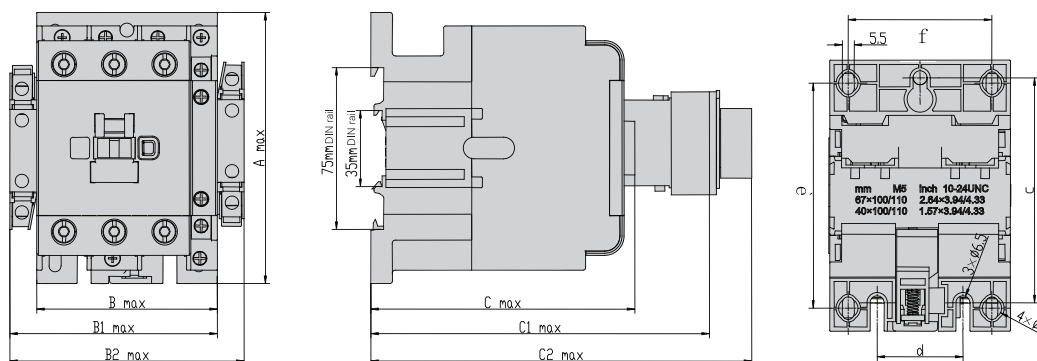


Overall and installation dimensions

HDC3 06-38A



HDC3-40-95A





Overall and installation dimensions

Overall Dimension of HDC3 06-95A AC contactor

Model	Amax	Bmax	B1max	B2max	Cmax	C1max	C2max
HDC3-06	74.5	45.5	-	-	75	107	132
HDC3-09, 12, 18	74.5	45.5	58	71	82.5	114.5	139.5
HDC3-25, 32, 38	83	56.5	69	82	97	129	154
HDC3-40, 50, 65	127.5	74.5	88	101	117	148.5	173.5
HDC3-80,95	127.5	85.5	99	112	125.5	157	182

Note: B1max=contactor+HFC6 B2max=Contactor+2 pieces of HFC6 C1max=Contactor+HFD6 C2max=Contactor+HFT6

Installation dimension of HDC3 06-95A AC Contactor

Model	a	b	c	d	e	f
HDC3-06	35	50/60	-	-	-	-
HDC3-09, 12, 18	35	50/60	-	-	-	-
HDC3-25, 32, 38	40	50/60	-	-	-	-
HDC3-40, 50, 65	-	-	105	40	100/110	59
HDC3-80,95	-	-	105	40	100/110	67

HDC3-N reversible AC contactor

Order Information

3SERIES
MORE VALUE FOR PRICE!



HDC3-N reversible AC contactor

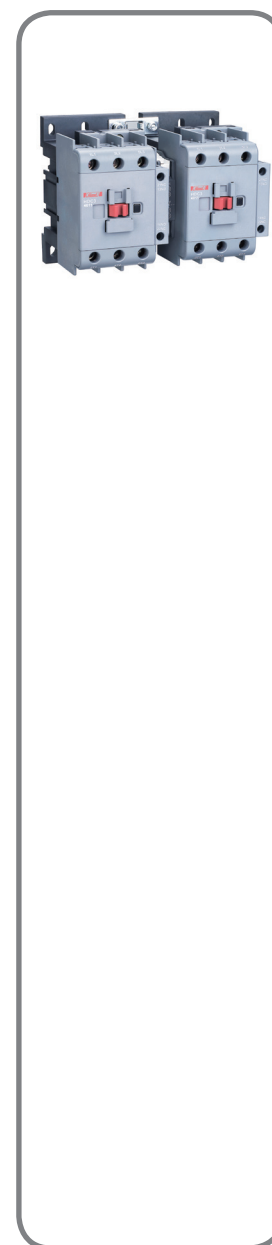
Product Name	Current Specification	Mechanical interlock	Auxiliary Contact	Coil Voltage	Coil frequency
HDC3	09	N	10	M	5
	↓	↓	↓	↓	↓
	09:9A ... 95:95A	N:Mechanical interlock	10:1NO+0NC 01:0NO+1NC 11:1NO+1NC	B:24V ... M:220V/230V ... Q:380V/400V ...	5:50Hz 7:50/60Hz

Motor powerPe(KW AC-4,380V)	Rated current Ie(A)	Auxiliary contact		Reference
		NO	NC	
1.5	9	1	0	HDC3 09N 10 *
		0	1	HDC3 09N 01 *
2.2	12	1	0	HDC3 12N 10 *
		0	1	HDC3 12N 01 *
3	18	1	0	HDC3 18N 10 *
		0	1	HDC3 18N 01 *
4	25	1	0	HDC3 25N 10 *
		0	1	HDC3 25N 01 *
5.5	32	1	0	HDC3 32N 10 *
		0	1	HDC3 32N 01 *
5.5	38	1	0	HDC3 38N 10 *
		0	1	HDC3 38N 01 *
7.5	40	1	1	HDC3 40N 11 *
11	50	1	1	HDC3 50N 11 *
15	65	1	1	HDC3 65N 11 *
18.5	80	1	1	HDC3 80N 11 *
22	95	1	1	HDC3 95N 11 *

Note: Only 3 poles is available;

* means coil voltage code + frequency code

Coil voltage code					
Coil voltage(V)	24	36	110	220/230	380/400
*	B	C	F	M	Q



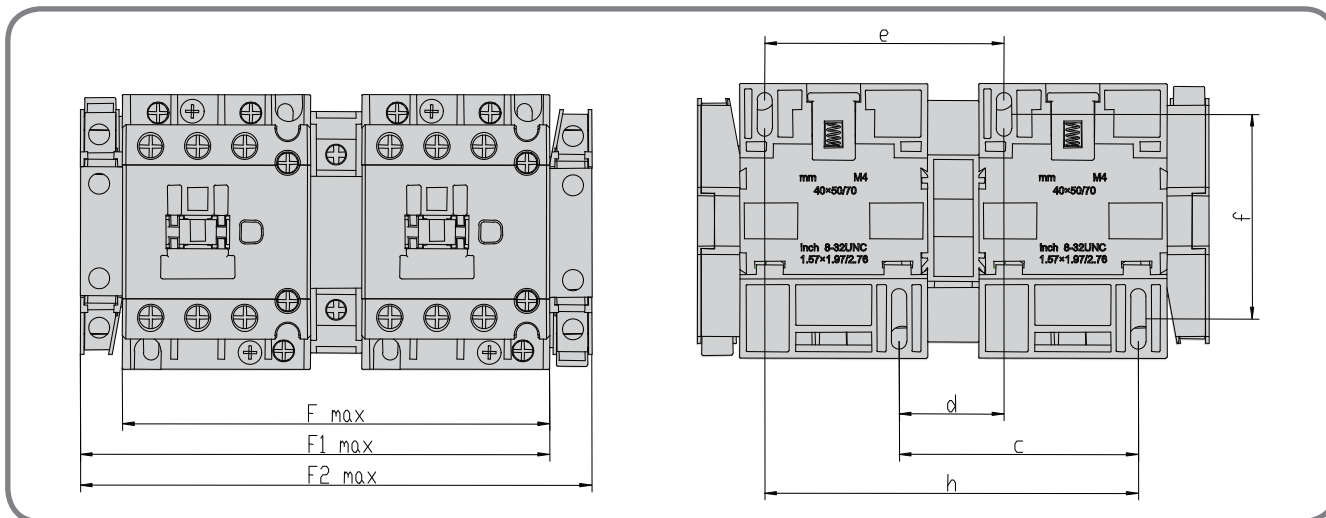
HDC3-N Directional AC contactor

3SERIES
MORE VALUE FOR PRICE!

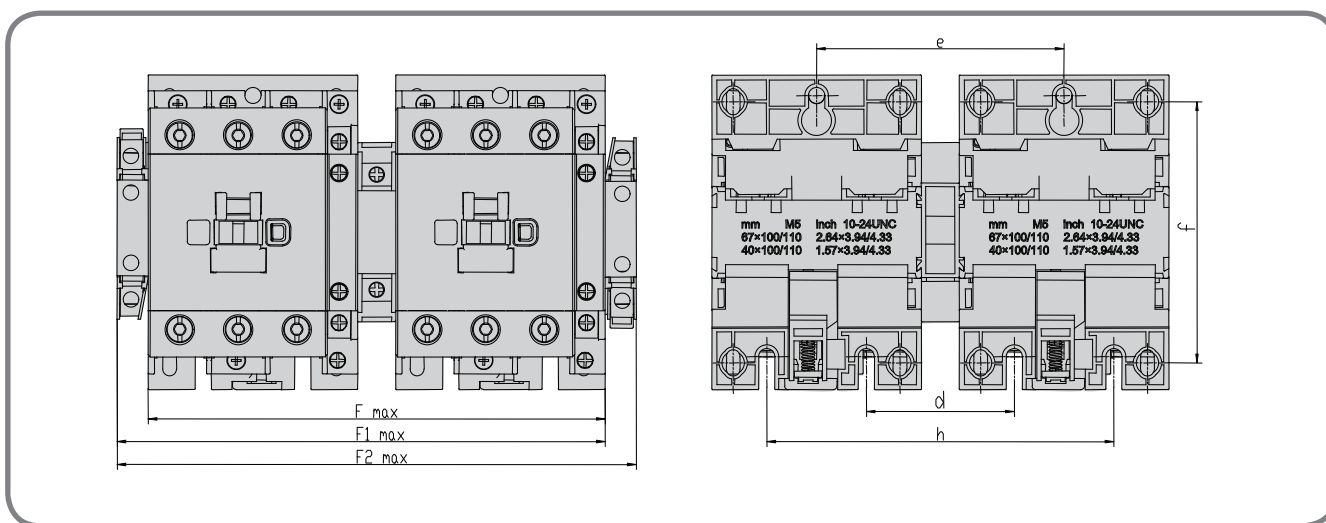


Overall and installation dimensions AC contactor

HDC3-N 09-38A



HDC3-N 40-95A



Overall dimension of HDC3-N 09-95A directional AC contactor

Model	Fmax	F1max	F2max	c	d	e	f	h
HDC3-09N, 12N, 18N	107	120	131	60	25	60	50/60	95
HDC3-25N, 32N, 38N	129	142	153	71	31.5	71	50/60	111.5
HDC3-40N, 50N, 65N	163	180	193	-	50	90	100/110	130
HDC3-80N,95N	186	202	215	-	60	100	100/110	140

HDR3 Thermal Overload Relay

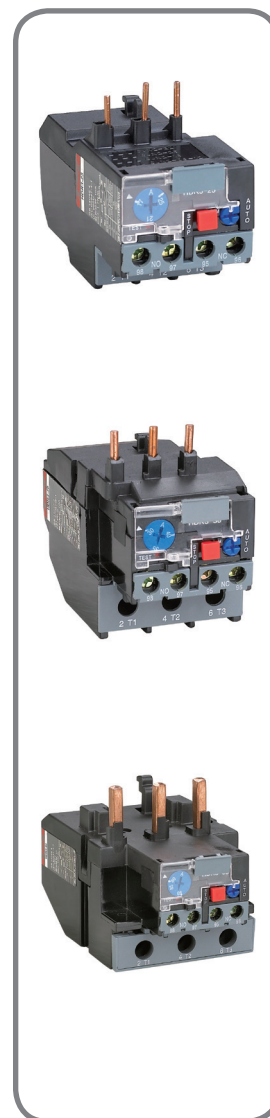
Functions and features

3SERIES
MORE VALUE FOR PRICE!



Main technical parameters

HDR3 Thermal Overload Relay				
Temperature compensation		-5°C~+40°C		
Trip level	10A	HDR3-25,36		
	10	HDR3-93		
Rated insulation voltage(Ui)	V	660V		
Product features				
Overload protection		Yes		
Phase-failure protection		Yes		
Manual reset		Yes		
Automatic reset		Yes		
Stop button		Yes		
Test button		Yes		
Trip indication		Yes		
Tolerance on slope in any direction		±5°		
Auxiliary circuit				
Utilization category		AC-15		DC-13
Rated frequency	HZ	50	50	
Rated insulation voltage (Ui)	V	500	500	500
Rated operational Voltage (Ue)	V	230	400	230
Rated operational current Ie	A	1.57	0.90	0.14
Conventional thermal current Ith	A NO	5	5	5
	NC	5	5	5
Product Certification		CB, CE, SEMKO		



Motor Control and Protection

Base



Name	Reference
HDR3-25	HDR325J
HDR3-36	HDR336J
HDR3-93	HDR393J

HDR3 Thermal Overload Relay

Functions and features

3SERIES
MORE VALUE FOR PRICE!

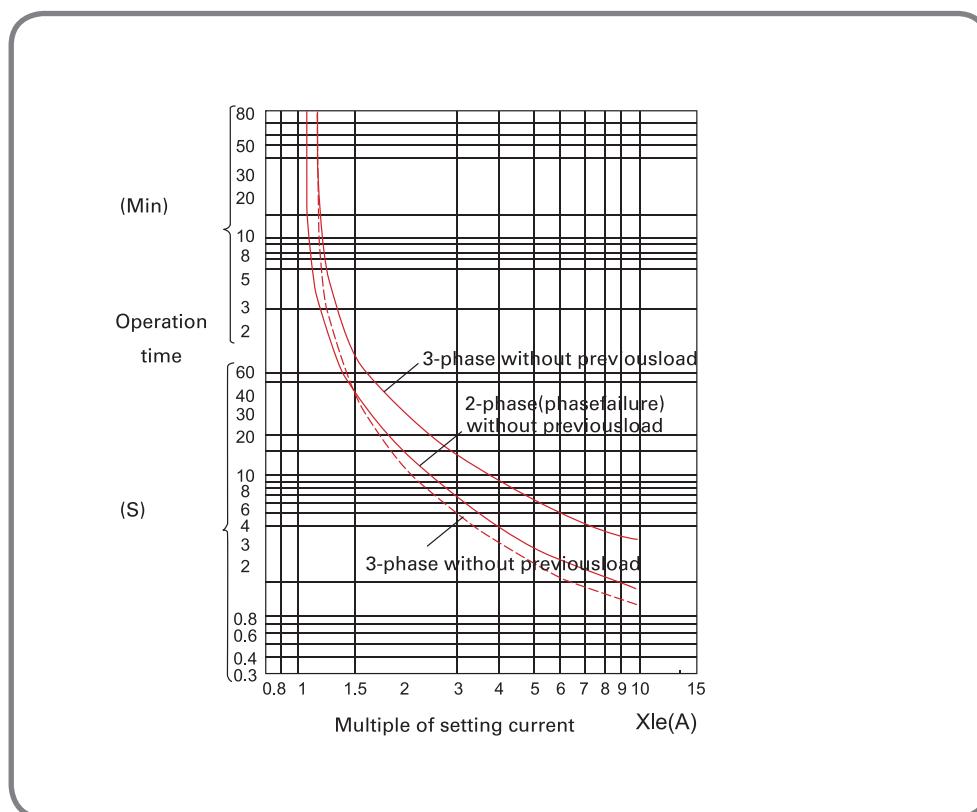


Tripping Characteristic

No.	Multiples of Setting Current	Tripping Time		Initial Condition	Ambient Temperature
		Trip class 10A	Trip class 10		
Tripping Characteristics for Current Balance					
1	1.05	Non-tripping within 2h	Non-tripping within 2h	Without previous load	+20°C
2	1.2	Tripping within 2h	Tripping within 2h	After No.1 Test	
3	1.5	<2min	<4min	After No.1 Test	
4	7.2	2s<Tp≤10s	4s<Tp≤10s	Without previous load	+20°C
Tripping Characteristics for Current Imbalance					
Any 2-Phase, 3rd Phase					
1	1.0	Non-tripping within 2h	Non-tripping within 2h	Without previous load	+20°C
2	1.15	Tripping within 2h	Tripping within 2h	After No.1 Test	

Tripping Characteristics

Average value (Environment temperature 20°C)



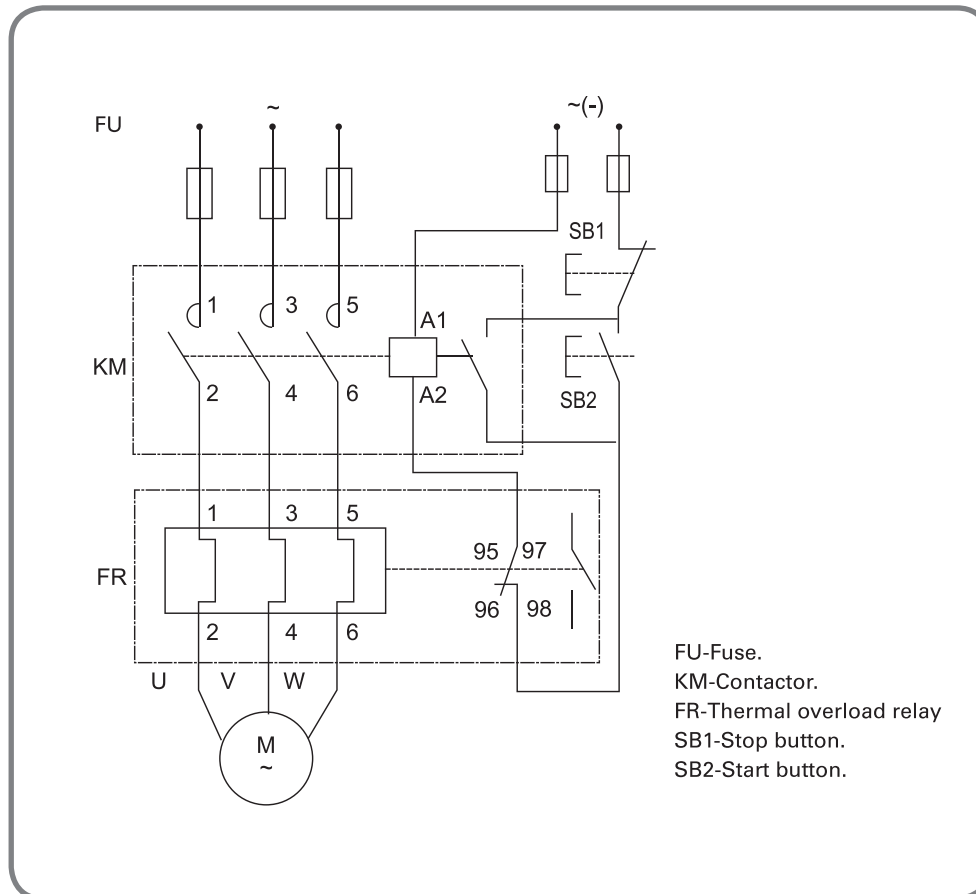
HDR3 Thermal Overload Relay

Functions and features

3SERIES
MORE VALUE FOR PRICE!



Installation wiring diagram



HDR3 Thermal Overload Relay

Order Information

3SERIES
MORE VALUE FOR PRICE!



HDR3 Thermal Overload Relay

Product Name	Frame current	Auxiliary Contact
HDR3	25	P16
	↓	↓
	25:25A 36:36A 93:93A	1P6: 1.0-1.6A P16: 0.1-0.16 ... 93: 80-93A P means decimal point



Frame Rating Current (A)	Setting Current(A)	Fuse current used for matching with Relay	Contactors used for matching with Relay	Reference
		HRT16 is recommended	HDC3 is recommended	
25	0.1-0.16	4	09-38	HDR325P16
	0.16-0.25	4	09-38	HDR325P25
	0.25-0.4	4	09-38	HDR325P4
	0.4-0.63	4	09-38	HDR325P63
	0.63-1	4	09-38	HDR3251
	1-1.6	4	09-38	HDR3251P6
	1.6-2.5	6	09-38	HDR3252P5
	2.5-4	10	09-38	HDR3254
	4-6	16	09-38	HDR3256
	5.5-8	20	09-38	HDR3258
	7-10	20	09-38	HDR32510
	9-13	25	12-38	HDR325P13
	12-18	35	18-38	HDR325P18
17-25	50	25-38	HDR325P25	
36	23-32	63	25-32	HDR33632
	30-40	80	32-38	HDR33640
93	23-32	63	40-95	HDR39332
	30-40	80	40-95	HDR39340
	37-50	100	50-95	HDR39350
	48-65	100	50-95	HDR39365
	55-70	125	65-95	HDR39370
	63-80	125	80-95	HDR39380
	80-93	160	95	HDR39393

Motor Control and Protection

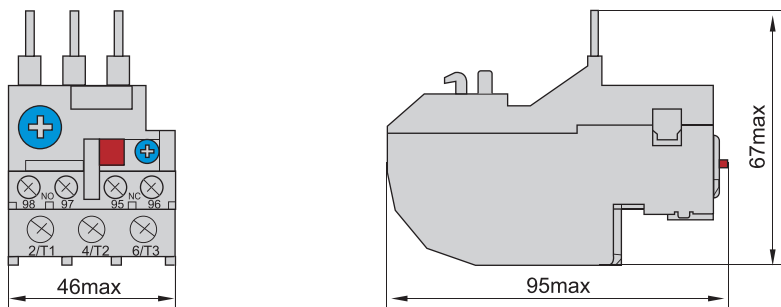
HDR3 Thermal Overload Relay

Overall and installation dimensions

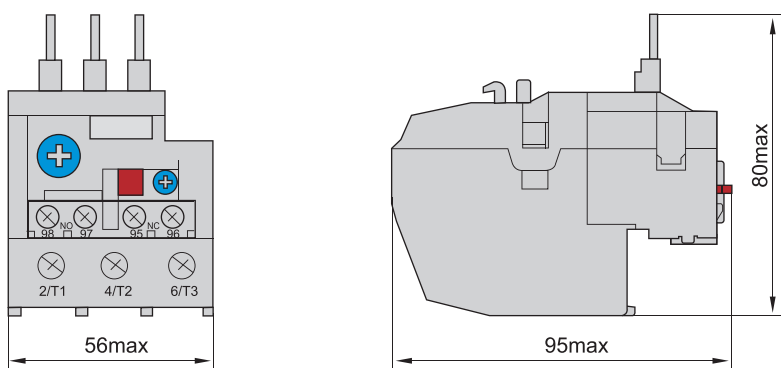
3SERIES
MORE VALUE FOR PRICE!



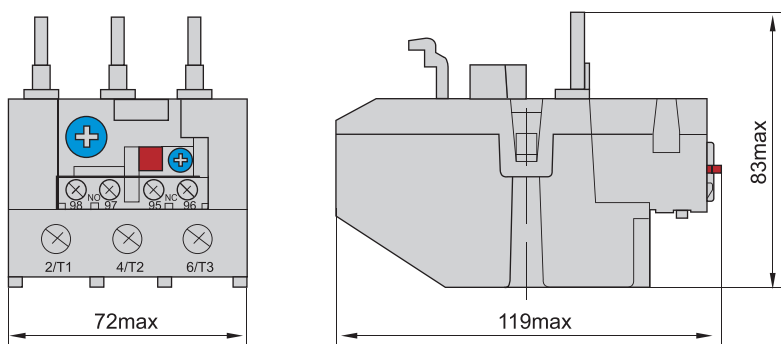
Overall dimension drawing of HDR3-25/Z



Overall dimension drawing of HDR3-36/Z



Overall dimension drawing of HDR3-93/Z



HDZ3 Contactor Relay

Functions and features

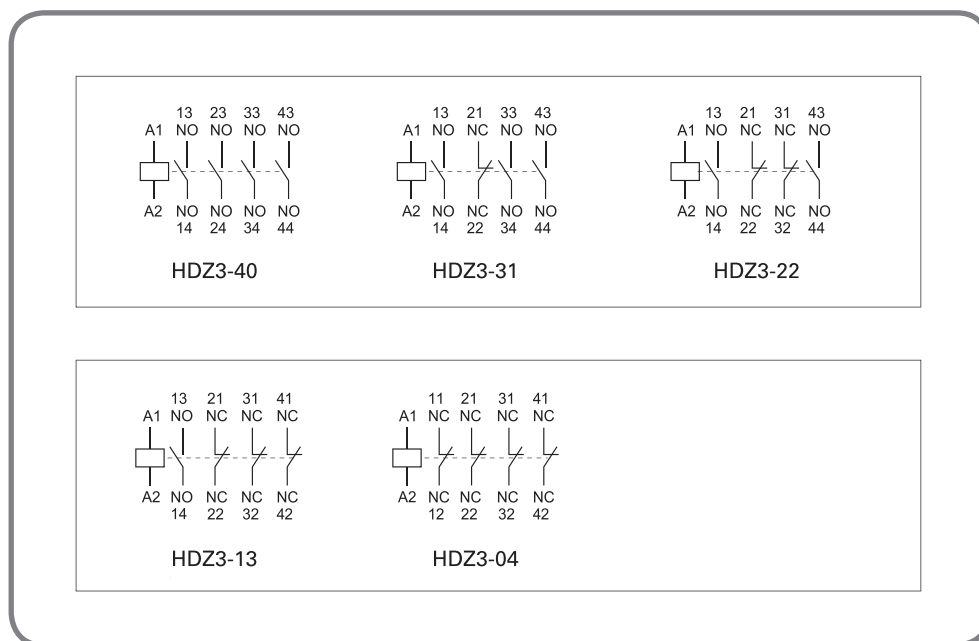
3SERIES
MORE VALUE FOR PRICE!



Main technical parameters

Rated insulation voltage (Ui)	V	690
Conventional thermal current (Ith)	A	10
Rated operational current (Ie)	A	AC-15 380V: 0.95
		DC-13 220V: 0.15
Contact combination		2NO+2NC,3NO+1NC,4NO+0NC,1NO+3NC,0NO+4NC
Electrical durabilities	10,000 times	110
Mechanical durabilities	10,000 times	1100
Operation frequency	times/Hour	1200
Rated control circuit voltage(Us)	50Hz	24,36,48,110,127,220/230,240,380/400,415,440
	50/60Hz	24,36,48,110,127,220/230,240,380/400,415,440
Operational voltage range	V	AC 85%...110% Us
Drop-out voltage range	V	AC 20%...75% Us
Production Certification		CE

Wiring Diagram



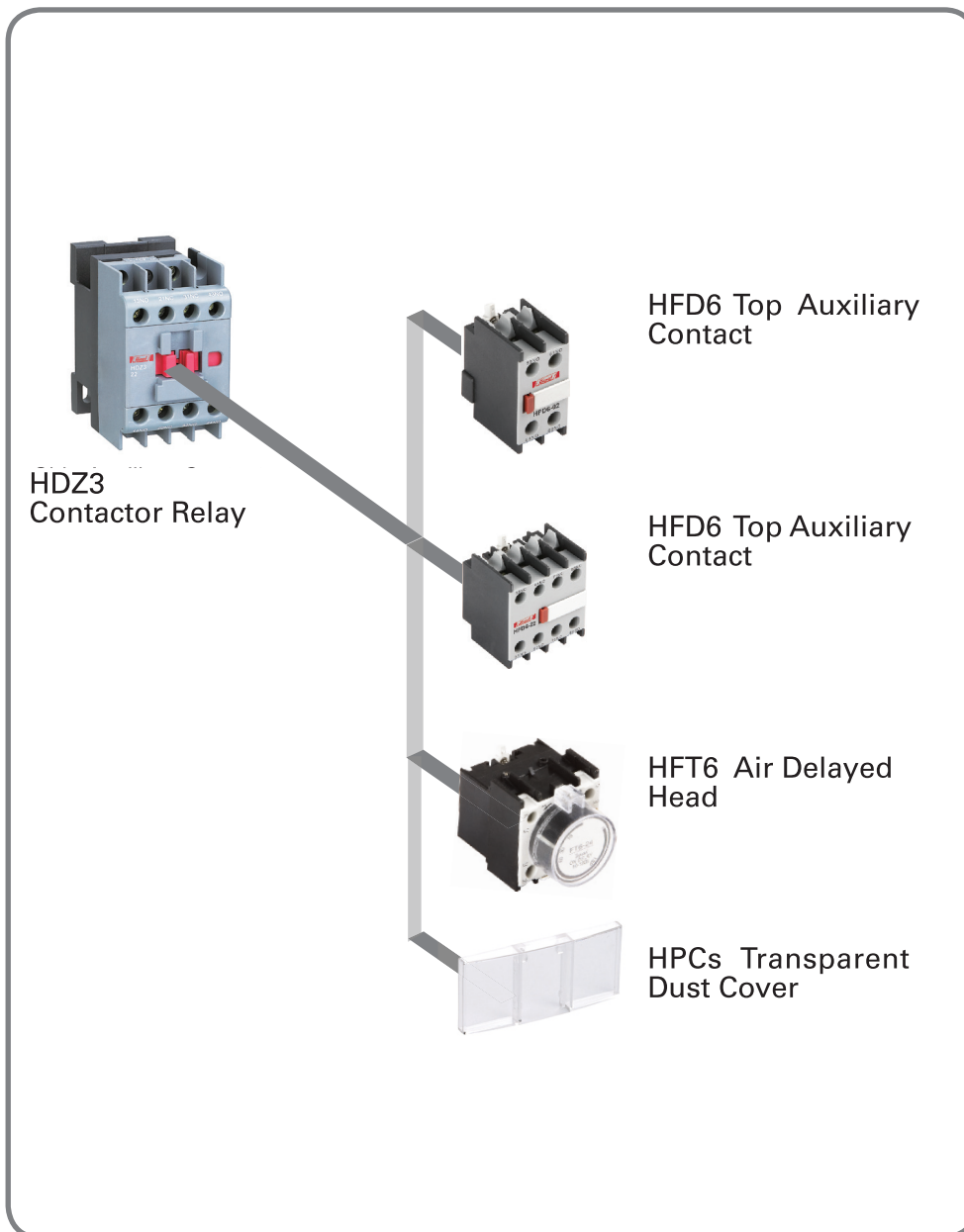
HDZ3 Contactor Relay

Functions and features

3SERIES
MORE VALUE FOR PRICE!



Schematic diagram of Accessory installation



HDZ3 Contactor Relay

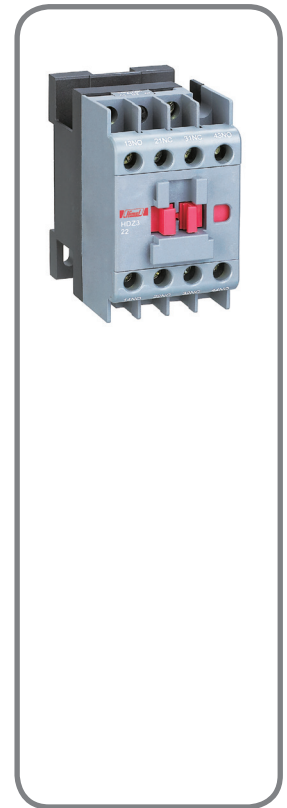
Order Information

3SERIES
MORE VALUE FOR PRICE!



HDZ3 Contactor Relay

Product Name	Contact	Coil Voltage	Coil Frequency
HDZ3	22	M	5
	↓	↓	
	22: 2NO+2NC 31: 3NO+1NC 40: 4NO+0NC 13: 1NO+3NC 04: 0NO+4NC	B:24V ... M: 220V/230V ... Q: 380V/400V ...	5: 50Hz 7: 50/60Hz



Contact		Reference
NO	NC	
2	2	HDZ322*
3	1	HDZ331*
4	0	HDZ340*
1	3	HDZ313*
0	4	HDZ304*

Coil voltage code

Coil voltage(V)	24	36	48	110	127	220/230	240	380/400	415	440
*	B	C	E	F	S	M	U	Q	L	X

Note: * means coil voltage code

HDZ3 Contactor Relay

Overall and installation dimensions

3SERIES
MORE VALUE FOR PRICE!



Overall and installation dimensions

HDZ3

