

HDRX Thermal Overload Relays

Standard: IEC60947-4



Range Presentation

HDRX is Himel X series range of thermal overload relays designed to provide protection against overload, phase loss and current imbalance.

HDRX thermal overload relays can be combined with HDCX contactors into motor starter.

Features

- ◆ Frame Rating Current: 38A, 65A, 93A
- ◆ Setting Current: 0.1-93A

Online Content



HDRX

Selection Code

Range name	Frame size	Setting currents
HDRX	38	P16
HDRX	38: 38A	P16: 0.1-0.16A P25: 0.16-0.25A 38: 30-38A
	65: 65A	25: 17-25A 32: 23-32A 65: 48-65A
	93: 93A	32: 23-32A 40: 30-40A 93: 80-93A

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Technical Parameters					
Thermal overload relays			HDRX		
Relay model			38	65	93
Main circuit technical characteristics					
Temperature compensation			-5°C~+40°C		
Trip class			10A		10
Rated insulation voltage(Ui)		V	690		
Rated operational voltage(Ue)		V	690		
Rated impulse withstand voltage(Uimp)		kV	6		
Certificate			CB, CE, SEMKO		
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 technical characteristics					
Rated frequency		Hz	50/60		
Rated insulation voltage(Ui)		V	500		
Rated impulse withstand voltage(Uimp)		kV	4		
Conversional thermal current(Ith)		A	5		
Rated operational voltage(Ue)	AC-15	V	220/380		
	DC-13	V	220		
Rated operational current(Ie)	AC-15	A	1.64/0.95		
	DC-13	A	0.15		
Auxiliary(standard)			1NO+1NC		
Wiring		mm²	1~2.5		

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Order Information

Frame Current (A)	Setting Current(A) code		Recommended HRT16	Recommended Contactor	Reference
38	0.1~0.16	P16	4	HDCX-09~38	HDRX38P16
	0.16~0.25	P25	4		HDRX38P25
	0.25~0.4	P4	4		HDRX38P4
	0.4~0.63	P63	4		HDRX38P63
	0.63~1	1	4		HDRX381
	1~1.6	1P6	4		HDRX381P6
	1.6~2.5	2P5	6		HDRX382P5
	2.5~4	4	10		HDRX384
	4~6	6	16		HDRX386
	5.5~8	8	20		HDRX388
	7~10	10	20		HDRX3810
	9~13	13	25	HDCX-12~38	HDRX3813
	12~18	18	35	HDCX-18~38	HDRX3818
	17~25	25	50	HDCX-25~38	HDRX3825
	23~32	32	63		HDRX3832
	30~38	38	80	HDCX-38	HDRX3838
65	17~25	25	50	HDCX-40~65	HDRX6525
	23~32	32	63		HDRX6532
	30~40	40	80		HDRX6540
	37~50	50	100		HDRX6550
	48~65	65	100		HDRX6565
93	23~32	32	63	HDCX-40~95	HDRX9332
	30~40	40	80		HDRX9340
	37~50	50	100	HDCX-50~95	HDRX9350
	48~65	65	100		HDRX9365
	55~70	70	125	HDCX-65~95	HDRX9370
	63~80	80	125	HDCX-80~95	HDRX9380
	80~93	93	160	HDCX-95	HDRX9393

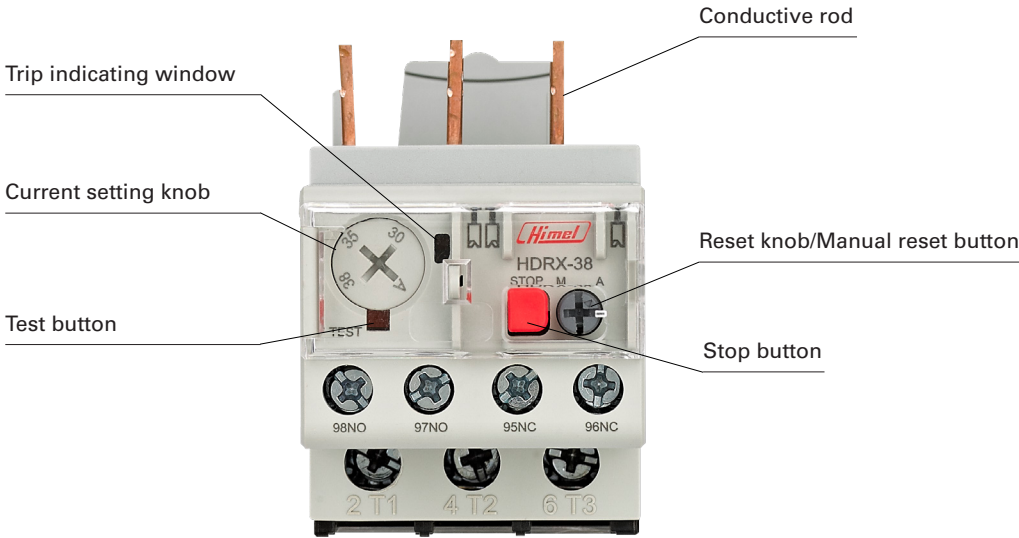


HDRX Thermal Overload Relays

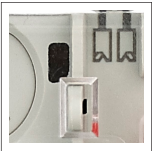
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Overview



1, Trip indicating window



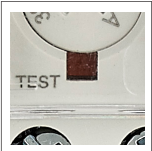
When the thermal overload relay tripped, the trip indicating window will show orange color, which means "tripped"

2, Current setting knob



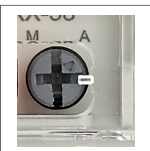
Set the adjusting current for the electric motor

3, Test button



Simulate "trip"(make NO, NC contacts act) to check the control circuit

4, Reset knob/Manual reset button



Reset knob:
When the wedge points to M: Manual reset
When the wedge points to A: Automatic reset
Manual reset button:
When the thermal overload relay tripped(indicating window shows orange color), push this button to reset the relay.

5, Stop button



Make the NC contacts act, but not affect the NO contacts. When push STOP button, the control circuit will be open, and motor stops working.

6, Conductive rod



Can be inserted into main circuit terminal of the contactor. The square rod increase the contact surface, and make the wire connection more tight.

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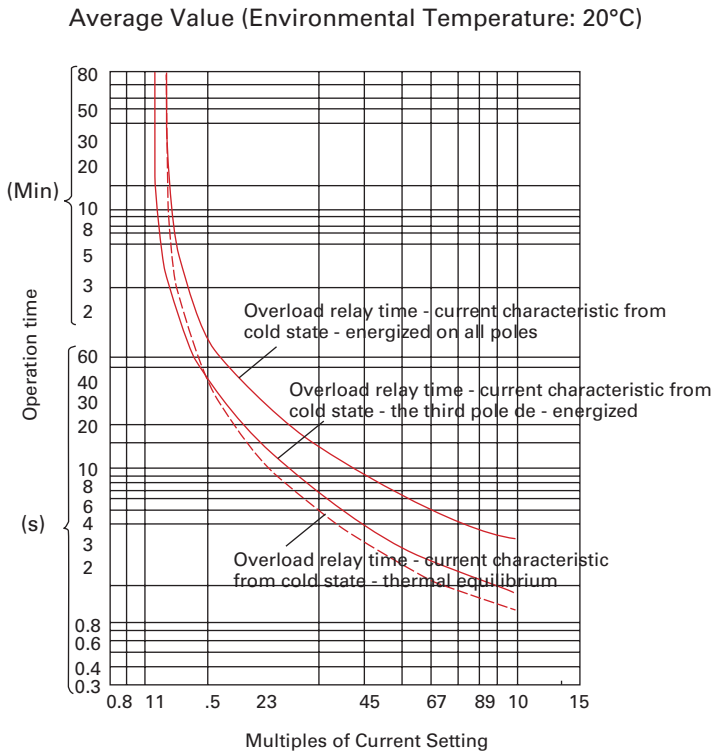
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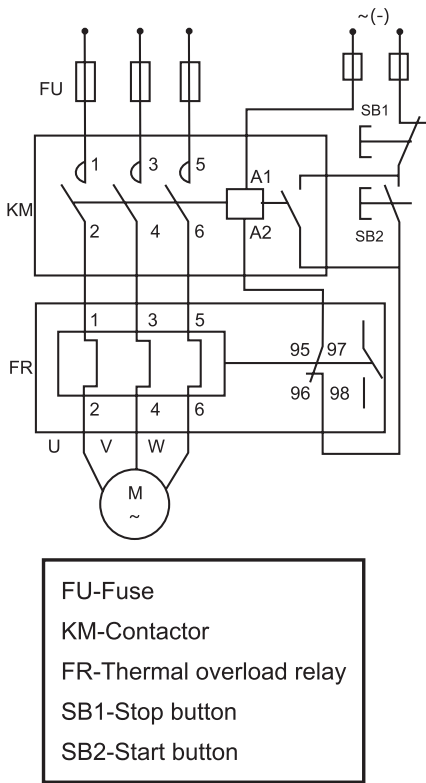
Tripping Characteristics

No.	Multiples of Current Setting		Tripping Time		Initial Condition	Reference Ambient Air Temperature
			Trip class 10A	Trip class 10		
Limits of operation of time-delay overload relays when energized on all poles						
1	1.05		Non-tripping within 2h	Non-tripping within 2h	Cold State	+20°C
2	1.25		Tripping within 2h	Tripping within 2h	After No.1 Test (Thermal Equilibrium)	
3	1.5		<2min	<4min	After No.1 Test (Thermal Equilibrium)	
4	7.2		2s<Tp≤10s	4s<Tp≤10s	Cold State	
Limits of operation of three-pole thermal overload relays when energized on two poles only						
When the value of current flowing in two poles and the third pole de-energized						
1	1.0	0.9	Non-tripping within 2h	Non-tripping within 2h	Cold State	+20°C
2	1.15	0	Tripping within 2h	Tripping within 2h	After No.1 Test (Thermal Equilibrium)	

Tripping Characteristics



Wiring Diagram



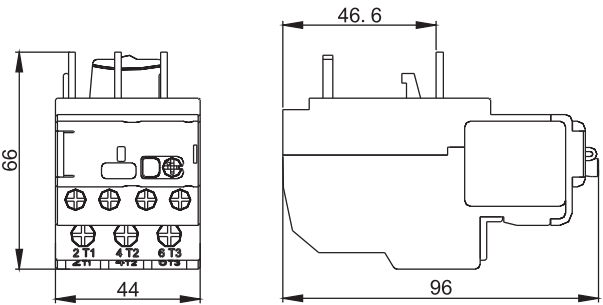
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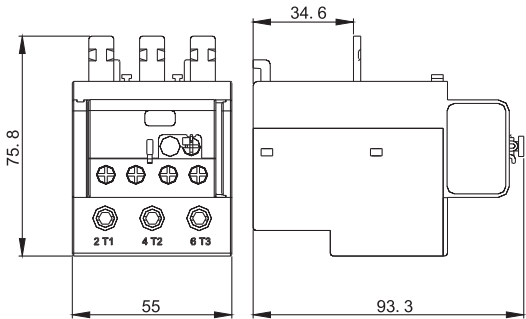


Installation Dimensions

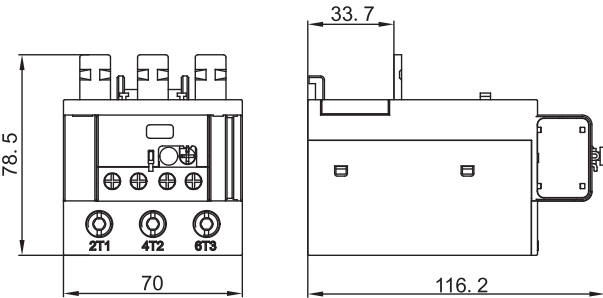
Overall Dimensional Drawing of HDRX-38



Overall Dimensional Drawing of HDRX-65

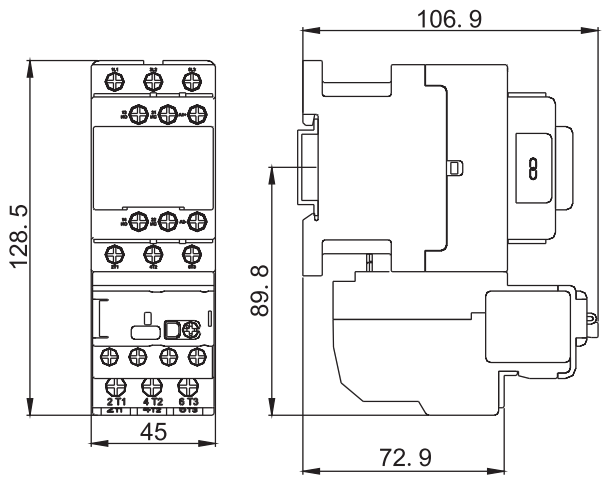


Overall Dimensional Drawing of HDRX-93

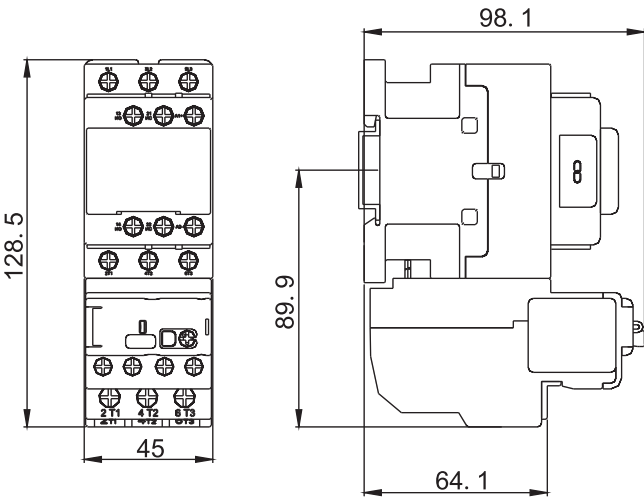


Installation Instruction

HDRX-38 With HDCX-09/12/18 DC Assembly Installation



HDRX-38 With HDCX-09/12/18 Assembly Installation

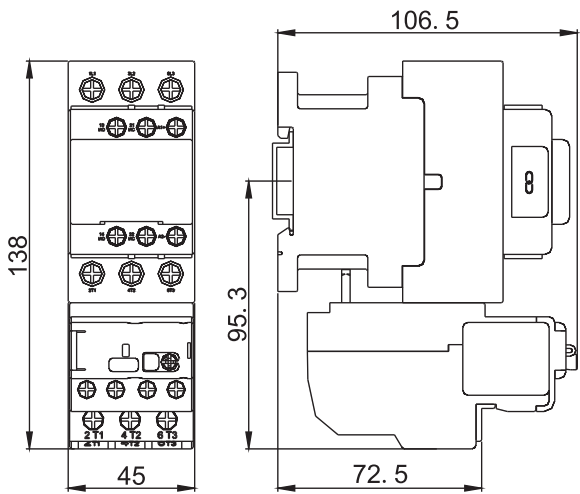


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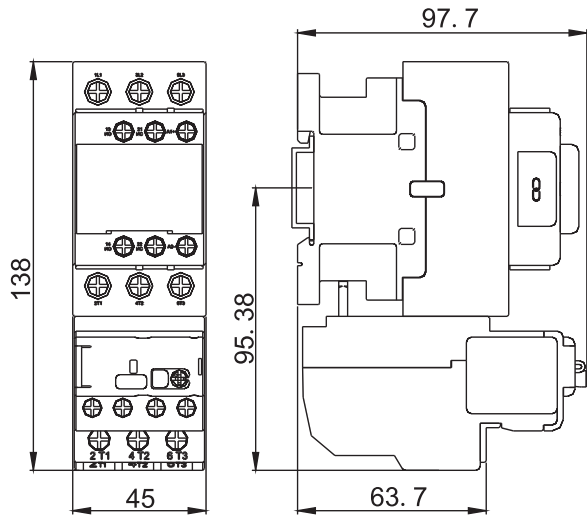
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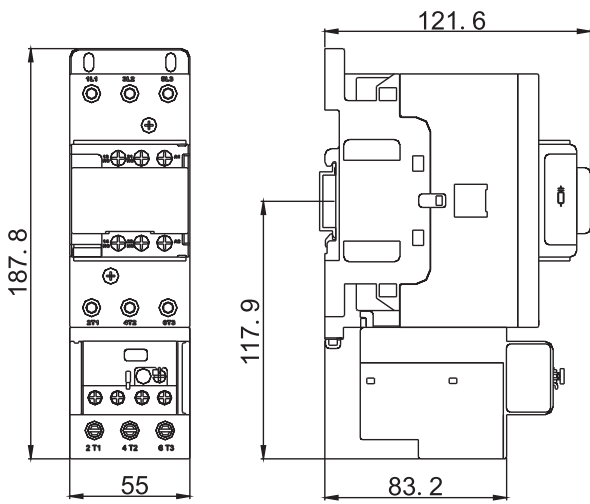
HDRX-38 With HDCX-25/32/38 DC Assembly Installation



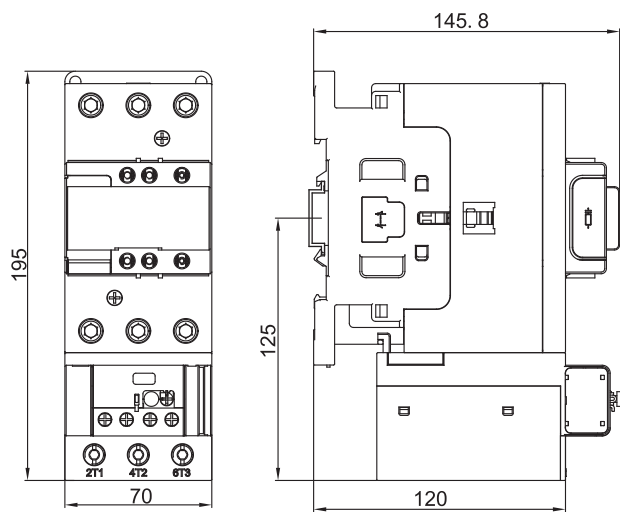
HDRX-38 With HDCX-25/32/38 Assembly Installation



HDRX-65 With HDCX-40/50/65 Assembly Installation



HDRX-93 With HDCX-80/95 Assembly Installation



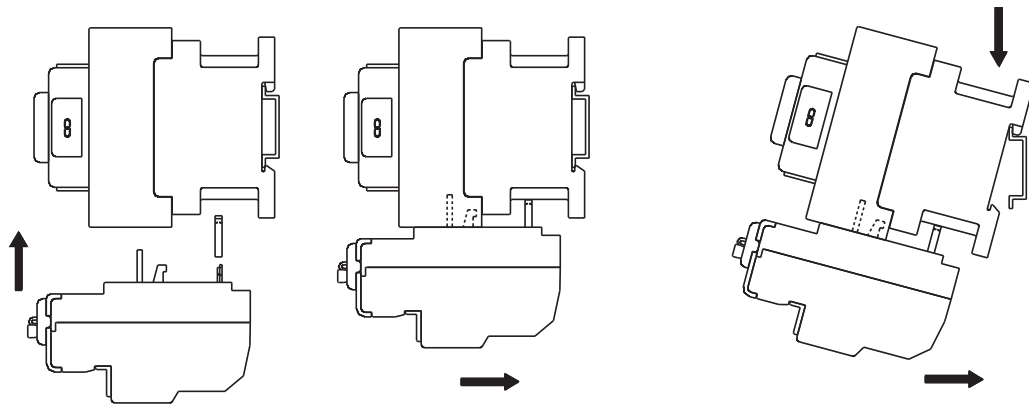
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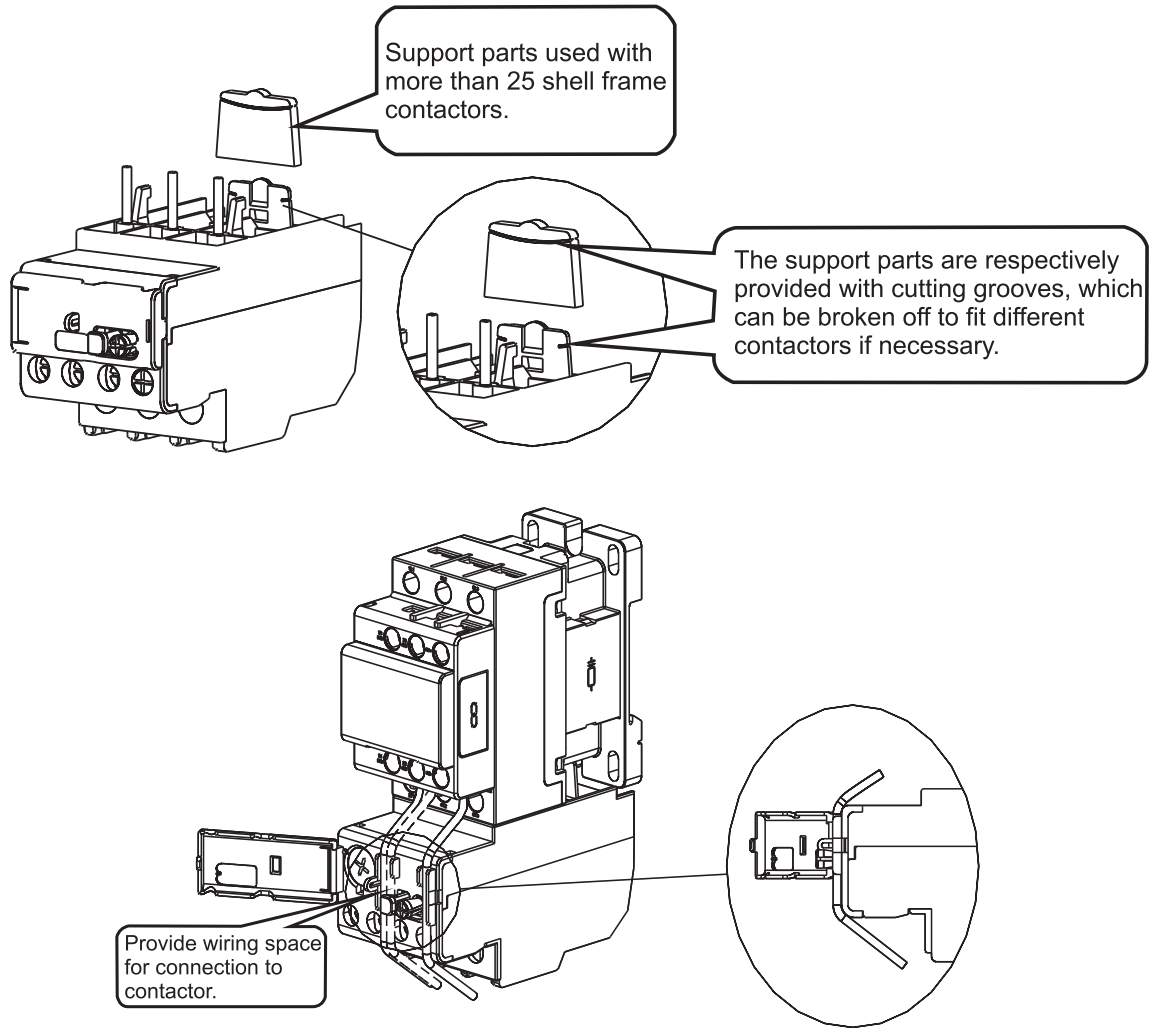
Installation Instruction

HDRX-38 Assembly Installation Instruction



Installation method 1: Install the contactor to the DIN rail, then install the thermal relay

Installation method 2: Assemble the contactor and thermal relay, then install them on the DIN rail.

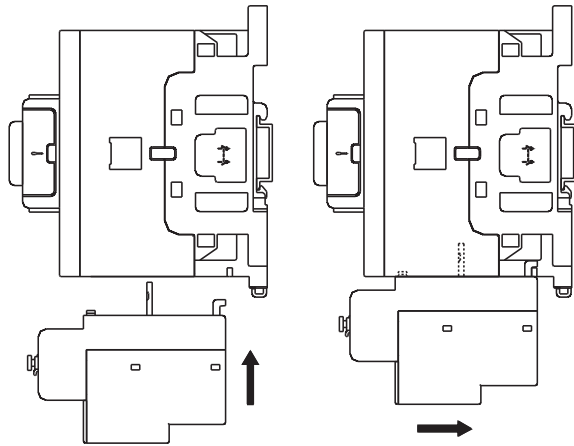


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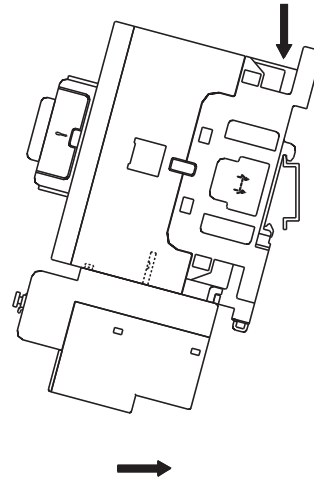
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HDRX-65/93 Assembly Installation Instruction



Installation method 1: Install the contactor to the DIN rail, then install the thermal relay.



Installation method 2: Assemble the contactor and thermal relay, then install them on the DIN rail.

