Noark

Catalog

RDS1
AC Rotary Switch-Disconnector

Excellent Products. Exceptional Value.

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ABOUT US

NOARK Electric is a global manufacturer of low-voltage electrical components for industrial applications. We specialize in motor controls and circuit protection for original equipment manufacturers. Our mission is to provide customers with the highest quality products at an exceptional value and back them with world-class service and support. Every NOARK product is tested and certified to the highest industry standards and covered by our exclusive five-year limited warranty.

Research and Development

The entire portfolio of high-quality NOARK products is designed for manufacturing and assembly (DFMA). Each component is developed in-house by our engineering team to meet the strictest standards and performance requirements. This dedication to excellence has led to the development of patented technology found in many of our products.

World-class Manufacturing

After being thoroughly tested, approved and certified – each NOARK product is sent into production at our state-of-the-art manufacturing facilities. This allows us to maintain strict quality control standards throughout the manufacturing process. In addition, NOARK Electric adheres to a policy of environmental protection and sustainability.

North American Distribution

NOARK's distribution centers are located in Pomona, CA and Kitchener, ON, with the aim of ensuring prompt and reliable deliveries of the entire product range to our customers all over North America. Our supply chain team works closely with our factories and logistics partners to ensure the availability of our products on the North American market and provide logistics services on the level which our customers expect. NOARK Electric is a subsidiary of the largest electrical manufacturing group in Asia with over 50 thousand employees and sales revenue of $22 billion USD. We have corporate facilities in Los Angeles, Shanghai and Prague to service the requirements of individual markets and countries.

140+	300+	20	22	3	10,000,000+	50,000+
Countries	Overseas Distributors	Overseas Subsidiaries	Logistics Centers	R & D Centers	Sq.Ft. Manufacturing Space	Employees Worldwide

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AC Rotary Switch-Disconnector

Product Overview

Noark RDS1 series AC rotary switch-disconnector complies with UL98 standard and can be used for isolation protection in AC 600V power systems under CE standard, its rated voltage can reach up to AC 690V. During the maintenance of electrical equipment, the product can isolate the equipment in need of power outage maintenance from the power supply, forming a clear disconnect point to ensure the safety of maintenance personnel and equipment.

Design Features

- Electrical lifecycle: 6,000 times; Mechanical lifecycle: 10,000 times;
- (Under UL standard) Current ratings: 30~100A; maximum voltage rating: 600V; (under IEC standard) current ratings: 30~125A; maximum voltage rating: 690V;
- DIN rail/board mounting and door mounting are both available for option.
- The switch can be equipped with up to 2 pairs of auxiliary contacts on both sides, with buckle design realizing easy loading and unloading.
- Widely used in industry and commerce, including power distribution, construction, petrochemical, etc.

Standards and certifications

- UL 98
- IEC/EN 60947-3
- GB/T 14048.3

RDS	1	B	30	3	S
RDS Series AC Rotary Switch-Disconnector	Frame size	Mounting Type	Current Rating	Number of Poles	Handle
	1: 125A@IEC 100A@UL	B: Board/DIN rail mounting	30：30 A	3：3 poles	S: Equipped with selector handle (Only for door mounting type)
		D: Door mounting	60：60 A	4：4 poles	Blank: Not equipped with handle, need additional purchase.
			100：100 A		
			125：125A (IEC Only)		

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AC Rotary Switch-Disconnector

Product Overview

Part Number	Product	Description
1002979	RDS1D303S	Rotary Disconnect Switch Door mounting 3P 30A Equipped with selector handle
1002980	RDS1D603S	Rotary Disconnect Switch Door mounting 3P 60A Equipped with selector handle
1002981	RDS1D1003S	Rotary Disconnect Switch Door mounting 3P 100A Equipped with selector handle
1002982	RDS1D1253S	Rotary Disconnect Switch Door mounting 3P 125A Equipped with selector handle
1002991	RDS1D304S	Rotary Disconnect Switch Door mounting 4P(N pole on the right) 30A Equipped with selector handle
1002992	RDS1D604S	Rotary Disconnect Switch Door mounting 4P(N pole on the right) 60A Equipped with selector handle
1002993	RDS1D1004S	Rotary Disconnect Switch Door mounting 4P(N pole on the right) 100A Equipped with selector handle
1002994	RDS1D1254S	Rotary Disconnect Switch Door mounting 4P(N pole on the right) 125A Equipped with selector handle
1600245	RDS1D304S	Rotary Disconnect Switch Door mounting 4P(N pole on the left) 30A Equipped with selector handle
1600246	RDS1D604S	Rotary Disconnect Switch Door mounting 4P(N pole on the left) 60A Equipped with selector handle
1600247	RDS1D1004S	Rotary Disconnect Switch Door mounting 4P(N pole on the left) 100A Equipped with selector handle
1600248	RDS1D1254S	Rotary Disconnect Switch Door mounting 4P(N pole on the left) 125A Equipped with selector handle
1002971	RDS1B303	Rotary Disconnect Switch Board/DIN rail mounting 3P 30A With no handle
1002972	RDS1B603	Rotary Disconnect Switch Board/DIN rail mounting 3P 60A With no handle
1002973	RDS1B1003	Rotary Disconnect Switch Board/DIN rail mounting 3P 100A With no handle
1002974	RDS1B1253	Rotary Disconnect Switch Board/DIN rail mounting 3P 125A With no handle
1002983	RDS1B304	Rotary Disconnect Switch Board/DIN rail mounting 4P(N pole on the right) 30A With no handle
1002984	RDS1B604	Rotary Disconnect Switch Board/DIN rail mounting 4P(N pole on the right) 60A With no handle
1002985	RDS1B1004	Rotary Disconnect Switch Board/DIN rail mounting 4P(N pole on the right) 100A With no handle
1002986	RDS1B1254	Rotary Disconnect Switch Board/DIN rail mounting 4P(N pole on the right) 125A With no handle
1600249	RDS1B304	Rotary Disconnect Switch Board/DIN rail mounting 4P(N pole on the left) 30A With no handle
1600250	RDS1B604	Rotary Disconnect Switch Board/DIN rail mounting 4P(N pole on the left) 60A With no handle
1600251	RDS1B1004	Rotary Disconnect Switch Board/DIN rail mounting 4P(N pole on the left) 100A With no handle
1600252	RDS1B1254	Rotary Disconnect Switch Board/DIN rail mounting 4P(N pole on the left) 125A With no handle
1103299	NEH1B2	Rotary Handle Grey IP66
1103300	NEH1R2	Rotary Handle Red IP66
1002999	ES20E	Extended Shaft 200mm 6*6mm²
1003000	ES32E	Extended Shaft 320mm 6*6mm²
1003001	ES40E	Extended Shaft 400mm 6*6mm²
1003004	AX1511L	Auxiliary Contact 1NO+1NC Mounting on the left
1003005	AX1511R	Auxiliary Contact 1NO+1NC Mounting on the right
1003006	AX1522L	Auxiliary Contact 2NO+2NC Mounting on the left
1003007	AX1522R	Auxiliary Contact 2NO+2NC Mounting on the right

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AC Rotary Switch-Disconnector

Product Selection Guide

Rated current (A)		3P		4P(N pole on the right)		4P(N pole on the left)	
		Product	Part Number	Product	Part Number	Product	Part Number
Door-mounting	30	RDS1D303S	1002979	RDS1D304S	1002991	RDS1D304S	1600245
	60	RDS1D603S	1002980	RDS1D604S	1002992	RDS1D604S	1600246
	100	RDS1D1003S	1002981	RDS1D1004S	1002993	RDS1D1004S	1600247
	125	RDS1D1253S	1002982	RDS1D1254S	1002994	RDS1D1254S	1600248

Rated current (A)		3P		4P(N pole on the right)		4P(N pole on the left)	
		Product	Part Number	Product	Part Number	Product	Part Number
Board/DIN rail mounting	30	RDS1B303	1002971	RDS1B304	1002983	RDS1B304	1600249
	60	RDS1B603	1002972	RDS1B604	1002984	RDS1B604	1600250
	100	RDS1B1003	1002973	RDS1B1004	1002985	RDS1B1004	1600251
	125	RDS1B1253	1002974	RDS1B1254	1002986	RDS1B1254	1600252

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AC Rotary Switch-Disconnector

UL98 Specifications

Product Type			RDS1		
Frame Current (A)			100		
Number of Foles			3P, 4P		
Rated Voltage (V)			600		
Rated Insulation Voltage Ui (V)			750		
Rated Impulse Withstand Voltage Uimp (kV)			8		
Rated Making Capacity Icm (peak) (kA)			3.6		
Rated Short-Time Withstand Current Icw (Valid Value)			2.5kA/1s		
General Switching	Frame Current (A)		30	60	100
	Rated Voltage (V)		600		
The Maximum Rated Current of Motor Switching / FLA	Three-phase Circuit	240V	10HP/28A	20HP/54A	30HP/80A
		480V	20HP/27A	40HP/52A	50HP/65A
		600V	30HP/32A	40HP/41A	50HP/52A
	Single-phase Circuit	120V	2HP/24A	3HP/34A	5HP/56A
		240V	5HP/28A	7.5HP/40A	15HP/68A
		480V	--	--	25HP/55A
		600V	--	--	20HP/35A
Restricted Short-Circuit Current Rating (Fuse Selection)	Matched Switch-disconnector		Rated Breaking Capacity	Fuse Rated Current	Fuse Classification Type
	RDS1B (D)30**		AC600V, 200kA	60A	Class J, Class T
	RDS1B (D)60**				
	RDS1B (D)100**		AC600V, 200kA	100A	
			AC600V, 50kA	150A	
Operation Life	Electrical Endurance (Operations)		6,000		
	Mechanieal Endurance (Operations)		10,000		
Terminal Wiring Capacity (M8)	Switch Main Body AWG (mm^2)	30A, 60A	14-4 (2.5~25)		
		100A	8-1/0 (10~70)		
	Auxiliary Contacts AWG (mm^2)		22 (0.3~0.4)		
Terminal Tightening Torque (N·m)	Main Circuit		6		
	Auxiliary Circuit		0.8		
Actuating Torque (N·m)			1.5~2		
Degree of Protection (IP)	RDS1 Main Body		IP20		
	SH1 Handle		IP65		
Mounting Mode			Front actuation		
Ambient Temperature			-40℃~+85℃		

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AC Rotary Switch-Disconnector

IEC Specifications

Product Type			RDS1			
Frame Current (A)			125			
Number of Poles			3P, 4P			
Rated Voltage (V)			415/440/500/690			
Rated Operation Current (A)	Voltages	Utilization Category	30A	60A	100A	125A
	415V	AC-21A AC-22A	40	63	100	125
	500V					
	690V					
	415V	AC-23A	40	63	80	90
	440V				65	78
	500V				60	70
	690V			40	40	50
Rated Insulation Voltage Ui (V)			750			
Rated Impulse Withstand Voltage Uimp (kV)			8			
Rated Making Capacity Icm (peak) (kA)			3.6			
Rated Short-Time Withstand Current Icw (Valid Value)			2.5kA/1s			
Operation Life	Electrical Endurance(Operations)		6,000			
	Mechanieal Endurance(Operations)		10,000			
Terminal Wiring Capacity (M8)	Switch Main Body AWG (mm^2)	30A, 60A	14-4 (2.5~25)			
		100A, 125A	8-1/0 (10~70)			
	Auxiliary Contacts AWG (mm^2)		22 (0.3~0.4)			
Terminal Tightening Torque (N·m)	Main Circuit		6			
	Auxiliary Circuit		0.8			
Actuating Torque (N·m)			1.5~2			
Degree of Protection (IP)	RDS1 Main Body		IP20			
	SH1 Handle		IP65			
Mounting Mode			Front actuation			
Ambient Temperature			-40℃~+85℃			
Certification			CCC/CE			

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AC Rotary Switch-Disconnector

De-rating Specifications and Wiring Diagram

Temperature De-rating

When the ambient temperature changes within its operating temperature range, please refer to the table below for the Temperature Compensation Coefficient.

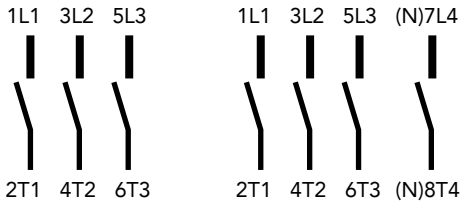
Ambient temperature (℃)	70	75	80	85
Operating current compensation coefficient	1	0.95	0.92	0.88
Operating voltage compensation coefficient	1	1	1	1
Power frequency withstand voltage (kV)	6	6	6	6

Elevation De-rating

Breaker elevation de-rating with dielectric strength above 6,561 ft (2,000 m)

Altitude (m)	6,561(2,000)	9,842(3,000)	13,123(4,000)	16,404(5,000)
Operating current compensation coefficient	1	1	1	1
Operating voltage compensation coefficient	1	0.93	0.88	0.82
Power frequency withstand voltage (kV)	6	6	6	5

Wiring Diagram



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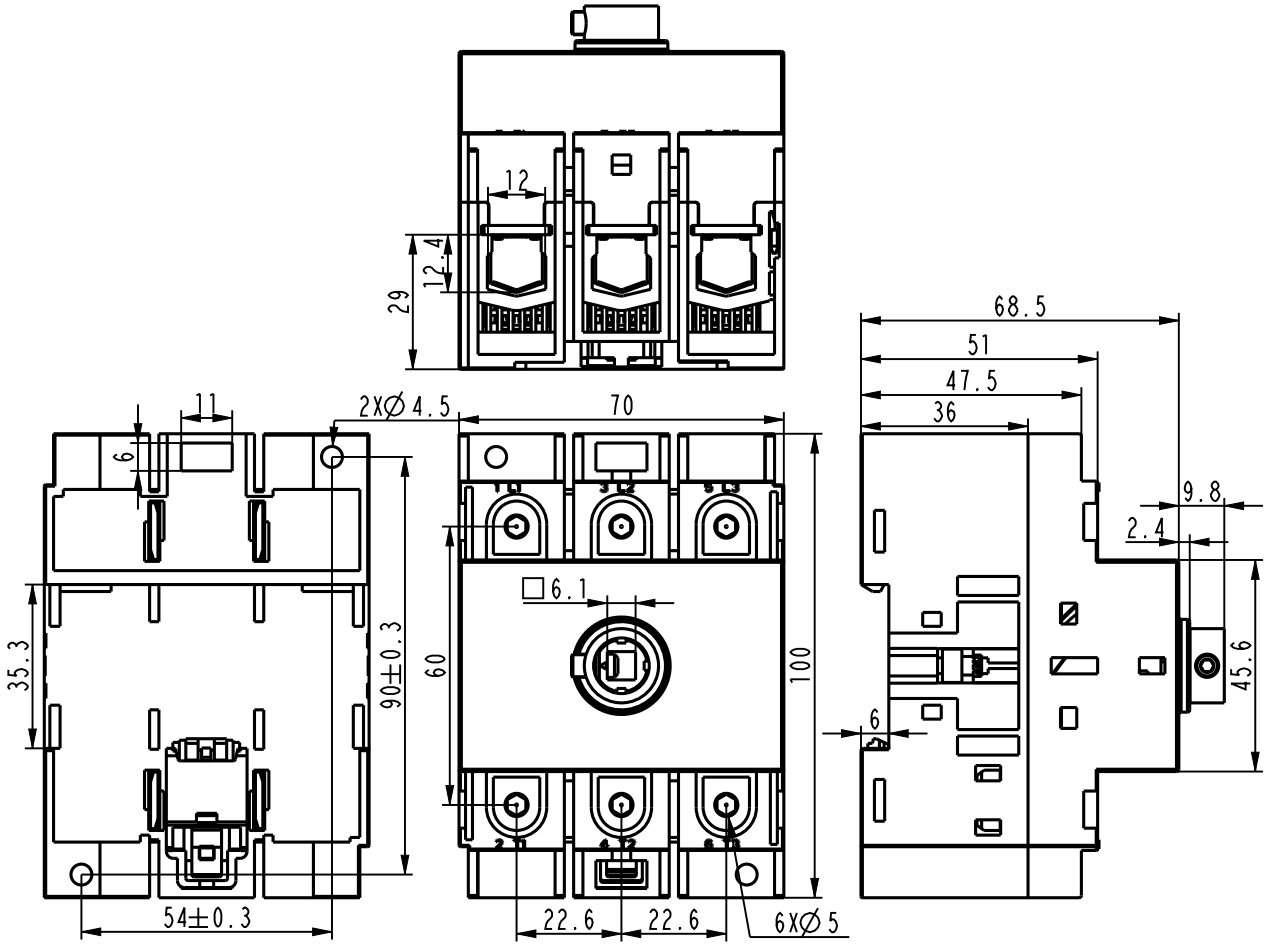
AC Rotary Switch-Disconnector

Dimensions

Board/DIN rail mounting

3P

Unit: mm



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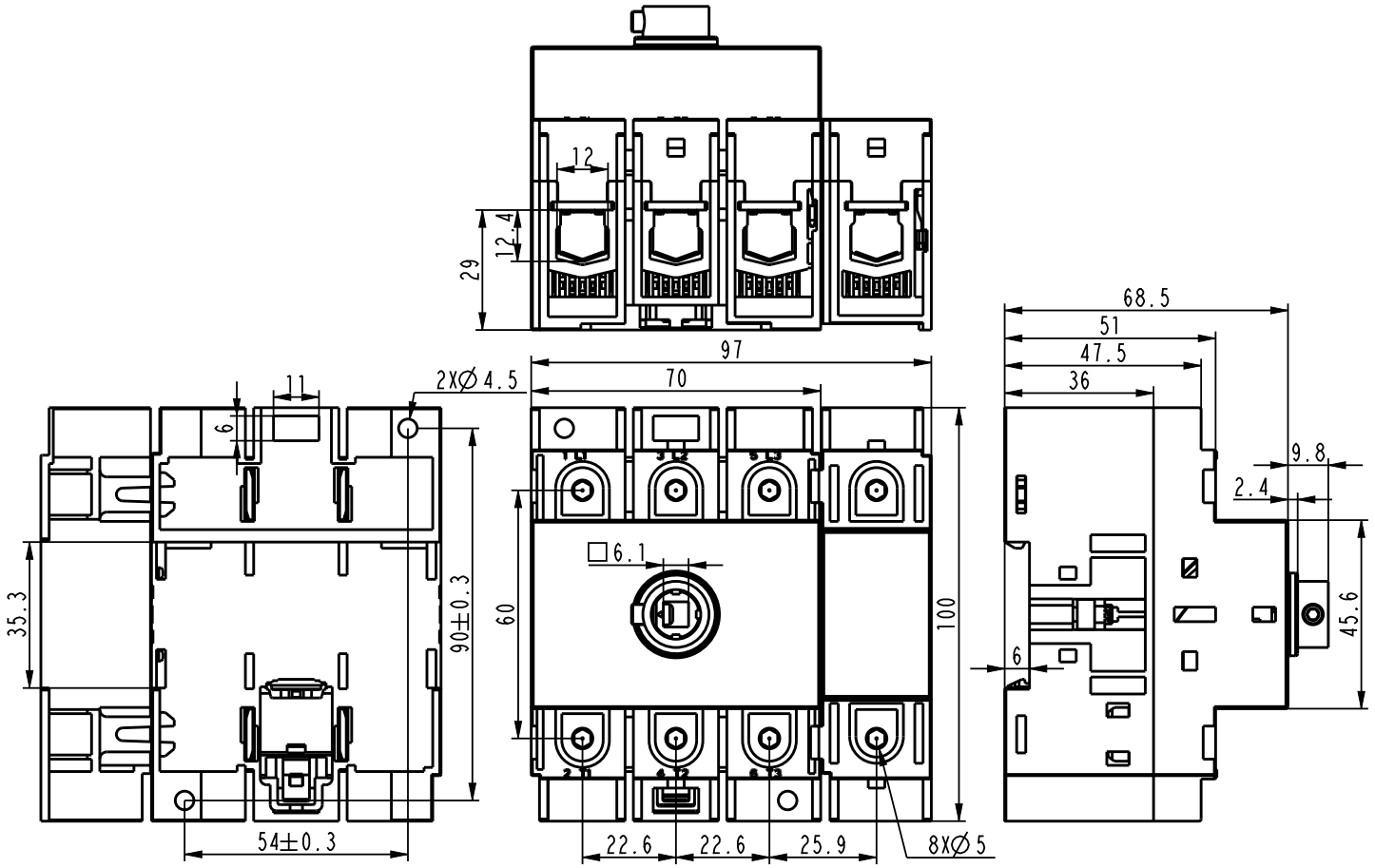
AC Rotary Switch-Disconnector

Dimensions

Board/DIN rail mounting

4P

Unit: mm



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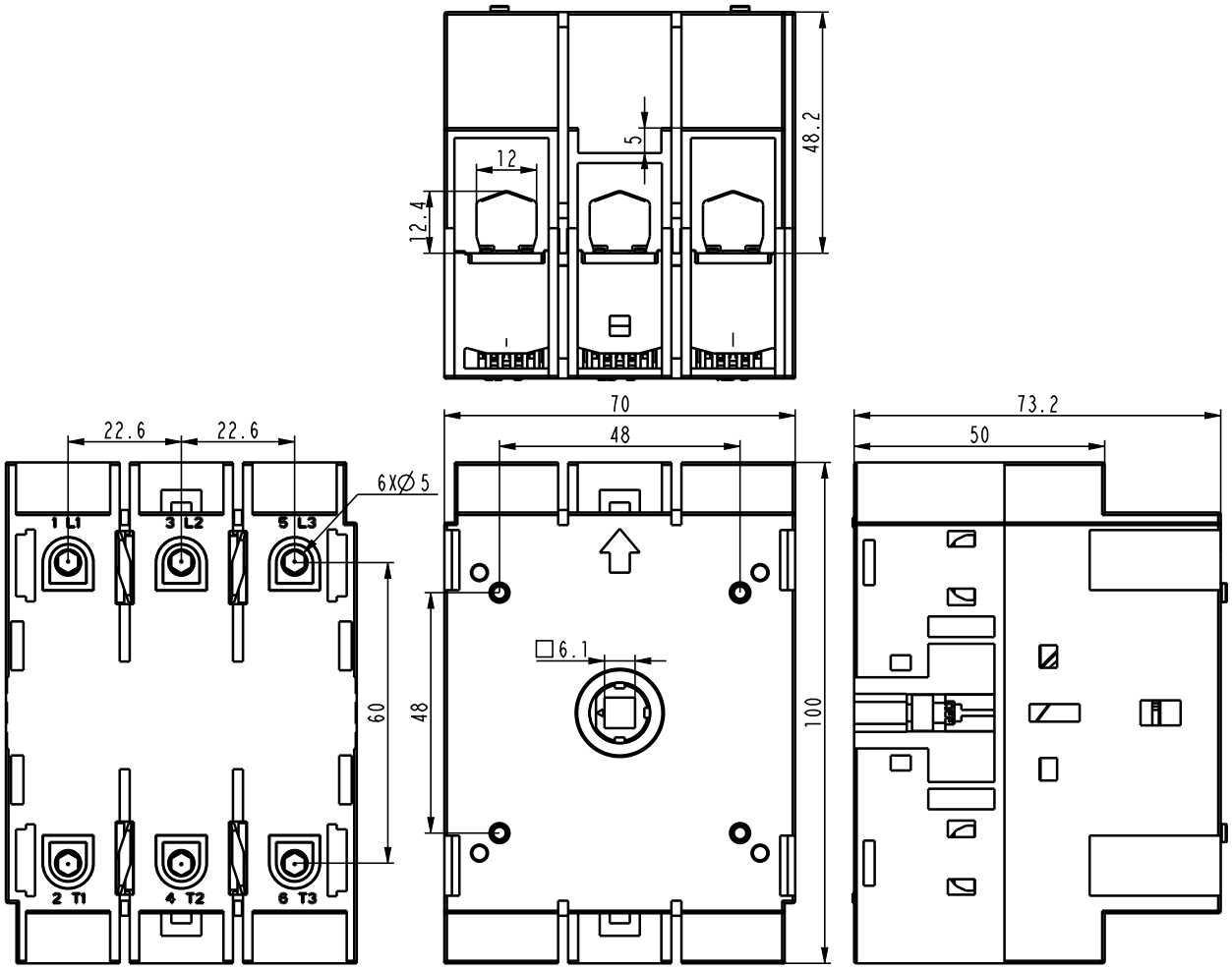
AC Rotary Switch-Disconnector

Dimensions

Door mounting

3P

Unit: mm



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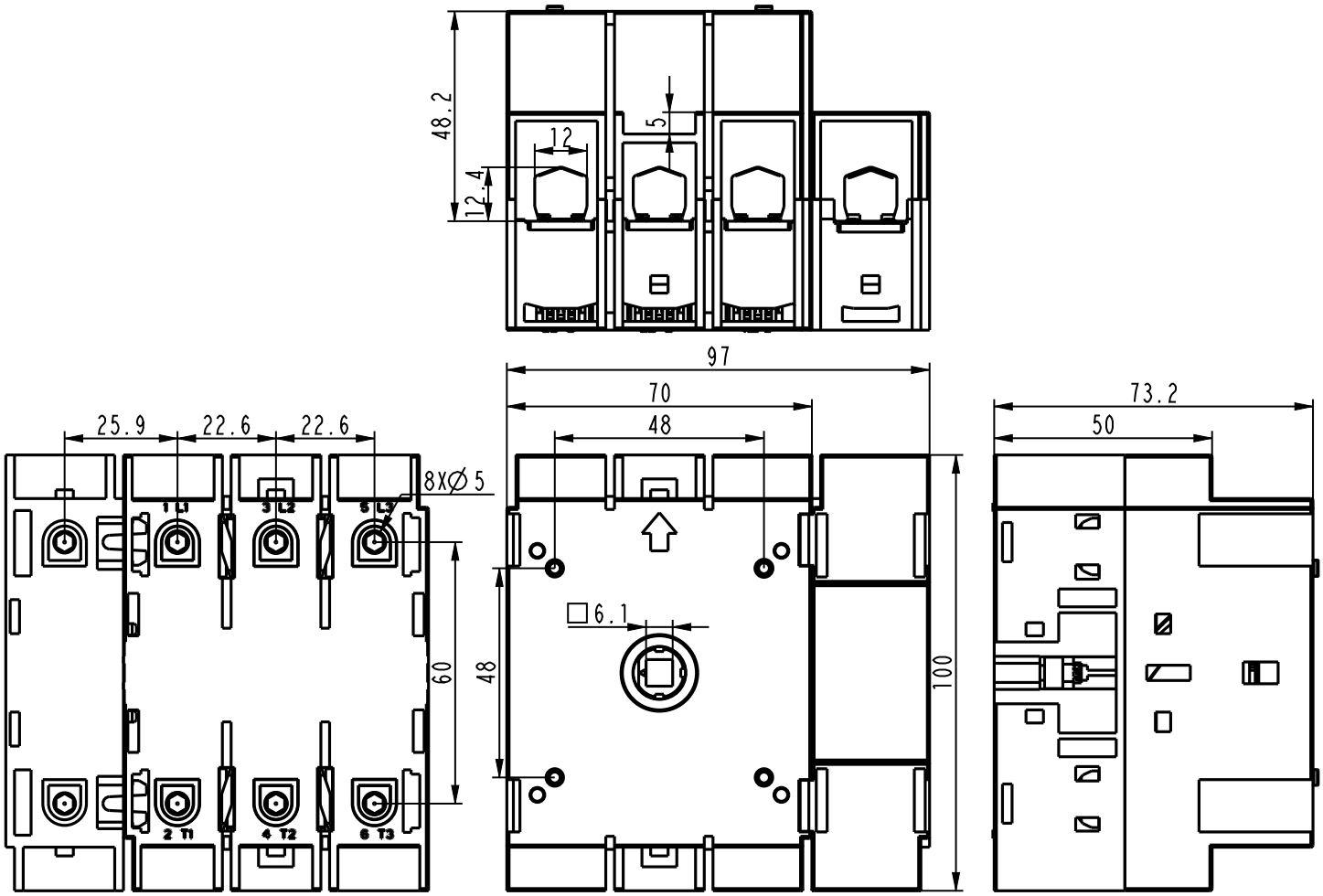
AC Rotary Switch-Disconnector

Dimensions

Door mounting

4P

Unit: mm



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Accessory

Pistol Handles, Extended Shaft

NEH1	B	2
Description	Color	Standard
Pistol handle*	B: Grey	2：IP66
	R: Red	

ES	20	E
Description	Length	Cross-sectional area
Extended shaft	20：200mm	E：6*6mm²
	32：320mm	
	40：400mm	

Description		Product	Part Number
Pistol handle	Red	NEH1R2	1103300
	Grey	NEH1B2	1103299
Extended shaft	200mm	ES20E	1002999
	320mm	ES32E	1003000
	400mm	ES40E	1003001

*1. Pistol handles need to be ordered together with extended shafts.

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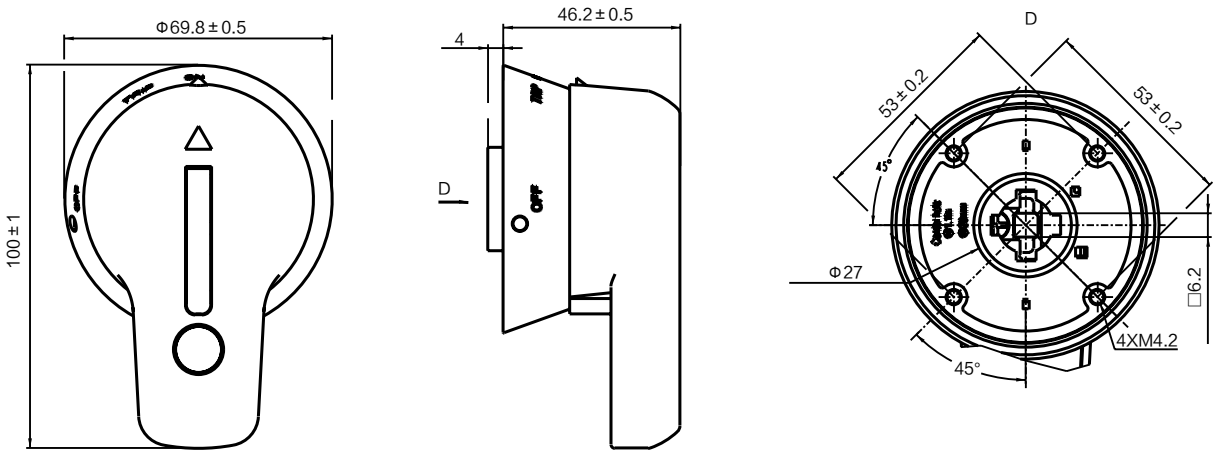
Accessory

Pistol Handles, Extended Shaft

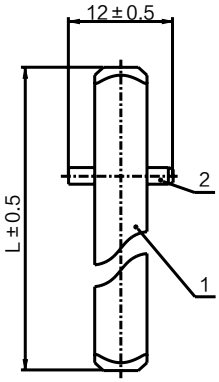
Pistol handle

Unit: mm



Extended shaft

Unit: mm



Product	L(mm)
ES20E	200
ES32E	320
ES40E	400

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Accessory

Auxiliary Contact

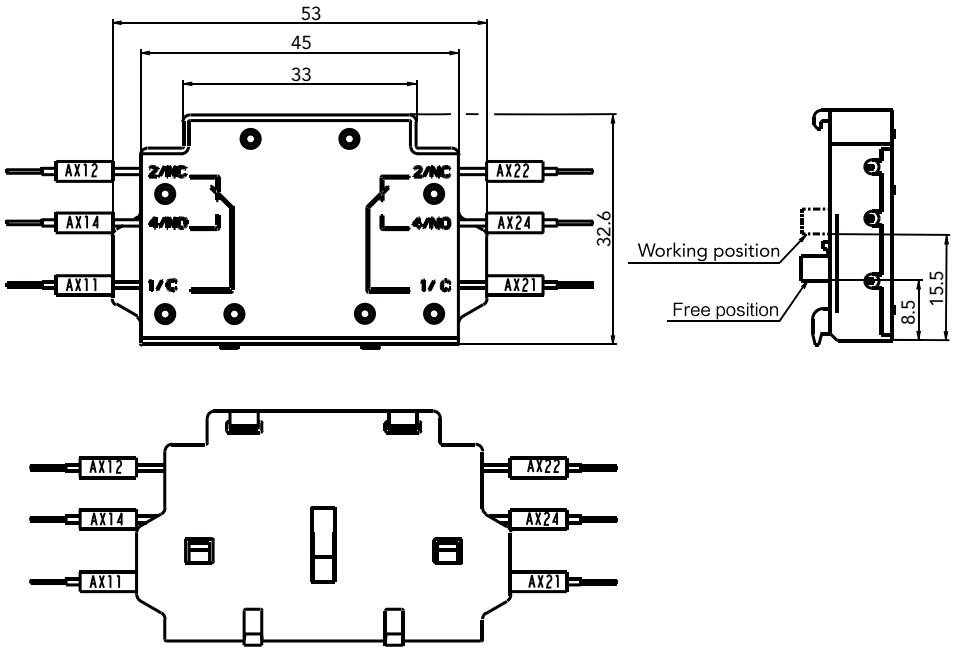
AX15	11	L
Description	**Auxiliary contact**	**Mounting direction**
Auxiliary contact	11：1NO+1NC	L: Mounting on the left side *
	22：2NO+2NC	R: Mounting on the right side

Description		Product	Part Number
Auxiliary contact	1NO+1NC, mounting on the left side	AX1511L	1003004
	1NO+1NC, mounting on the right side	AX1511R	1003005
	2NO+2NC, mounting on the left side	AX1522L	1003006
	2NO+2NC, mounting on the right side	AX1522R	1003007

Auxiliary contact	When switch is off	When switch is on
Diagram	AX12(AX22) AX11(AX21) AX14(AX24)	AX12(AX22) AX11(AX21) AX14(AX24)

Auxiliary contact

Unit: mm



* Since 4P switch has already been equipped with N phase on the left side, it can only be equipped with N phase on the right side.

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NOARK Electric USA
2188 Pomona Blvd.
Pomona, CA 91768
(626) 330-7007
nasales@noark-electric.com

NOARK Electric Canada
975 Bleams Rd. Unit 3
Kitchener, ON N2E 3Z5
519-790-0605
casales@noark-electric.com

na.noark-electric.com

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