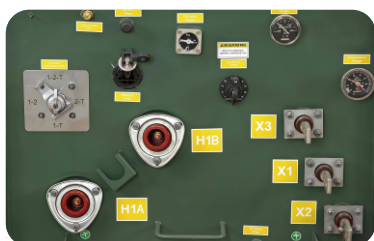
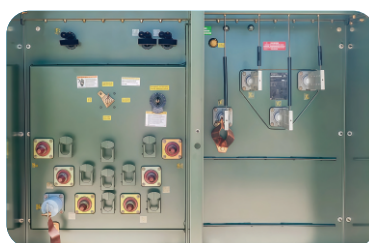


PRODUCT INTRODUCTION

● Transformer components



BRIEF INTRODUCTION

SUVELL Powering the World

SUVELL supplies essential power accessories to over 200 enterprises worldwide, ensuring the safety and efficiency of global power systems. With a modern 5,000² production base and a team of professional electrical engineers, we produce high-quality transformers, switchgear, cables, and transmission line components.

Our technical expertise and reliable products make us a trusted partner in power infrastructure across a wide range of industries.



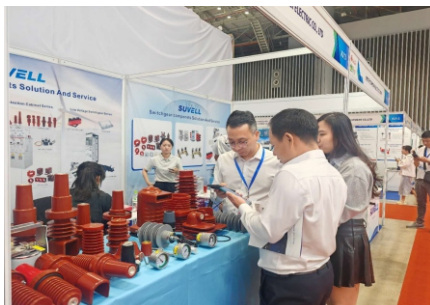
Produce equipment



Testing & QC



Global markets





Two position Series



Four position Series



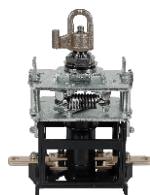
SUVELL

Suvell has the more selections

15-25KV 2-Position Loadbreak Switch



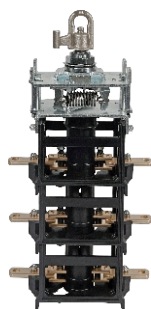
BFYI-25/630-J1
Single-phase



BFYI-25/630-J1L
Single-Phase
Hinged Cover



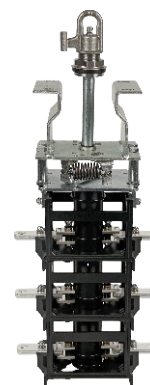
BFYI-25/630
Three-phase



BFYI-24/630-25-L
Three-Phase
Bolt in type



BFYI-25/630-P
Three-Phase
(side hole operate)



BFYI-25/630-D
Three-phase
Pad-Mounted
(under ground type)

35KV 2-Position Loadbreak Switch



BYFI-40.5/630-25-J1
Single-phase



BYFI-40.5/630-25
Three-phase



BYFI-40.5/630-25-L
Three-Phase
Lock type



BYFI-40.5/630-25-J1-L
Single-Phase
Lock type

15-25KV 4-Position Loadbreak Switch



YZFN-20/630-20-J1
Single-phase



YZFN-20/630-20-T
Three-phase



YZFN-20/630-20-V
Three-phase



YZFN-20/630-20-S
Three-phase



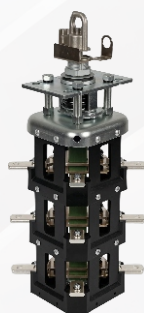
FYN33-25/630-25-J1
Single-phase
T-blade



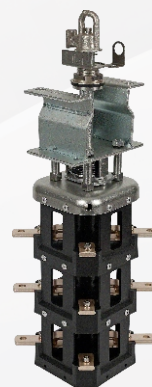
FYN33-25/630-25
Three-phase
T-blade



FYN33-25/630-25-J1-MBB
Single-phase



FYN33-25/630-25-MBB
Three-phase



FYN33-25/630-25-D
Three-phase
Embedded Type

35KV 4-Position Loadbreak Switch



FYN33-40.5/630-25-J1
Single-phase
T-blade



FYN33-40.5/630-25
Three-phase
T-blade



FYN33-40.5/630-25-MBB
Three-phase
four-position



FYN33-40.5/630-25-J1-MBB
Single-phase
Semicircular Rotor

BFYI-25 Two-Position, Oil Loadbreak Switch (LBS)

0 General

1. Overview

The BFYI-25 is a two-position, oil loadbreak switch (LBS) designed for 25kV, 50/60Hz pad-mounted transformers. It was developed to meet the need for higher voltage ratings in modern combination transformers.

2. Key Features

Type: Oil-immersed for reliable insulation and arc quenching.

Operation: Spring-driven, three-phase simultaneous operation for rapid and reliable making and breaking of rated load currents.

Capable of withstanding specified short-circuit conditions.

Contacts: Features a double-break floating contact bridge system for excellent conductivity, low resistance, and high fault current withstand capability.

Positions: Two clear positions: "OPEN" and "CLOSE".

3. Configuration & Options

Control: Simple 90° or 120° rotary operation (Close=Clockwise, Open=Counterclockwise).

Applications: Depending on the different needs of the power grid, the loadbreak switches can be configured differently to serve as control equipment for terminal type combined transformers or to form a ring network type combined transformer using three loadbreak switches.

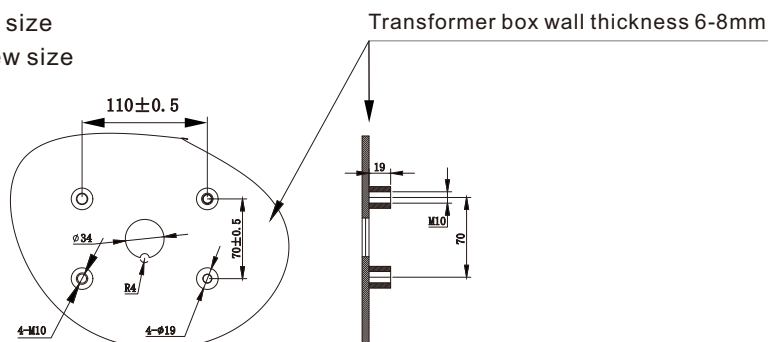
Accessories: Available with auxiliary switches and motorized operators for automation.

Corrosion Protection: Optional C3, C4, or C5 protection levels to suit environmental requirements.

0 Parameters

Name		Unit	BFYI-15/630-20	BFYI-(15-25)/630-25
Rated voltage		KV	15	25
Power frequency withstand voltage	Ground,interphase	KV	65	
	Isolating distance	KV	79	
Lightning impulse withstand voltage	Ground,interphase	KV	125	
	Isolating distance	KV	145	
Rated current		A	630	630
Rated short-circuit withstand current		KA	20/4S	25/4S
Rated peak withstand current		KA	50	63
Main circuit resistance		$\mu\Omega$	<200	
Mechanical life		times	>3000	

Transformer box opening size
and switch mounting screw size



Note: Product related information is constantly updated. Please confirm relevant information with our company before placing an order.

① Wiring Schematics (Four position LBOR Switch)

SWITCH TYPE	TYPICAL DECAL STENCIL LAYOUT	VIEW OF CONTACTS FROM FRONT (HANDLE) END OF SWITCH	POSITION 1 FRONT SCHEMATIC AS SHIPPED AND AS SHOWN AT LEFT	POSITION 2 SCHEMATIC SWITCH HANDLE ROTATED 90 CLOCKWISE FROM POSITION 1	POSITION 3 SCHEMATIC SWITCH HANDLE ROTATED 90 CLOCKWISE FROM POSITION 2	POSITION 4 SCHEMATIC SWITCH HANDLE ROTATED 90 CLOCKWISE FROM POSITION 3
STRAIGHT BLADE	CLOSE OPEN OPEN CLOSE					
SELECTOR BLADE ON-OFF	CLOSE OPEN OPEN OPEN					
SELECTOR BLADE 1 BLADE SIDE	LINE A TO C OPEN LINE B TO C OPEN					
SELECTOR BLADE 1 BLADE CENTER	LINE A TO C OPEN OPEN LINE B TO C					
V-BLADE BREAK BEFORE MAKE	LINES A & B TO C LINE A ONLY TO C LINE B ONLY TO C OPEN (ALL)					
V-BLADE MAKE BEFORE BREAK	LINES A & B TO C LINE A ONLY TO C LINE B ONLY TO C OPEN (ALL)					
T-BLADE BREAK BEFORE MAKE	LINES A & B TO C LINE A ONLY TO C LINE B ONLY TO C LINES A TO B C OPEN					
T-BLADE MAKE BEFORE BREAK	LINES A & B TO C LINE A ONLY TO C LINE B ONLY TO C LINES A TO B C OPEN					

Note:

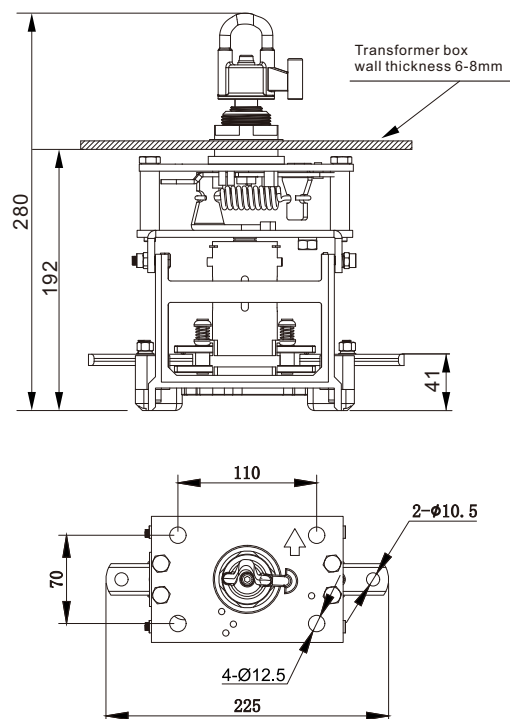
1. Switch center is pivot point. Black segments of blade rotate. White outlined segments are stationary.

2. Other position sequences available - consult factory for details.

BFYI-25/630-J1



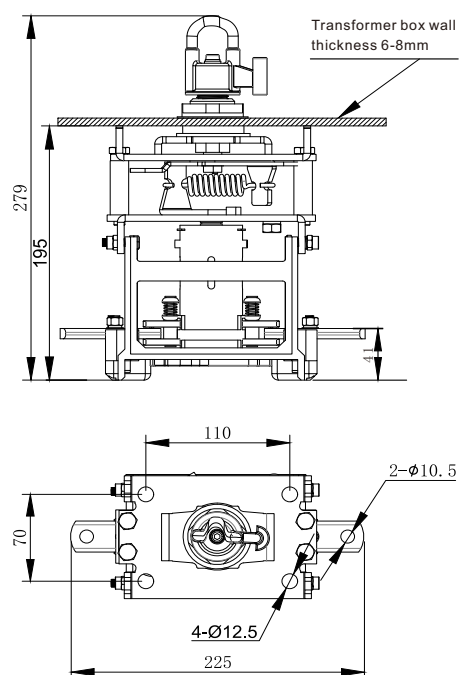
Single-phase



BFYI-25/630-J1-L



Single-Phase
with lock

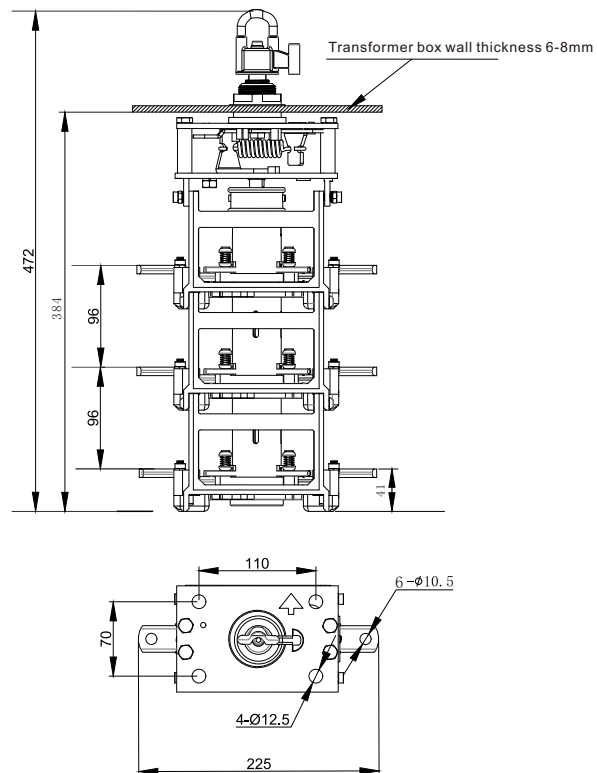


Note: Product related information is constantly updated. Please confirm relevant information with our company before placing an order.

BFYI-25/630



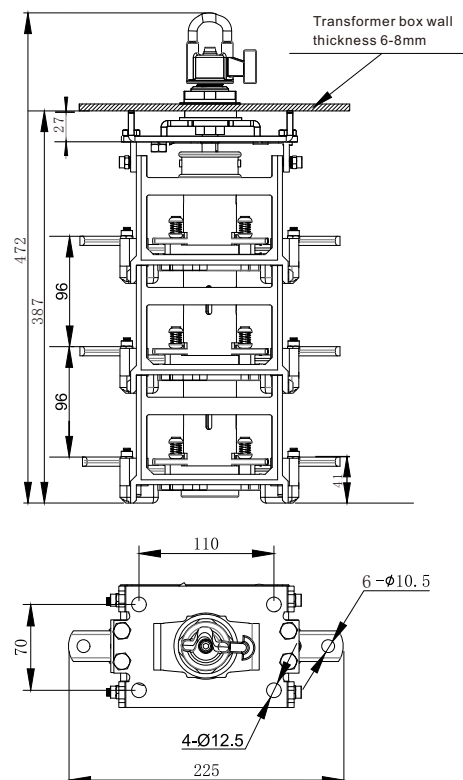
Three-phase



BFYI-25/630-25-L



Three-Phase
with lock

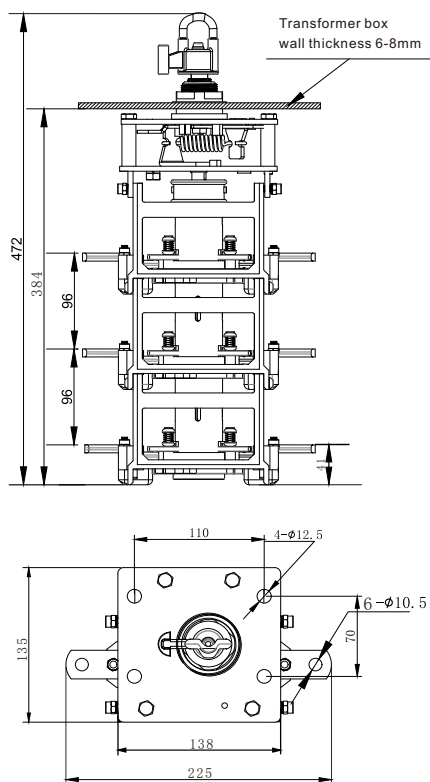


Note: Product related information is constantly updated. Please confirm relevant information with our company before placing an order.

BFYI-25/630- P



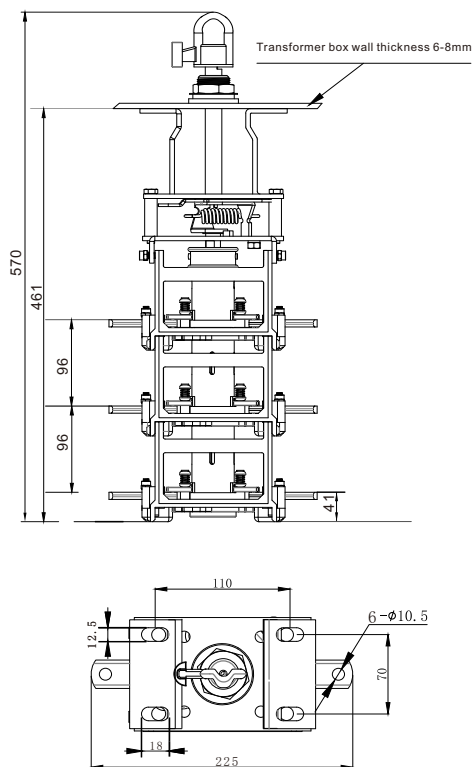
Three-Phase
(side hole operate)



BFYI-25/630-D



Three-phase
Pad-Mounted (under ground type)



Note: Product related information is constantly updated. Please confirm relevant information with our company before placing an order.

BYFI-40.5 Two-Position, Oil Loadbreak Switch (LBS)

General

BYFI-40.5 type two-position oil loadbreak switch is designed for compact substations with an AC frequency of 50Hz or 60Hz and a rated voltage of 35kV. It is a specialized loadbreak switch developed by our company to meet the increasing voltage level requirements of domestic compact substations.

The loadbreak switch features a two-position construction, using transformer oil as both the insulation and arc-extinguishing medium. It incorporates a spring-operated mechanism for three-phase simultaneous operation, enabling accurate and reliable making and breaking of rated load currents, as well as withstanding short-time fault currents under specified conditions.

The contact system employs a double-break floating contact bridge design, ensuring excellent performance, low resistance, and high current-carrying capacity. A unique structural design provides effective contact force compensation, significantly enhancing the short-circuit withstand capability of the contacts.

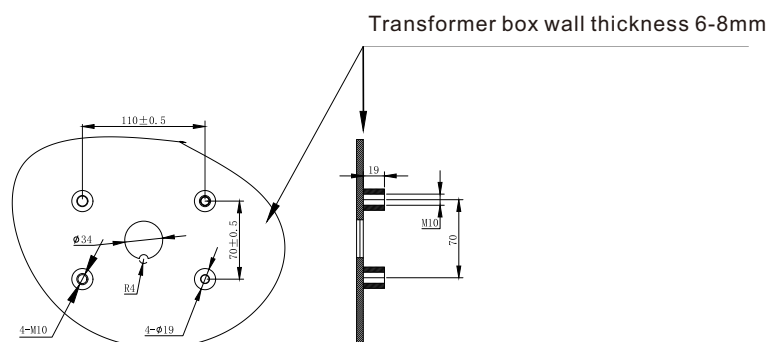
The switch has two positions: "OPEN" and "CLOSE". Closing is achieved by rotating clockwise, while opening is performed counterclockwise, with a 90° rotation angle. Depending on power supply requirements and configuration, one loadbreak switch can be used as a control device for a terminal-type compact substation, while three switches can form a ring main unit configuration. An auxiliary travel switch and an electric operating mechanism are available as options to adapt to various types of substations.

Customers may select protection classes such as C3, C4, or C5 according to design specifications.

Parameters

Name	Unit	BYFI-40.5/630-20	BYFI-40.5/630-25	BYFI-40.5/630-31.5
Rated voltage	KV		40.5	
Power frequency withstand voltage	Ground,interphase	KV	95	
	Isolating distance	KV	118	
Lightning impulse withstand voltage	Ground,interphase	KV	200	
	Isolating distance	KV	215	
Rated current	A		630	
Rated short-circuit withstand current	KA	20/2S	25/4S	31.5/4S
Rated peak withstand current	KA	50	63	80
Main circuit resistance	$\mu\Omega$		<200	
Mechanical life	times		>3000	

Transformer box opening size
and switch mounting screw size

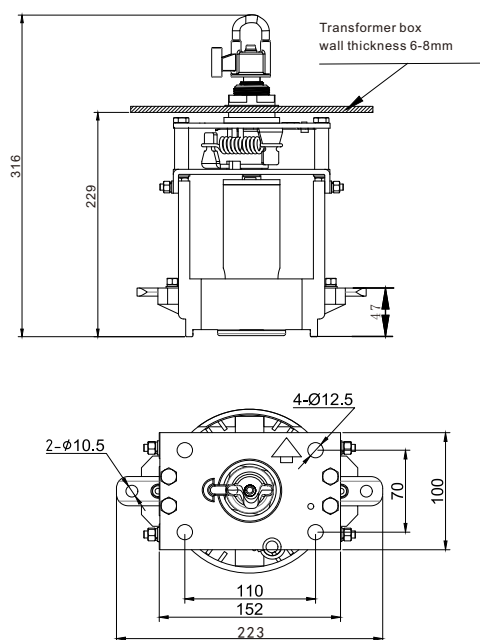


Note: Product related information is constantly updated. Please confirm relevant information with our company before placing an order.

BYFI-40.5/630-25-J1



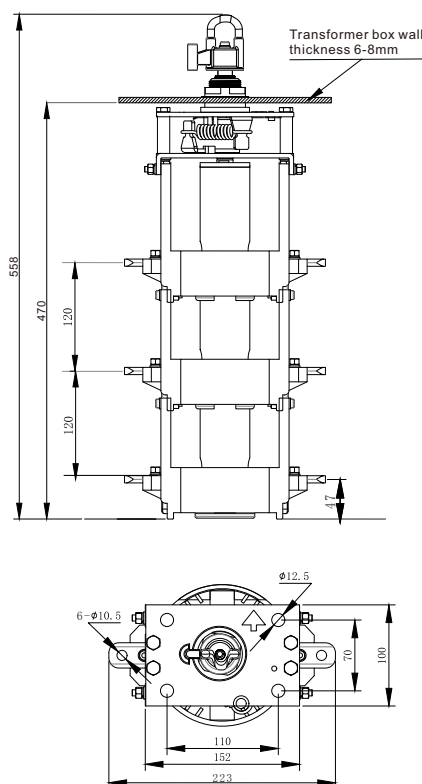
Single-phase



BYFI-40.5/630-25



Three-phase

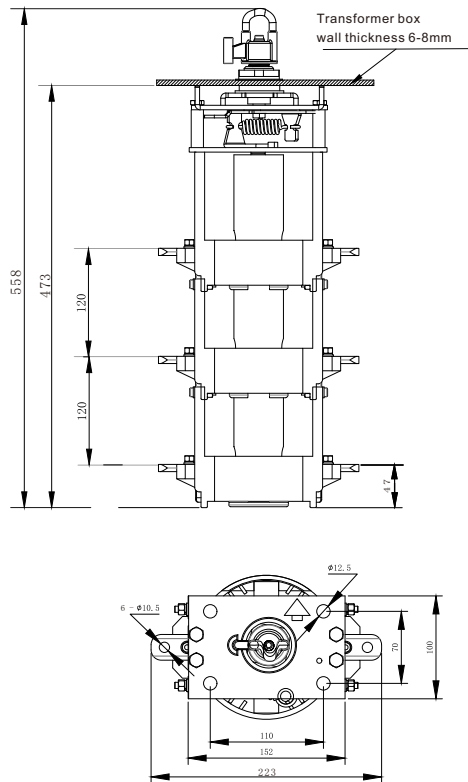


Note: Product related information is constantly updated. Please confirm relevant information with our company before placing an order.

BYFI-40.5/630-25-L



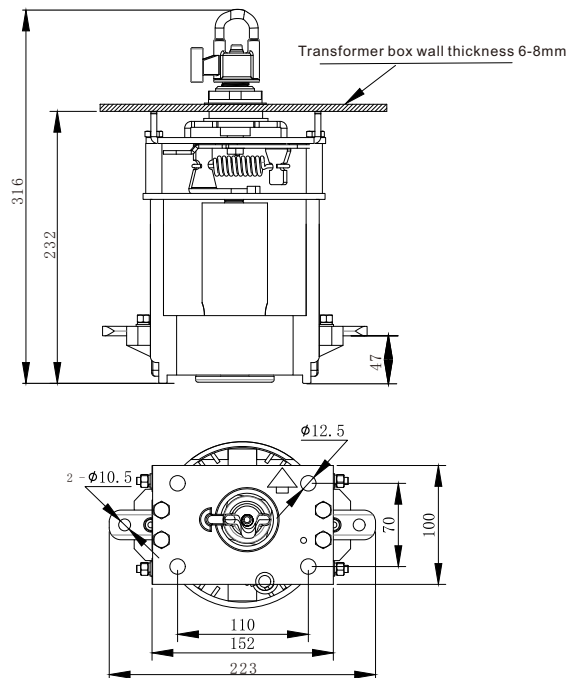
Three-Phase
Lock type



BYFI-40.5/630-25-J1-L

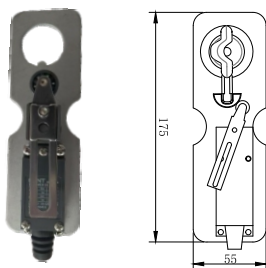


Single-Phase
Lock type



Note: Product related information is constantly updated. Please confirm relevant information with our company before placing an order.

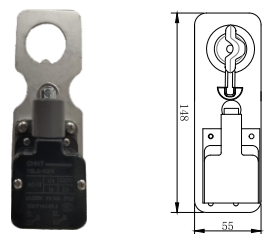
Panel Structure of On-off Auxiliary Travel Switch



F1 travel switch



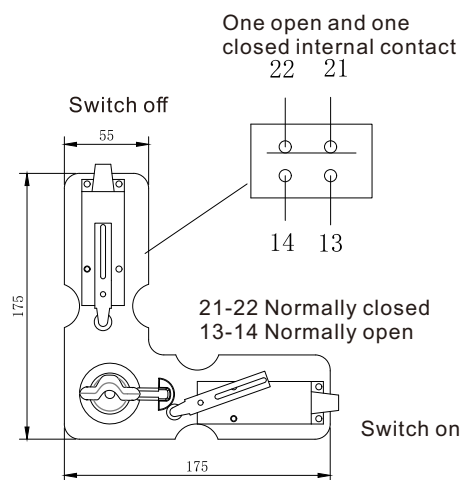
F2 travel switch



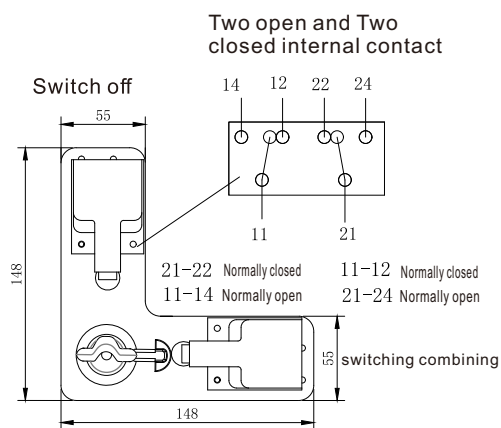
F21 travel switch



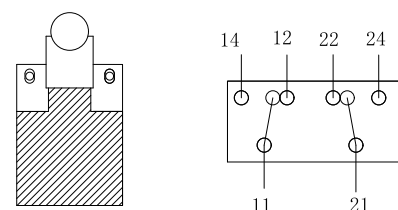
F22 travel switch



Two open and two closed (F2)



Four open and Four closed (F22)



Two open and two closed travel switch

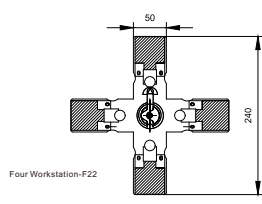
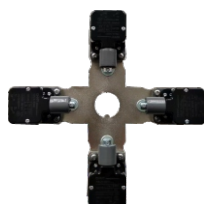
contact

Attention: The travel switch does not come with a limit plate

Code	Description		
F	Load switch with auxiliary contact for on-off indication (Connected to travel switch)	F1	A travel switch with independent wiring for open and close contacts configured. The signal output is one open and one closed.
		F2	Two travel switches with independent wiring for open and close contacts configured. The signal output is two open and two closed.
		F21	A travel switch with common wiring for open and close contacts configured. The signal output is two open and two closed.
		F22	Two travel switches with common wiring for open and close contacts configured. The signal output is four open and four closed.
K	Special load switch matched with electric operating mechanism		

Four position load switch travel switch (optional)

Four two open and two closed travel switches



YZFN-10(20) Oil Loadbreak Switch (LBS)

0 General

YZFN-10 (20) series oil loadbreak switch is designed for compact substations with AC frequencies of 50Hz/60Hz and a rated voltage of 20kV. It uses transformer oil as both the insulation and arc-extinguishing medium and features a spring-operated mechanism for three-phase simultaneous operation. This design ensures accurate and reliable making and breaking of rated load currents.

The switch serves as a control and protection device for industrial and commercial power systems in ring main unit and dual power supply applications. The oil loadbreak switch supports four modes of power supply and transformer connection:

Ring main power supply
Busbar 1 power supply
Busbar 2 power supply
Disconnected position

Operation is performed using a dedicated control lever.

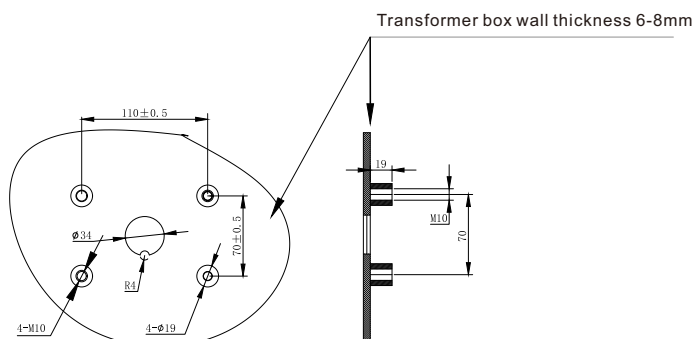
Each 90° rotation—clockwise or counterclockwise—changes the switch position, with a full 360° cycle covering all four modes.

The switch is available in multiple configurations, including T, R, S, H, V, and terminal types, allowing users to select the appropriate version based on application requirements.

0 Parameters

Name		Unit	YZFN-20/315-R	YZFN-20/630-R
Rated voltage		KV	24	
Power frequency withstand voltage	Ground, interphase	KV	55	
	Isolating distance	KV	60	
Lightning impulse withstand voltage	Ground, interphase	KV	125	
	Isolating distance	KV	145	
Rated current		A	315	630
Rated short-circuit withstand current		KA	20	20
Rated peak withstand current		KA	50	50
Main circuit resistance		$\mu\Omega$	<320	<200
Operating torque		N.m	<50	
Mechanical life		times	>2000	

Transformer box opening size
and switch mounting screw size



Note: Product related information is constantly updated. Please confirm relevant information with our company before placing an order.

T Type

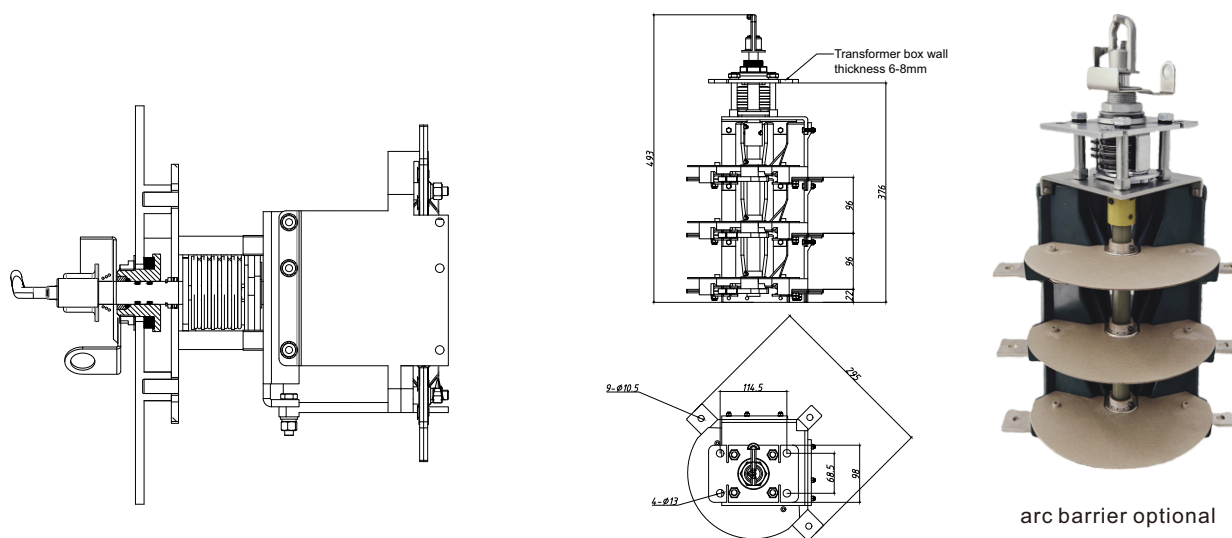
Designed for ring main and dual-power supply systems. When the compact substation supply is switched to the "OFF" position, both Power Supply 1 and Power Supply 2 remain connected and energized.

V Type

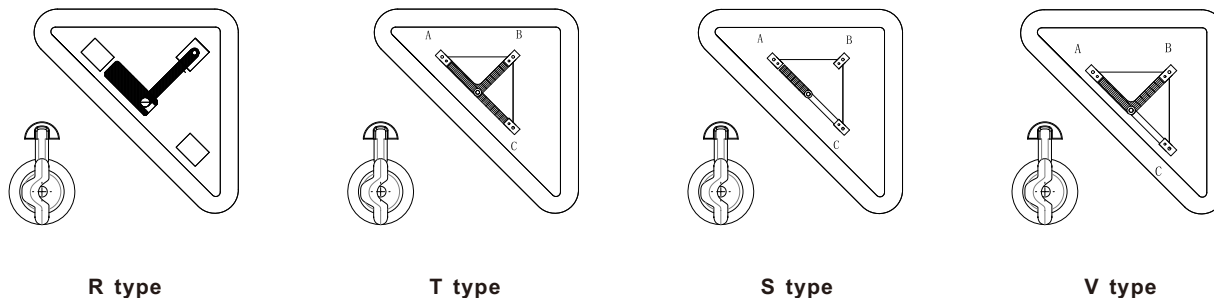
Suitable for ring main and dual-power supply systems. When the compact substation supply is turned off, both Power Supply 1 and Power Supply 2 are automatically disconnected and cannot be re-engaged until the switch is operated.

Dual Power Terminal Type

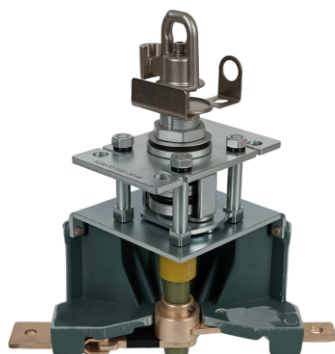
Used in terminal-type compact substations. This configuration allows the substation to be powered by either Power Supply 1 or Power Supply 2, with the non-selected source automatically switched off. It is not suitable for ring network supply systems.



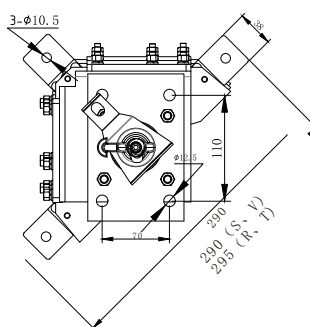
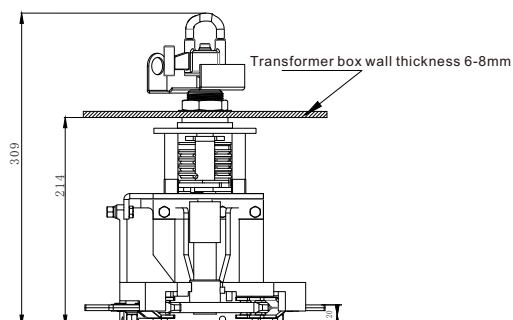
On-off relationship diagram of four positions of rotor and stator



YZFN-20/630-20-J1



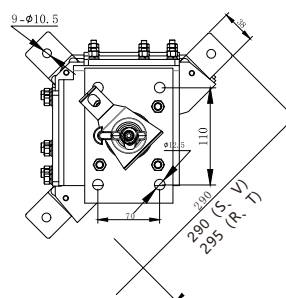
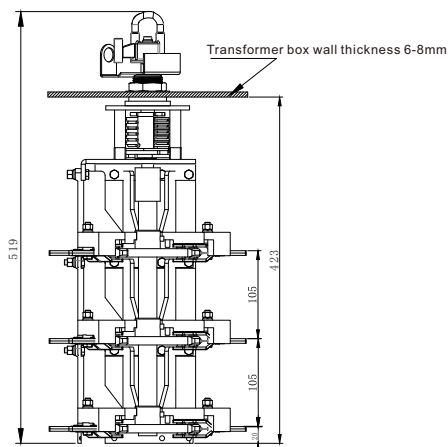
Single-phase



YZFN-20/630-20-T YZFN-20/630-20-V YZFN-20/630-20-S YZFN-20/630-20-R



Four models with the same installation dimension



Note: Product related information is constantly updated. Please confirm relevant information with our company before placing an order.

FYN33 Four-Position, Oil Loadbreak Switch (LBS)

0 General

The FYN33 four-position oil loadbreak switch is designed for compact substations with AC frequencies of 50Hz/60Hz and rated voltages of 10kV, 24kV, and 35kV. This ultra-compact loadbreak switch is specially engineered for confined spaces inside compact substations while meeting increasing grid load capacity requirements.

Using transformer oil as both insulation and arc-extinguishing medium, the switch features spring-operated energy storage and three-phase simultaneous operation, enabling precise and rapid making and breaking of load currents. It is suitable for 10kV, 24kV, and 35kV ring main or dual power supply distribution systems.

The switch employs a ring main unit T-type configuration with four positions:

- Ring network power supply
- Power supply 1
- Power supply 2
- Disconnected

Its contact system utilizes a double-contact bridge floating clamp design, characterized by low resistance, high current-carrying capacity, and excellent electrodynamic compensation, significantly enhancing performance under load conditions. The fixed static contact terminal board ensures convenient and reliable installation and wiring, while an additional auxiliary static contact ensures precise alignment between moving and stationary contacts.

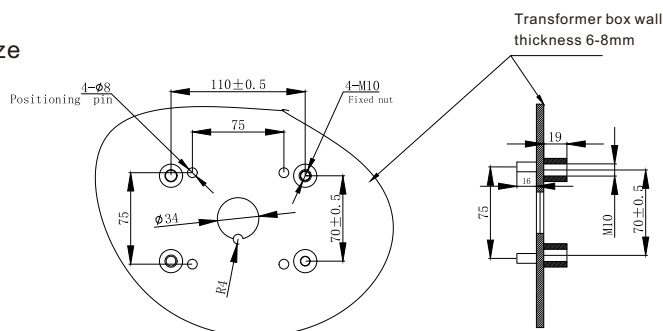
Mounted on the sidewall of the transformer tank, the switch is operated via a dedicated insulated control lever. Each 90° rotation (clockwise or counterclockwise) changes the switch position, completing a full cycle through all four positions in 360°.

Available in embedded versions or with electric operating mechanisms, the switch can be adapted for various transformer applications. Customers may select protection classes including C3, C4, and C5 according to design requirements.

0 Parameters

Name		Unit	FYN33-12/630	FYN33-25/630	FYN33-40.5/630
Rated voltage		KV	12	25	40.5
Power frequency withstand voltage	Ground,interphase	KV	42	65	95
	Isolating distance	KV	48	79	118
Lightning impulse withstand voltage	Ground,interphase	KV	75	125	200
	Isolating distance	KV	85	145	215
Rated current		A	630		
Rated short-circuit withstand current		KA	20/2S	25/4S	31.5/4S
Rated peak withstand current		KA	50	63	80
Main circuit resistance		$\mu\Omega$	<200		
Mechanical life		times	>3000		

Transformer box opening size
and switch mounting screw size

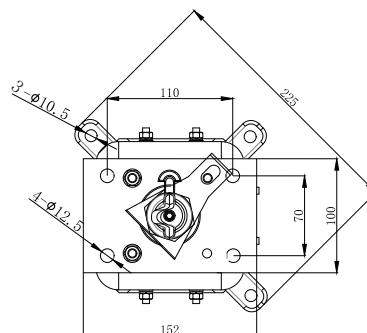
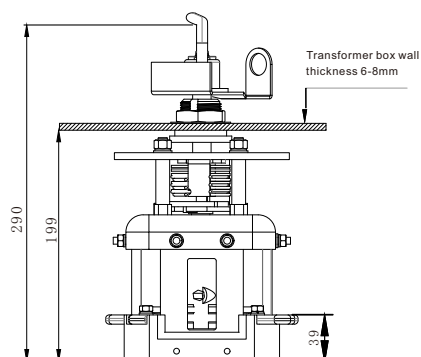


Note: Product related information is constantly updated. Please confirm relevant information with our company before placing an order.

FYN33-25/630-25-J1



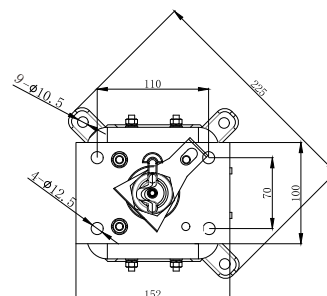
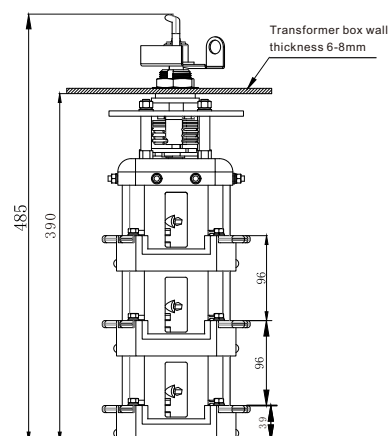
Single-phase
T-blade



FYN33-25/630-25



Three-phase
T-blade

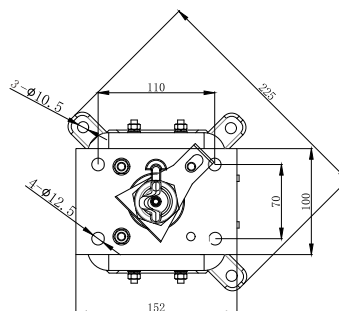
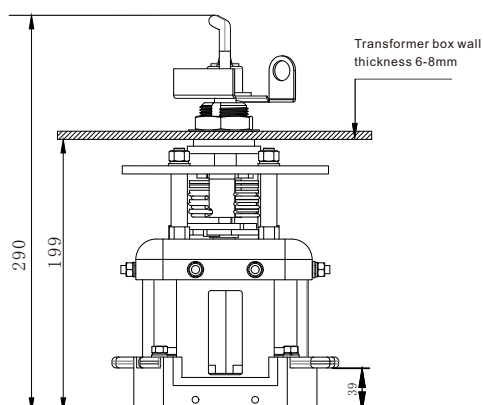


Note: Product related information is constantly updated. Please confirm relevant information with our company before placing an order.

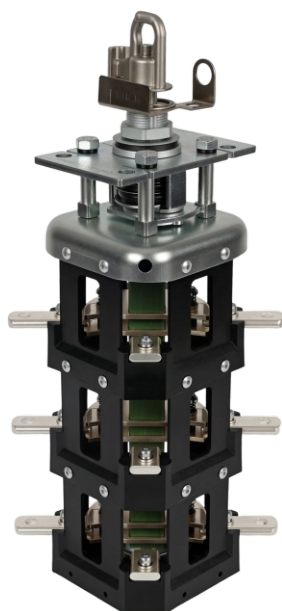
FYN33-25/630-25-J1-MBB



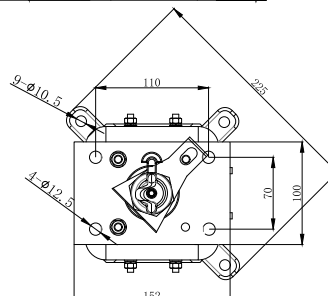
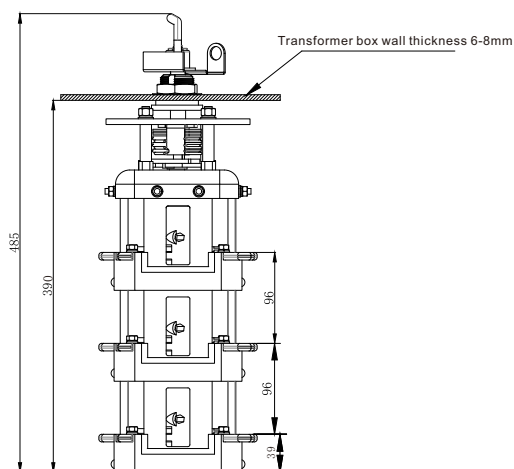
Single-phase



FYN33-25/630-25-MBB

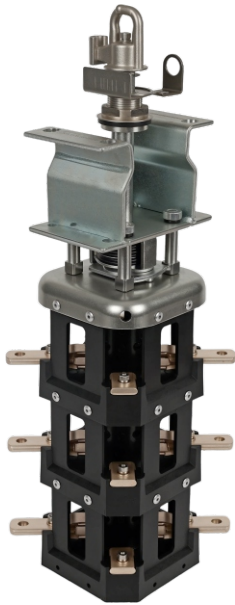


Three-phase

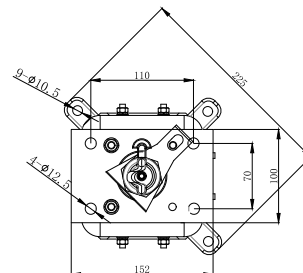
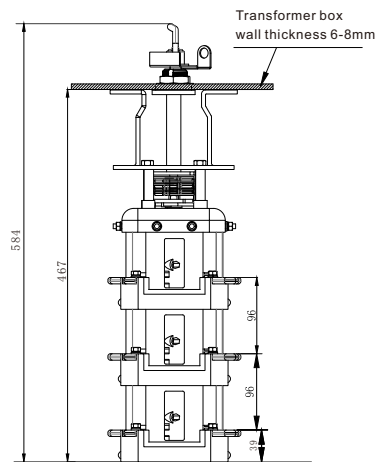


Note: Product related information is constantly updated. Please confirm relevant information with our company before placing an order.

FYN33-25/630-25-D



Three-phase
Embedded Type



FYN33-40.5/630-25-J1



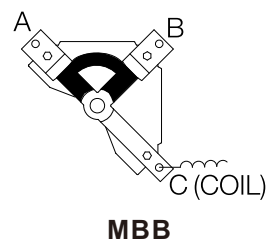
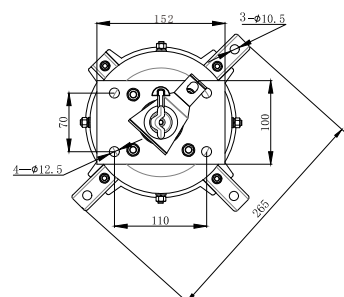
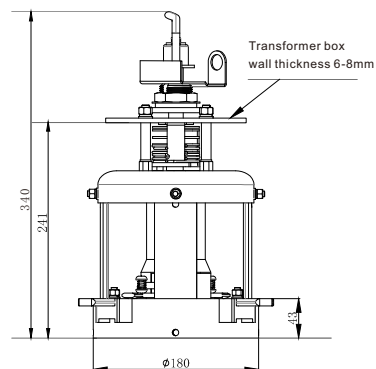
Single-phase
T-blade

BBM



Single-phase
Semicircular Rotor

MBB



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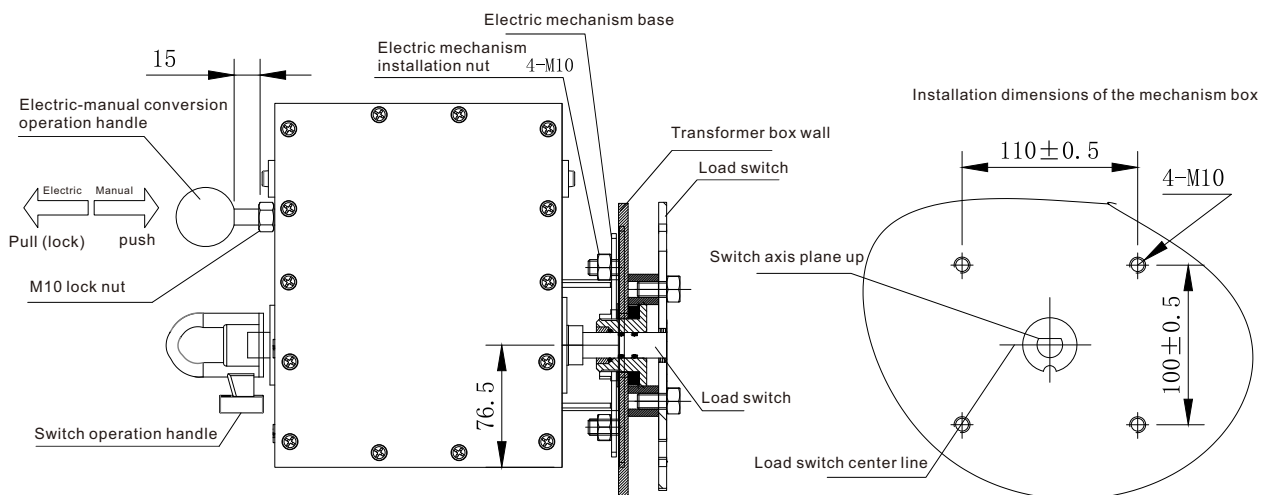
Optional accessories

Electric operating mechanism controller for two-position load break switch



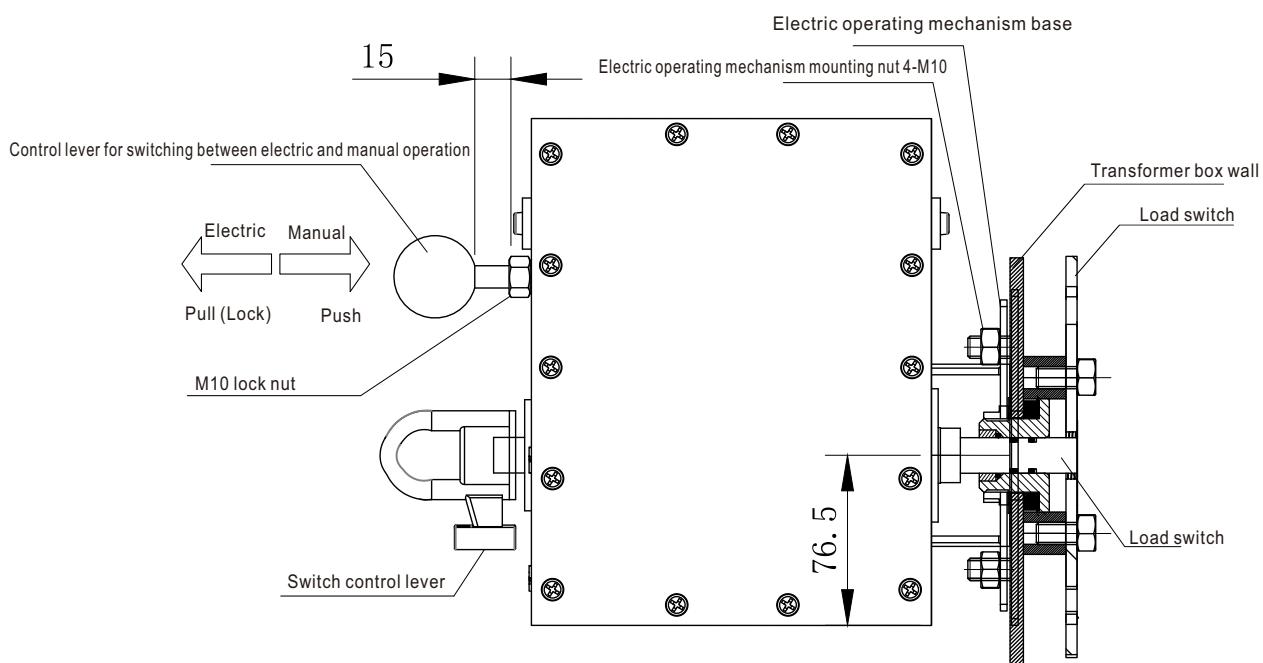
FD-211

Schematic diagram of the electric mechanism assembly

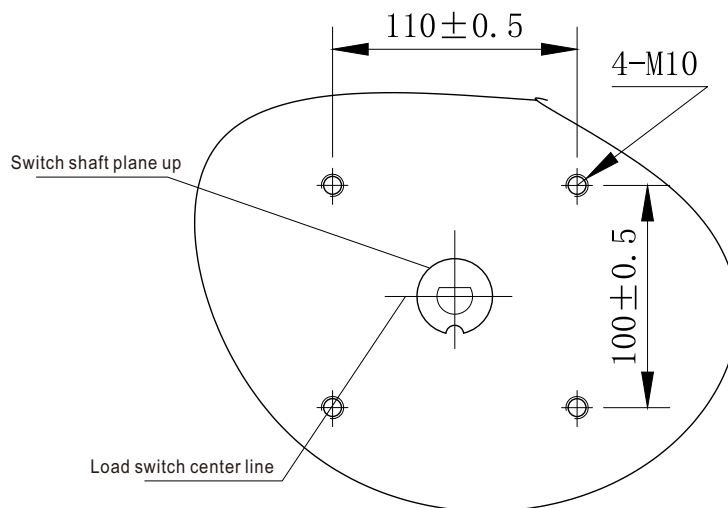


Note: Product related information is constantly updated. Please confirm relevant information with our company before placing an order.

■ Schematic diagram of electric operating mechanism combination ■

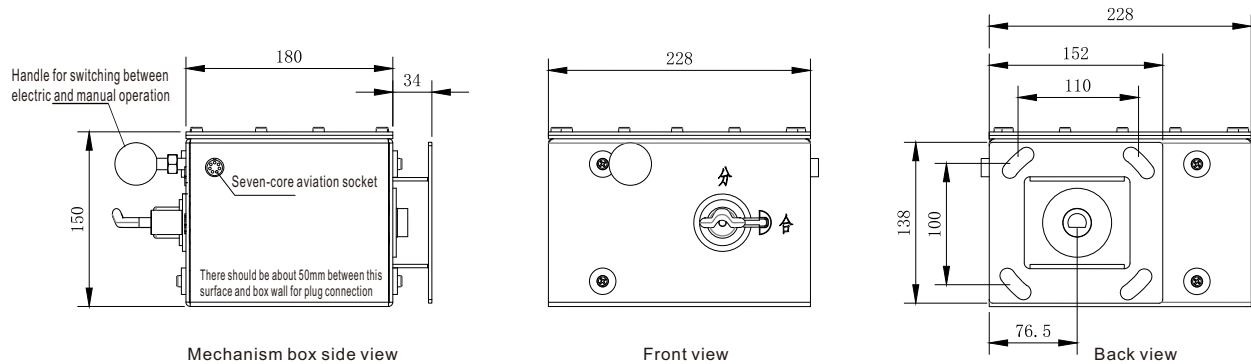


Mechanism box installation dimension

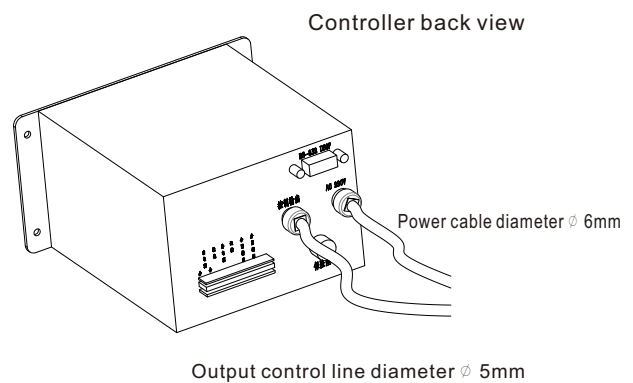
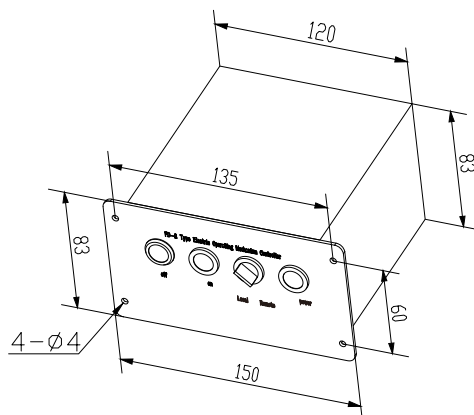
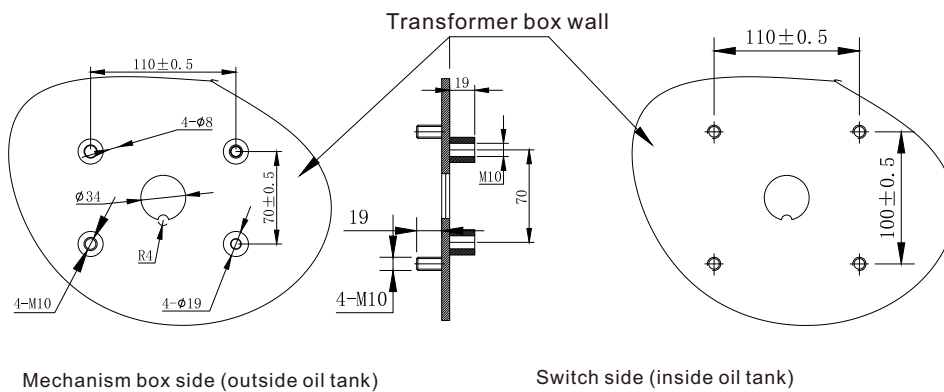


FD-211 electric mechanism controller dimension

FD-211 electric mechanism operation box dimension



Mounting plate dimension



Controller installation opening size: 121*84mm
Fixed size: 135*60mm

■ ZBC-10A Integrated Transformer Multi-purpose Control Lever ■

ZBC-10
Open to use it



Length 1365 mm Weight:2.3KG

ZBC-10A
Open to use it



Length 1395 mm Weight:1.3KG

Electricalproperty
Powerfrequencywithstand voltage of insulated control lever is not less than 200kV for a length of 300mm
Impulsevoltage of insulated control lever is not less than 200kV for a length of 300mm
Leakagecurrent of 300mm-long test product at a power frequency withstand voltage of 100kV for 1 minute is not more than 10μA in dry state and not more than 30uA in wet state
Powerfrequencywithstand voltage from metal hook to handle is greater than 150kV
Mechanicalproperty
Bendingmoment is greater than 100Nm
Twistingmoment is greater than 90Nm
Tensileforce is greater than 200N

Note: Product related information is constantly updated. Please confirm relevant information with our company before placing an order.

Note

SUVELL

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