

QTN61

INDUSTRIAL JOYSTICK

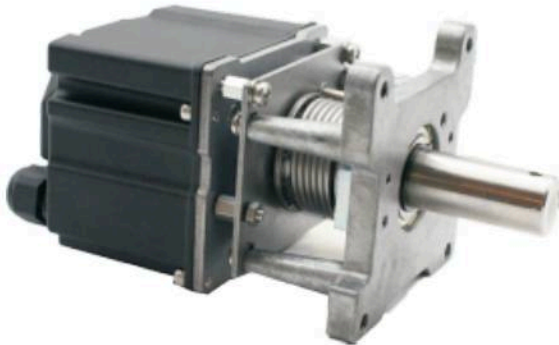


- Single-axis operation
- Spring return&Friction
- Optional for MICROSWITCH, POTENTIOMETER,ENCODER

The QTN61 features a robust metal-cast drive block as standard, ensuring long service life and a high number of switching cycles. It is suitable for demanding control tasks, including deck machinery.

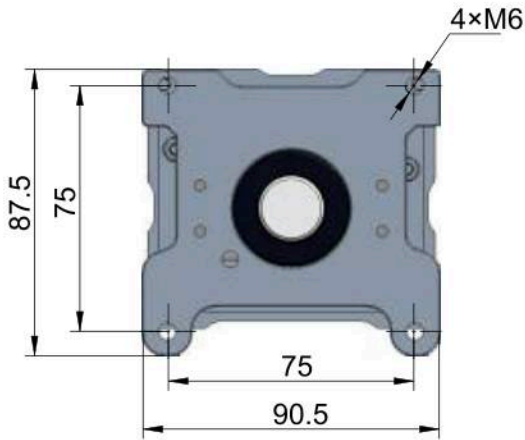
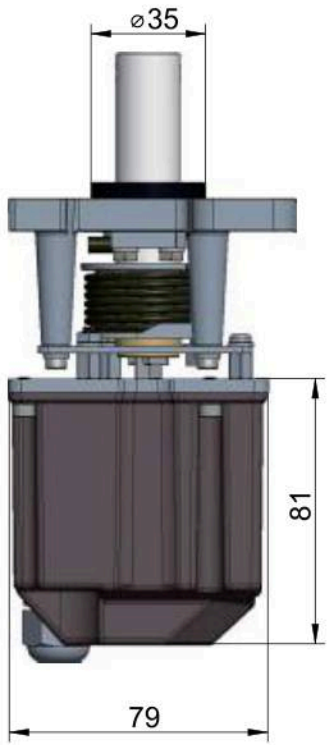
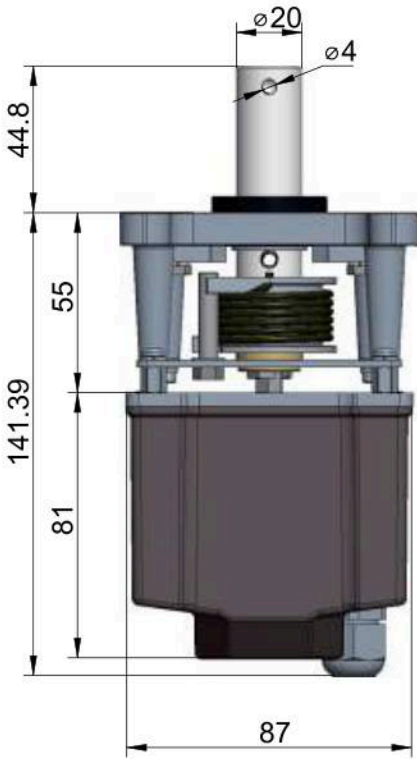
Technical Data

Ambient Temperature: -20°C to 60°C
 Mechanical Life: 2M
 Protection Level: IP65 Above/ IP00 Below



Selection	Movement	Gate	Interface	Contact arrangement	Wiring
• Z: Spring return • R: Friction brake					
• 1: 1-Axis†					
• Voltage output DC24V - V1: -10V~0~+10V - V2: +10V~0~+10V - V3: -5V~0~+5V - V4: +5V~0~+5V - V5: 0~+10V - V6: 0~+5V • Hall output DC5V - HV1: 0-2.5-5V - HV2: 0.5-2.5-4.5V - HV3: 1.0-2.5-4.0V - Hv4: 1.25-2.5-3.75V • Potentiometer output DC36V - P1: Two directions output - P2: One directions output • 5K • 10K • Current output DC24V - I1: 4mA-12mA-20mA - I2: 20mA-4mA-20mA					
3 2 1 0 1 2 3 1/01 2/02 3/03 4/04 5/05 03 2 1 0 1 2 1/01 2/02 3/03 4/04 02 1 0 1 1/01 2/02 3/03 01 Special X					
• A: Terminal interface • L: Direct outgoing line 30mm • X: Customize					

Dimensions



Angle ± 70°



QTNS00

ROTARY SWITCH

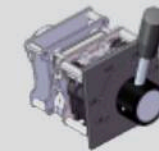
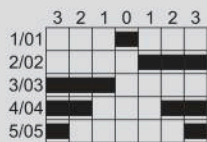
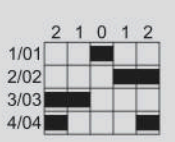


The QTNS00 is a robust rotary switch with a stable drive mechanism and customizable handle options. It is widely used in control panels, marine applications, and various control circuits.

Technical Data

Ambient Temperature:	-40°C to +60°C
Operating Temperature:	-30°C to +60°
Cmechanical Life:	1M
Protection Level:	IP56



Selection	Palm Grips	Movement	Interface	Contact arrangement
 • A	 • B	 • C		
• Z: Spring return • R: Friction brake				
• Voltage output DC24V V1: -10V~0~+10V V2: +10V~0~+10V V3: -5V~0~+5V V4: +5V~0~+5V V5: 0~+10V V6: 0~+5V				
• Hall output DC5V HV1: 0-2.5-5V HV2: 0.5-2.5-4.5V HV3: 1.0-2.5-4.0V HV4: 1.25-2.5-3.75V				
• Current output DC24V I1: 4mA-12mA-20mA I2: 20mA-4mA-20mA				
 03	 02	 01	Special X	

QTS23

INDUSTRIAL JOYSTICK



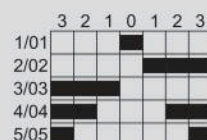
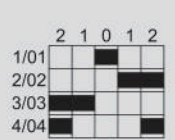
- Single-axis operation
- Spring return, friction positioning, mechanical interlock
- Lock-in, momentary
- Integrated bus interface
- Options Micro switch, dual-contact element, potentiometer, or absolute encoder

The QTS23 joystick, built with a robust metal cast drive block, ensures long service life and high switching cycles. It is well-suited for demanding control tasks and is often used in consoles, construction machinery, municipal vehicles, and deck machinery.

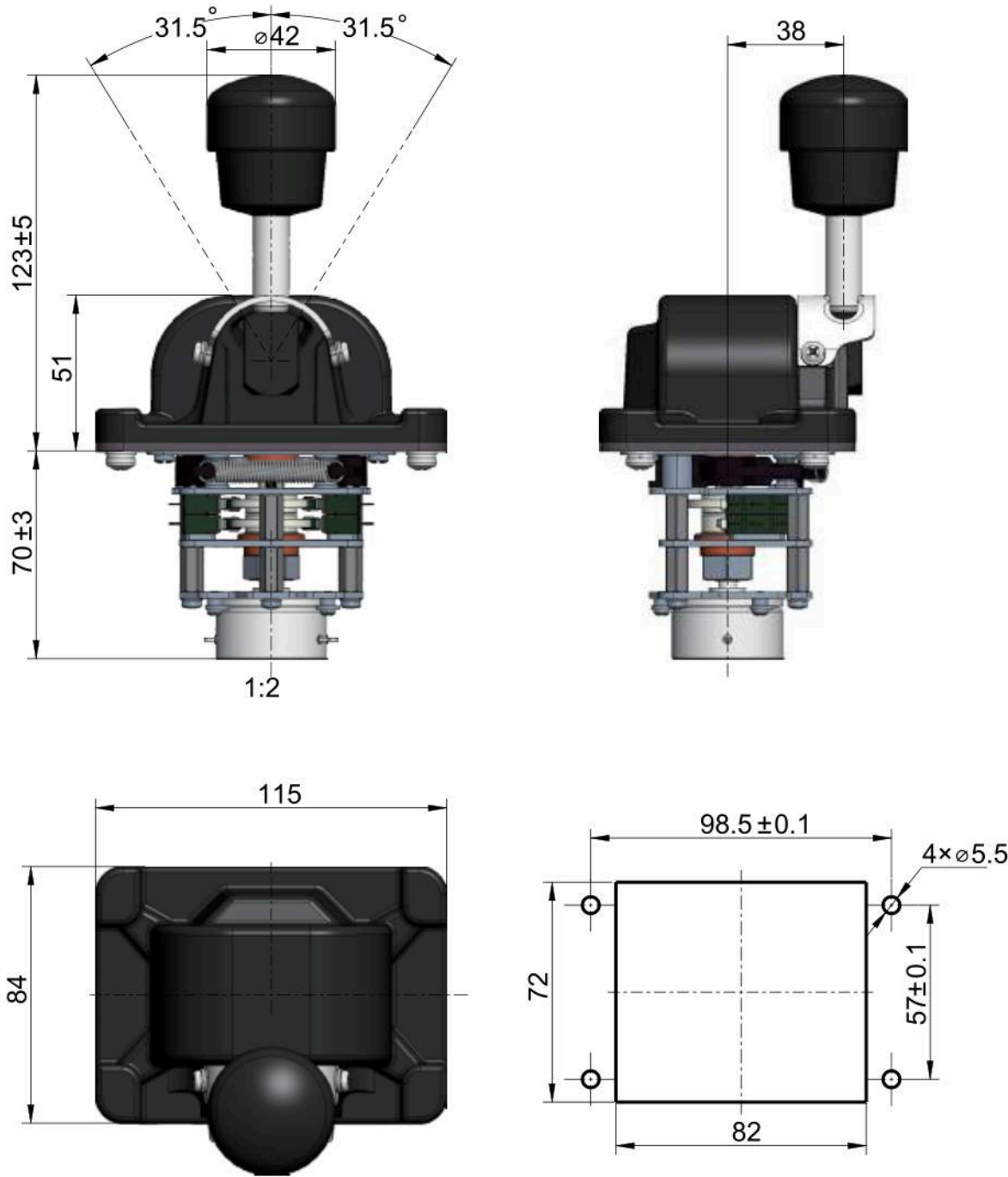
Technical Data

Ambient Temperature:	-20°C to 60°C
Mechanical Life:	2 M
Electrical Output:	Hall sensor, potentiometer, voltage output, current output
Protection Level:	IP65 Above/IP00 Below
Mounting:	Top-down installation



Selection	Palm Grips	Gate	Movement	Interface	Contact arrangement	Wiring
• A Fixed handle • B Zero position mechanical handle						
• 1 Bidirectional ↓ • 2 Unidirectional ↑						
• Z: Spring return • R: Friction brake • ZS: Spring return with self-locking • RS: Friction brake with self-locking						
• Voltage output DC24V V1: -10V~0~+10V V2: +10V~0~+10V V3: -5V~0~+5V V4: +5V~0~+5V V5: 0~+10V V6: 0~+5V	• Hall output DC5V HV1: 0-2.5-5V HV2: 0.5-2.5-4.5V HV3: 1.0-2.5-4.0V Hv4: 1.25-2.5-3.75V	• Potentiometer output DC36V P1: Two directions output P2: One directions output • 5K • 10K	• Current output DC24V I1: 4mA-12mA-20mA I2: 20mA-4mA-20mA			
 03	 02	 01	Special X			
• A: Terminal interface • L: Direct outgoing line 30mm • X: Customize						

Dimensions



QTV11
INDUSTRIAL JOYSTICK

The QTV11 industrial joystick is used in secondary AC circuits (50Hz/60Hz) with rated voltage up to 380V (440V). It supports motor commutation, speed regulation, braking, and linkage. It can be mounted on console surfaces or portable control boxes and is commonly used in mechanical equipment for ports, shipping, railways, metallurgy, mining, power, construction, and manufacturing.

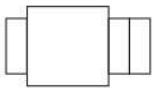
Technical Data

Operating temperature:	-40°C-85°C
Handle Force:	< 20N
Rated Current:	10A
Mechanical Life:	5 M
Degree of Protection:	up to IP65

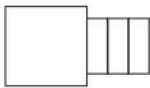


Selection	Installation variant	Palm grips	Gate	Axis 1			Axis 2			Mounting	Contact arrangement
				Movement	No. of contacts	Interface	Movement	No. of contacts	Interface		
	• 30 Single axis-30 • 3030 Double axis-3030 • 213 Double axis-2130 See Appendix-Installation of contact group										
	• S4 • S5 • S7 • SHD8 • SHD8B See more options in the grip section										
	• 1: 1-Axis↑ • 2: Cross gate + • 3: All-direction ※ • 4: Special gate										
	• Z: Spring return • R: Friction brake										
	• 01 2 contacts • 02 4 contacts • 03 6 contacts • 04 8 contacts • 05 10 contacts										
	• Voltage output DC24V V1: -10V~0~+10V V2: +10V~0~+10V • Hall output DC5V HV1: 0-2.5-5V HV2: 0.5-2.5-4.5V • Current output DC24V I1: 4mA-12mA-20mA I2: 20mA-4mA-20mA • Potentiometer output 1K 2K 5K 10K										
	• Z: Spring return • R: Friction brake										
	• 01 2 contacts • 02 4 contacts • 03 6 contacts • 04 8 contacts • 05 10 contacts										
	• Voltage output DC24V V1: -10V~0~+10V V2: +10V~0~+10V • Hall output DC5V HV1: 0-2.5-5V HV2: 0.5-2.5-4.5V • Current output DC24V I1: 4mA-12mA-20mA I2: 20mA-4mA-20mA • Potentiometer output 1K 2K 5K 10K										
	• M1: A-type(58*58) • M2: B-type(67*67) • M3: B-type(80*80) • X:Customize										
	• See the page 50										

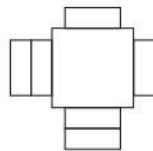
Installation variant



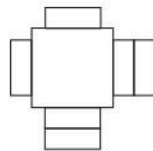
single axis 12



single axis 03



double axis 2121



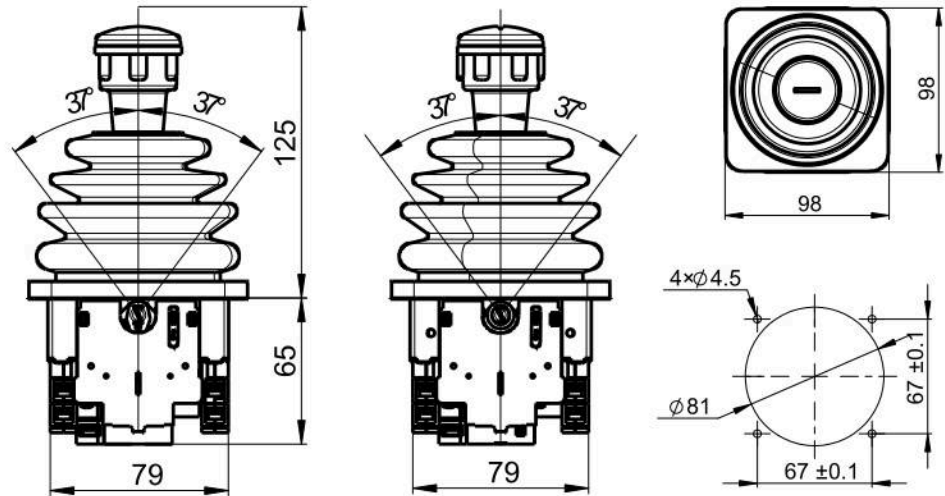
double axis 1221



Grip



Dimensions



No.of contacts	Dim A	Dim B
2	41	83
4	56	98
6	71	113
8	86	128
10	101	143

QT-VNSO

INDUSTRIAL JOYSTICK

The QT-VNSO industrial joystick, designed for AC 50Hz (60Hz) and up to 380V (440V), controls secondary circuits with functions such as motor reversing, speed control, and braking. It mounts on console surfaces or portable boxes and is used widely in ports, railways, mining, and more.

Technical Data

Temperature Range:	-20°C to 60°C
Operating Force:	≤50N
Current:	10A
Mechanical Life:	5M
Protection Level:	IP65



Selection

- SG41Z Lift up zero mechanical interlock
- SG6 Push-down zero mechanical interlock
- See more options in the grip section

- 1: 1-Axis↑
- 2: Cross gate +
- 3: All-direction ※
- 4: Special gate H,C,L and special

- Z: Spring return
- R: Friction brake

- 01 2 contacts
- 02 4 contacts
- 03 6 contacts
- 04 8 contacts
- 05 10 contacts

- Voltage output DC24V
V1: -10V~0~+10V
V2: +10V~0~+10V
V3: -5V~0~+5V
V4: +5V~0~+5V
V5: 0~+10V
V6: 0~+5V
- Hall output DC5V
HV1: 0-2.5-5V
HV2: 0.5-2.5-4.5V
HV3: 1.0-2.5-4.0V
HV4: 1.25-2.5-3.75V
- Current output DC24V
11: 4mA-12mA-20mA
12: 20mA-4mA-20mA
- Potentiometer output
1K 2K 5K 10K
- CAN
CAN 2.0 output
CAN J1939 output
CAN OPEN

- Z: Spring return
- R: Friction brake

- 01 2 contacts
- 02 4 contacts
- 03 6 contacts
- 04 8 contacts
- 05 10 contacts

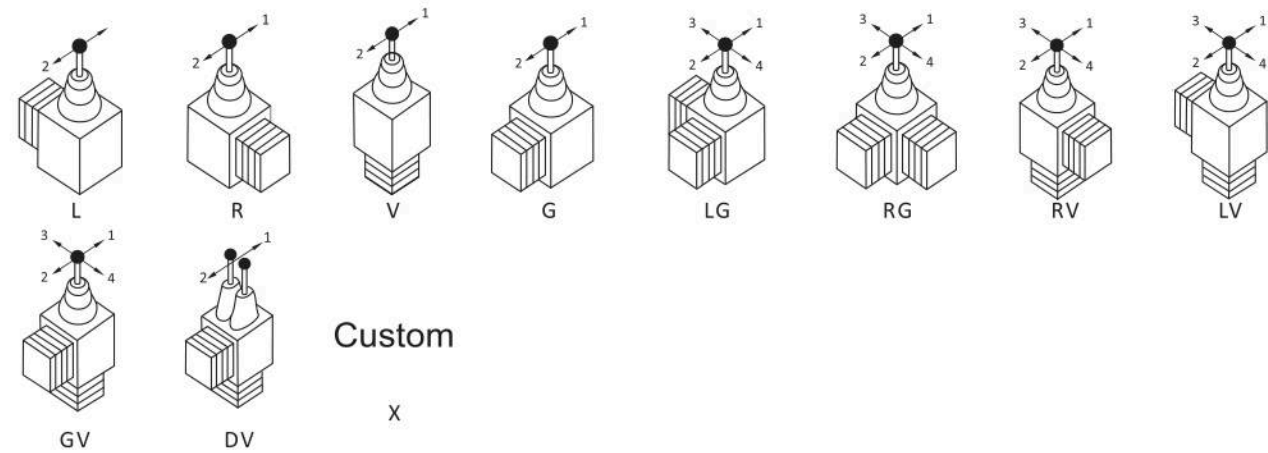
- Voltage output DC24V
V1: -10V~0~+10V
V2: +10V~0~+10V
V3: -5V~0~+5V
V4: +5V~0~+5V
V5: 0~+10V
V6: 0~+5V
- Hall output DC5V
HV1: 0-2.5-5V
HV2: 0.5-2.5-4.5V
HV3: 1.0-2.5-4.0V
HV4: 1.25-2.5-3.75V
- Current output DC24V
11: 4mA-12mA-20mA
12: 20mA-4mA-20mA
- Potentiometer output
1K 2K 5K 10K
- CAN
CAN 2.0 output
CAN J1939 output
CAN OPEN

- M1:B-type(67*67)

- L: Single axis
- R: Single axis
- LG: double axis
- RG: double axis

- See the page 50

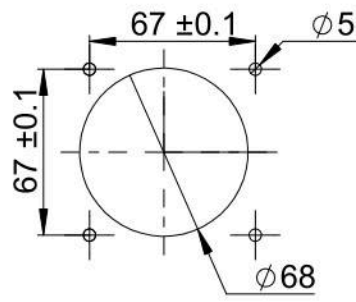
Installation variant



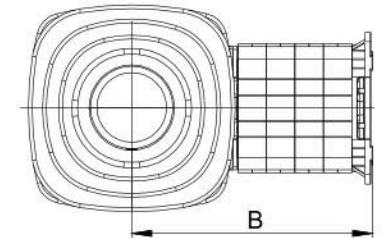
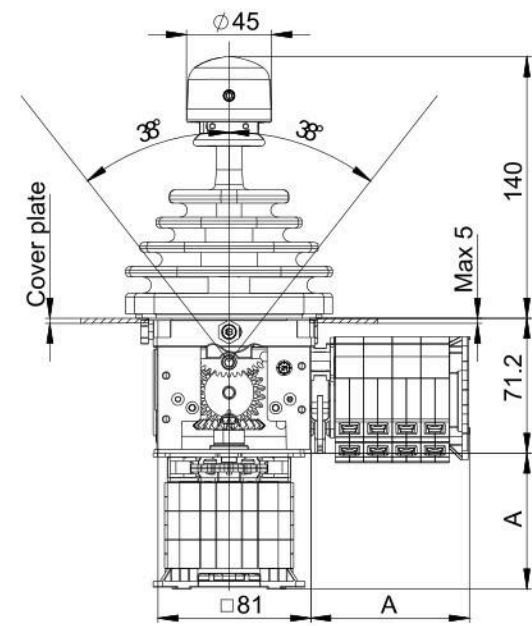
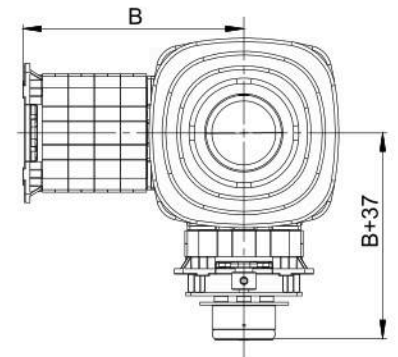
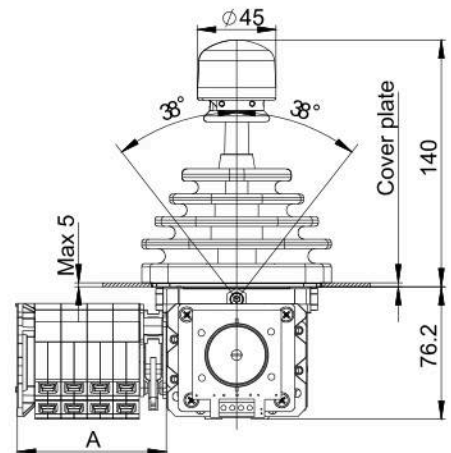
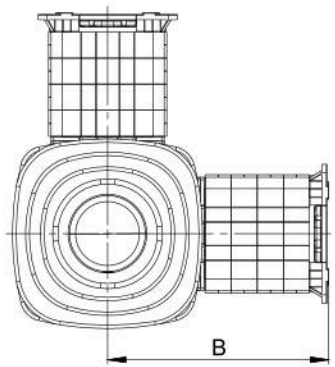
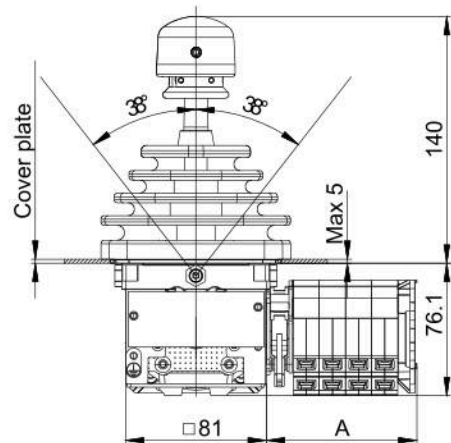
Grip



Dimensions



No.of contacts	Dim A	Dim B
2	41	83
4	56	98
6	71	113
8	86	128
10	101	143



QT7B

INDUSTRIAL JOYSTICK



The QT7B industrial joystick is designed for AC circuits up to 380V (440V), enabling motor control, speed regulation, and braking. It can be mounted on consoles or portable control boxes and is widely used in industries like ports, shipping, railways, metallurgy, mining, and construction

Technical Data

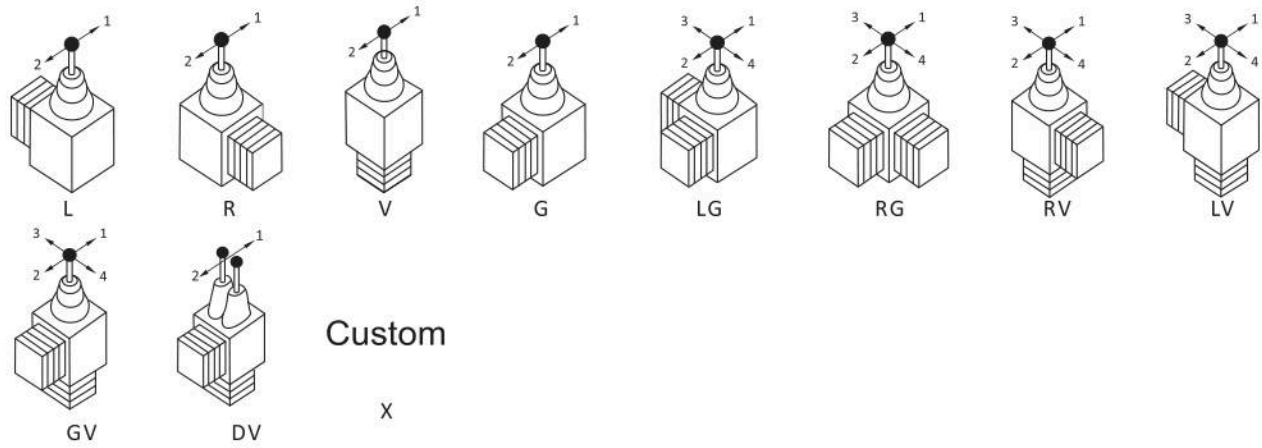
Operating Temp:	-20°C to 60°C
Handle Force:	<50N
Rated Voltage:	380V/440V
Rated Current:	10A
Mechanical Life:	5 M
Degree of protection:	Up to IP65



Selection	Installation Variant	Palm Grips	Gate	Axis1			Axis1			Mounting	Contact arrangement
				Movement	No. of contacts	Interface	Movement	No. of contacts	Interface		
• See Appendix-Installation of contact group											
• See more options in the grip section											
• 1: 1-Axis† • 3: All-direction ※	• 2: Cross gate † • 4: Special gate										
• Z: Spring return • R: Friction brake											
• 01 2 contacts • 04 8 contacts	• 02 4 contacts • 05 10 contacts	• 03 6 contacts									
• Voltage output DC24V V1: -10V~0~+10V V2: +10V~0~+10V V3: -5V~0~+5V V4: +5V~0~+5V V5: 0~+10V V6: 0~+5V	• Hall output DC5V HV1: 0-2.5-5V HV2: 0.5-2.5-4.5V HV3: 1.0-2.5-4.0V HV4: 1.25-2.5-3.75V	• Current output DC24V 11: 4mA-12mA-20mA 12: 20mA-4mA-20mA • Potentiometer output 1K 2K 5K 10K	• CAN CAN 2.0 output CAN J1939 output CAN OPEN								
• Z: Spring return • R: Friction brake											
• 01 2 contacts • 02 4 contacts • 03 6 contacts • 04 8 contacts • 05 10 contacts											
• Voltage output DC24V V1: -10V~0~+10V V2: +10V~0~+10V V3: -5V~0~+5V V4: +5V~0~+5V V5: 0~+10V V6: 0~+5V	• Hall output DC5V HV1: 0-2.5-5V HV2: 0.5-2.5-4.5V HV3: 1.0-2.5-4.0V HV4: 1.25-2.5-3.75V	• Current output DC24V 11: 4mA-12mA-20mA 12: 20mA-4mA-20mA • Potentiometer output 1K 2K 5K 10K	• CAN CAN 2.0 output CAN J1939 output CAN OPEN								
• M1:B-type(84*84) • 2: M2: A-type(80*80) • X:Customize											
• See the page 50											



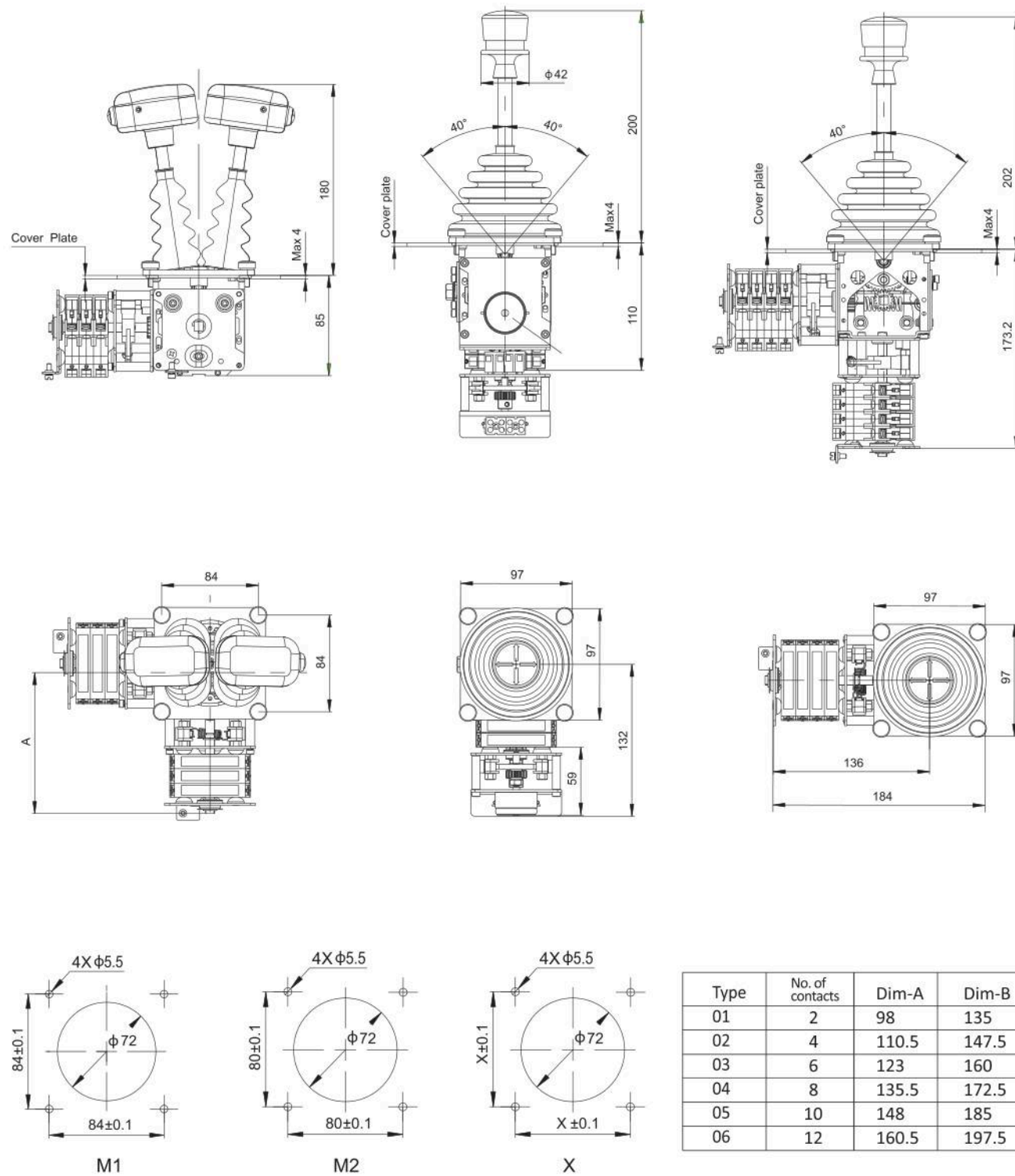
Installation variant



Grip



Dimensions



Type	No. of contacts	Dim-A	Dim-B
01	2	98	135
02	4	110.5	147.5
03	6	123	160
04	8	135.5	172.5
05	10	148	185
06	12	160.5	197.5

INDUSTRIAL JOYSTICK

The XKB Joystick is designed for various secondary circuits with AC 50Hz (60Hz), supporting a rated voltage up to 380V (440V). It enables motor commutation, speed control, braking, and linkage functions. This joystick can be installed on console surfaces or in portable control boxes, making it ideal for both light and heavy lifting equipment and driving applications that require a fixed console.

Technical Data

Model	XKB-A	XKB-E
Direction	4Direction, can be linked	•
Amount of movement	2	•
Amount of notches in each direction	3	•
Type of movement	Notched-Hold position/spring return unnotched-spring return	•
Operating schemes	Standard CAM assembly	Custom CAM combination
Maximum number of contacts per movement	16	•
Mechanical Life(in millions of operating cycles)	1	•
Control device	Vertical centering	•
Handle	1 Standard 2 Mechanical zero interlock 4 With zero mechanical & electrical interlocks 5 Push-down type 6 Button with fat or convex head 9 Other	•
Maximum number of potentiometers per movement	1 or 2 pairs	•



Model	XKB-A: predefined, non modifiable scheme XKB-E: variable composition scheme	
Direction	4Direction, can be linked	
Control lever	140mm maximum travel in one direction:28°	
Amount of notches in each direction	3	
Type of lever movement	①Notched positions, hold position: up to 3 gears(12°,20°,28°)in one direction ②Notched positions, spring return: up to 3 gears(12°,20°,28°)in one direction ③Unnotched position, spring return: 28° travel in one direction	
Contact	Contact block with 4 contacts + 1 zero position contacts Each type of contact block allows the user to use 1 additional pair of contacts	
Contact closing sequence	XKB-A standard scheme . Each movement has 4 pairs of contacts + 1 pair of zero position contacts: each movement has 2 pairs of direction contacts, 2 pairs of functional contacts, and 1 pair of zero position contacts. XKB-E customized scheme . Each movement has 4 pairs of contacts + i pair of zero position contacts: each movement mechanism has 4 pairs of contacts and i pair of zero position contacts.	
Electrical Life	1 million	
handle Grip position	Vertical center	
Handle	1 Standard handle:with zero(center)position contact (closed at zero) 2 With zero mechanical interlocking with zero mechanical lock and the center of the closed contact 4 Push handle: The contact associated with it opens when the handle is released 5 Flat button handle: When the button is released, the associated contact breaks 6 Raised button handle: When the button is released, the associated contact opens 9 Round head push-down handle type when the button is released, the associated off contact	
Maximum number of potentiometers per movement	2 Pairs	



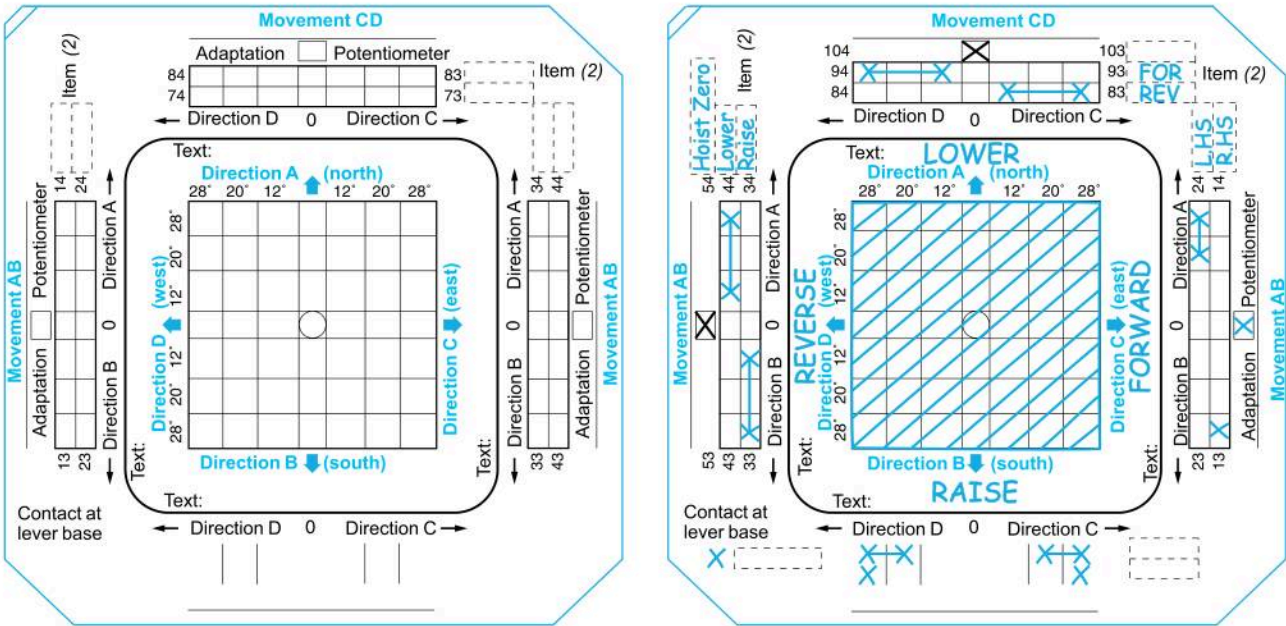
Grip



handle number	handle type	B
1	Standard handle	137-142mm
2	With zero mechanical interlocking electrical interlocks	137-142mm
4	push handle	138-143mm
5	Flat head push-button type	137-142mm
6	Convex head push-button type	141-146mm
9	Round head push-down handle type	141-146mm



Contact Arrangement



Selection

- A:Standard
- E:Special

- 4 contacts
1: screw connection
2: 6.3m clip connection
- 4+1 contacts
3: screw connection
4: 6.3m clip connection

- 1: Standard handle + zero contact (closed at zero)
- 2: With zero mechanical interlocking electrical interlocks (contact closed at zero2 position)
- 4: Push-down handle (contacts open when handle is released)
- 5: Flat head push-button type (contacts open when handle is released)
- 6: Convex head push-button type (contacts open when handle is released)
- 9: Round head push-down handle type (contacts open when handle is released)

- 0: No need 0
- 1: Notched positions, hold position
- 3: Notched positions, spring return
- 2: Unnotched positions, spring return(1)

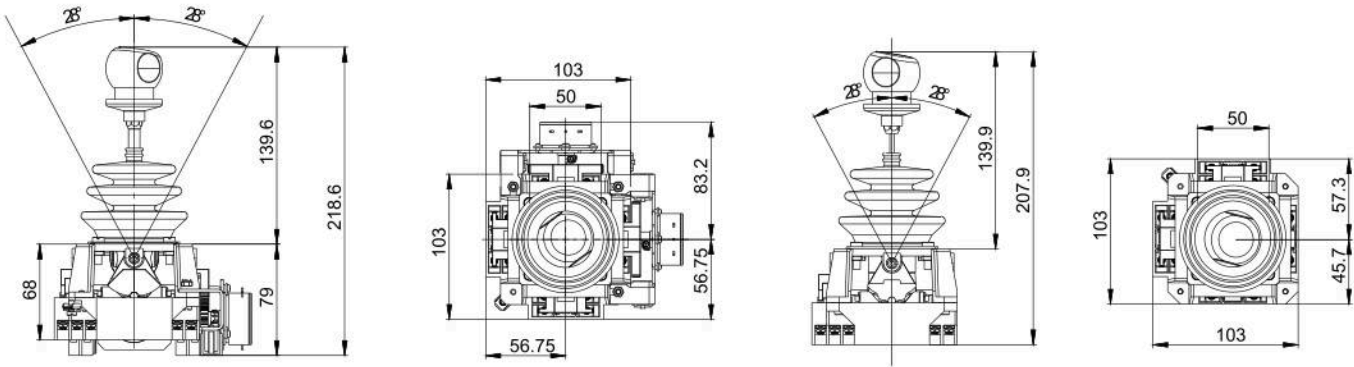
- 0: No need
- 1: Notched positions, hold position
- 3: Notched positions, spring return
- 2: Unnotched positions, spring return

- With frame only (no potentiometer)
4: AB Direction
5: CD Direction
6: AB+CD Direction
- With frame+potentiometer
7: AB Direction
8: CD Direction
9: AB+CD Direction
- 0: No potentiometer

See the page 50

Note:
(1) This type of movement is recommended for the handle when using a potentiometer.
(2) The resistance value of the potentiometer needs to be stated in the order form.

Dimensions



Contact Arrangement

Lever gate
Sketch and crosshatch the lever's field of movement on the grid

Potentiometer adaptation
Cross **X** the position on the scheme

On movement AB
Type/Size:

Value:

On movement CD
Type/Size:

Value:

Drum n°3

Item (2)

Choice of cam carriers (1)

Adaptation ☐ Potentiometer ☐

Text: **LOWER** Direction A (north) Ex: 5 notches
Direction B (south) Ex: 3 notches
Direction C (east)
Direction D (west)

Text: **RAISE**

Choice of cam carriers (1)

Legend

Without legend ☐

With blank legend, **XKDY1** ☐

Legend with specific engraving, **XKDY1001** (clearly state text on this scheme) ☒

Left-hand operated unit ☐

Right-hand operated unit ☐

Drum n°2

Item (2)

Choice of cam carriers (1)

Adaptation ☐ Potentiometer ☐

Text: **LOWER** Direction A (north) Ex: 5 notches
Direction B (south) Ex: 3 notches
Direction C (east)
Direction D (west)

Text: **RAISE**

Choice of cam carriers (1)

Legend

Without legend ☐

With blank legend, **XKDY1** ☐

Legend with specific engraving, **XKDY1001** (clearly state text on this scheme) ☒

Left-hand operated unit ☐

Right-hand operated unit ☐

Drum n°1

Item (2)

Choice of cam carriers (1)

Adaptation ☐ Potentiometer ☐

Text: **LOWER** Direction A (north) Ex: 5 notches
Direction B (south) Ex: 3 notches
Direction C (east)
Direction D (west)

Text: **RAISE**

Choice of cam carriers (1)

Legend

Without legend ☐

With blank legend, **XKDY1** ☐

Legend with specific engraving, **XKDY1001** (clearly state text on this scheme) ☒

Left-hand operated unit ☐

Right-hand operated unit ☐

Drum n°4

Item (2)

Choice of cam carriers (1)

Adaptation ☐ Potentiometer ☐

Text: **LOWER** Direction A (north) Ex: 5 notches
Direction B (south) Ex: 3 notches
Direction C (east)
Direction D (west)

Text: **RAISE**

Choice of cam carriers (1)

Legend

Without legend ☐

With blank legend, **XKDY1** ☐

Legend with specific engraving, **XKDY1001** (clearly state text on this scheme) ☒

Left-hand operated unit ☐

Right-hand operated unit ☐

Technical Data

Model	XKD
Direction	4Direction, can be linked
Amount of movement	2
Amount of notches in each direction	5
Type of movement	notched-Hold position/spring return
Operating schemes	Standard CAM assembly
Maximum number of;ontacts per movement	16
Mechanical Life(in millidns of operating cycles)	3
Control device	Vertical centering
Handle	1 standard
	2 Mechanical zero interlock
	3 With zero mechanical &electrical interlocks
	4 5 Push-down type
	6 7 8 9 Button with flat or convex head
	0 Other
Maximum number of potentiometers per movement	2 pairs

Model	XKDF
Direction	4Direction, can be linked
Control lever	200mm Maximum stroke in one direction 36°C
Maximum Number Of Contacts	①T Notched positions, hold position: maximum 3 gears in one direction 1.5 notches maximum in each direction, at 12°, 18°, 24, 30° and 36° (6° per notch). only when used with variable composition cam carriers comprising 4 or 8-contact blocks (1 st notch at 6°). 2.3 notches maximum in each direction, at 12°, 24° and 36° (12 per notch), only when used with variable composition cam carriers comprising 2-contact blocks.
Type of lever movement	②b Notched positions, with spring return to zero operation 3 or 5 notches maximum in each direction depending on the versions stated above ③3 Unnotched positions, with spring return to zero operation 36° maximum travel in each direction
Contact	16 contacts maximum per movement. The contact blocks are mounted in pairs on a fixing plate.
Cam schemes	(1) Variable composition cams, 6° per position; 4 or 8-contact cam carriers (2) Variable composition cams, 12° per position; 2-contact cam carriers
Electrical Life	3
handle Grip position	Vertical centering
Handle	1 standard
	2 Mechanical zero interlock
	3 With zero mechanical & electrical interlocks
	4 5 Push-down type
	6 7 8 9 Button with flat or convex head
	0 Other
Maximum number of potentiometers per movement	2 Pairs





Grip



Selection

• Standard model, length 200 mm

- 1: Simple (standard model)
- 2: With zero (centre) position mechanical interlocking
- 3: With zero (centre) position mechanical & electrical interlocking (1 C/O contact)
- Dead man's type
 - 4: With N/C + N/O contact
 - 5: With N/O + N/O contact
 - 6: With N/C + NiO contact
 - 7: With N/O + N/O contact
- With built-in projecting
 - 8: With N/C + N/O contact
 - 9: With N/O + N/O contact

- 0: block
- 1: block
- 2: block
- 3: block
- 4: block
- 5: block
- 6: block
- 7: block
- 8: block

- 1: Notched positions, with stayput operation 3 notches(1)
- 2: 5 notches (starting from 12°) or 6 notches (starting from 6°)(2)
- 3: Notched positions, with spring return 3 notches(1)
- 4: 5 notches (starting from 12°) or 6 notches (starting from 6°)(2)
- 5: Unnotched positions, with spring return to zero operation (3)

- 0: Without adaptation nor potentiometer
- 1: With adaptation only (without potentiometer)
- 2: With adaptation + potentiometer(4)

- 0: block
- 1: block
- 2: block
- 3: block
- 4: block
- 5: block
- 6: block
- 7: block
- 8: block

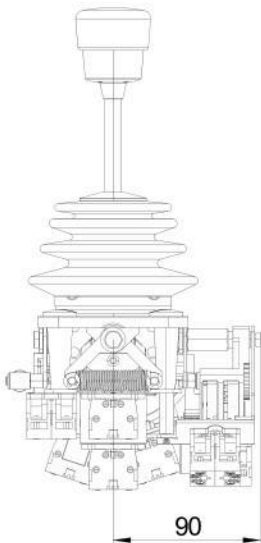
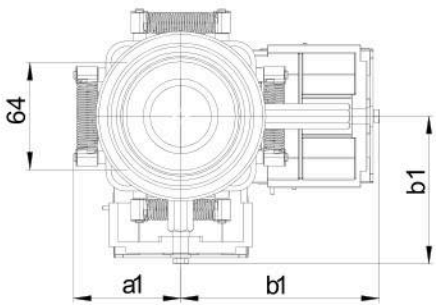
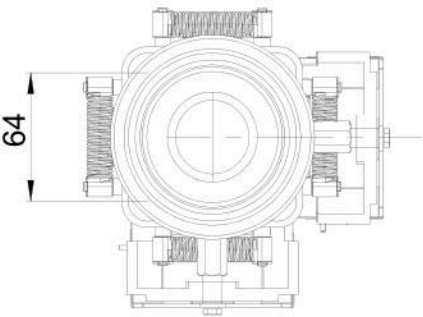
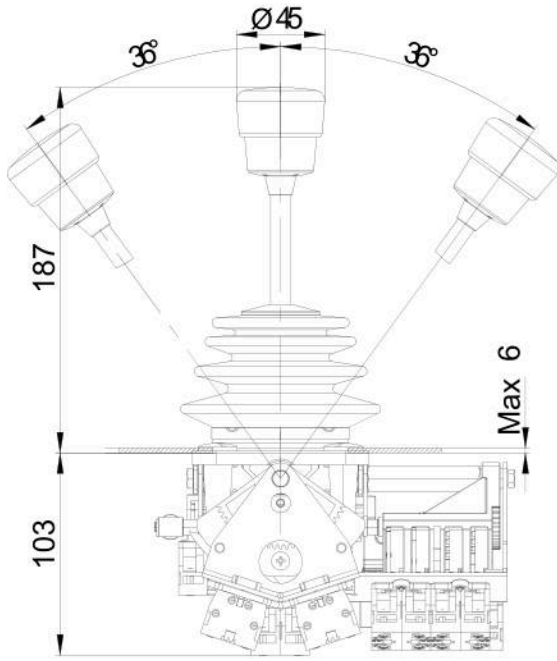
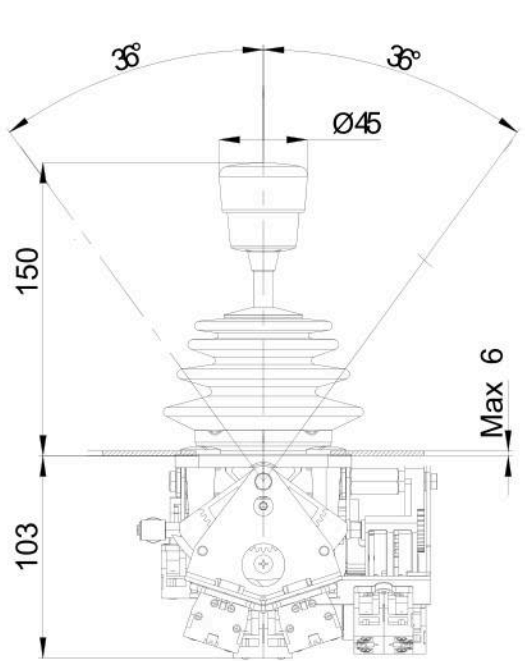
- 1: Notched positions, with stayput operation 3 notches(1)
- 2: 5 notches (starting from 12°) or 6 notches (starting from 6°)(2)
- 3: Notched positions, with spring return 3 notches(1)
- 4: 5 notches (starting from 12°) or 6 notches (starting from 6°)(2)
- 5: Unnotched positions, with spring return to zero operation (3)

- 0: Without adaptation nor potentiometer
- 1: With adaptation only (without potentiometer)
- 2: With adaptation + potentiometer(4)

Note:
(1) 3 notches: restricted to 2-contact variable composition cams only
(2) 5 notches: by using 1 or 2 variable composition 4 or 8-contact cams, mechanical notch at 12° (6 electrical positions in each direction)
(3) Type of lever movement recommended when using a potentiometer



Dimensions



STANDARD POTENTIOMETER

Data

Model	XKZ A15
Size description	15
standard	UTE 93265
Install	Body side(Synchronized Type)
Rotation operation	continuous rotation
function	Independent linearity+2%
Mechanical corner	360°

Electrical characteristic

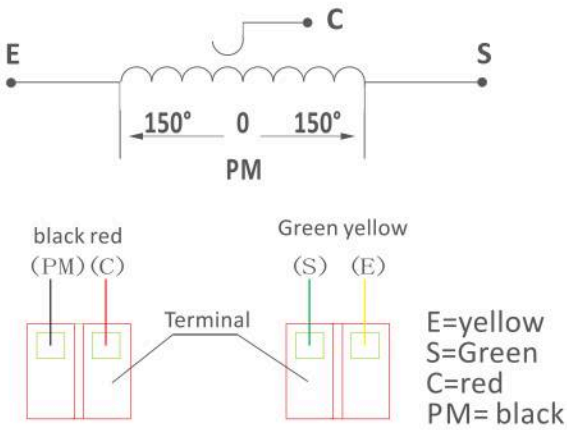
Standard resistance	1KΩ~10KΩ
Midpoint Line	Potentiometer Pin Pinout
Rated power(Pn)	2W/70°
Theoretical electrical corner	156°X2

Environmental characteristics

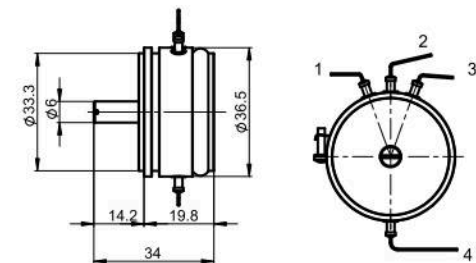
Mechanical Life	5million times
Use environment	-55°C~+125°C
Vibration	15G 2000HZ
Impact	15G 11ms

Resistance	Availability	Size	Model	Weightkg
4700(2x2350)	Standing stock	15	XKZ A15047	0.05
1000(2x500)	short-term	15	XKZA15010	0.05
2000(2x1000)	short-term	15	XKZ A15022	0.05
10000(2x5000)	Standing stock	15	XKZA15100	0.05
other	able to provide	15	XKZA15000(1)	0.05

Wiring diagram



Dimensions



the pinion gear of the adpatation can be connected to thepotentiometer coaxially,the shaft diameter is Φ 6 , and thelength is 14.6

	a	Φ
XKZ A15	20	37



LSSINE

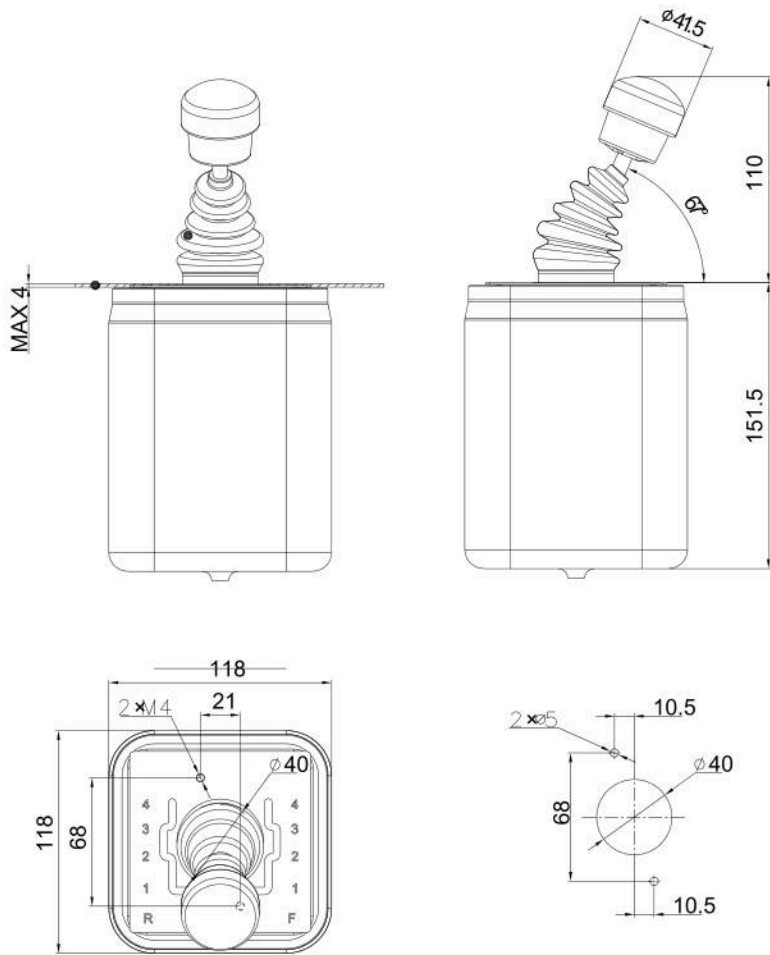
T32E4 CONTROLLER

The T32E4 controller is a durable switchgear that meets EC/EN 60947-5-1 standards. Its modular construction ensures versatility across applications. This controller is engineered to perform reliably in environments with high exposure to oil, moisture, ozone, and intense ultraviolet radiation. It is ideal for both light and heavy lifting equipment within industrial automation systems and fixed console operations

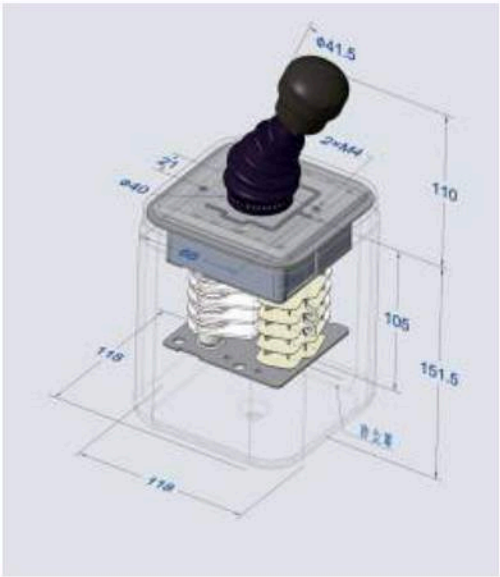
Technical Data

Ambient Temp:	-40°C to 85°C
Operating Temp:	-20°C to 60°C
Operating Force:	≤20N
Mechanical Life:	1M
Power:	AC 2.6A / DC 0.3A
Rated Current:	15A
Rated Voltage:	380V (440V)

Dimensions



LSSINE



SC1

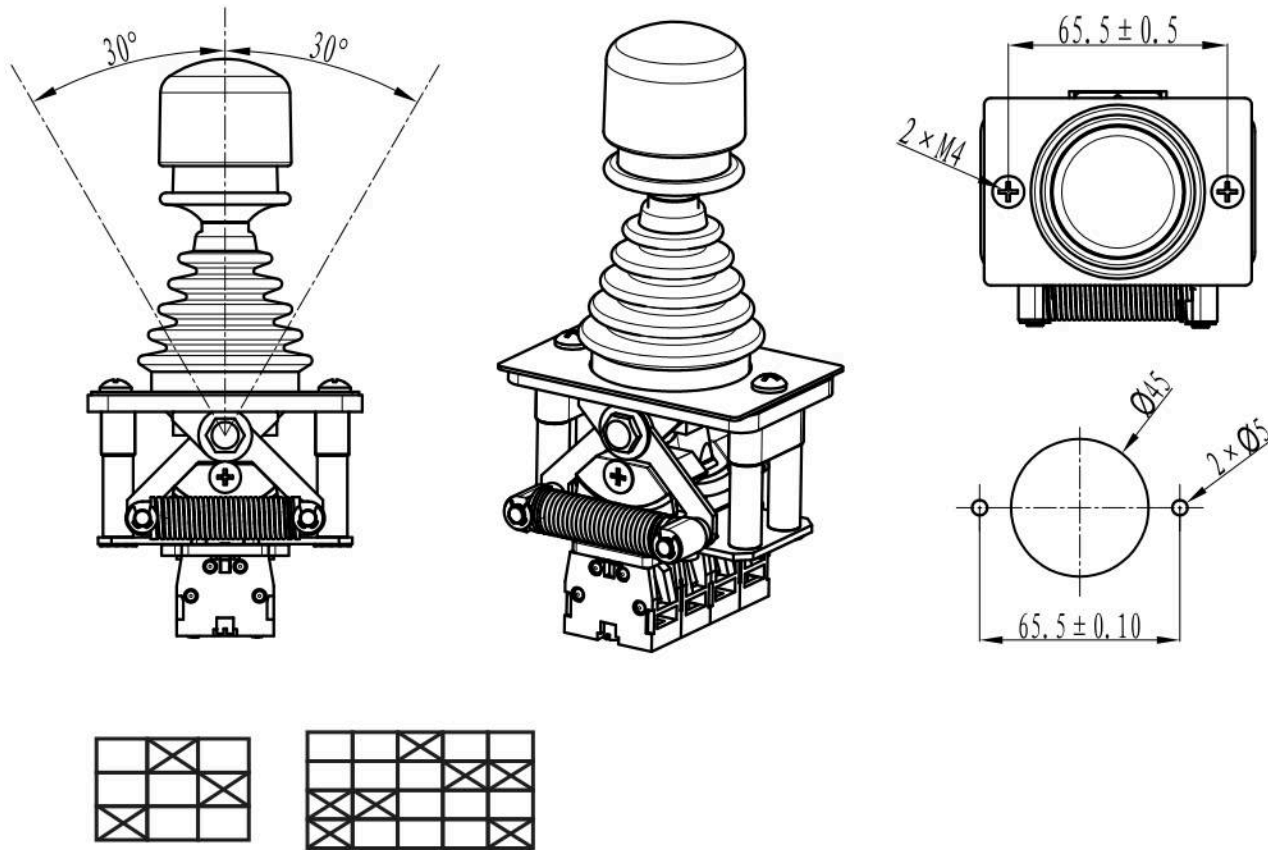
COMPACT LIGHT JOYSTICK

The SC1 joystick features a compact design, light and straightforward structure, enhancing ease of operation. Equipped with a zero position spring return and a self-locking mechanism, it ensures safety and reliability. It boasts a long service life and offers easy wiring, convenient installation, and low maintenance. This product line is primarily used in cranes, construction machinery, and various automated control systems

Technical Data

Operating Temperature:	-20°C to 60°C
Handle Operating Force:	≤20N
Mechanical Life:	1M
Power:	AC 2.6A / DC 0.3A
Rated Current:	15A
Rated Voltage:	380V (440V)

Dimensions



QT3S

INDUSTRIAL JOYSTICK

The QT3S joystick is engineered for use in secondary AC circuits (50Hz/60Hz) with rated voltages up to 380V (440V). It facilitates efficient motor control functions such as commutation, speed regulation, and braking, and can be integrated into console surfaces or portable control systems. Its versatility makes it a reliable choice for heavy-duty applications in industries including ports, shipping, railways, metallurgy, mining, and construction.

Technical Data

Operating Temp:	-20°C to 60°C
Handle Force:	<20N
Mechanical Life:	3M
Degree of protection:	Up tp IP65
Rated Current:	10A



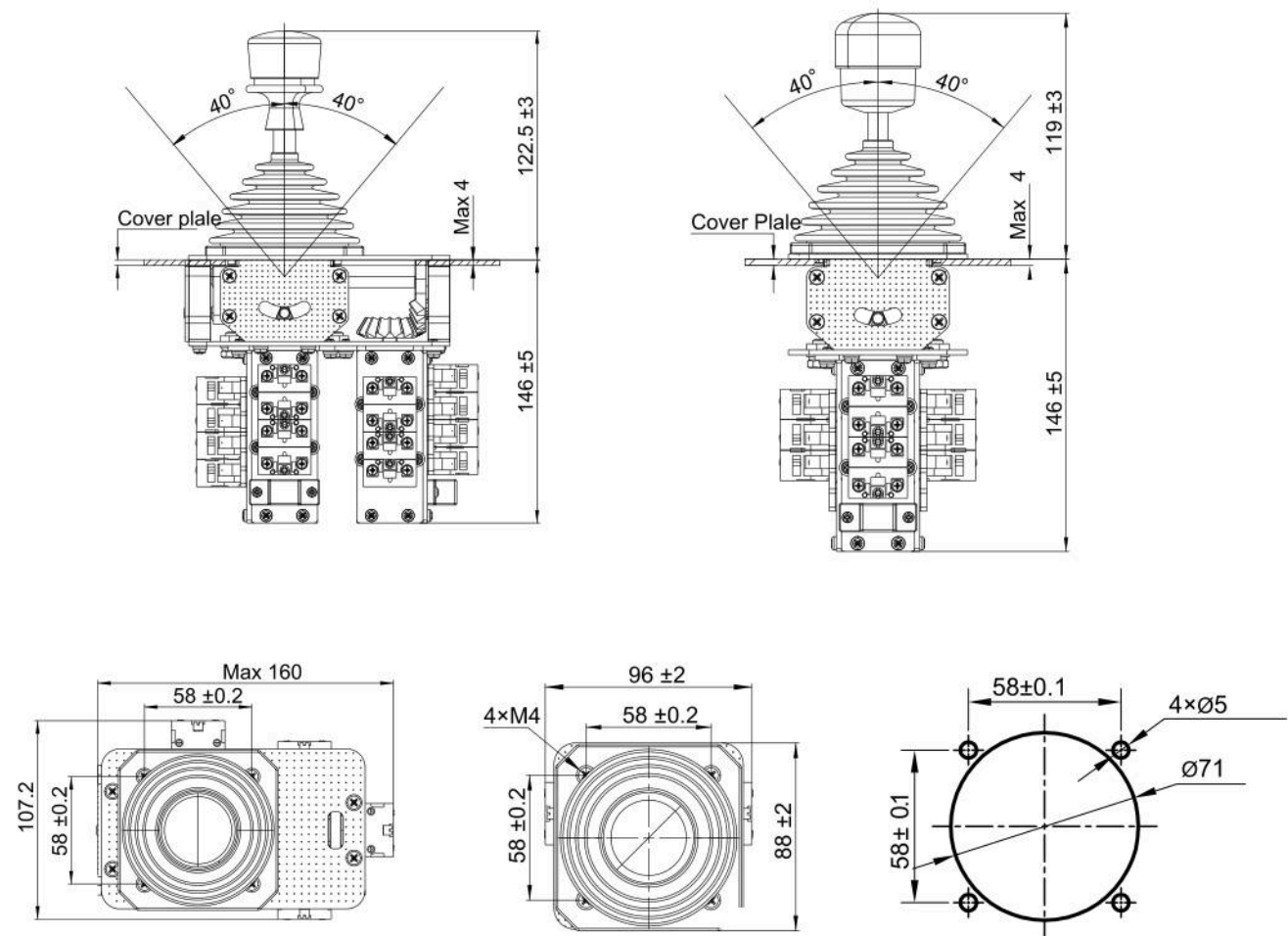
Selection	Palm Grips	Gate	Axis1			Axis2			Contact arrangement
			Movement	No. of contacts	Interface	Movement	No. of contacts	Interface	
• S1 • S4 • S5 • S6 • SHD8 • SHD8B See more options in the grip section									
• 1: 1-Axis↓ • 3: All-direction ※		• 2: Cross gate ⇄ • 4: Special gate							
• Z: Spring return • R: Friction brake									
• 01 2 contacts • 04 8 contacts		• 02 4 contacts • 05 10 contacts		• 03 6 contacts					
Potentiometer output • 1K • 2K • 5K • 10K									
• Z: Spring return • R: Friction brake									
• 01 2 contacts • 04 8 contacts		• 02 4 contacts • 05 10 contacts		• 03 6 contacts					
Potentiometer output • 1K • 2K • 5K • 10K									
• See the page 50									



Grip



Dimensions



QT3A

INDUSTRIAL JOYSTICK

The QT3A joystick is ideal for motor control, speed adjustment, and braking in AC circuits up to 380V (440V). It can be mounted on consoles or portable control boxes, offering reliable performance in industries such as ports, shipping, railways, metallurgy, mining, power, and construction.

Technical Data

Operating Temp:	-20°C to 60°C
Handle Force:	<20N
Mechanical Life:	2 M
Rated Current:	10A
Degree of protection:	Up to IP65



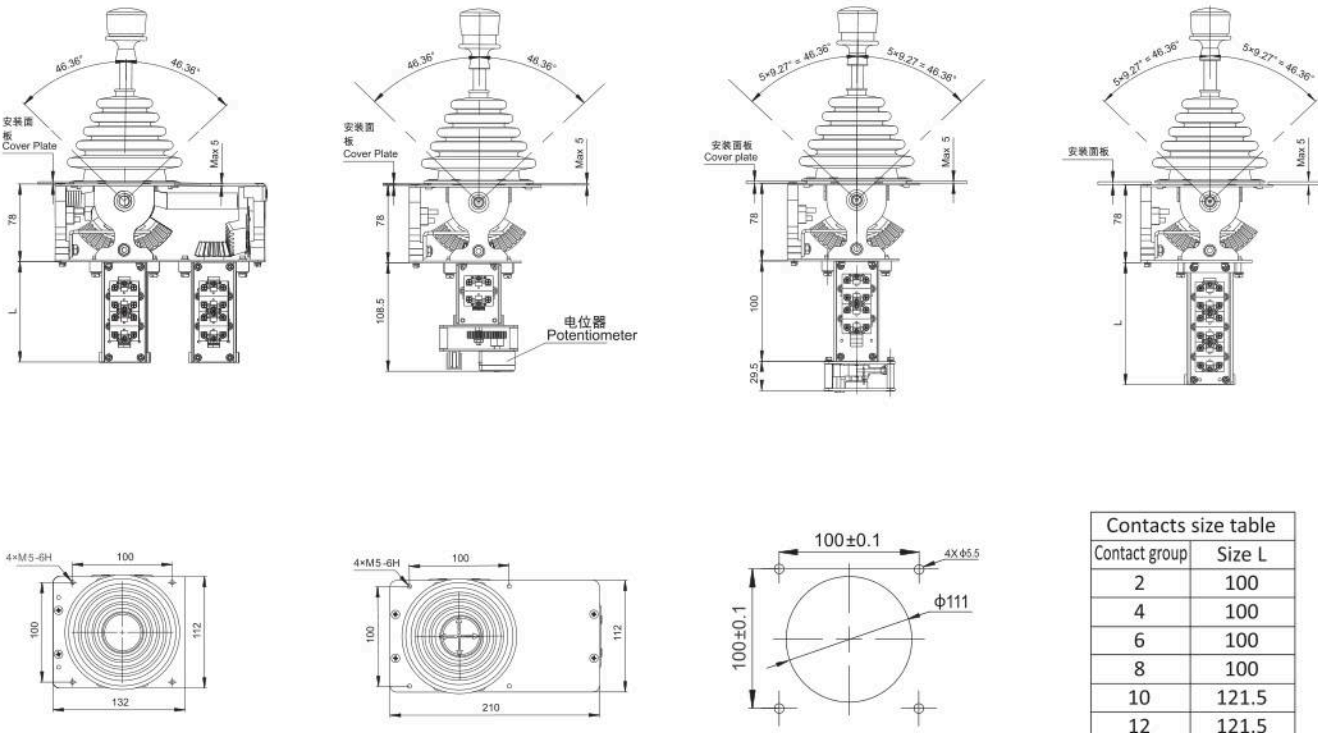
Selection	Palm Grips	Gate	Axis1			Axis2			Contact arrangement
			Axis 1	No. of contacts	Interface	Axis 2	No. of contacts	Interface	
• SHD8B • S7 • S2 • SHD8									
• 1 -Axis ↓ • 2 Cross gate + • 3 All-direction(x, Y-Axis) ※									
• Z: Spring return • R: Friction brake									
• 01 2 contacts • 02 4 contacts • 03 6 contacts • 04 8 contacts • 05 10 contacts									
Potentiometer output • 1K • 2K • 5K • 10K									
• Z Spring return • R Friction brake									
• 01 2 contacts • 02 4 contacts • 03 6 contacts • 04 8 contacts • 05 10 contacts									
Potentiometer output • 1K • 2K • 5K • 10K									
• See the page 50									



Grip



Dimensions



Contacts size table	
Contact group	Size L
2	100
4	100
6	100
8	100
10	121.5
12	121.5



SQ1
INDUSTRIAL JOYSTICK

- Potentiometer or Hall Sensor
 - Single or dual axis options
 - High-strength handle with excellent proportional control and on/off output
 - Protection rating: IP64 (above panel)
 - Easy installation, smooth operation, durable, and maintenance-free
- The SQ1 joystick is widely used in rotary drilling rigs, aerial fire trucks, crane shield machines, oil hoists, hydraulic proportional control systems, and frequency conversion motor control.

Technical Data

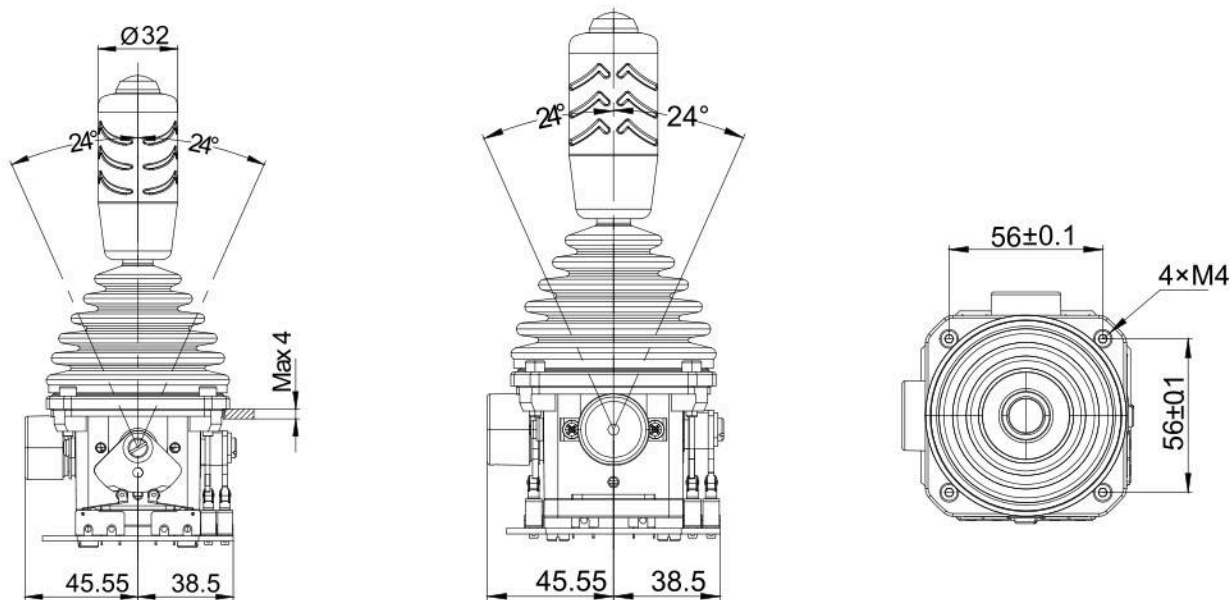
Operating Temperature: -40°C to +80°C
Handle Force: <20N
Mechanical Life: 5M
Operating Torque: ~5N (max 50N)
EMS Interference Resistance: Tested at 100V/m, frequency range 30MHz to 1GHz, with 80% sine wave modulation, meeting EN50082-2 (1995) standards.
ESD Protection Level: 4.8kV for contact discharge, 15kV for air discharge, compliant with IEC61000-4-2 standards.



Selection	Palm Grips	Gate	Axis1			Axis2			Contact arrangement
			Axis 1	No. of contacts	Interface	Axis 2	No. of contacts	Interface	
• SHD8 SHD8 • S7 Press down mechanical interlock↓ • S2 Grab-type • SHD SHD8 with button • 8B • S4 Lift-up mechanical interlock↑									
• 1 -Axis ↑ • 2 Cross gate ⇄ • 3 All-direction(x, Y-Axis) ※									
• Z Spring return • R Friction brake									
• 01 2 contacts • 02 4 contacts • 03 6 contacts • 04 8 contacts • 05 10 contacts									
• Voltage output DC24V V1: -10V~0~+10V V2: +10V~0~+10V V3: -5V~0~+5V V4: +5V~0~+5V V5: 0~+10V V6: 0~+5V • Hall output DC5V HV1: 0-2.5-5V HV2: 0.5-2.5-4.5V HV3: 1.0-2.5-4.0V HV4: 1.25-2.5-3.75V • CAN CAN 2.0 CAN J1939 CAN OPEN • Current output DC24V I1: 4mA-12mA-20mA I2: 20mA-4mA-20mA • P1: One directions output P2: Two directions output									
• Z Spring return • R Friction brake									
• 01 2 contacts • 02 4 contacts • 03 6 contacts • 04 8 contacts • 05 10 contacts									
• Voltage output DC24V V1: -10V~0~+10V V2: +10V~0~+10V V3: -5V~0~+5V V4: +5V~0~+5V V5: 0~+10V V6: 0~+5V • Hall output DC5V HV1: 0-2.5-5V HV2: 0.5-2.5-4.5V HV3: 1.0-2.5-4.0V HV4: 1.25-2.5-3.75V • CAN CAN 2.0 CAN J1939 CAN OPEN • Current output DC24V I1: 4mA-12mA-20mA I2: 20mA-4mA-20mA • P1: One directions output P2: Two directions output									
• See the drawing below									

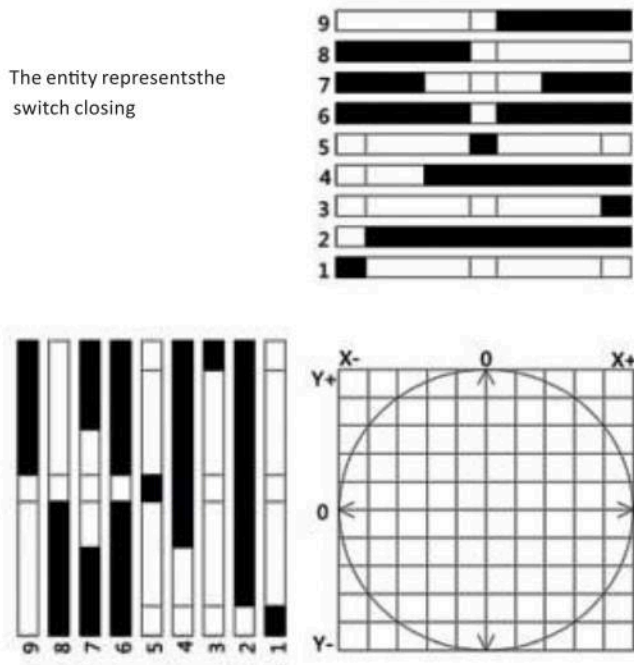


Dimensions



Contact Arrangement

The entity represents the switch closing



Grip



SQ2

INDUSTRIAL JOYSTICK

- Potentiometer or Hall Sensor
 - Single axis options
 - High-strength handle with excellent proportional control and on/off output
 - Protection rating: IP64 (above panel)
 - Easy installation, smooth operation, durable, and maintenance-free
- The SQ2 joystick is widely used in rotary drilling rigs, aerial fire trucks, crane shield machines, oil hoists, hydraulic proportional control systems, and frequency conversion motor control.

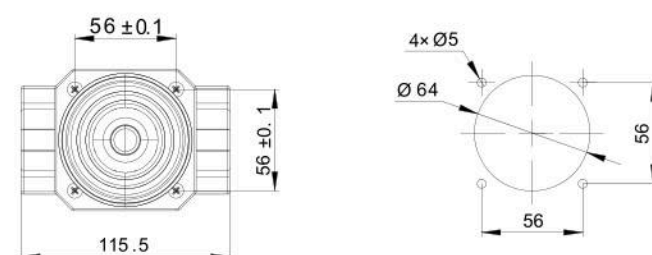
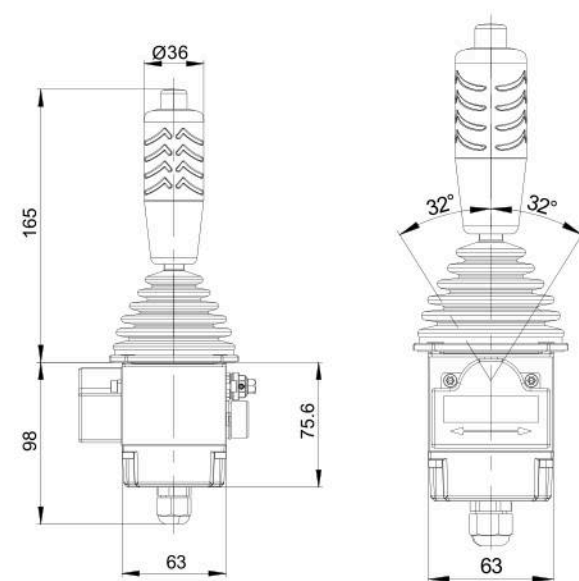
Technical Data

Operating Temperature: -40°C to +80°C
Handle Force: <20N
Mechanical Life: 5M
Operating Torque: ~5N (max 50N)
EMS Interference Resistance: Tested at 100V/m, frequency range 30MHz to 1GHz, with 80% sine wave modulation, meeting EN50082-2 (1995) standards.
ESD Protection Level: 4.8kV for contact discharge, 15kV for air discharge, compliant with IEC61000-4-2 standards.

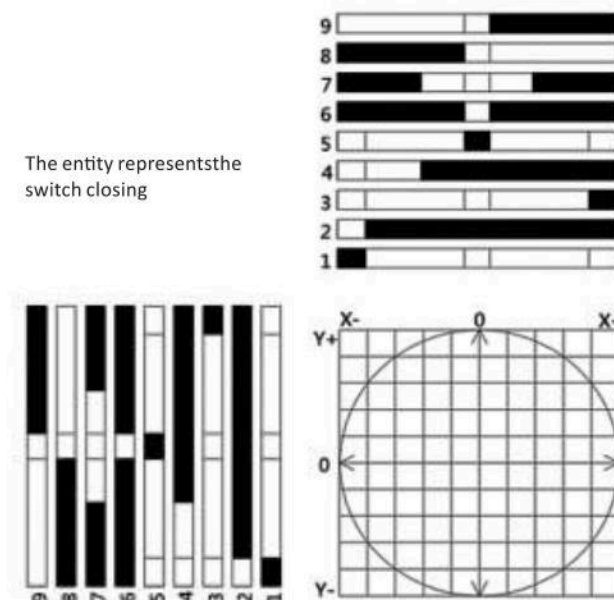


Selection	Palm Grips	Gate	Axis1			Axis2			Contact arrangement
			Axis 1	No. of contacts	Interface	Axis 2	No. of contacts	Interface	
• SHD8 SHD8 • S7 Press down mechanical interlock↓ • S2 Grab-type • SHD SHD8 with button • 8B SHD8 with button • S4 Lift-up mechanical interlock↑									
• 1 Bidirectional ↓ • 2 Unidirectional ↑									
• Z Spring return • R Friction brake									
• 01 2 contacts • 02 4 contacts • 03 6 contacts • 04 8 contacts • 05 10 contacts									
• Voltage output DC24V V1: -10V~0~+10V V2: +10V~0~+10V V3: -5V~0~+5V V4: +5V~0~+5V V5: 0~+10V V6: 0~+5V • Hall output DC5V HV1: 0-2.5-5V HV2: 0.5-2.5-4.5V HV3: 1.0-2.5-4.0V HV4: 1.25-2.5-3.75V • CAN CAN 2.0 CAN J1939 CAN OPEN • Current output DC24V I1: 4mA-12mA-20mA I2: 20mA-4mA-20mA P1: One directions output P2: Two directions output									
• Z Spring return • R Friction brake									
• 01 2 contacts • 02 4 contacts • 03 6 contacts • 04 8 contacts • 05 10 contacts									
• Voltage output DC24V V1: -10V~0~+10V V2: +10V~0~+10V V3: -5V~0~+5V V4: +5V~0~+5V V5: 0~+10V V6: 0~+5V • Hall output DC5V HV1: 0-2.5-5V HV2: 0.5-2.5-4.5V HV3: 1.0-2.5-4.0V HV4: 1.25-2.5-3.75V • CAN CAN 2.0 CAN J1939 CAN OPEN • Current output DC24V I1: 4mA-12mA-20mA I2: 20mA-4mA-20mA P1: One directions output P2: Two directions output									
• See the drawing below									

Dimensions



Contact Arrangement



SQ4

INDUSTRIAL JOYSTICK

- Ergonomics design
- Three degree movement X,Y,Z
- Wider voltage range
- dual channel control system
- Multiple interface

The SQ4 is a compact, finger-tip joystick mainly used in video control systems, electric wheelchairs, and medical devices. It provides precise, smooth control for reliable performance across these critical applications

Technical Data

Travel angle: $\pm 40^\circ$ (Z axis) $\pm 20^\circ / \pm 27^\circ$ (X or Y axis)
 Operating force*: 2.3-6N
 Mechanical life: 2M(X or Y)/1M(Z)
 Operating Temp: $-40^\circ\text{C} \sim +85^\circ\text{C}$
 Protection Level: IP65
 EMC: EN6100-6-4-2007, 30MHz-1GHz EN6100-6-2-2019, 80MHz-6GHz
 Impact: IEC60068-2-27, 50g, 11ms, 3 times/direction impact, in total 6 directions
 Vibration: IEC60068-2-64, random vibration, 3.6gRMS, 100-200Hz, each axis lasts for one hour



Grip



Selection

Palm Grips

Gate

Movement

Interface

Wiring

- A
- B
- C
- D
- E
- 1 -Axis $\updownarrow$
- 2 Cross gate $\oplus$
- 3 All-direction(x, Y-Axis) $\otimes$
- 4 Z-Axis $\odot$

- T Spring return

- Dual path DC5V
Dp2: 0.5-2.5-4.5V $\Rightarrow$ 4.5-2.5-0.5V
Dp3: 1.0-2.5-4.0V $\Rightarrow$ 4.5-2.5-1.0
Dp4: 1.25-2.5-3.75V $\Rightarrow$ 3.75-2.5-1.25V
- CAN
CAN 2.0 output
- Hall output DC5V
HV2: 0.5-2.5-4.5V
HV3: 1.0-2.5-4.0V
HV4: 1.25-2.5-3.75V
- USB

- A: Terminal interface
- L: Direct outgoing line
- X: Customize



Grip



Dimensions



SQ5
INDUSTRIAL JOYSTICK

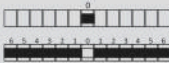
Ergonomic handle design for comfortable operation
Multi-axis control with spring return
Durable construction for harsh environments
Contactless Hall technology for high reliability and long lifespan
Electronics with IP67 protection rating

Applications: Aerial work platforms, lifting machinery, electro-hydraulic control, industrial automation

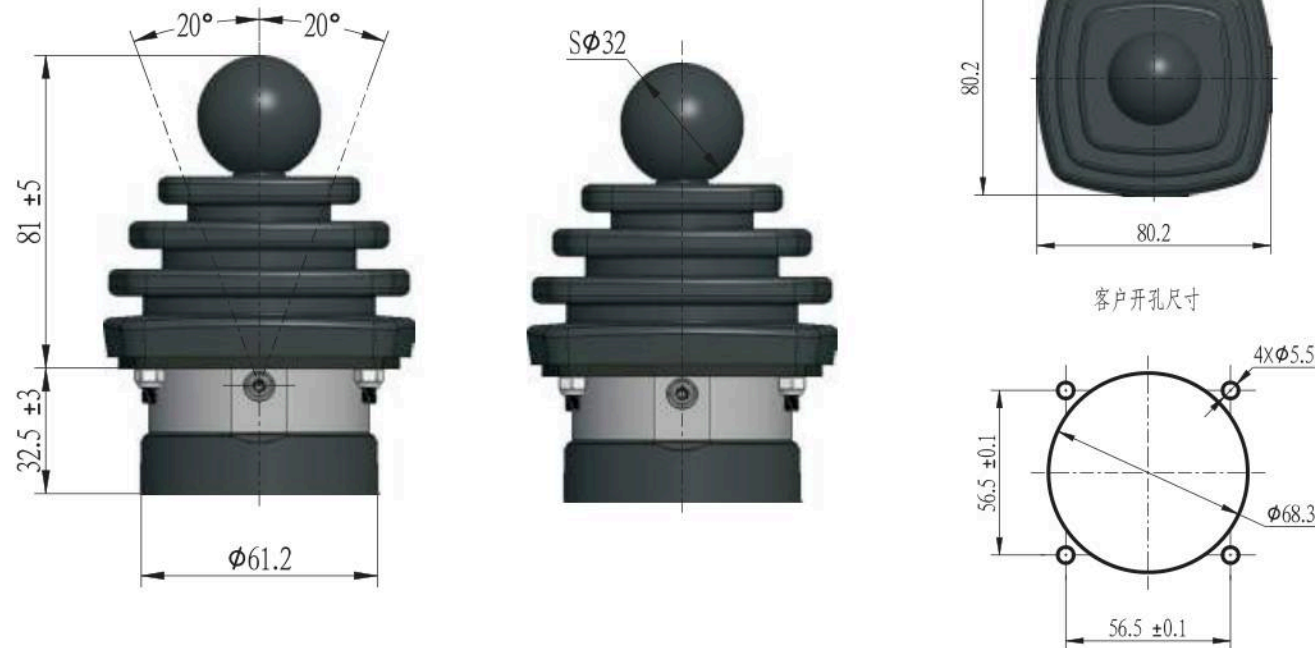


Technical Data

Ambient Temperature: -40°C to +85°C
Operating Temperature: -30°C to +70°C
Handle Operating Force: ≤15N
Mechanical Life: 5
M Angle: ±20°

Selection	Palm grips	Gate	Axis 1		Axis 2		Wiring	Contact arrangement
			Movement	Interface	Movement	Interface		
• SHD1 • SHD4B • SHD8B • SHD8 See more options in the grip section								
• 1 -Axis ↓ • 3 Cross gate ↗								
• 2: Y-Axis ↓ • 4: All-direction ✖								
• Z: Spring return								
• Voltage output DC24V V1: -10V~0~+10V V2: +10V~0~+10V V3: -5V~0~+5V V4: +5V~0~+5V	• Hall output DC5V HV1: 0-2.5-5V HV2: 0.5-2.5-4.5V HV3: 1.0-2.5-4.0V HV4: 1.25-2.5-3.75V	• CAN CAN 2.0 CAN J1939 CAN OPEN	• Current output DC24V I1: 4mA-12mA-20mA I2: 20mA-4mA-20mA					
• Spring return								
• Voltage output DC24V V1: -10V~0~+10V V2: +10V~0~+10V V3: -5V~0~+5V V4: +5V~0~+5V	• Hall output DC5V HV1: 0-2.5-5V HV2: 0.5-2.5-4.5V HV3: 1.0-2.5-4.0V HV4: 1.25-2.5-3.75V	• CAN CAN 2.0 CAN J1939 CAN OPEN	• Current output DC24V I1: 4mA-12mA-20mA I2: 20mA-4mA-20mA					
• C: Connector	• L: Direct outgoing line							
• K1 • K2 	• K3 							

Dimensions



Grip



SQ6 INDUSTRIAL JOYSTICK

Ergonomic Design: Specifically engineered for use in construction machinery, offering optimal user comfort and efficiency.

Hall Effect Technology: Utilizes contactless sensors for enhanced durability and extended operational life.

Customizable Options: Available with various handle designs and configurable button placements to suit diverse operational needs.

Flexible Output: Supports optional CAN bus output for integration with modern control systems.

Versatile Functionality: Features spring return and is capable of multi-axis operation for comprehensive control.

Applications

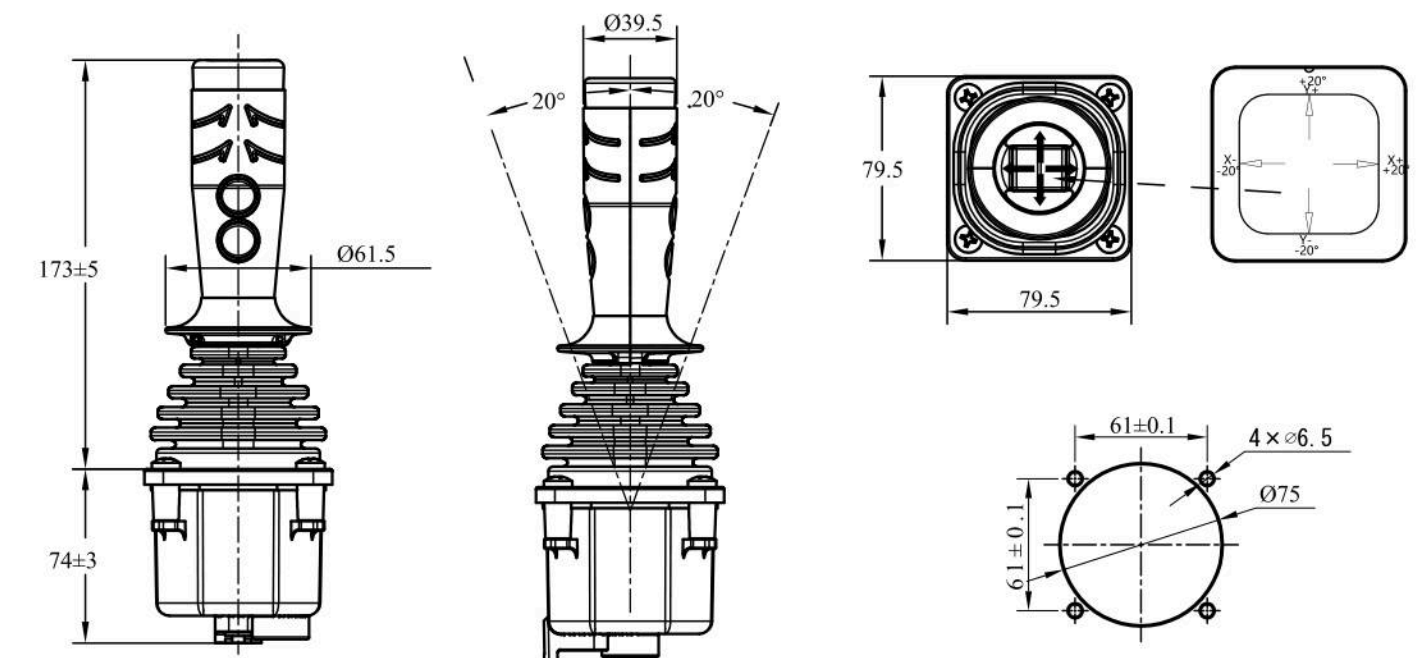
Ideal for cranes, loaders, forklifts, excavators, access platforms, tractors, harvesters, and other heavy machinery.

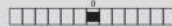
Technical Data

Operating Temp :	-30°C to +70°C
Service Life:	3 M
Protection Level:	IP65
Operating Force:	5N
Resistance:	< 200Ω



Dimensions



Selection	Palm grips	Gate	Axis 1		Axis 2		Mounting	Contact arrangement
			Movement	Interface	Movement	Interface		
	• SHD8B Palm Grips with signal buttonSHD8B • SHD8 Palm Grips SHD8 See more options in the grip sector							
	• 1: X-Axis ↔ • 3: Cross gate ⇄ • 2: Y-Axis ↓ • 4: All-direction ⌘							
	• Z: Spring return							
	• Voltage output DC24V - V1: -10V~0~+10V - V2: +10V~0~+10V - V3: -5V~0~+5V - V4: +5V~0~+5V	• Hall output DC5V - HV1: 0-2.5-5V - HV2: 0.5-2.5-4.5V - HV3: 1.0-2.5-4.0V - HV4: 1.25-2.5-3.75V	• CAN - CAN 2.0 output - CAN J1939 output - CAN OPEN	• Current output DC24V - I1: 4mA-12mA-20mA - I2: 20mA-4mA-20mA				
	• Z: Spring return							
	• Voltage output DC24V - V1: -10V~0~+10V - V2: +10V~0~+10V - V3: -5V~0~+5V - V4: +5V~0~+5V	• Hall output DC5V - HV1: 0-2.5-5V - HV2: 0.5-2.5-4.5V - HV3: 1.0-2.5-4.0V - HV4: 1.25-2.5-3.75V	• CAN - CAN 2.0 output - CAN J1939 output - CAN OPEN	• Current output DC24V - I1: 4mA-12mA-20mA - I2: 20mA-4mA-20mA				
	• D:Dechi connector(CAN bus output only) • A: Terminal interface • L: Direct outgoing line							
	• K1:  • K2: 							



Grip



SQ7

INDUSTRIAL JOYSTICK

Features both spring-loaded return and options for uni- or bi-directional control. Supports multidirectional inputs for versatile maneuvering. Utilizes durable potentiometer or Hall effect sensors for precise angle detection. Offers multiple signal outputs tailored to diverse applications. Ideally suited for use in a wide range of heavy machinery including cranes, loaders, forklifts, excavators, and aerial work platforms.

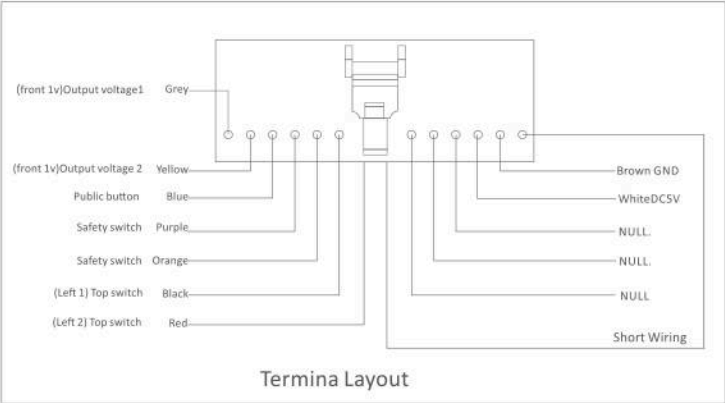
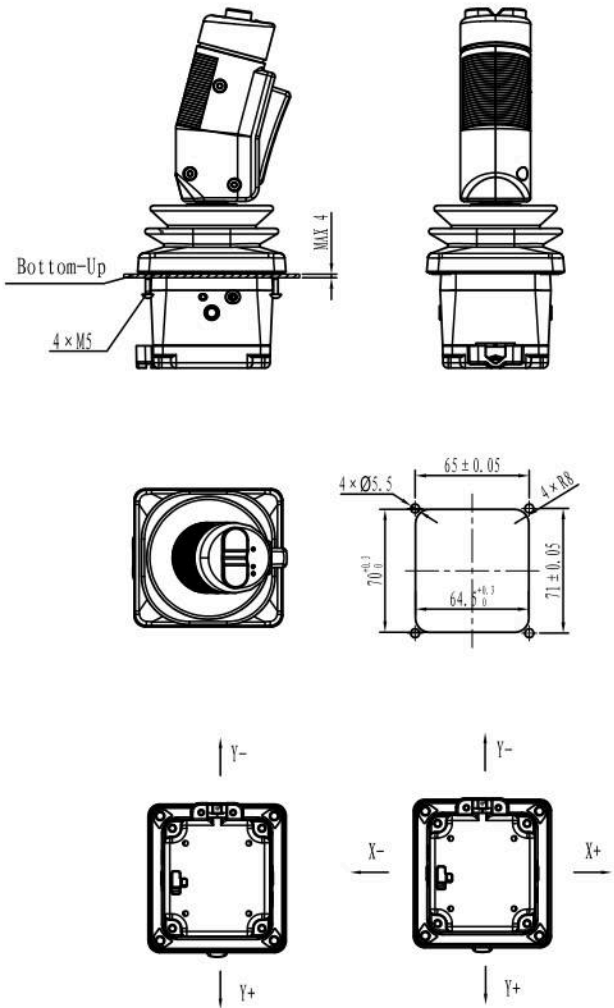


Technical Data

Operating Temperature: -20°C (-40°C) to +80°C
Handle Operating Force: ≤20N
Mechanical Life: 5 million cycles
Degree of Protection: IP64
EMS Interference Protection: 100V/m, 30MHz–1GHz, 80% sine wave modulation; complies with EN50082-2 (1995)
ESD Interference Protection: 4.8kV contact discharge, 15kV air discharge; meets IEC61000-4-2 standards

Selection	Palm Grips	Gate	Movement	Axis 1	Axis 2	Wiring
				Interface	Interface	
• KW: safety switch+ rocker switch • K: safety switch,without rocker switch • W: without safety switch,rocker switch						
• 1 -Axis ↑ • 2 Cross gate ⇄ • 3 All-direction(x, Y-Axis) ⌘						
• Z: Spring return						
• Hall output DC5V - HV1:0-2.5-5V - HV2:0.5-2.5-4.5V - HV3:1.0-2.5-4.0V - HV4:1.25-2.5-3.75V - HV5:1.15-2.5-3.85V • Dual path DC5V - DP1: 0-2.5-5V ⇌ 5-2.5-0V - DP2: 0.5-2.5-4.5V ⇌ 4.5-2.5-0.5V - DP3: 1.0-2.5-4.0V ⇌ 4.0-2.5-1.0V - DP4: 1.25-2.5-3.75V ⇌ 3.75-2.5-1.25V - DP5: 1.15-2.5-3.85V ⇌ 3.85-2.5-1.15V - DP6: 1-2-4V ⇌ 4-2-1V						
• Hall output DC5V - HV1:0-2.5-5V - HV2:0.5-2.5-4.5V - HV3:1.0-2.5-4.0V - HV4:1.25-2.5-3.75V - HV5:1.15-2.5-3.85V • Dual path DC5V - DP1: 0-2.5-5V ⇌ 5-2.5-0V - DP2: 0.5-2.5-4.5V ⇌ 4.5-2.5-0.5V - DP3: 1.0-2.5-4.0V ⇌ 4.0-2.5-1.0V - DP4: 1.25-2.5-3.75V ⇌ 3.75-2.5-1.25V - DP5: 1.15-2.5-3.85V ⇌ 3.85-2.5-1.15V - DP6: 1-2-4V ⇌ 4-2-1V						
• C: Connector • L: Direct outgoing line • X: Customize						

Dimensions



color	Function	color	Function
Redundant Hall Type		Hall Type	
Grey	Y-axis front output	Grey	Y-axis output
	Y-axis back output	Pink	X-axis output
Yellow	Y-axis back output	Blue	Public button
	Y-axis front output	Purple	Safe Switch
Blue	Public button	Orange	Safe Switch
Purple	Safe Switch	Black	(Left 1)Top Switch
Orange	Safe Switch	Red	(Left 2)Top Switch
Black	(Left 1)Top Switch	White	+5Vdc
Red	(Left 2)Top Switch	Brown	OV
Pink	X-axis front output+		
	X-axis back output-		
Green	X-axis front output+		
	X-axis back output-		
White	+5Vdc		
Brown	OV		

Grip



SQ7M
INDUSTRIAL JOYSTICK

The SQ7M joystick boasts an ergonomic design, offering multi-axis, grip-type operation and a robust handle suitable for harsh environments. It utilizes contactless Hall technology, ensuring high reliability, and features long-life electronic components with IP67 protection. Ideal for maritime operations, aerial work platforms, and harvesting equipment, this joystick excels in precise control and durability in demanding industrial settings.

Technical Data

Operating Force: 8N
Service Life: Up to 1 million cycles
Operating Temp: -40°C to +70°C
Protection Class: Up to IP67
EMC Compliance: EN61000-6-4:2007, EN61000-6-2:2019 (Frequency ranges 30MHz-1GHz and 80MHz-6GHz)



Selection

- KW: safety switch+ rocker switch
 - K: safety switch, without rocker switch
 - W: without safety switch, rocker switch
- See more options in the grip section

- 1 -Axis ↓
- 2 Cross gate +
- 3 All-direction(X, Y-Axis) ※

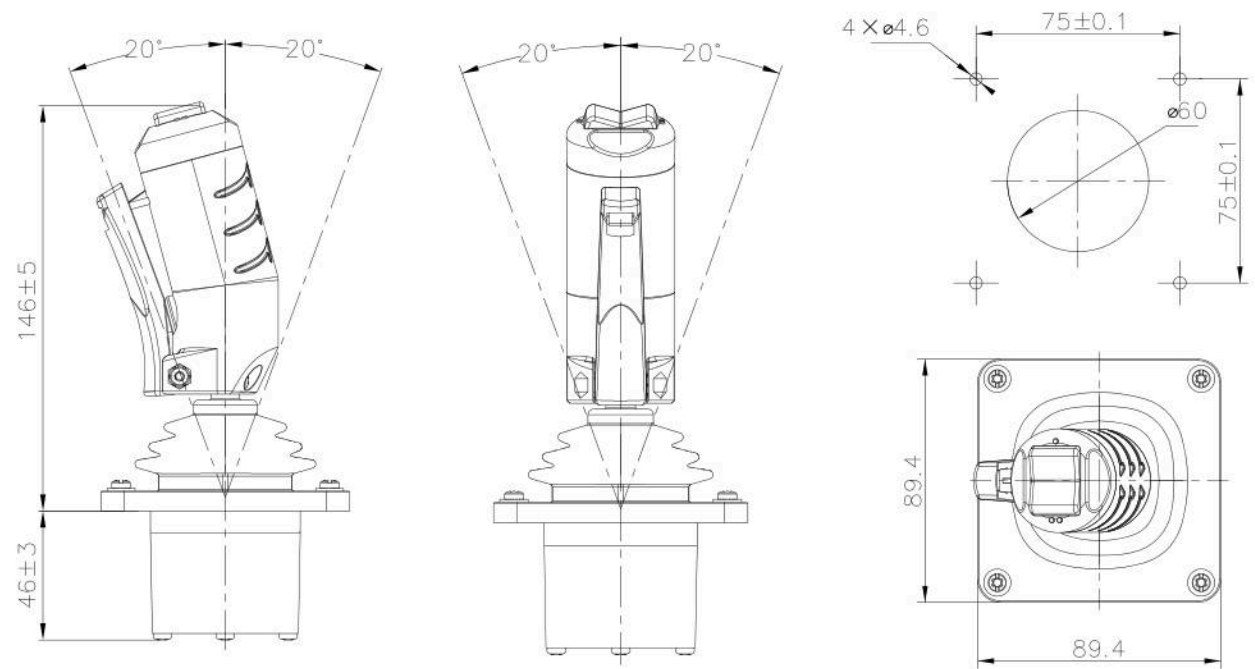
- Z: Spring return

- Hall output DCSV
HV1: 0-2.5-5V
HV2: 0.5-2.5-4.5V
HV3: 1.0-2.5-4.0V
HV4: 1.25-2.5-3.75V
HV5: 1.15-2.5-3.85V

- Hall output DCSV
HV1: 0-2.5-5V
HV2: 0.5-2.5-4.5V
HV3: 1.0-2.5-4.0V
HV4: 1.25-2.5-3.75V
HV5: 1.15-2.5-3.85V

- C: Connector
- L: Direct outgoing line

Dimensions



Grip



SQ8
INDUSTRIAL JOYSTICK

Hydraulic-Like Control Response
Hall Sensor with Vibration Feedback
Spring Return or Friction Positioning with Single or Dual Axis Control
Selectable Operation Modes: Linear, Cross, Square, T, or Z-Shaped
Effortless Installation, Flexible Operation, Uniform Response, Durable, and Maintenance-Free
The SQ8 joystick is robust and ideally suited for electro-hydraulic applications. It offers various output options including voltage, current, and switch contacts, and features customizable grip options for diverse operational requirements.



Technical Data

Ambient Temperature Range: -40°C to 85°C
Mechanical Life: 5M
Protection Class: IP54
Installation Mode: Bottom-to-top installation

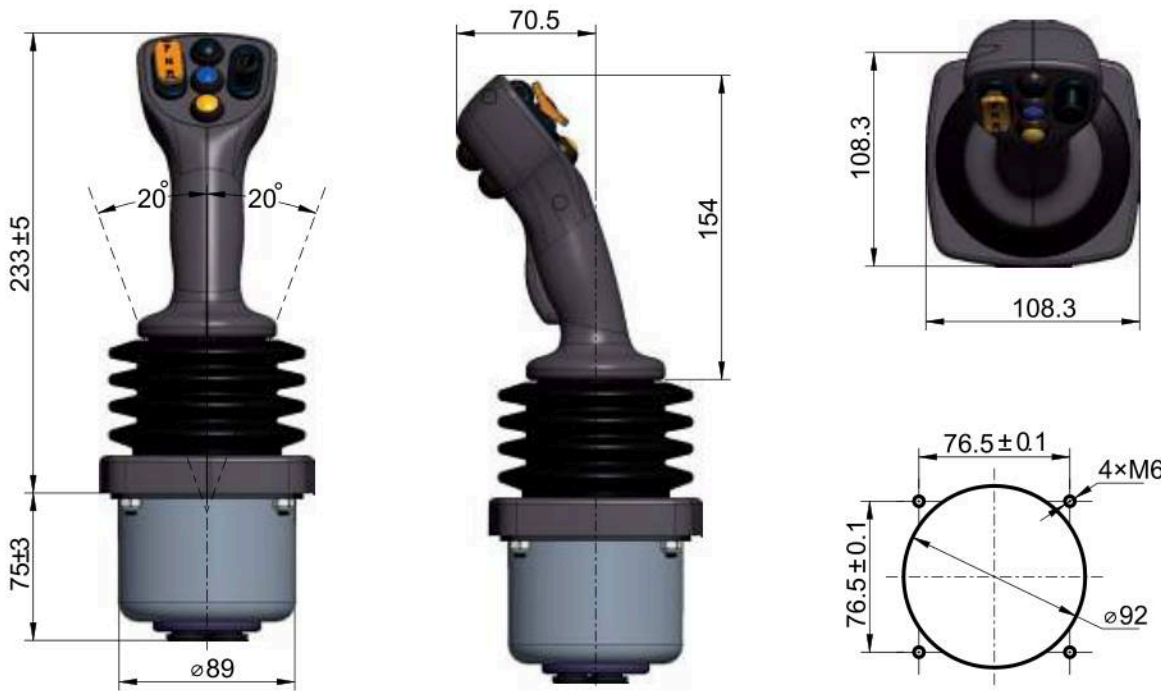
Selection	Palm Grips	Gate	Axis1		Axis2		Switch closed position	Wiring
			Movement	Interface	Movement	Interface		
• SHD1 • SHD4B • SHD8B • SHD8 See more options in the grip section								
• 1: 1-Axis↑ • 3: All-direction ※		• 2: Cross gate ⇄ • 4: Special gate H,C,L and special						
• Z: Spring return		• R: Friction brake						
• Hall output DC5V - HV1: 0-2.5-5V - HV2: 0.5-2.5-4.5V - HV3: 1.0-2.5-4.0V - HV4: 1.25-2.5-3.75V		• Current output DC24V - I1: 4mA-12mA-20mA - I2: 20mA-4mA-20mA • Potentiometer output 1K 2K 5K 10K	• CAN - CAN 2.0 output - CAN J1939 output - CAN OPEN	• Voltage output DC24V - V1: -10V~0~+10V - V2: +10V~0~+10V - V3: -5V~0~+5V - V4: +5V~0~+5V				
• Z: Spring return		• R: Friction brake						
• Hall output DC5V - HV1: 0-2.5-5V - HV2: 0.5-2.5-4.5V - HV3: 1.0-2.5-4.0V - HV4: 1.25-2.5-3.75V		• Current output DC24V - I1: 4mA-12mA-20mA - I2: 20mA-4mA-20mA • Potentiometer output 1K 2K 5K 10K	• CAN - CAN 2.0 output - CAN J1939 output - CAN OPEN	• Voltage output DC24V - V1: -10V~0~+10V - V2: +10V~0~+10V - V3: -5V~0~+5V - V4: +5V~0~+5V				
• K1 • K2		• K3						
• C: Connector		• L: Direct outgoing line						



Grip



Dimensions



SQT0

INDUSTRIAL JOYSTICK

The SQT0 joystick features a durable metal cast drive block, ensuring long service life and high switching cycle reliability. It is ideal for demanding control tasks and is commonly used in consoles, construction machinery, municipal vehicles, and work platforms.

Technical Data

Operating Temperature:	-20°C to 60°C
Mechanical Life:	2M
Protection Level:	IP54
Mounting :	Bottom-Up



Selection

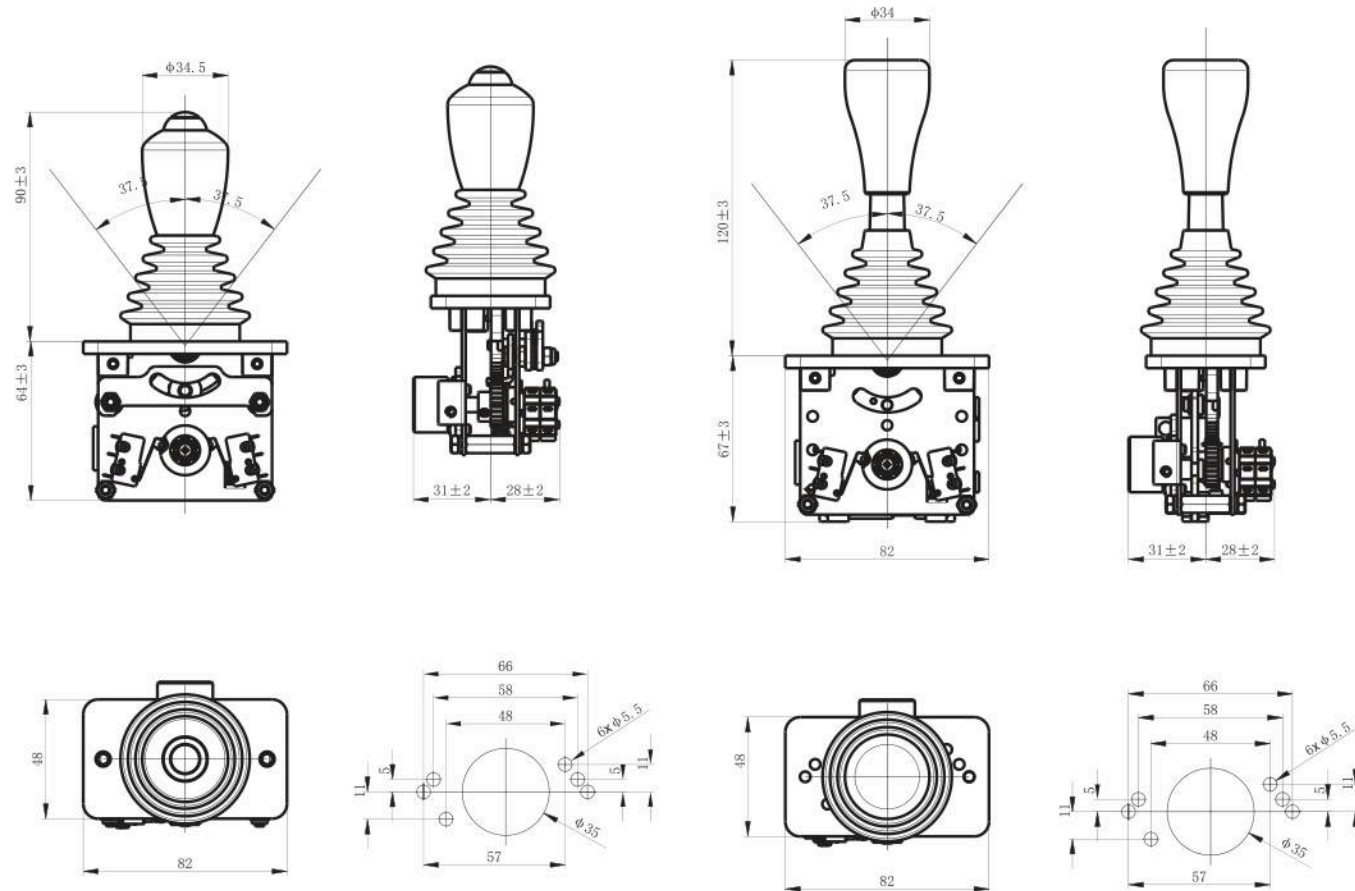
	Palm Grips	Gate	Movement	Interface	Switch closed position	Wiring
• SHD4 • SHD4B • SHD8B • SHD8 • SG21	See more options in the grip section					
• 1 Bidirectional ↓			• 2 Unidirectional ↑			
• Z Spring return			• R Friction brake			
• Hall output DCSV HV1: 0-2.5-5V HV2: 0.5-2.5-4.5V HV3: 1.0-2.5-4.0V HV4: 1.25-2.5-3.75V			• Potentiometer output 1K 2K 5K 10K 20K			
• K1 • K2 • K3						
• C: Connector						• L: Direct outgoing line



Grip



Dimensions



SQ20

INDUSTRIAL JOYSTICK

- Potentiometer or Hall Sensor
- Single-axis with spring return or friction brake options
- Robust build for precise control
- Simple setup, flexible operation, durable and maintenance-free
- Used in rotary drilling rigs, high-altitude fire trucks, crane machines, oil hoists, and frequency conversion motor controls.

Technical Data

Ambient Temperature:	-40 to +85°C
Operating Temperature:	-30 to +70°C
Handle Operating Force:	≤20N
Mechanical Life:	5M
Protection Level:	IP65
Angle:	±37.5° or ±75° (single direction)



Selection

- S5 Lift up zero mechanical interlock S5
 - S6 Push-down zero mechanical interlock S6
 - SB6 Straight Palm Grips with a button SB6 at the top
- See more options in the grip section

- 1 Bidirectional ↓
- 2 Unidirectional ↑

- Z: Spring return
- R: Friction brake

- | | | | |
|---|---|---|---|
| <ul style="list-style-type: none"> • Voltage output DC24V V1: -10V~0~+10V V2: +10V~0~+10V V3: -5V~0~+5V V4: +5V~0~+5V V5: 0~+10V | <ul style="list-style-type: none"> • Hall output DC5V HV1: 0-2.5-5V HV2: 0.5-2.5-4.5V HV3: 1.0-2.5-4.0V Hv4: 1.25-2.5-3.75V | <ul style="list-style-type: none"> • Potentiometer output DC36V P1: Two directions output P2: One directions output • 1K • 2K • 5K • 10K • 20K | <ul style="list-style-type: none"> • Current output DC24V I1: 4mA-12mA-20mA I2: 20mA-4mA-20mA |
|---|---|---|---|

- K1
- K2
- K3

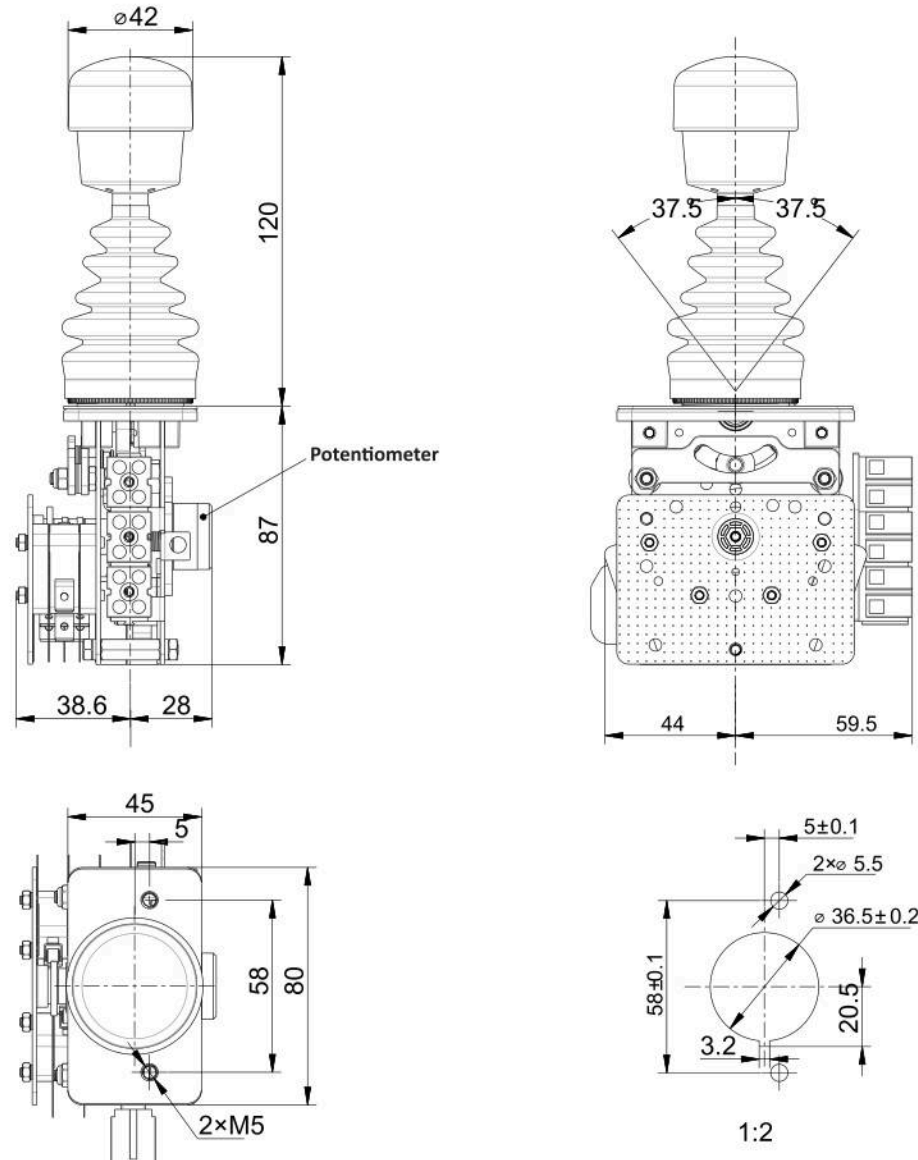
- A: Terminal interface
- L: Direct outgoing line
- X: Customize



Grip



Dimensions



Contact Arrangement

Typ	Form	Typ	Form
MS11	A01	MS24	A11
MS12	A02	MS214	A12
MS13	A03	MS224	A13
MS14	A04	MS25	A14
MS21	A05	MS26	A15
MS22	A06	MS0	A98
MS212	A07		
MS222	A08		
MS23	A09		
MS213	A10		

Micro change over contact for control handle with dead man's button signal button push button

contact 5 05=direction 1/4/5/8
contact 3 03=direction 2/3/6/7

Deflection directions designated DIN 15025

Poten-tiometer MSP

SW01

FINGERTIP SWITCH



SW01 is often used in heavy machinery, marine, robotics, or areas requiring precise movement control.

Technical Data

Protection Level:	IP67
Power Supply:	DC 30V
Current Rating:	2A
Service Life:	2M
Operating Temperature Range:	-40°C to +85°C



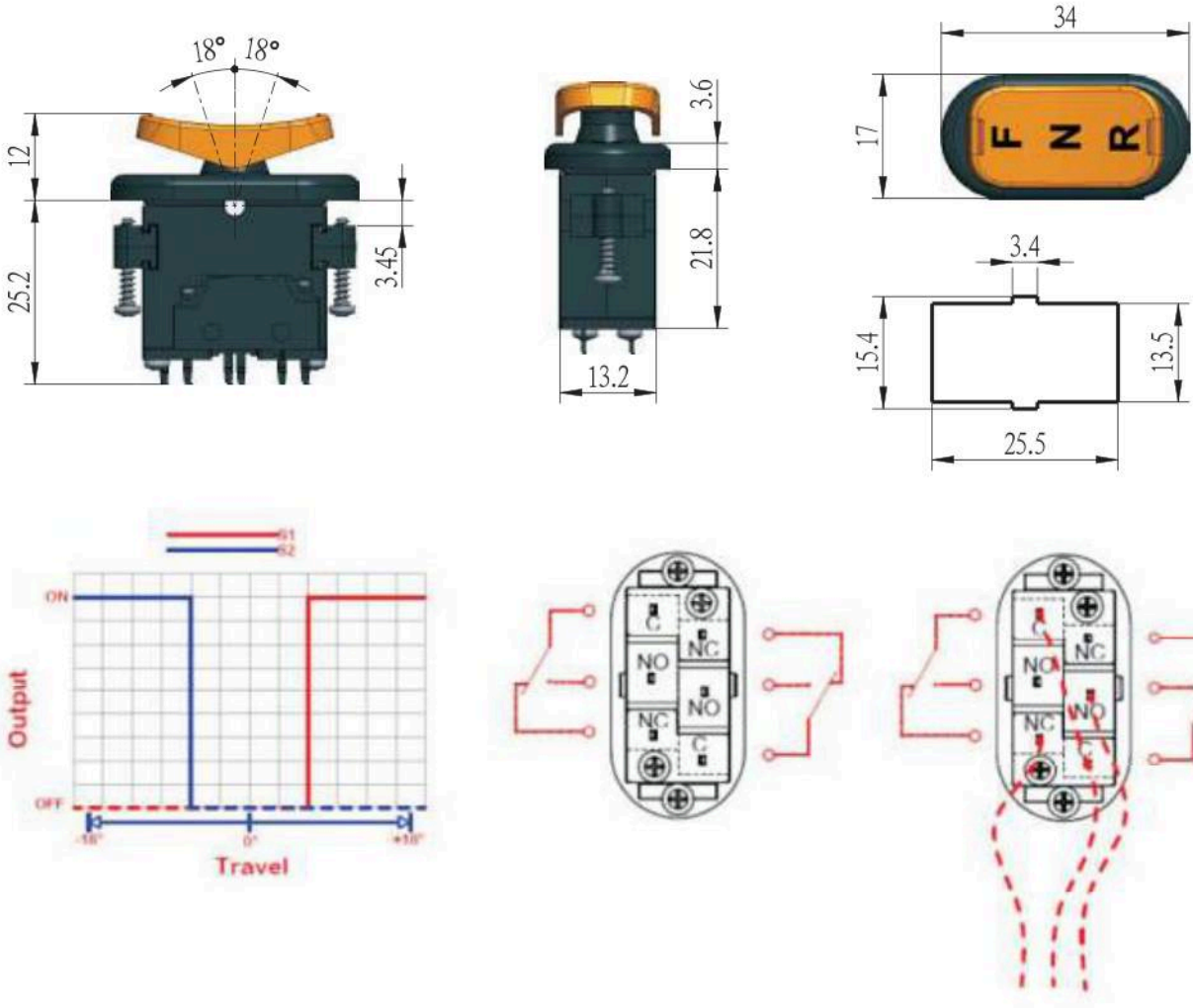
Grip



Dimensions

Dimensions

Selection	Palm Grips	Movement	Gate	Interface	Wiring
- PA - PB1 - PB2 - PB3 - PB4					
- Z: Spring return - R: Friction brake					
1: 1-Axis†					
SED → ON-OFF-ON					
- A: Terminal interface - L: Direct outgoing line 30mm - X: Customize					



SW02

FINGERTIP SWITCH



The SW02 is a high-performance fingertip switch designed for critical applications across various sectors, including broadcast equipment, security systems, automation technology, healthcare devices, and optical instruments. It combines durability with precision, employing a Hall sensor for reliable operation in demanding environments.

Technical Data

Basic unit:	Single-axis
operating Angle:	±24°
Power Supply:	5V DC, 12mA
Mechanical Life:	5M
Operating Temp:	-40°C to +70°C
Movement:	spring return; option for 3-position detent



Grip

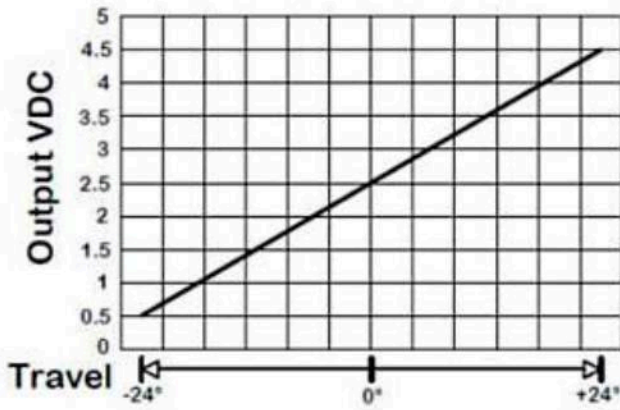
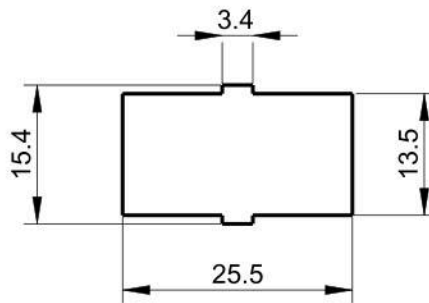
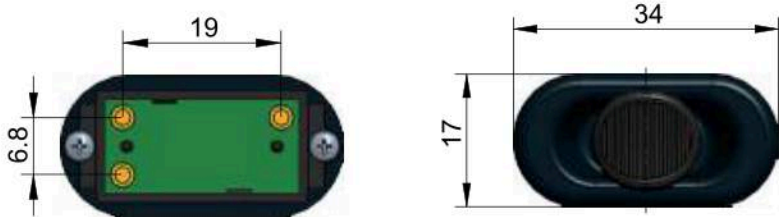
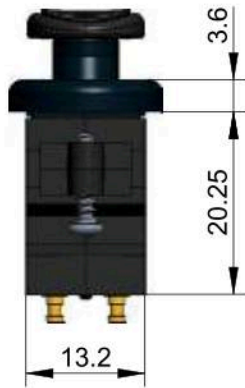
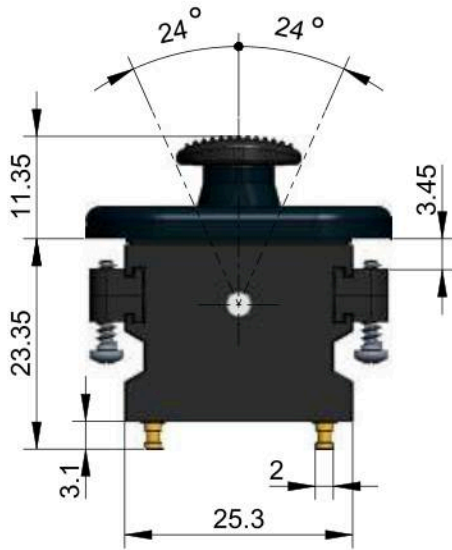


Dimensions



Dimensions

Selection	Palm Grips	Movement	Gate	Interface	Wiring
• PA					
• Z: Spring return					
• 1: 1-Axis↑					
• Hall output DC5V Hv2: 0.5-2.5-4.5V HV3: 1.0-2.5-4.0V Hv4: 1.25-2.5-3.75V	• DP Dp2: 0.5-2.5-4.5V 4.5-2.5-0.5V DP3: 1.0-2.5-4.0V 4.0-2.5-1.0V DP4: 1.25-2.5-3.75V 3.75-2.5-1.25V				
• A: Terminal interface • L: Direct outgoing line 250mm • X: Customize					



SW03

FINGER WHEEL

Heavy-duty design for critical applicationsSuitable for CCTV, robotics, medical, and optical devicesSingle-axis with Hall sensorThree-color LED (white, green, red)Signal output: 0.5-2.5V-4.5V Durable and reliable

Fingertip Switch

Movement:

Operating Angle:

Power Supply:

Lifetime:

Operating Temperature:

Spring-return

±30°

12mA/DC5V

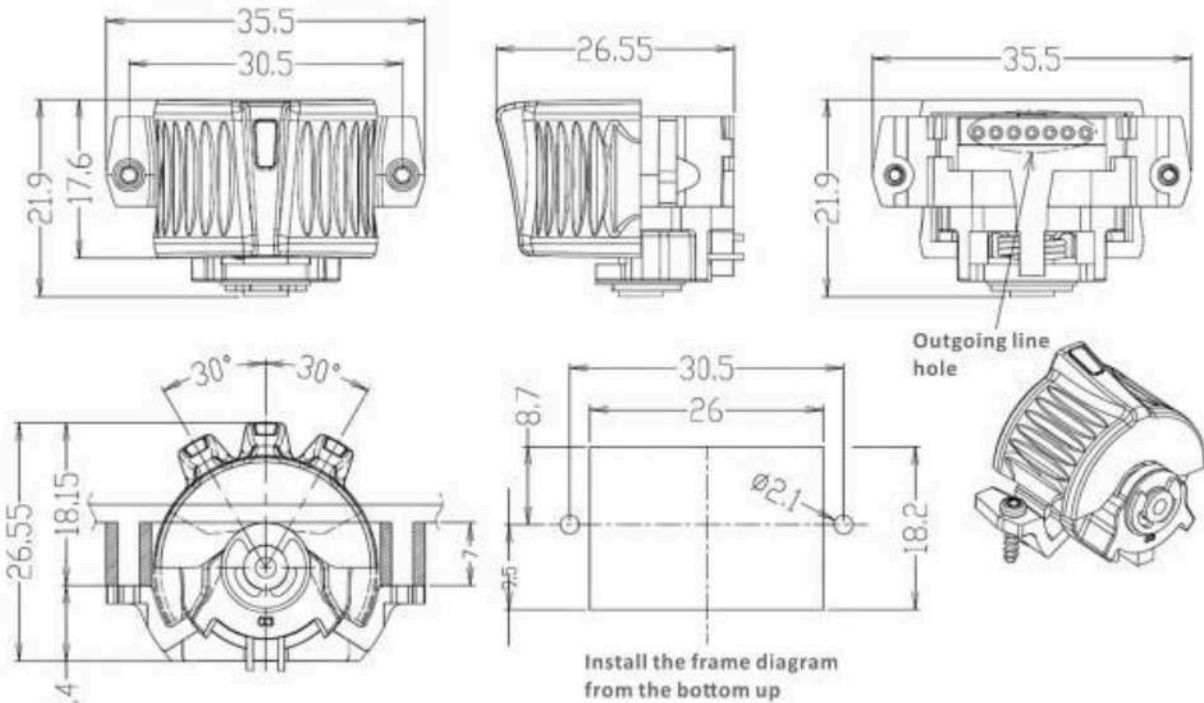
1M

-40°C to +70°C



Selection	Peak	Color	Movement	Interface	LED	Power
• 1: Slanted • 2: Flat						
• B: Black • R: Red						
• RO: Spring return • R3: 3 position detent						
• 30: 0.3-1.67-3.0 V • 40: 1.0-2.50-4.0 V • 45: 0.5-2.50-4.5 V						
• W: LED White • B: LED Blue						• 5V

Dimensions



SW04

FINGERTIP SWITCH

- Designed for Electro-hydraulic applications
- Hall sensor
- Robust service life
- Options for actuators, light, and colors

Technical Data

Operating Angle:

Signal Output:

Operating Temp:

Mechanism:

Power Supply:

Mechanical Life:

Protection Class:

±31.5°

0.5-2.5-4.5V

-40°C to +85°C

Spring return

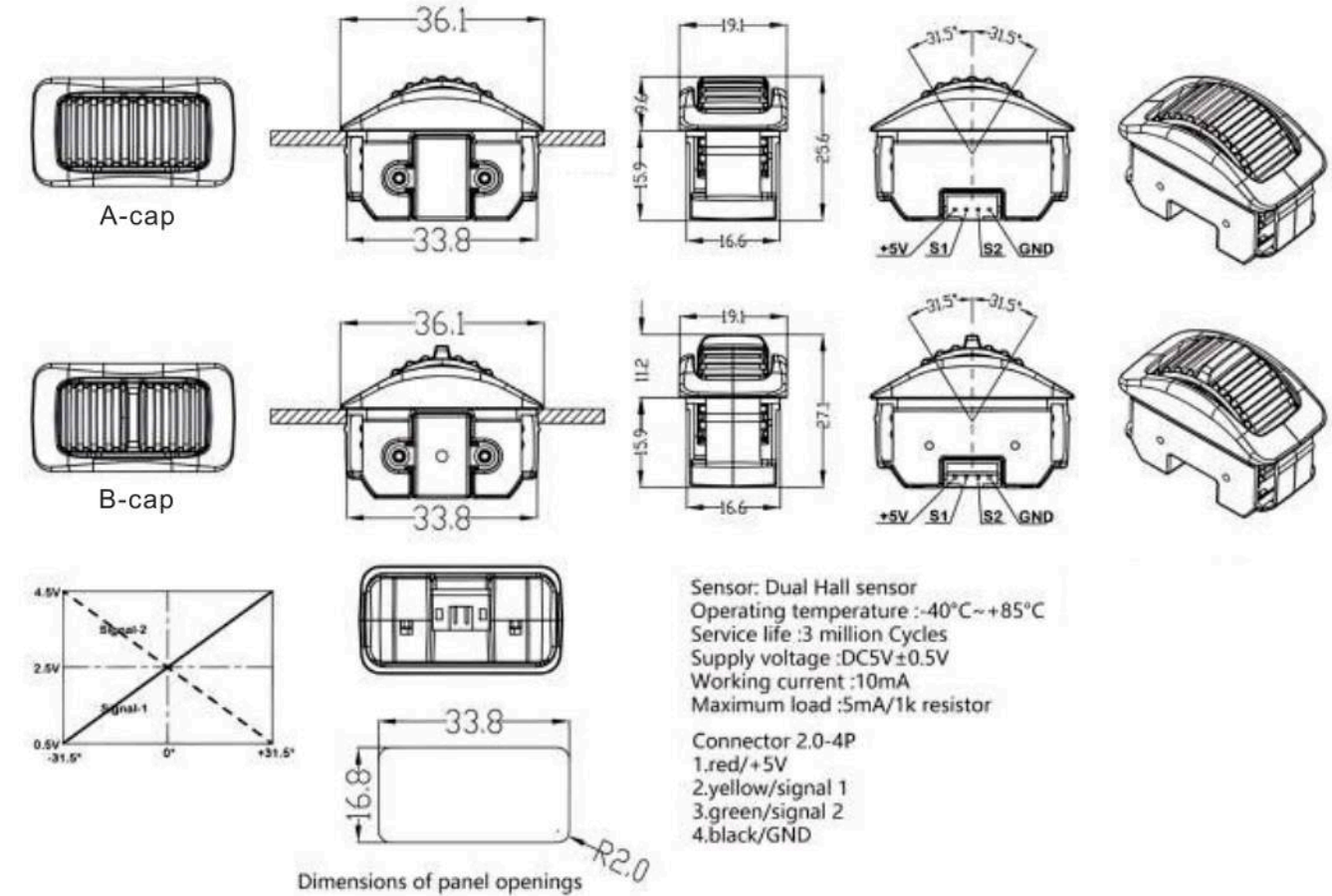
DC 5V/9mA

3M

IP65



Dimensions



SW05

FINGERTIP JOYSTICK



- Compact Design: Ideal for control panels and armrests.
- Reliability: Uses non-contact Hall effect sensors for enhanced durability.
- IP67 Protection: Resistant to dust and water, suitable for harsh environments.
- Custom Configurations: Options for spring return, detents, and variable resistance.
- Custom Colors: Handles available in various colors to fit design preferences.

Applications

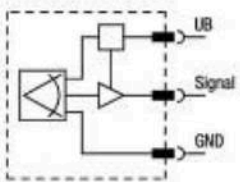
- Industrial Controllers: Suitable for a range of industrial remote controls.
- Control Panels: Integrates seamlessly into various control systems.
- Armrests: Perfect for machinery and equipment armrests.



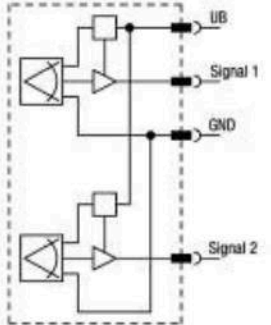
Selection	Hardware	Movement	colour	symbol	Connection
0: Analog 1: Semi-redundant 2: Redundant					
- ZB Spring return ↕ - ZU Spring return ↑ - DL Dual-end locking with spring return - OL One-end locking with spring return - F Friction brake without detent - FD Friction brake with middle detent	- R3 3 position detent - R5 5 position detent - R4 4 position detent with dual-end locking - FR3 3 position detent with friction brake - FR5 5 position detent with friction brake				
1: Red RAL3001 2: Green RAL6010 3: Yellow RAL1023 4: Blak RAL9005	5: Blue RAL5005 6: Orange RAL2010 7: Gray..RAL7043 8: White				
- N: No symbol - S: Special design					
00: 250MM Standard Cable 01: Deutsch DTM connector					

Dimensions

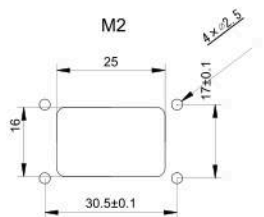
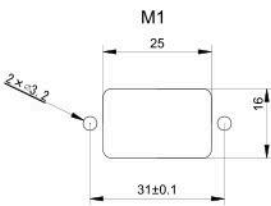
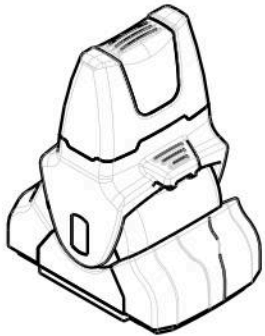
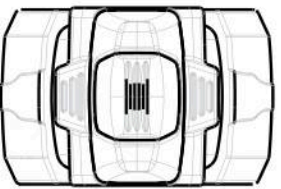
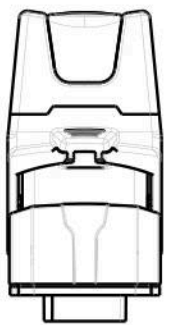
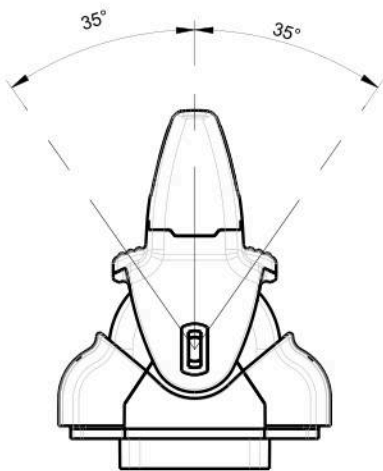
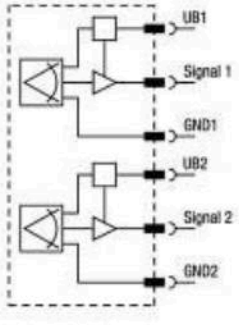
Analogue



Analogue semi-redundant



Analogue redundant

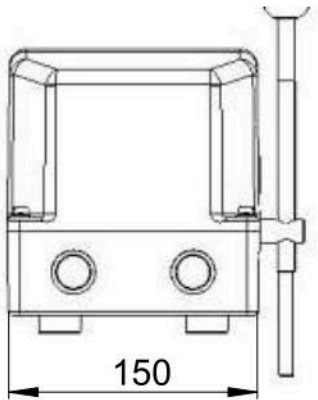
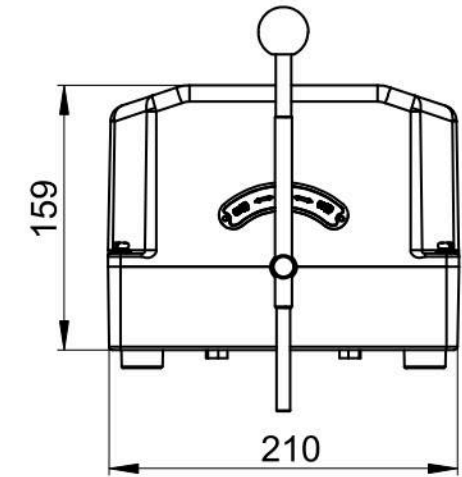
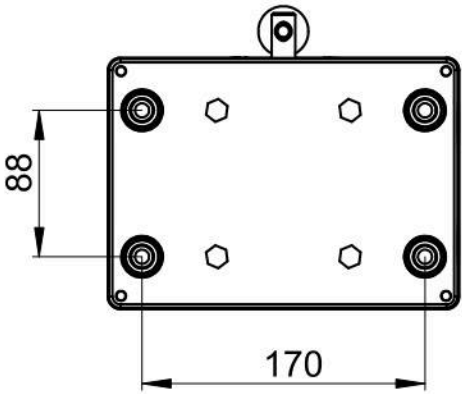


JK16-100AC

LIMIT SWITCH

JK16-100Ac limit switch, mainly used for AC 50HZ(60Hz),rated workingvoltage to380V(440V)rated working current to 100A construction elevatorpower supply circuit. When liftingWhen the limit switch of the machineloses effect, the switch is used to break off the power supply of the lift toachieve construction Ultimate protection of aircraft landing.

⚙️ Dimensions

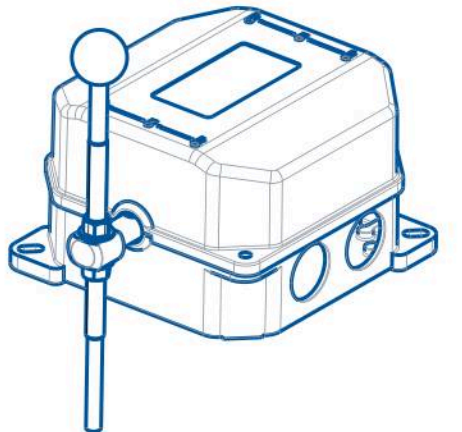
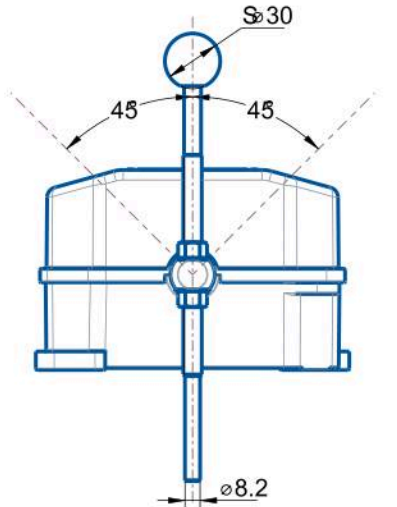
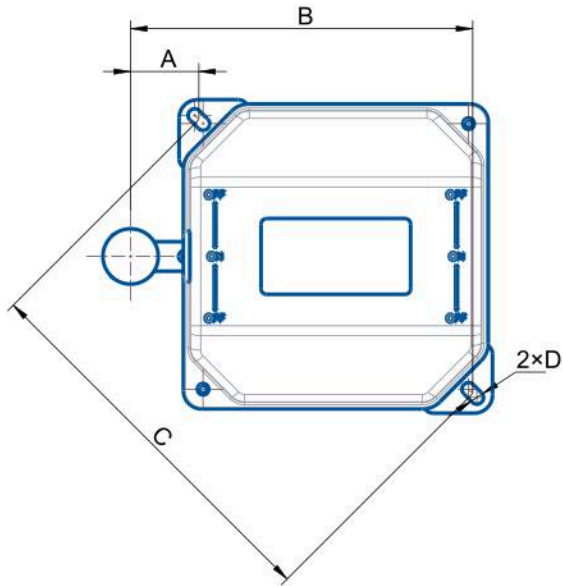
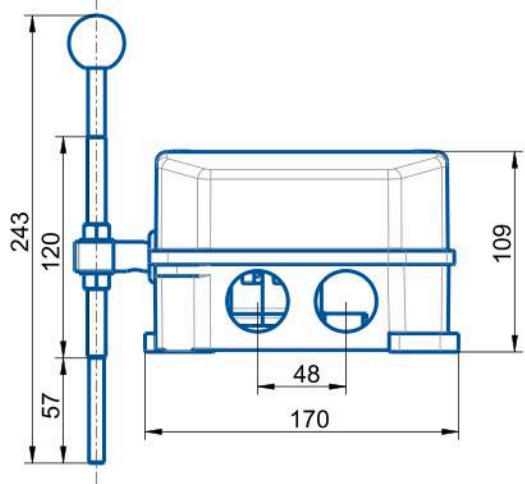


JK18-125AC

LIMIT SWITCH

JK18-125Ac limit switch, mainly used for AC 50HZ(60Hz), rated workingvoltage to380V(440V)rated working current to 100A construction elevatorpower supply circuit. When liftingWhen the limit switch of the machineloses effect, the switch is used to break off the power supply of the lift toachieve construction Ultimate protection of aircraft landing.

⚙️ Dimensions

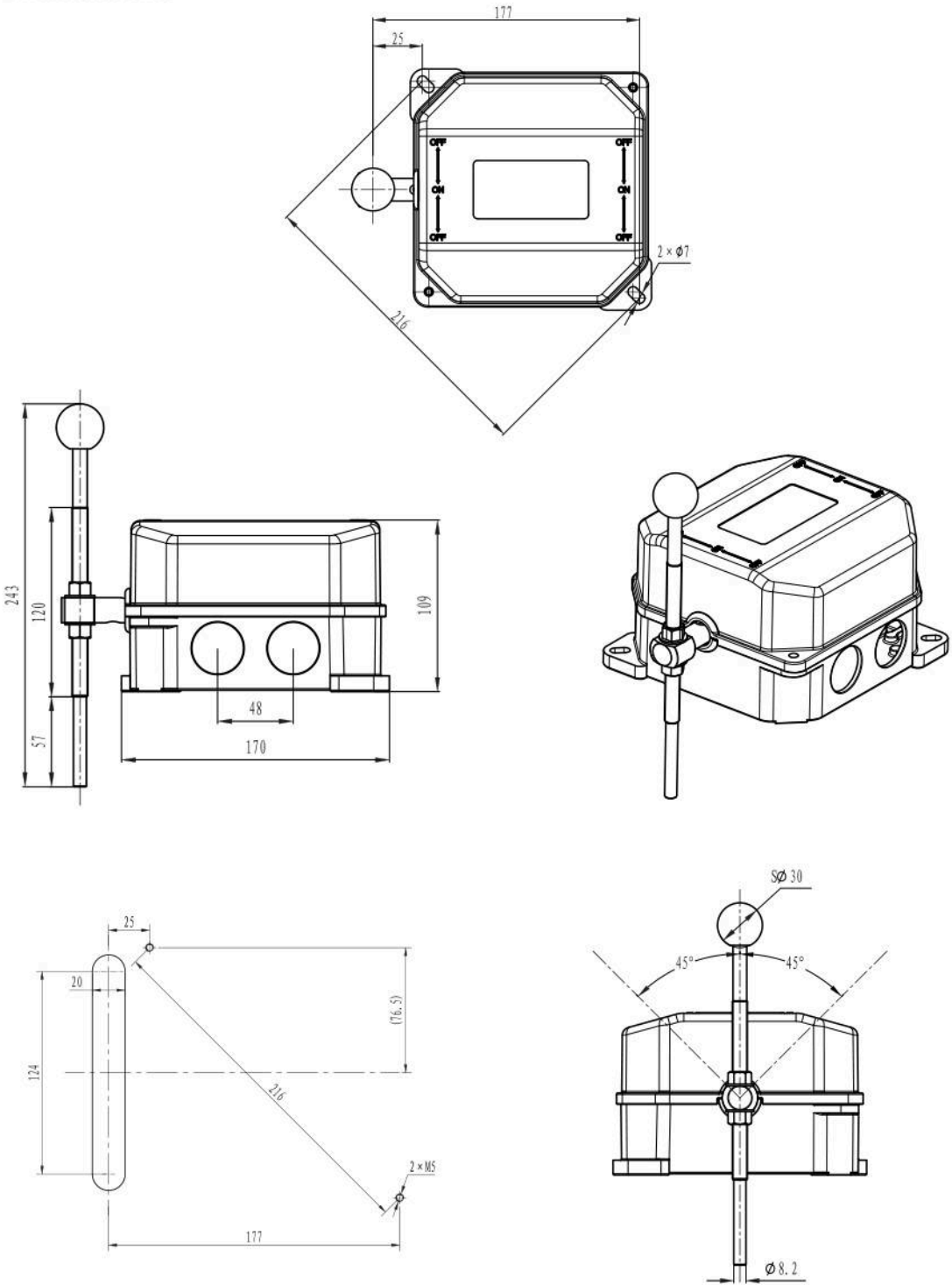


JK18-A/2AC

LIMIT SWITCH



Dimensions

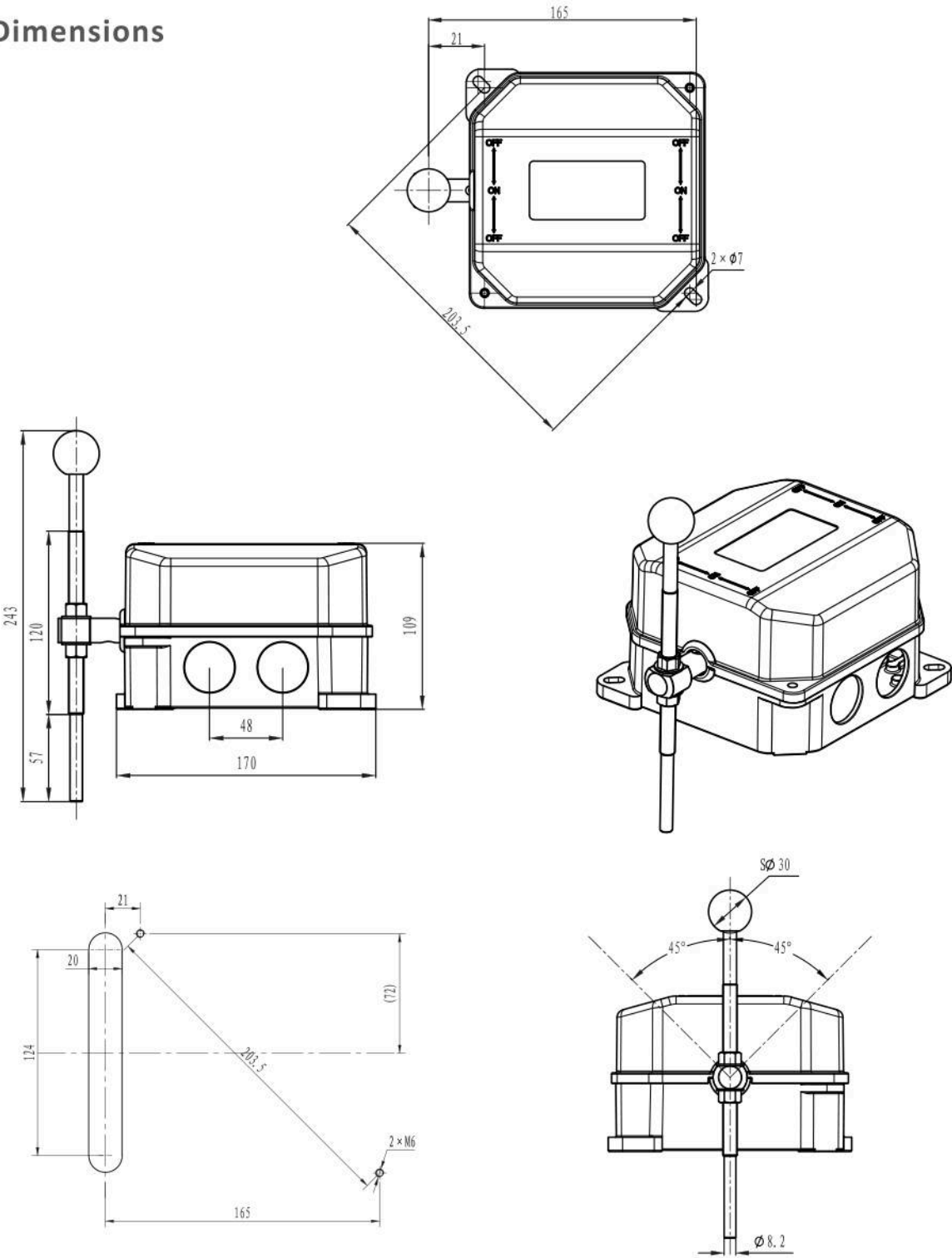


JK18-A/3AC

LIMIT SWITCH



Dimensions

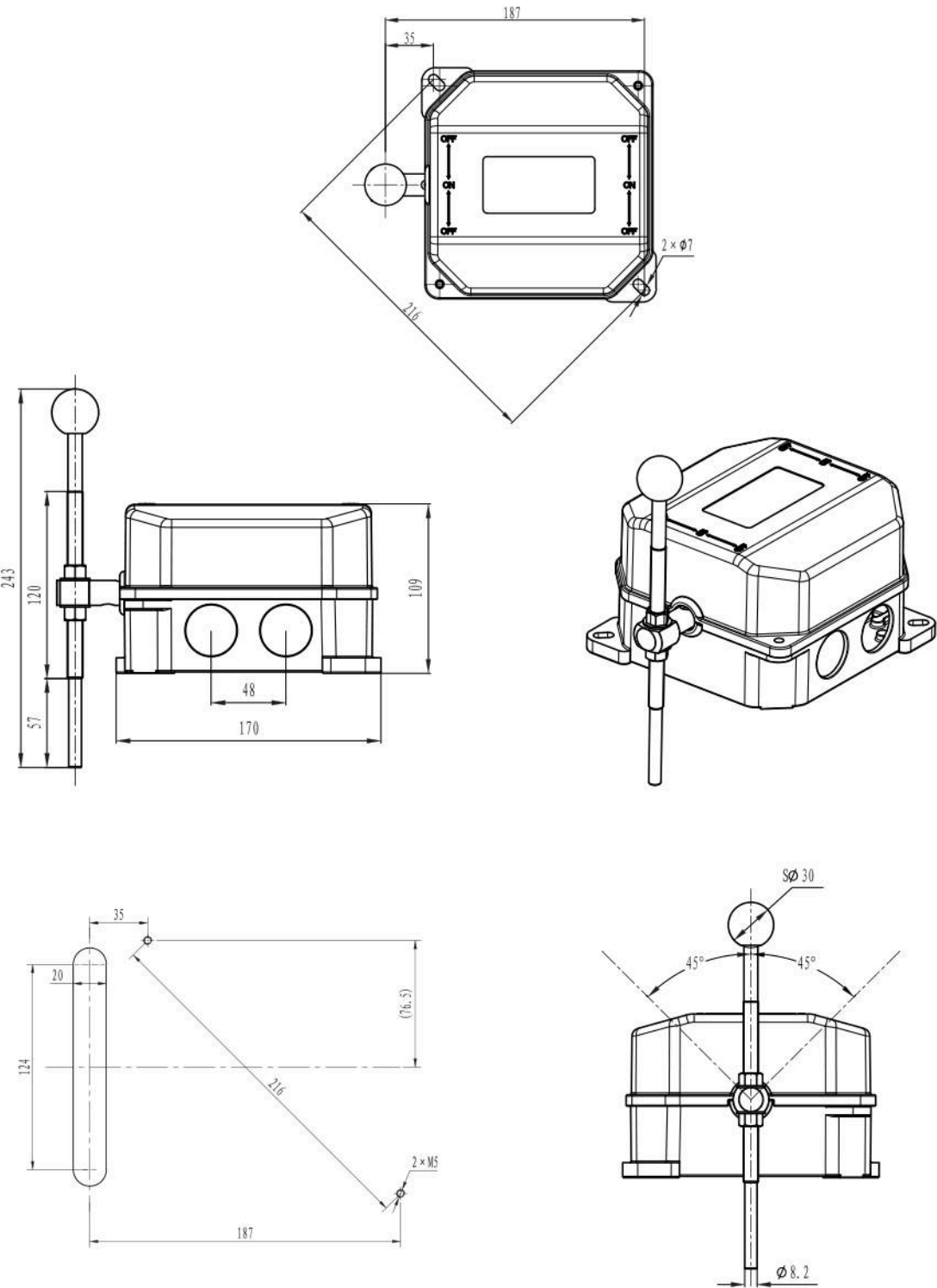


JK18-A/1.JK18-B/1

LIMIT SWITCH



Dimensions



CZT

CONTROL CONSOLE

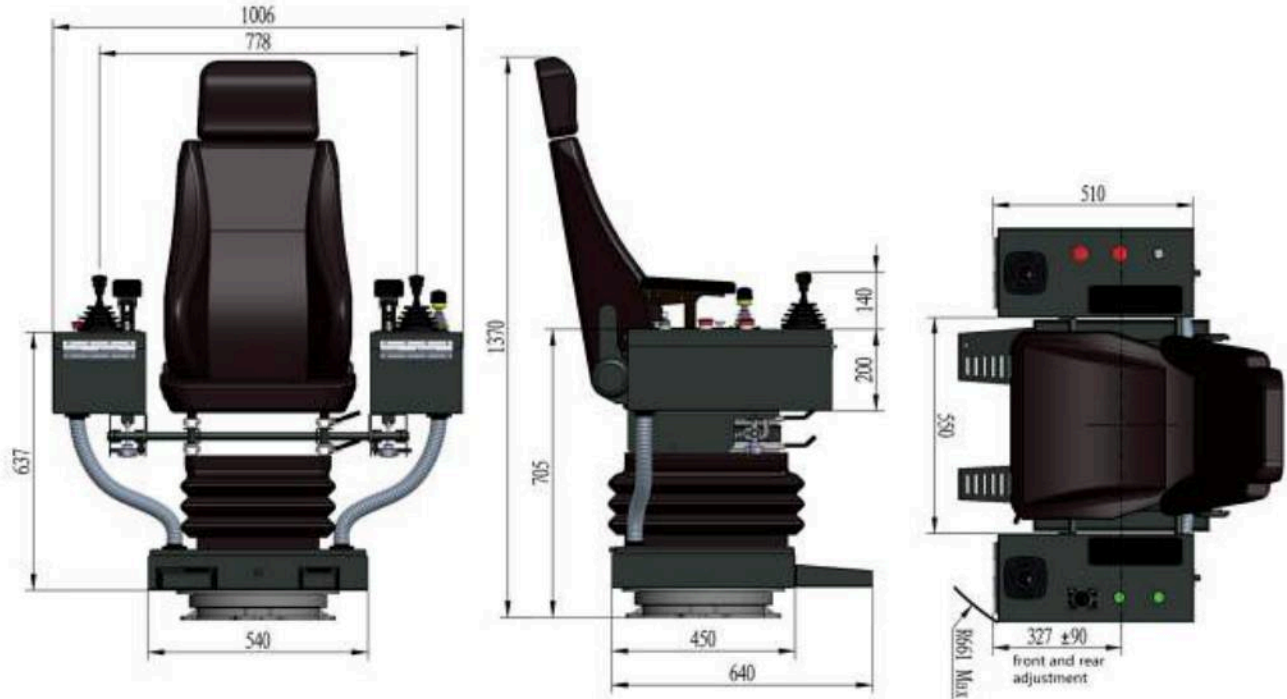
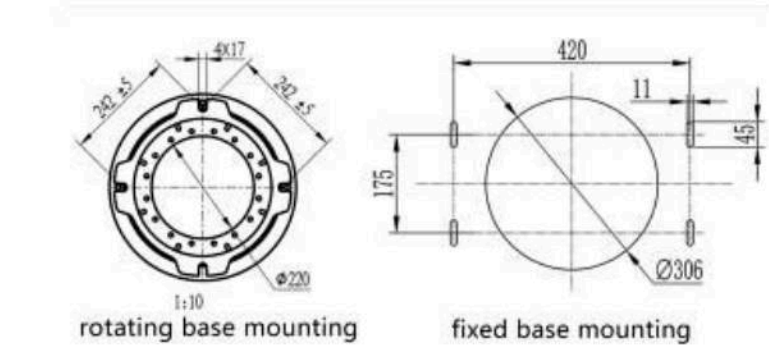


The CZT crane console is specifically designed for AC 50Hz (60Hz) control circuits, supporting a rated voltage up to 380V (440V). It efficiently manages the start, speed regulation, commutation, and braking of motors used in crane machinery and other similar electric control systems.

Control Box

The control box, crafted from steel plate, features a hinged cover with a standard locking mechanism for easy access and maintenance. The arrangement of the joystick, indicators, and controls is custom-configured to meet the client's specifications.

Dimensions



CT1

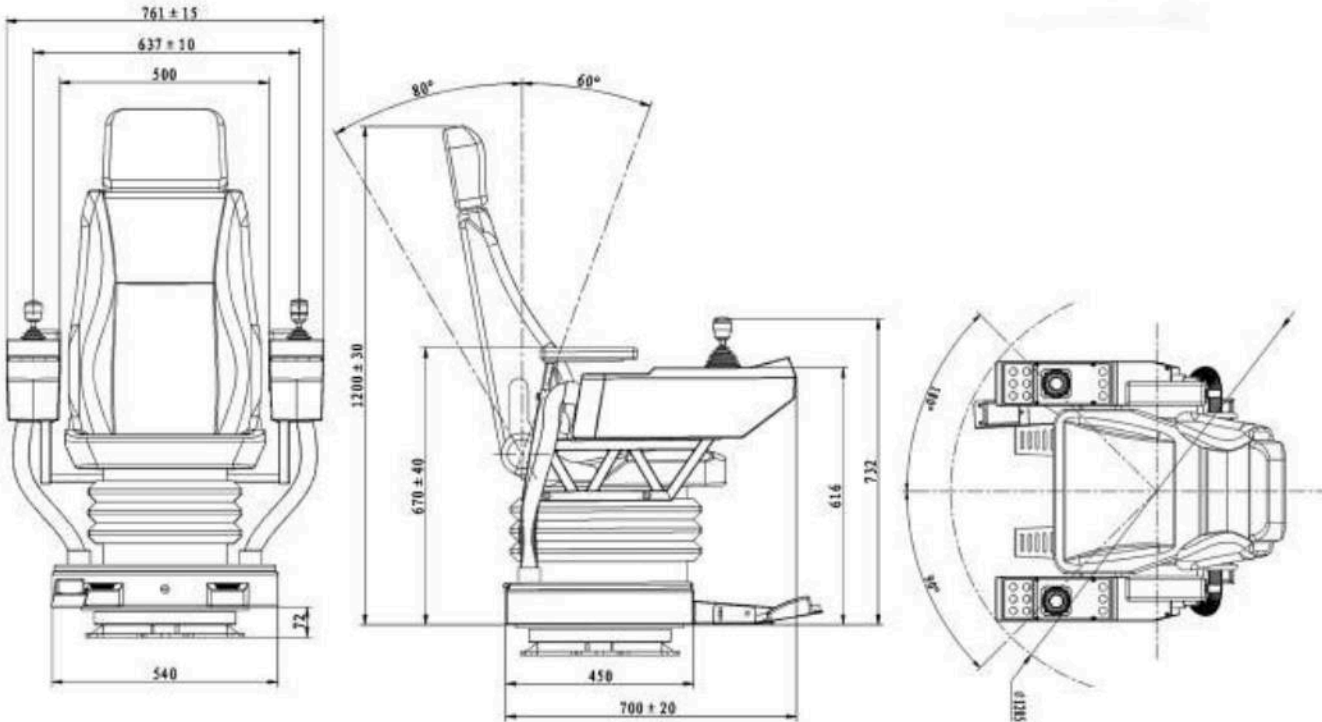
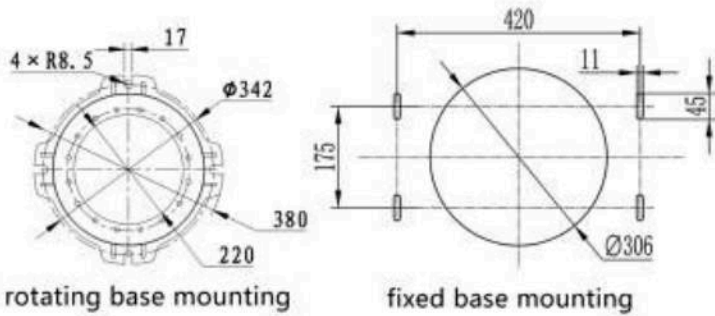
CONTROL CONSOLE

The CT1 crane console is engineered for AC 50Hz (60Hz) control circuits, accommodating a rated voltage of up to 380V (440V). It facilitates the control of motor start, speed regulation, commutation, and braking in crane machinery and related electrical control systems.

Control Box

Constructed from steel plate, the control box features a hinged cover equipped with a standard locking function for simplified inspection and maintenance. The configuration of the joystick, indicators, and control elements is tailored to meet the specific requirements of the client.

Dimensions



 **LSSINE**

QT5BM

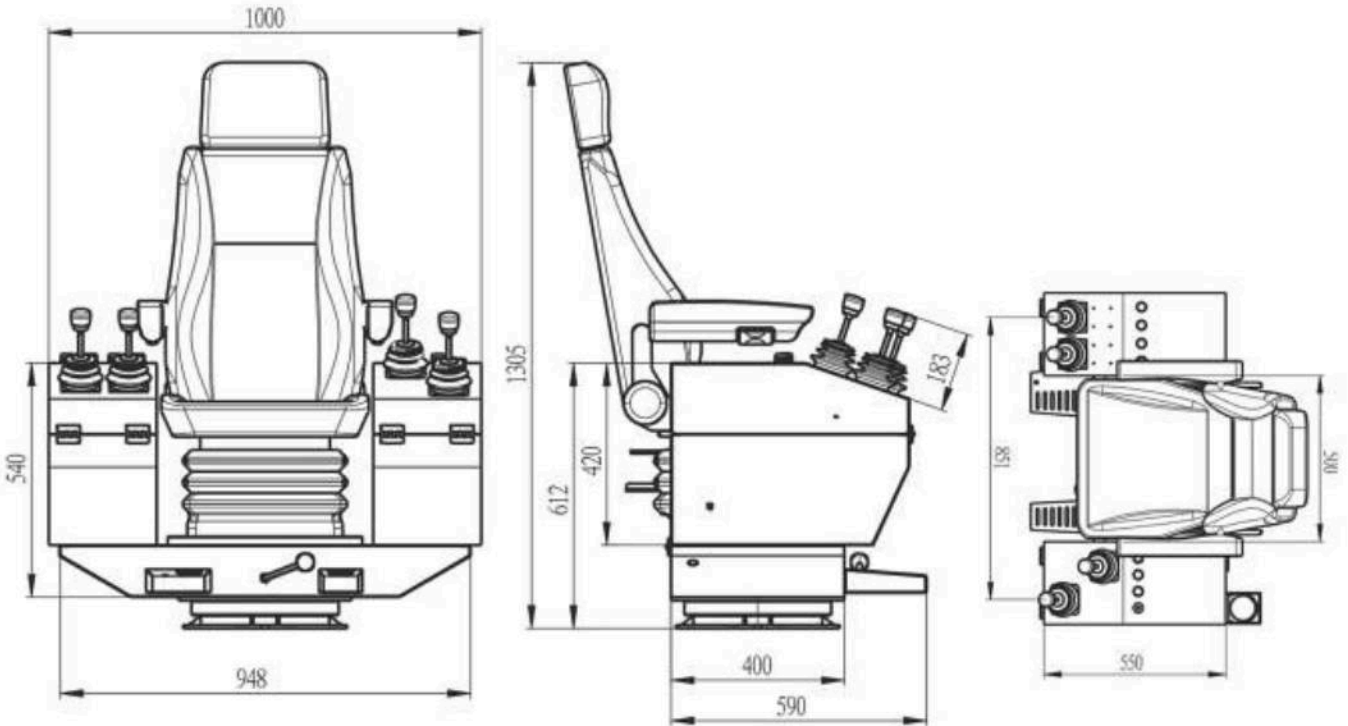
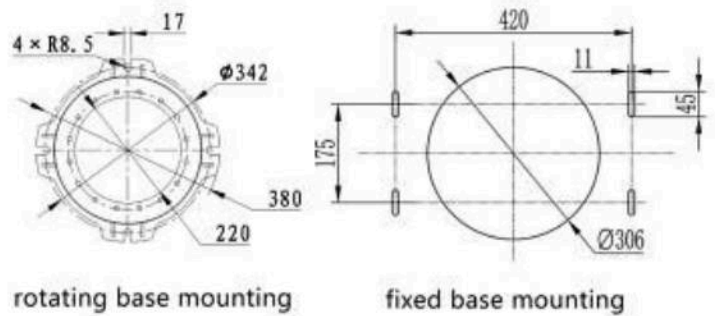
CONTROL CONSOLE

The QT5BM crane console is specifically designed for AC 50Hz (60Hz) control circuits with a maximum voltage capacity of 380V (440V). This console expertly manages the start, speed regulation, commutation, and braking of motors in crane machinery and associated electric control systems.

Control Box

The control box is crafted from robust steel plate and includes a hinged cover with a standard locking mechanism, enhancing ease of maintenance and routine checks. It's custom-configured to accommodate the joystick, indicators, and controls, precisely aligned with the client's specifications.

Dimensions



 **LSSINE**

QT5BX

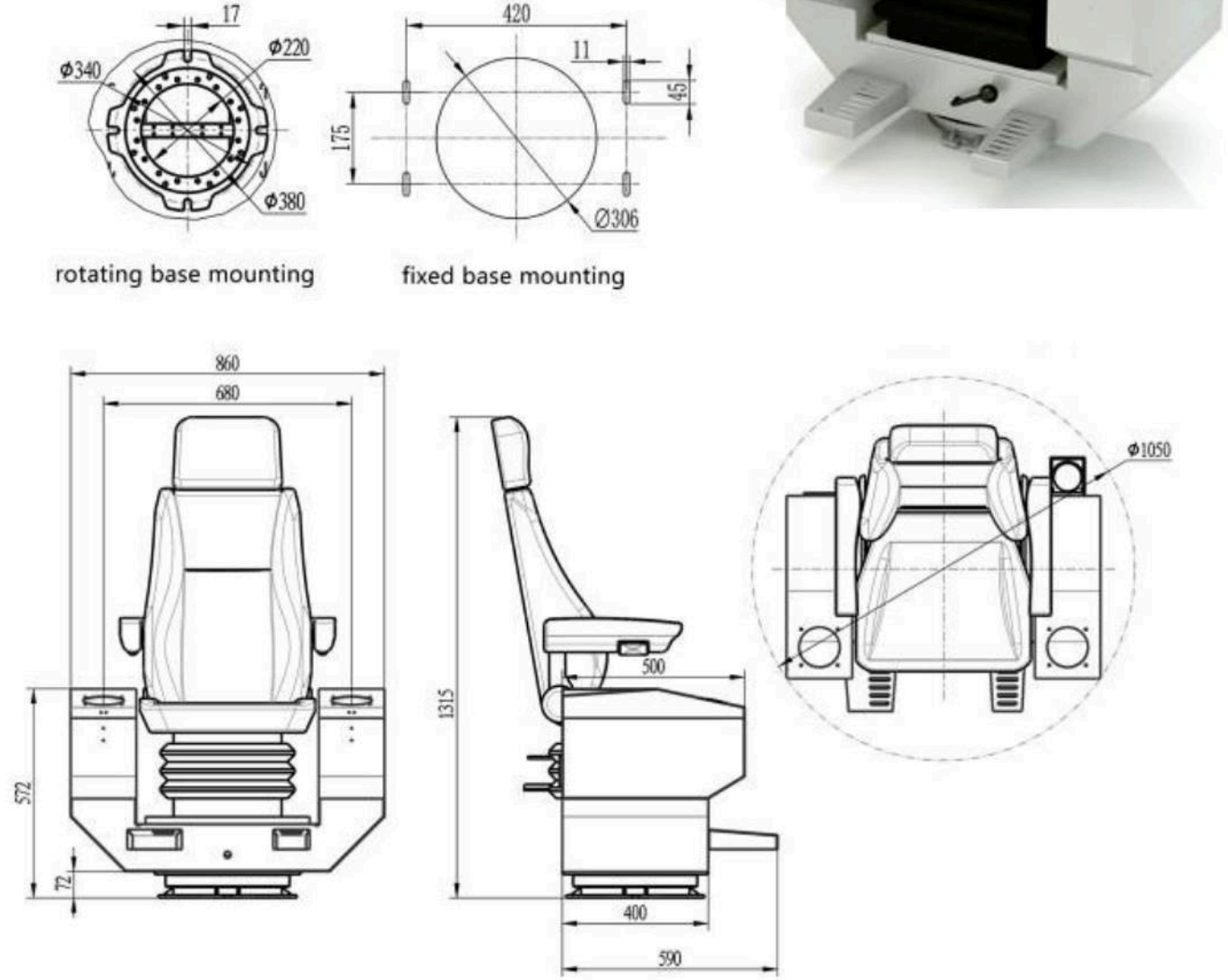
CONTROL CONSOLE

The QT5BX crane console is expertly engineered for AC 50Hz (60Hz) control circuits and supports voltages up to 380V (440V). This console is designed to manage the start, speed regulation, commutation, and braking of motors used in crane machinery and comparable electrical control systems.

Control Box

Constructed from durable steel plate, the control box features a hinged cover with a standard locking mechanism to facilitate easy access for maintenance. The arrangement of the joystick, indicators, and controls is tailored to meet the client's specific requirements.

Dimensions



CP22

MARINE DECK CONTROLLER

The CP22 Control Pedestal is designed to house control and monitoring devices. Pre-wired for quick and easy installation on the sea deck, it features a seawater-resistant aluminum housing. Primed with a textured RAL 7032 pebble-grey coating.

Technical Data

Operation temperature	-40°C to +85°C
Degree of protection	IP66



Dimensions

