

Index**Page No**

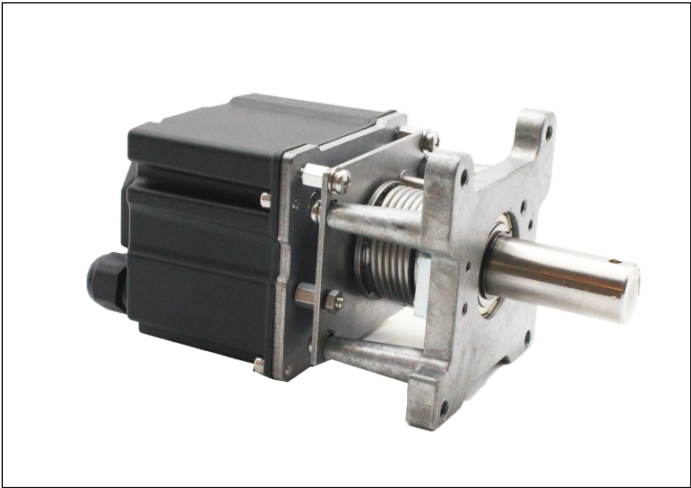
• QTN61 - Industrial Joystick	02
• QTNS00-Rotary Switch	04
• QTS23-Industrial Joystick	05
• QTV11-Industrial Joystick	07
• QT-VCSO-Industrial Joystick	09
• QT-VNSO-Industrial Joystick	11
• QT7B-Industrial Joystick	14
• XKB-Industrial Joystick	17
• XKD-Industrial Joystick	21
• Standard Potentionmeter	24
• T32E4-Controller	25
• SC1-Compact Light Joystick	26
• QT3S-Industrial Joystick	27
• QT3A-Industrial Joystick	29
• SQ1-Industrial Joystick	31
• SQ2-Industrial Joystick	33
• SQ4-Industrial Joystick	35
• SQ5-Industrial Joystick	37
• SQ6-Industrial Joystick	39
• SQ7-Industrial Joystick	41
• SQ7M-Industrial Joystick	43
• SQ8-Industrial Joystick	45
• SQT0-Industrial Joystick	47
• SQ20-Industrial Joystick	49
• SW01-Fingertip Switch	52
• SW02-Fingertip Switch	54
• SW03-Finger Wheel	56
• SW04-Finger Switch	57
• SW05-Fingertip Joystick	58
• JK16-100AC-Limit Switch	60
• JK16-125AC-Limit Switch	61
• JK18-A/2AC-Limit Switch	62
• JK18-A/3AC-Limit Switch	63
• JK18-A/1.JK18-B/1-Limit Switch	64
• CZT-Control Console	65
• CT1-Control Console	66
• QT5BM-Control Console	67
• QT5BX-Control Console	68
• CP22-Marine Deck Controller	69



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

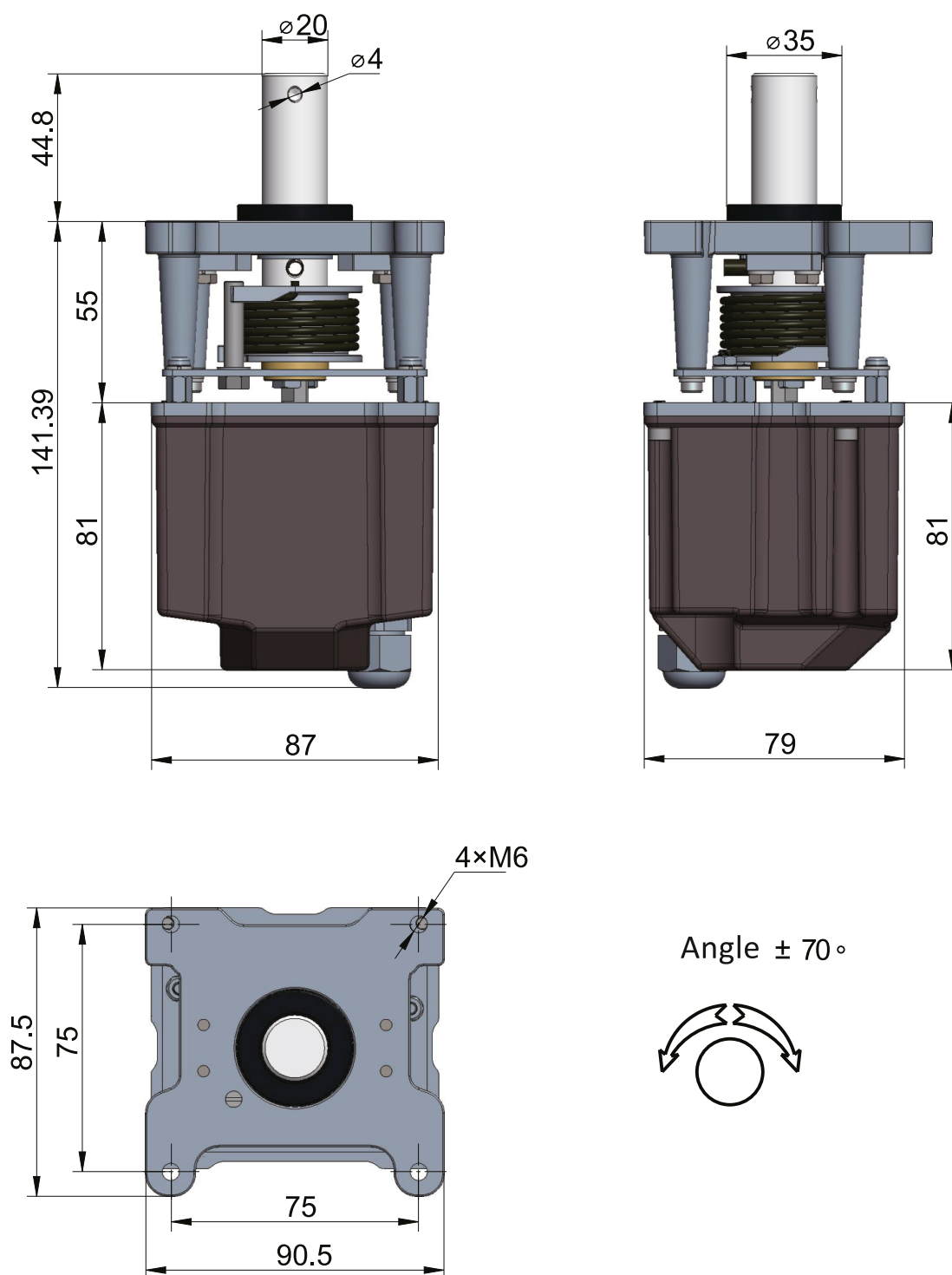
Ambient Temperature: -20°C to 60°C
Mechanical Life: 2M
Protection Level: IP65 Above/ IP00 Below

Selection	Movement	Gate	Contact 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																																																																												
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• A: Terminal interface • L: Direct outgoing line 30mm • X: Customize																																																																												



QTN61 - Industrial Joystick

Installation Dimensions





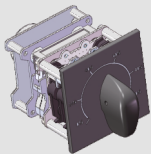
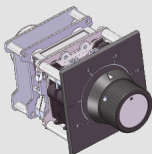
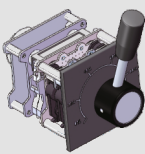
QTNS00-Rotary Switch

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						
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						



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

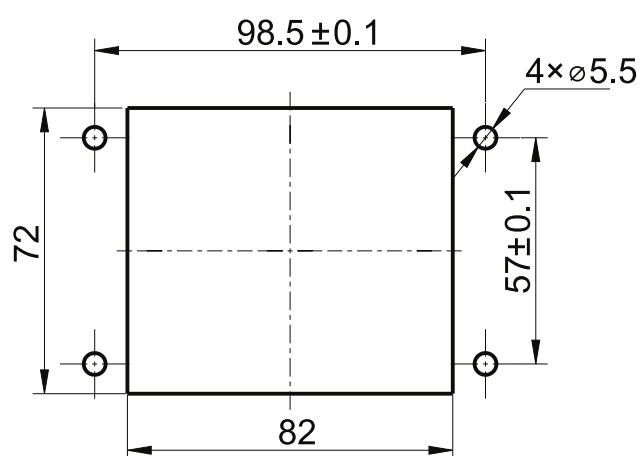
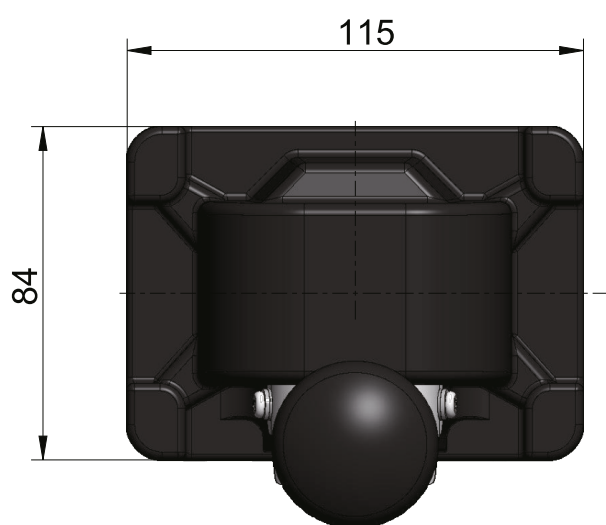
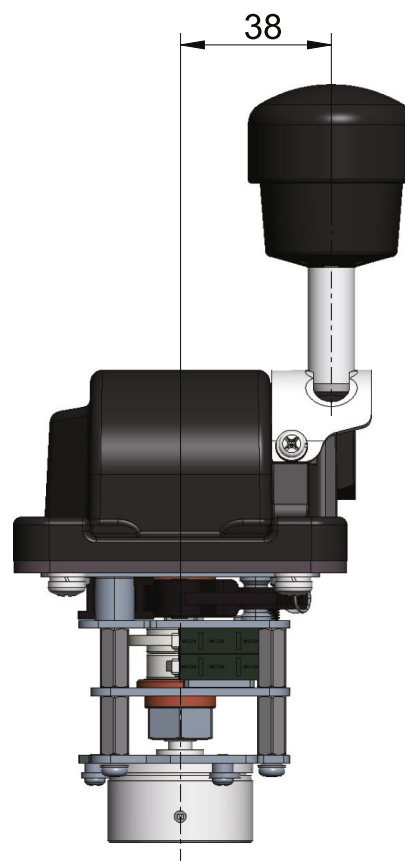
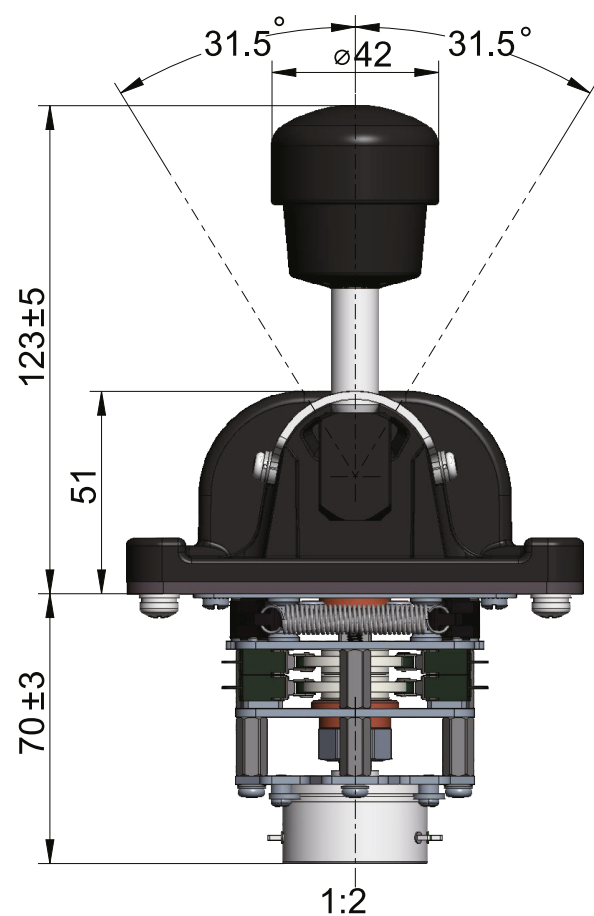


Selection	Palm Grips	Gate	Movement	Interface	Contact arrangement	Wiring																																																																																													
• A Fixed handle • B Zero position mechanical handle																																																																																																			
• 1 Bidirectional ↑ • 2 Unidirectional ↑																																																																																																			
• Z: Spring return • ZS: Spring return with self-locking		• R: Friction brake • 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																																																																																																			
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• A: Terminal interface • L: Direct outgoing line 30mm • X: Customize																																																																																																			



QTS23-Industrial Joystick

Installation 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

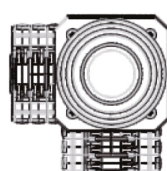
Operating temperature:	-40°C-85°C
Handle Force:	< 20N
Rated Current:	10A
Mechanical Life:	5 M
Degree of Protection:	up to IP65



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											



Type	No. of contacts	Dim.B
01	2	51
02	4	64
03	6	76



SHD8



S1



SHD2



S3



S4

S5



SG1



SG13



SG13B



SG9



SHD4B



SB34



SG25



SUGN



SUGA



SG51



S8



SB6



SG21



S9

[illegible]

Technical drawing of the watch case showing top and side views with dimensions. The top view shows a square case with rounded corners, a central dial with concentric circles, and a crown on the right side. The side view shows the case profile with a crown on the right side. Dimensions are indicated: 86 mm for the height, 73 mm for the width, and 64 mm for the depth.



QT-VC SO-Industrial Joystick

The QT-VC SO industrial joystick is primarily designed for AC 50Hz (60Hz) systems with a rated voltage up to 380V (440V). It facilitates various operations in secondary circuits, including motor reversing, speed control, braking, linkage, and pinch control. This joystick can be mounted on the surface of consoles or within portable control boxes. It has found extensive applications across ports, water transport, railways, mining, power generation, construction, and manufacturing sectors

Technical Data

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

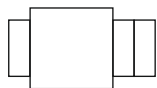


Selection	Installation variant			Palm Grips	Gate	Panel Size	Axis1			Axis2			Installation dimensions
							Movement	No. of contacts	Interface	Movement	No. of contacts	Interface	
	See the detaies in nextpage												
	- SG41Z Lift up zero mechanical interlock - SG6 Push-down zero mechanical interlock See more options in the grip section												
	1: 1-Axis↑ 2: Cross gate ⇄ 3: All-direction ※ 4: Special gate H,C,L and special												
	- A: Panel size A-type 109 x109 - B: Panel size B type 101x101												
	- Z: Spring return - R: Friction brake												
	01 2 contacts 02 4 contacts 03 6 contacts 04 8 contacts 05 10 contacts												
	- Voltage output DC24V - Hall output DC5V - Current output DC24V - Potentiometer output V1: -10V~0~+10V HV1: 0-2.5-5V I1: 4mA-12mA-20mA 1K 2K 5K 10K V2: +10V~0~+10 Hv2: 0.5-2.5-4.5V I2: 20mA-4mA-20mA												
	- Z: Spring return - R: Friction brake												
	01 2 contacts 02 4 contacts 03 6 contacts 04 8 contacts 05 10 contacts												
	- Voltage output DC24V - Hall output DC5V - Current output DC24V - Potentiometer output V1: -10V~0~+10V HV1: 0-2.5-5V I1: 4mA-12mA-20mA 1K 2K 5K 10K V2: +10V~0~+10 Hv2: 0.5-2.5-4.5V I2: 20mA-4mA-20mA												
	- M1: B-type(67*67) - X: Customize												

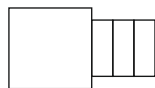


QT-VCISO-Industrial Joystick

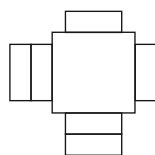
Installation variant



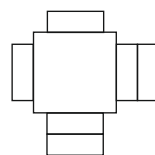
single axis 12



single axis 03



double axis 2121



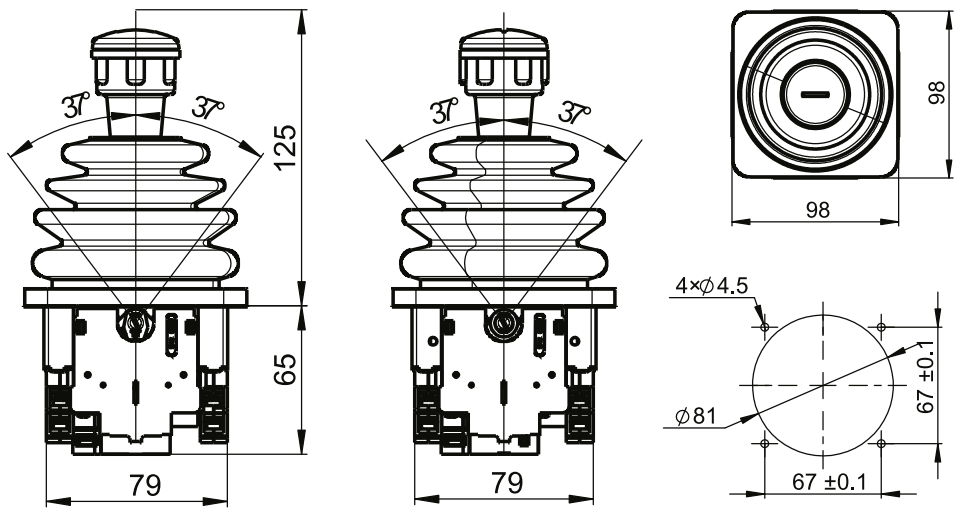
double axis 1221



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

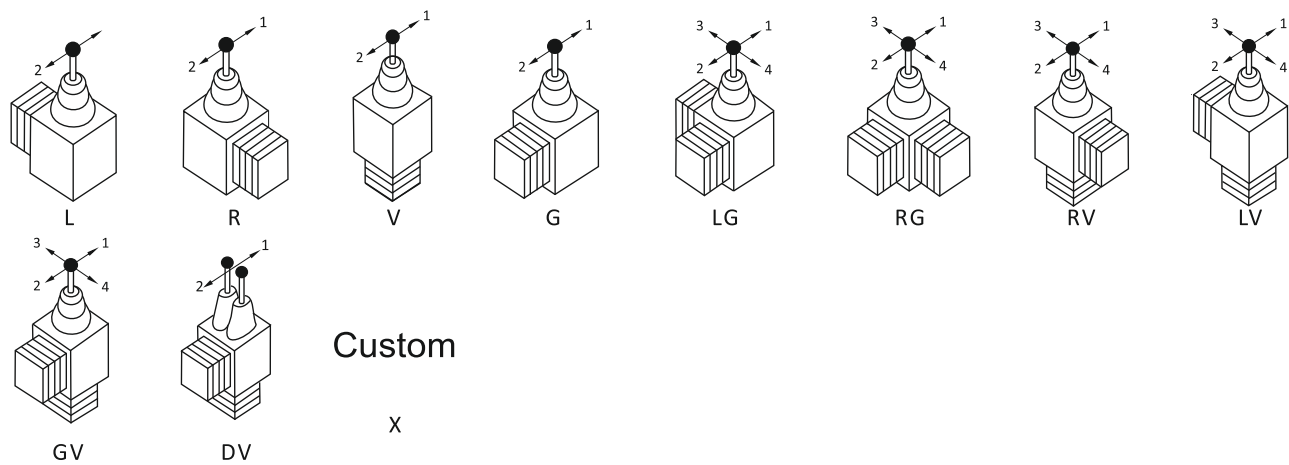


Selection	Palm Grips	Gate	Axis1			Axis2			Installation dimensions	Installation of contact group	Contact arrangement
			Movement	No. of contacts	Interface	Movement	No. of contacts	Interface			
• SG41Z Lift up zero mechanical interlock • SG6 Push-down zero mechanical interlock See more options in the grip 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											



QT-VNSO-Industrial Joystick

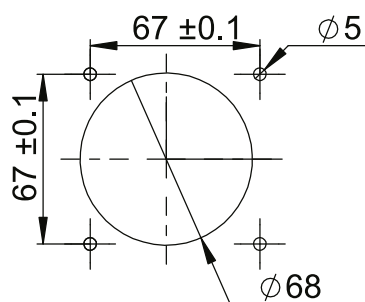
Installation variant



Grip



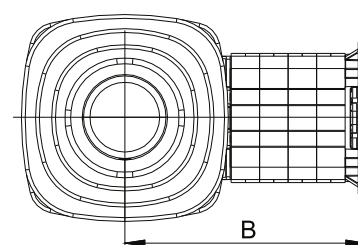
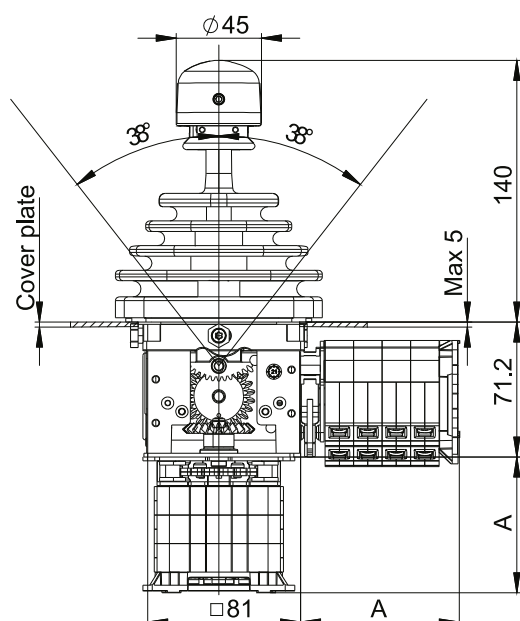
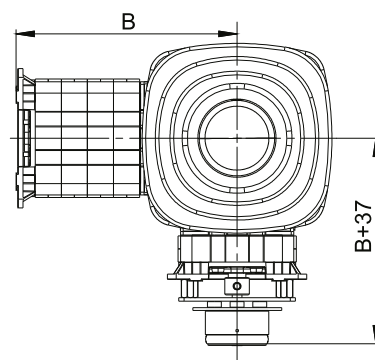
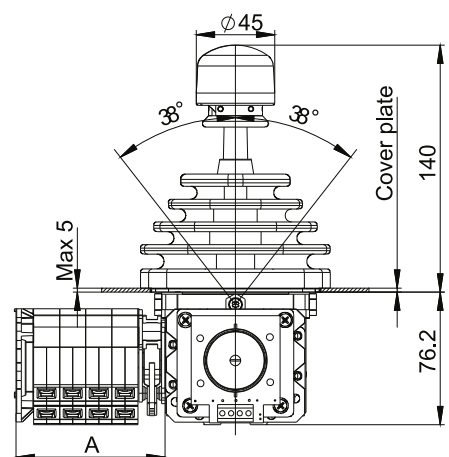
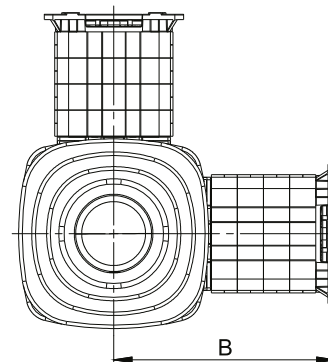
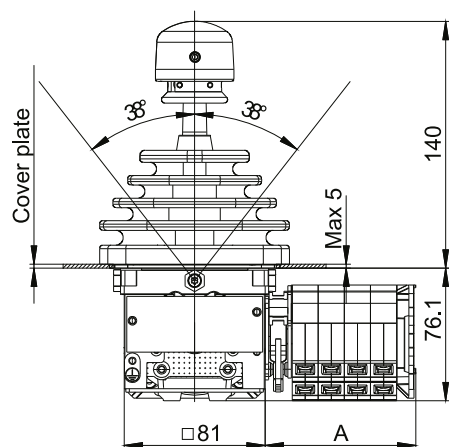
Dimensions



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



QT-VNSO-Industrial Joystick





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

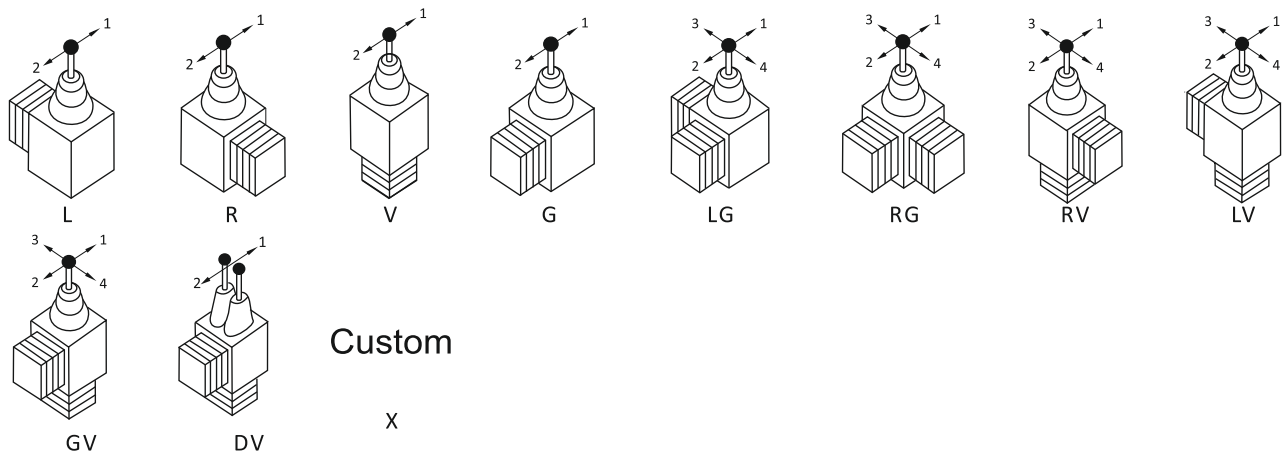


Selection	Installation Variant	Palm Grips	Gate	Axis1			Axis1			Mounting	Contact arrangement
				Movement	No. of contacts	Interface	Movement	No. of contacts	Interface		
• See Appendix-Installation of contact group											
• See more options in the grip section											
• 1: 1-Axis↓ • 3: All-direction ※											
• 2: Cross gate + • 4: Special gate											
• Z: Spring return • R: Friction brake											
• 01 2 contacts • 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(84*84) • 2: M2: A-type(80*80) • X:Customize											
• See the page 50											



QT7B-Industrial Joystick

 Installation variant



 Grip

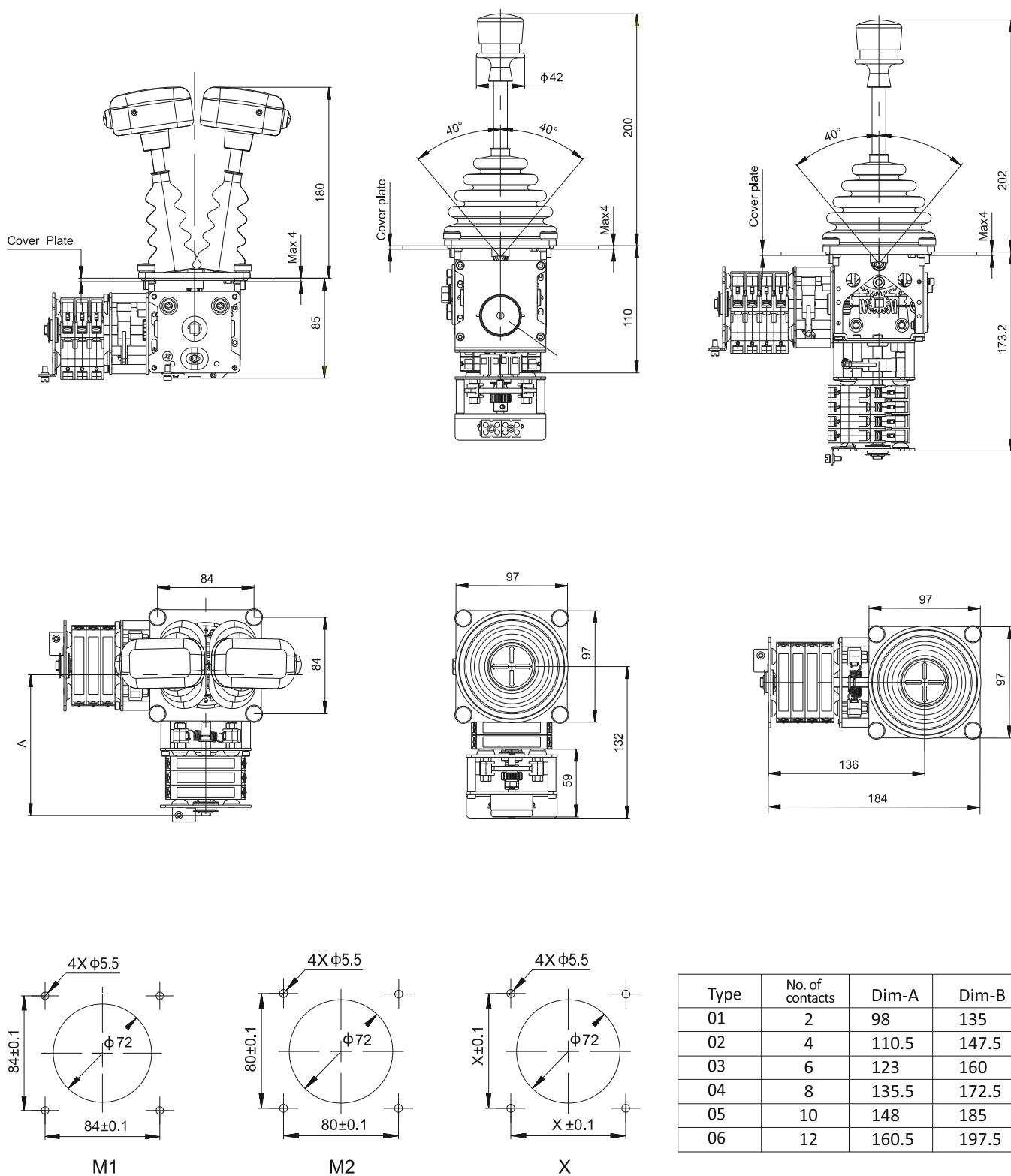




QT7B-Industrial Joystick



Dimensions





XKB-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.

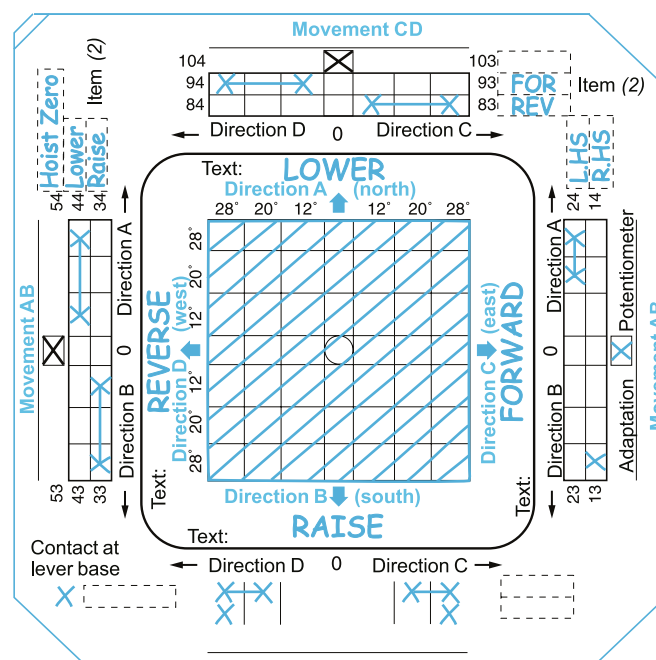
Technical Data

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 ofzero 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(centre)position contact (closed at zero)	
	2 With zero mechanical interlocking wizero mechanicallock and the center of the closed contact	
	4 Push handle: The contact associatedMith it opens when the handle is released	
	5 Flat button handle: When the button isreleased, the associated contact breaks	
	6 Raised button handle: When the buttois released,the associated contact opens	
	9 Round head push-down handle typewhen the button is released, the associated off contact	
Maximum number of potentiometers per movement : 2 Pairs		

2	1&4	5	6	9

[illegible]



XKB-Industrial Joystick

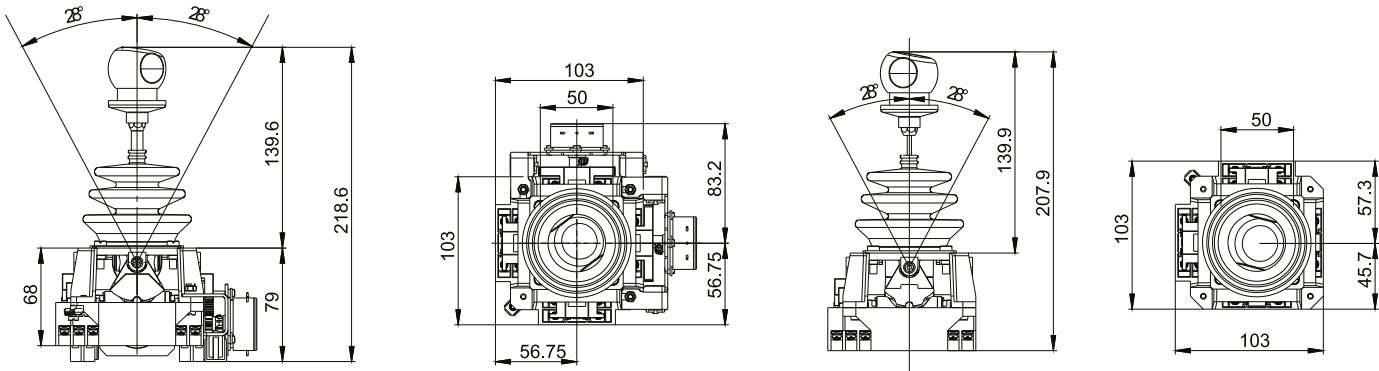
Selection	Lever	handle	handle	CD direction		handle	Contact arrangement
				Contacts	lever movement		
- A:Standard - E:Special							
4 contacts 1: screw connection 2: 6.3m clip connection	4+1 contacts 3: screw connection 4: 6.3m clip connection						
1: Standard handle + zero contact (closed at zero) 2: With zero mechanical interlocking electrical interlocks(contact closed at zero 2 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 Arrangement20/69



XKD-Industrial Joystick

The XKD Joystick operates in secondary circuits with AC 50Hz (60Hz) at a rated voltage of up to 380V (440V). It facilitates motor commutation, speed regulation, braking, and transfers. The joystick can be mounted on console surfaces or portable control boxes, making it versatile for both light and heavy lifting machinery and driving applications with fixed consoles

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	•
	unnotched·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		
Type of lever movement	①TNotched 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.	
	②b Notched positions, with spring return to zero operation 3 or 5 notches maximum in each direction depending on the versions stated above	
		③3Unnotched positions, with spring return to zero operation 36° maximum trave lin each direction
Contact	16 contacts maximum per movement .The contact blocks are mounted in pairs on a fixing plate.	
Cam schemes	(1) Vnable composition cams, 6° per posiion; 4 or 8-contact cam caiers(2)Variable composition cams, 12° per position; 2-contact cam cami	
Electrical Life		3
handle Grip position		Vertical centeringnd
Handle	1 standard	
	2 Mechanical zero interlock	
	3 With zero mechanical& electrical interlocks	
	4 5 Push-down type	
	6 7 8 9 Button with fat or convex head	
	0 Other	
Maximum number of potentiometers per movement : 2 Pairs		



XKD-Industrial Joystick



Grip



Selection

Selection	Lever	handle	AB direction			CD direction		
			Contacts	lever movement	Potentiometer	Contacts	lever movement	Potentiometer
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 - With built-in fush pushbutton 4:With N/C + N/O contact 6:With N/C + NiO contact 5:With N/O + N/O 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 3notches(1) 2: 5 notches (starting from 12°)or 6 notches (starting from 6°)(2) 3: Notched positions, with spring return 3notches(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 3notches(1) 2: 5 notches (starting from 12°)or 6 notches (starting from 6°)(2) 3: Notched positions, with spring return 3notches(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

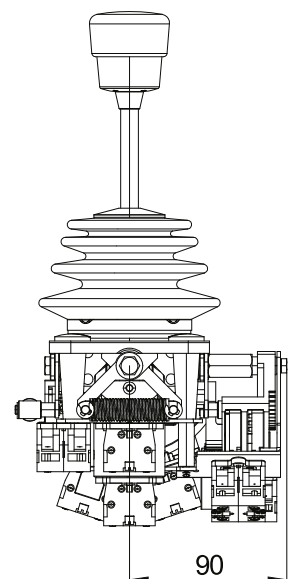
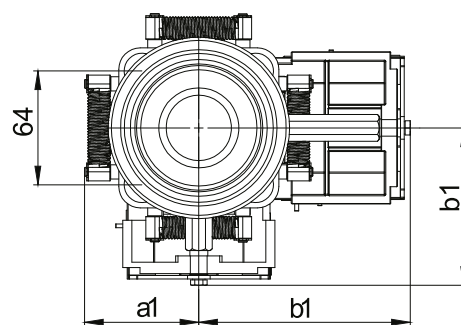
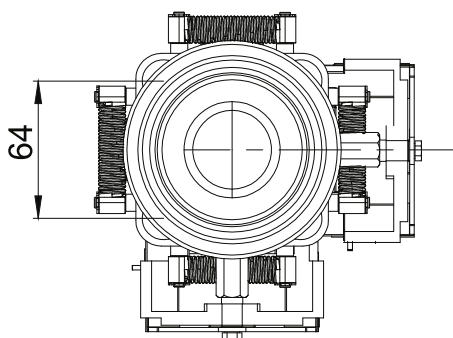
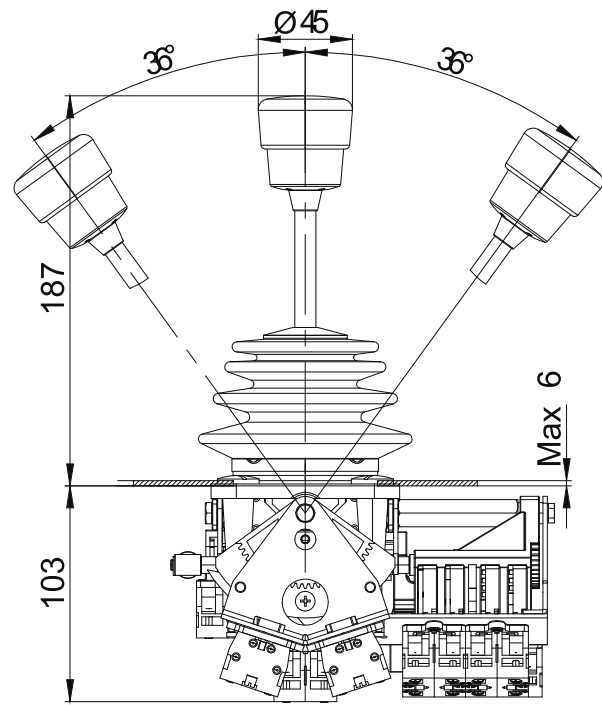
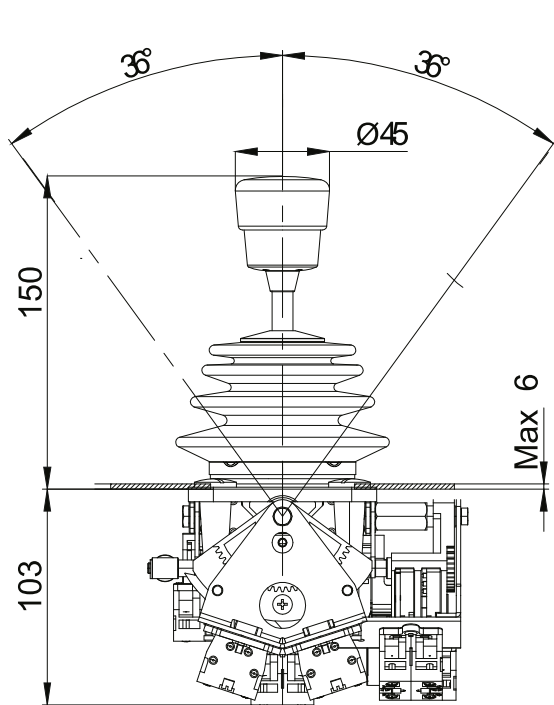
(2) 5 notches: by using 1 or 2 variable composition 4 or 8-contact cams, mechanical notch at 12° (6 electrical positions in each direction)

(3) Type of lever movement recommended when using a potentiometer



XKD-Industrial Joystick

Dimensions





Standard Potentionmeter

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

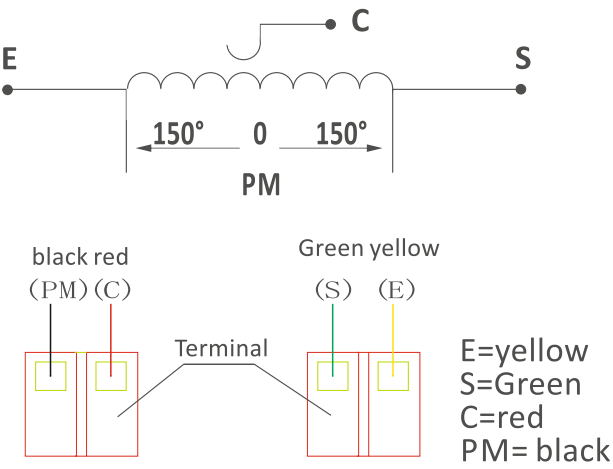
Environmental characteristics

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

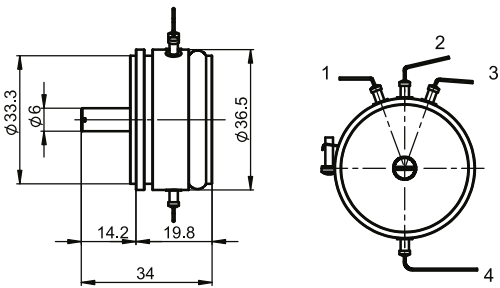


Resistance	Availability	Size	Model	Weightkg
4700(2x2350)	Standing stock	15	XKZ A15047	0.05
1000(2x500)	short-term	15	XKZA15010	0.05
2000(2x1000)	short-term	15	XKZ A15022	0.05
10000(2x5000)	Standing stock	15	XKZA15100	0.05
other	able to provide	15	XKZA15000(1)	0.05

Wiring diagram



Dimensions



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

	a	Φ
XKZ A15	20	37



T32E4-Controller

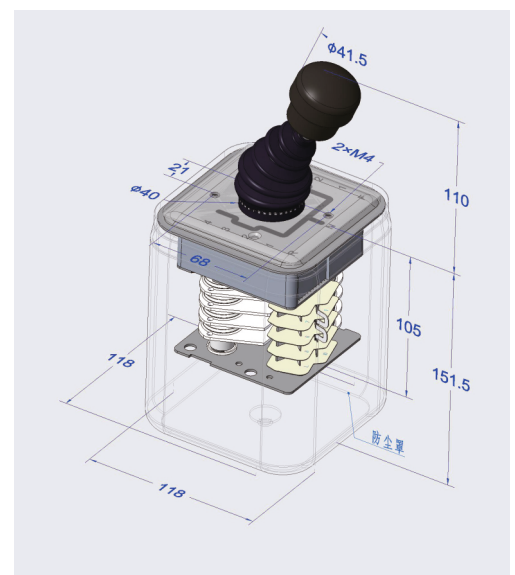
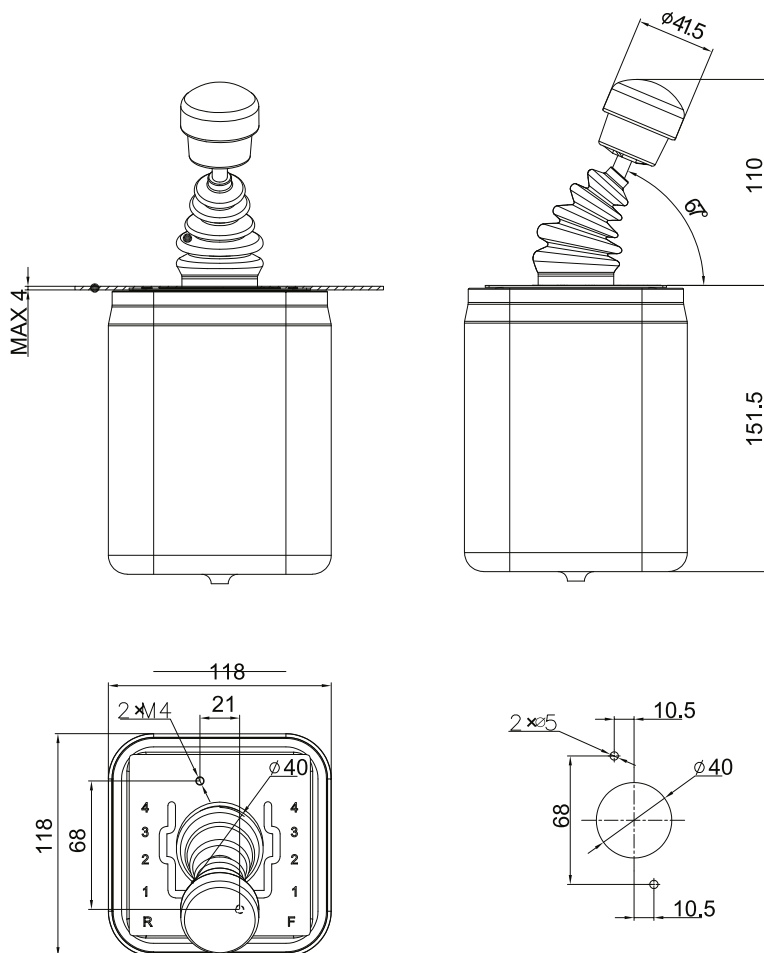
The T32E4 controller is a durable switchgear that meets EC/EN 60947-5-1 standards. Its modular construction ensures versatility across applications. This controller is engineered to perform reliably in environments with high exposure to oil, moisture, ozone, and intense ultraviolet radiation. It is ideal 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





SC1-Compact Light Joystick

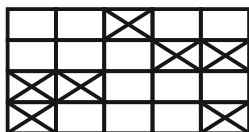
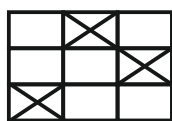
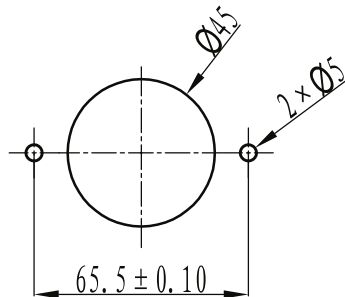
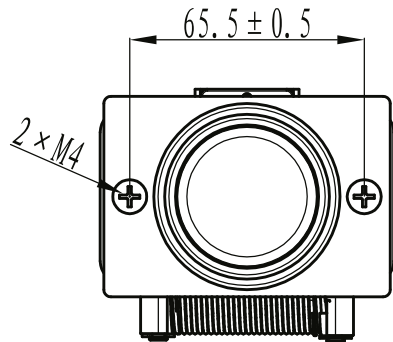
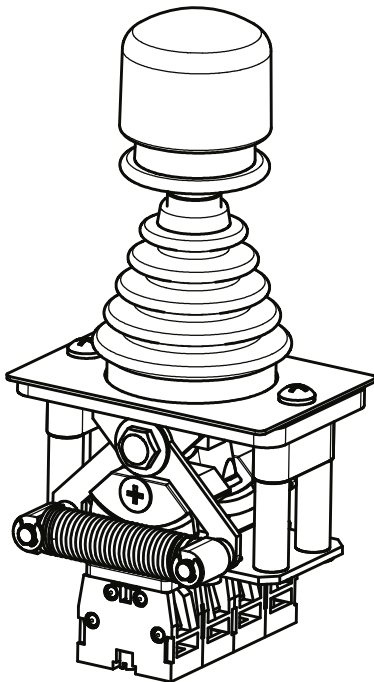
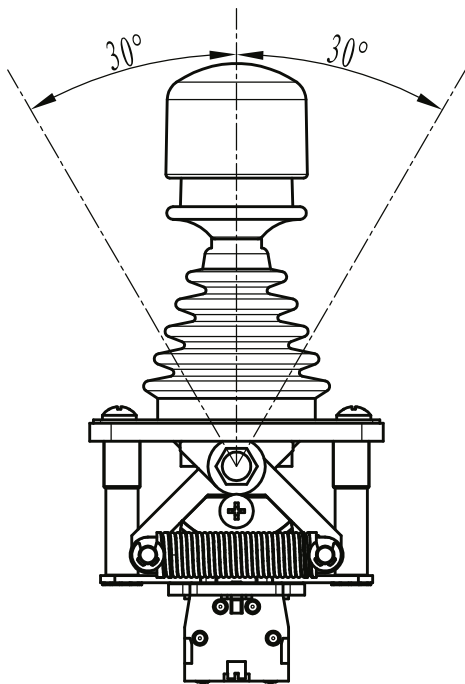
The SC1 joystick features a compact design, light and straightforward structure, enhancing ease of operation. Equipped with a zero position spring return and a self-locking mechanism, it ensures safety and reliability. It boasts a long service life and offers easy wiring, convenient installation, and 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									



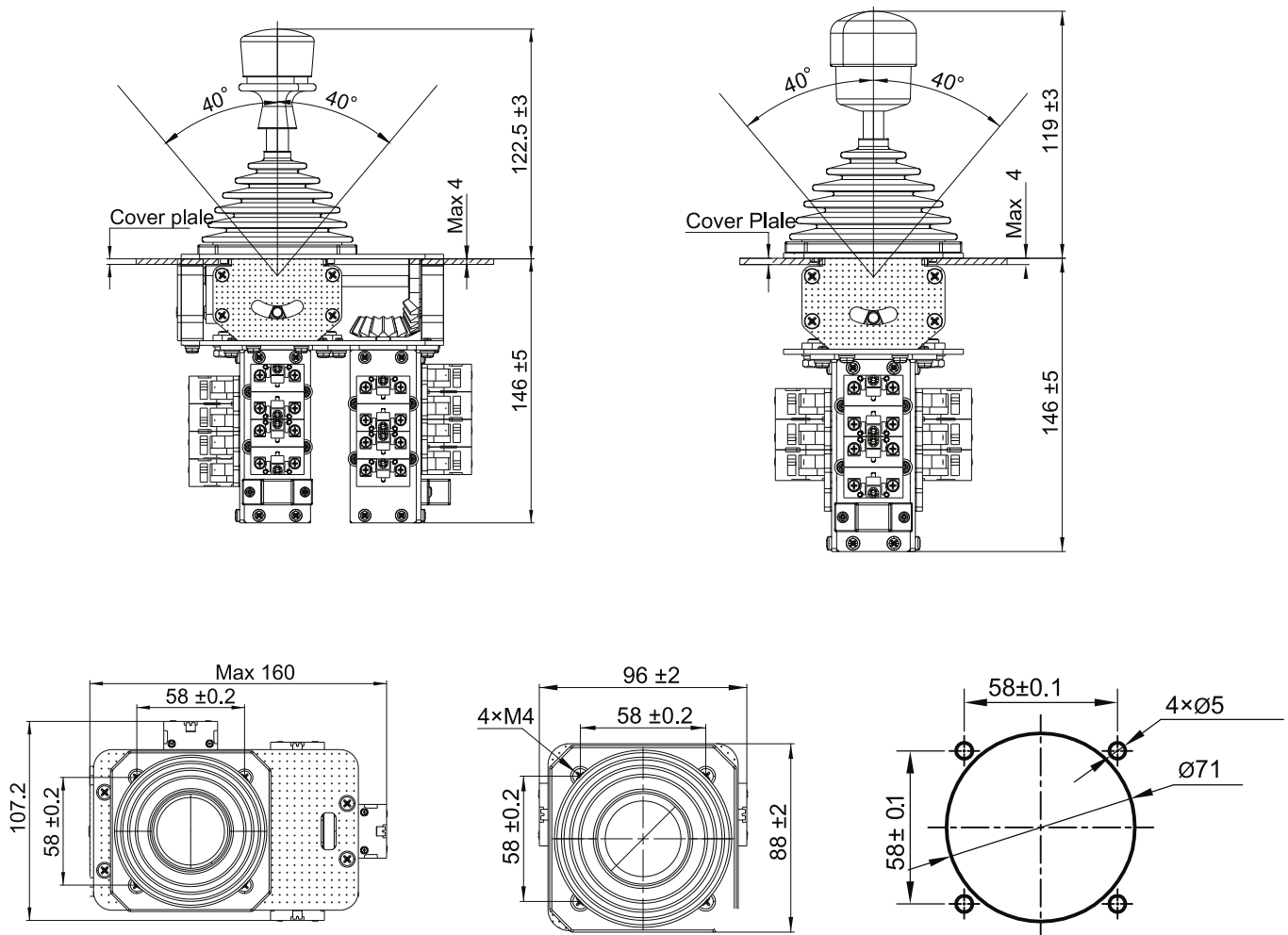
QT3S-Industrial Joystick



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



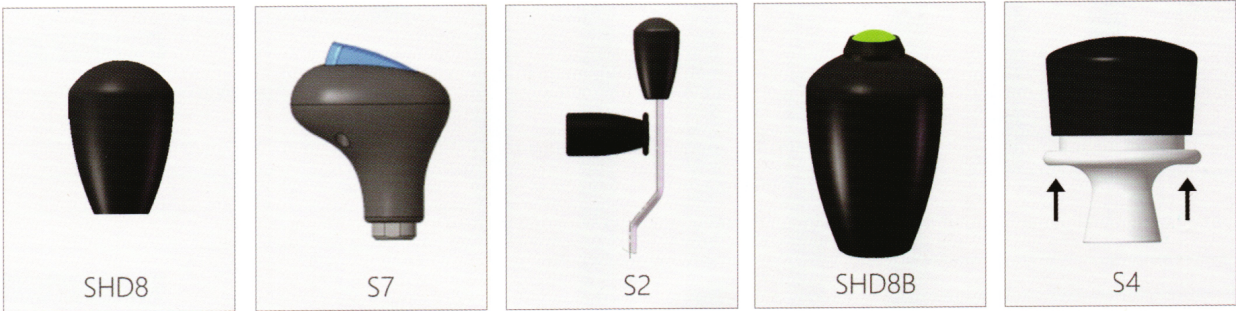
Selection	Palm Grips	Gate	Axis1			Axis2			Contact arrangement
			Axis 1	No. of contacts	Interface	Axis 2	No. of contacts	Interface	
• SHD8B • S7 • S2 • SHD8									
• 1 -Axis ↓ • 2 Cross gate ⇄ • 3 All-direction(x, Y-Axis) ⌘									
• Z: Spring return • R: Friction brake									
• 01 2 contacts •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



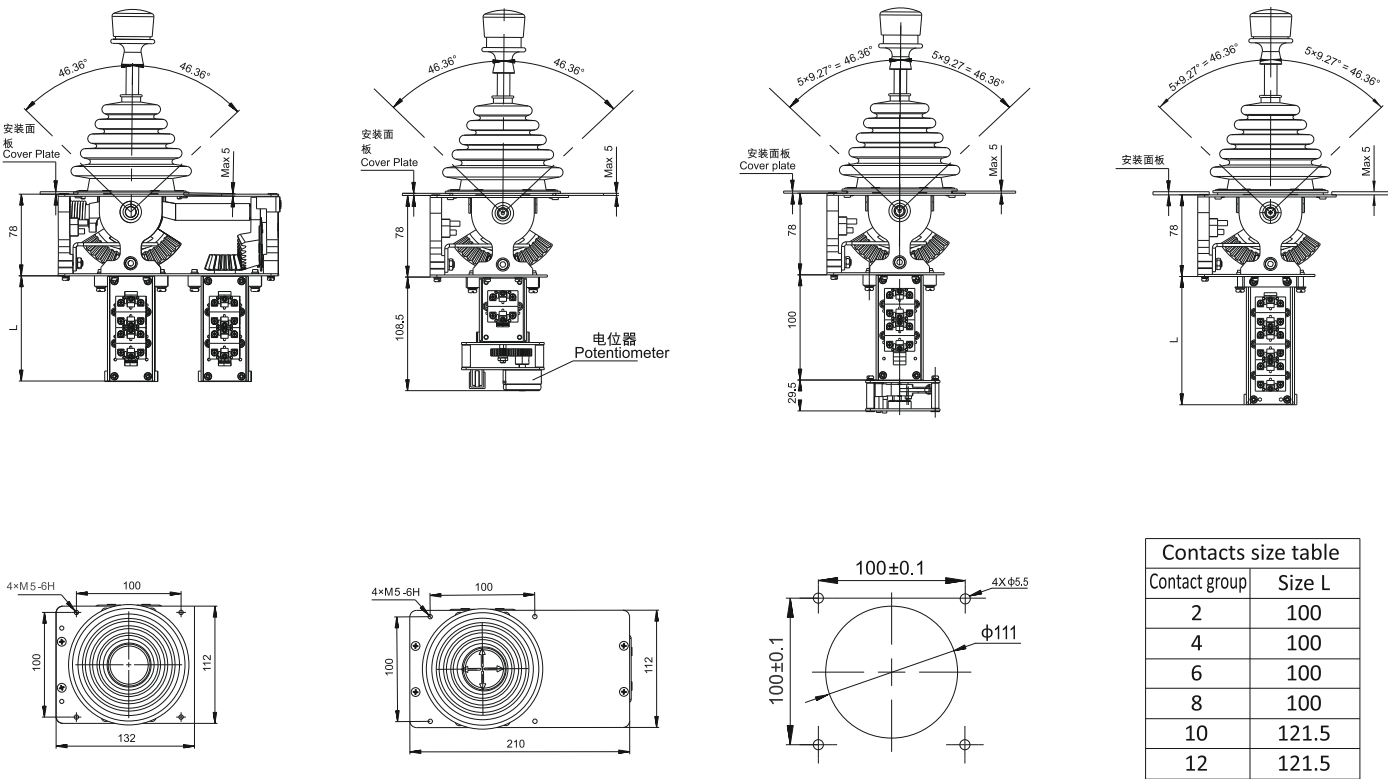
QT3A-Industrial Joystick



Grip



Dimensions





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

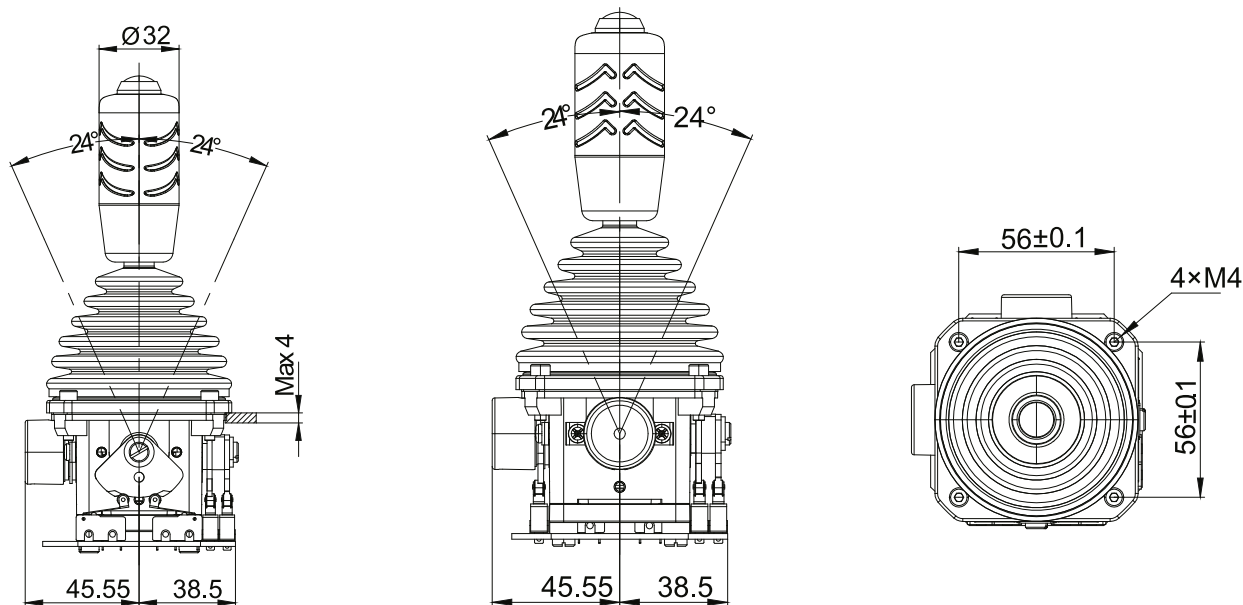
Operating Temperature: -40°C to +80°C
Handle Force: <20N
Mechanical Life: 5M
Operating Torque: ~5N (max 50N)
EMS Interference Resistance: Tested at 100V/m, frequency range 30MHz to 1GHz, with 80% sine wave modulation, meeting EN50082-2 (1995) standards.
ESD Protection Level: 4.8kV for contact discharge,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



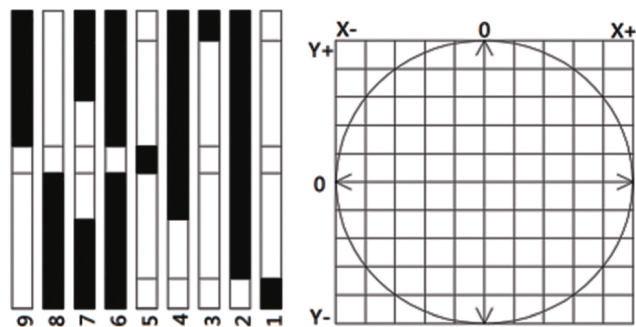
SQ1-Industrial Joystick

⚙️ 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 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.

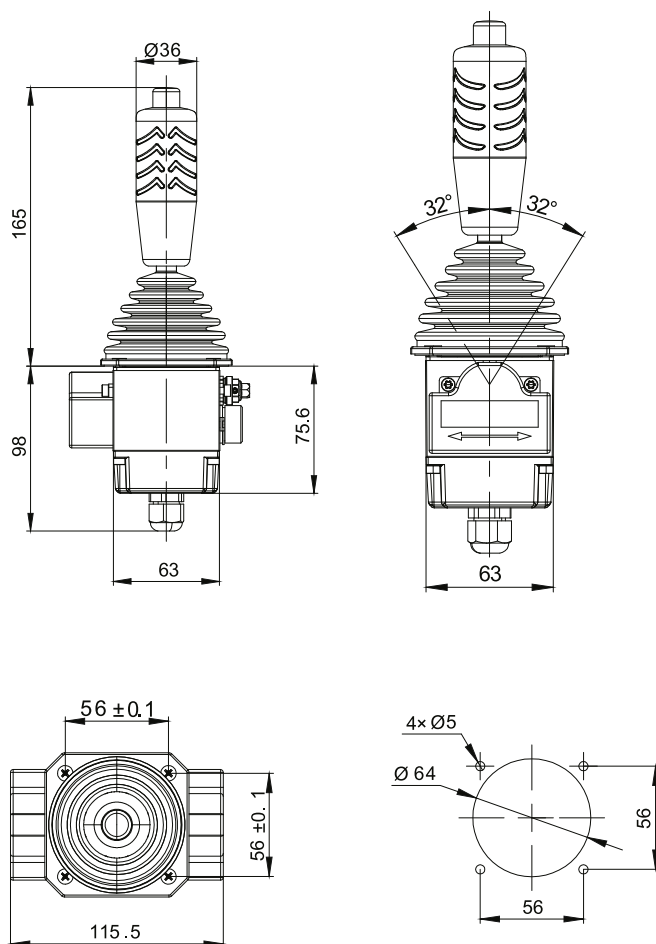
Selection	Palm Grips	Gate	Axis1			Axis2			Contact arrangement
			Axis 1	No. of contacts	Interface	Axis 2	No. of contacts	Interface	
• SHD8 SHD8 • S7 Press down mechanical interlock↓ • S2 Grab-type • SHD SHD8 with button • 8B • S4 Lift-up mechanical interlock↑									
• 1 Bidirectional ↓ • 2 Unidirectional ↑									
• Z Spring return • R Friction brake									
• 01 2 contacts • 04 8 contacts				• 02 4 contacts • 05 10 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					
Potentiometer output • 1K • 2K • 5K • 10K									
See the drawing below									



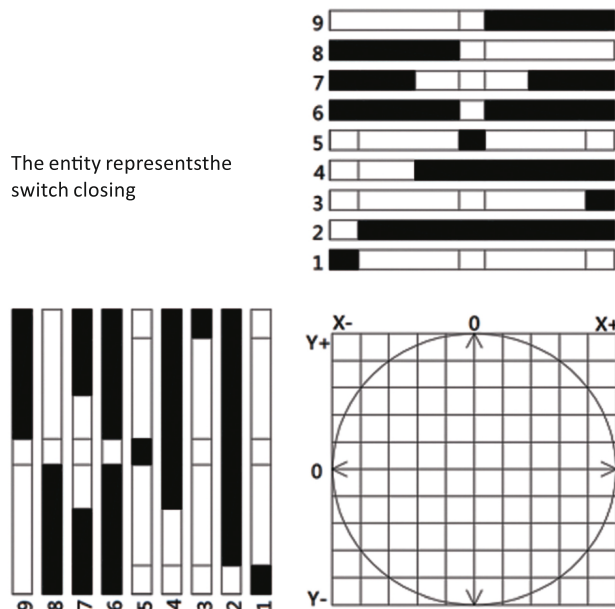
SQ2-Industrial Joystick



Dimensions



Contact Arrangement



Grip





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(XorY)/1M(Z)

Operating Temp: -40C~+85°C

Protection Level: IP65

EMC: EN6100-6-4-2007,30MHZ-1GHZEN6100)-6-2-2019,80MHz-6GHZ

Impact: IEC0068-2-27,50g, 1lms, 3 times/direction impact, in total 6 directions

Vibration: IEC60068-2-64, random vibration,3.6gRMS, 100-200Hz, each axis lasts for one hour



Selection	Palm Grips	Gate	Movement	Interface	Wiring
• A • B • C • D • E					
• 1 -Axis ↓ • 3 All-direction(x, Y-Axis) ※		• 2 Cross gate + • 4 Z-Axis ↻			
• T Spring return					
• Dual path DC5V Dp2: 0.5-2.5-4.5V ⇌ 4.5-2.5-0.5V Dp3: 1.0-2.5-4.0V ⇌ 4.5-2.5-1.0 Dp4: 1.25-2.5-3.75V ⇌ 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					



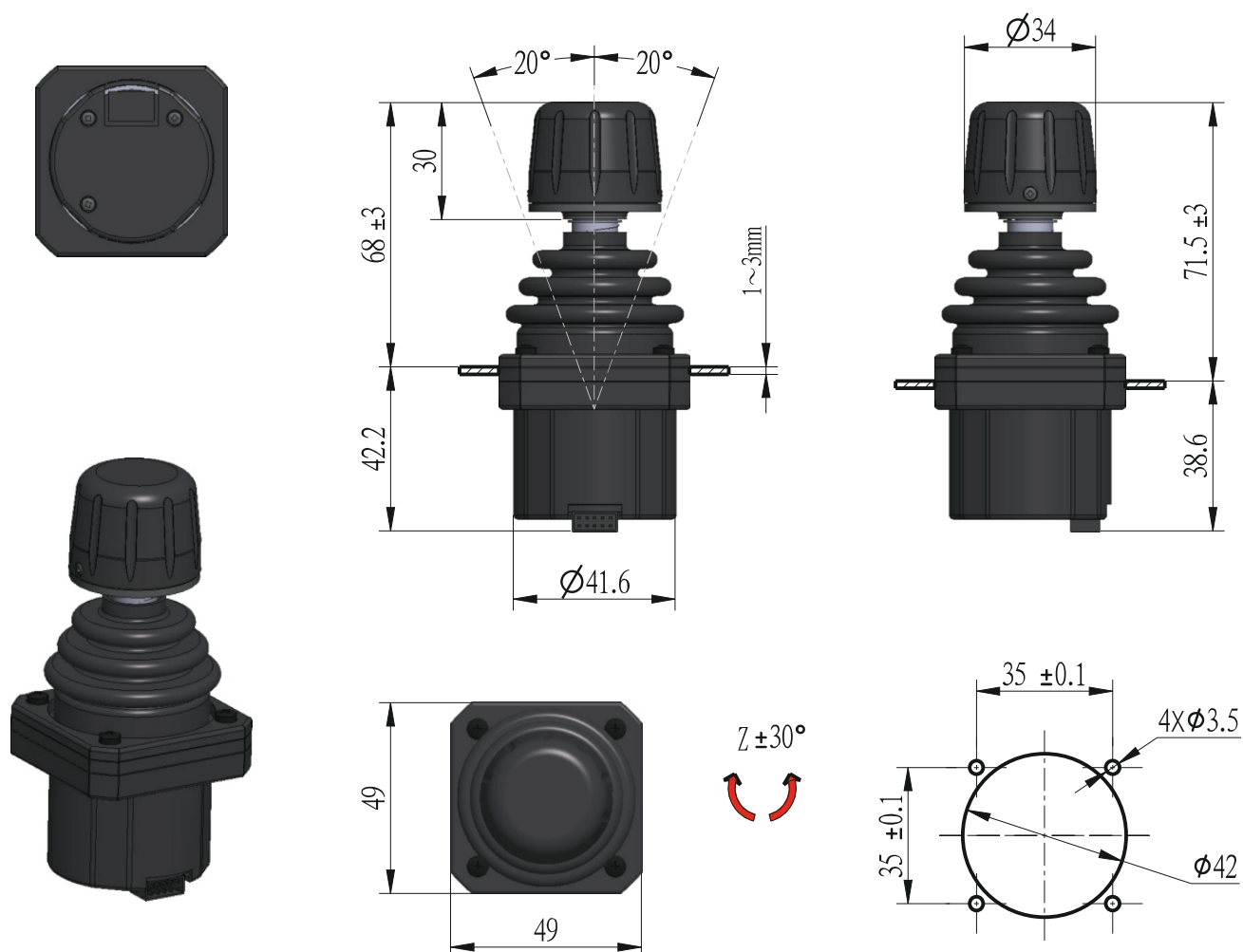
SQ4-Industrial Joystick



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 reliabilityandlonglifespan
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
MAngle: ±20°



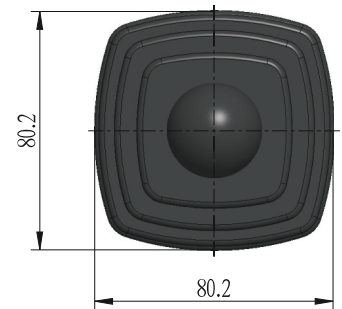
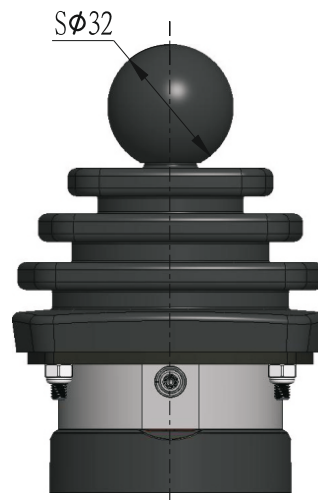
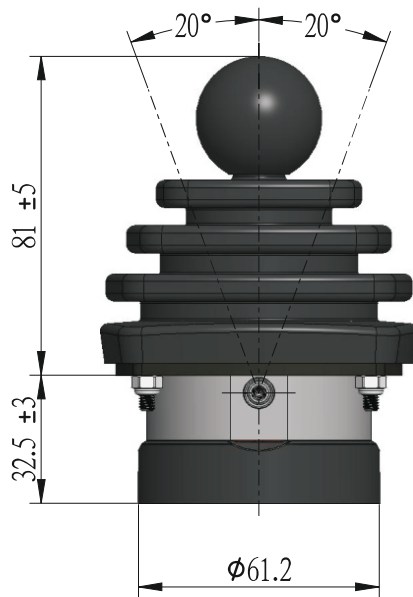
Selection	Palm grips	Gate	Axis 1		Axis 2		Wiring	Contact arrangement
			Movement	Interface	Movement	Interface		
• SHD1 • SHD4B • SHD8B • SHD8 See more options in the grip section								
• 1 -Axis ↑ • 3 Cross gate ⊕		• 2: Y-Axis ↓ • 4: All-direction ✕						
• Z: Spring return								
• Voltage output 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							



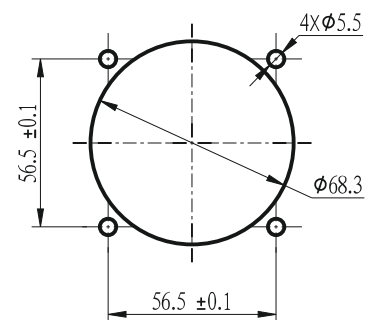
SQ5-Industrial Joystick



Dimensions



客户开孔尺寸



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

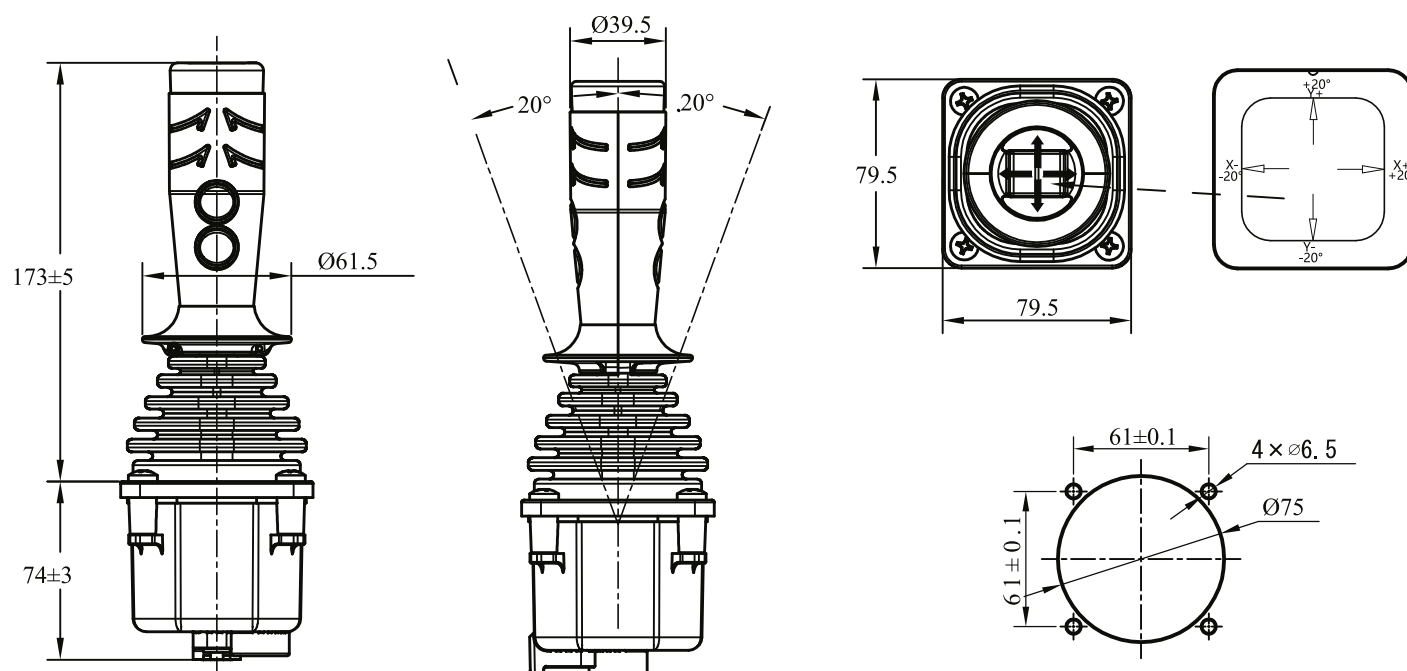
Ideal for cranes, loaders, forklifts, excavators, access platforms, tractors, harvesters, and other heavy machinery.

Technical Data

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



Dimensions





SQ6-Industrial Joystick

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:
Handle Operating Force:
Mechanical Life:
Degree of Protection:

-20°C (-40°C) to +80°C
≤20N
5 million cycles
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

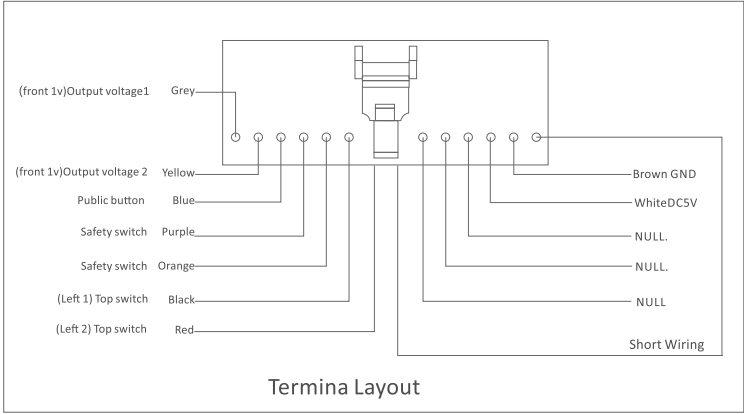
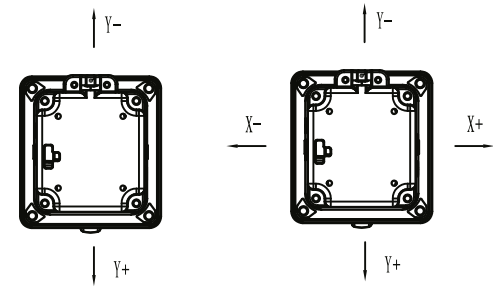
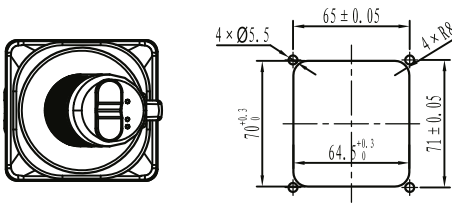
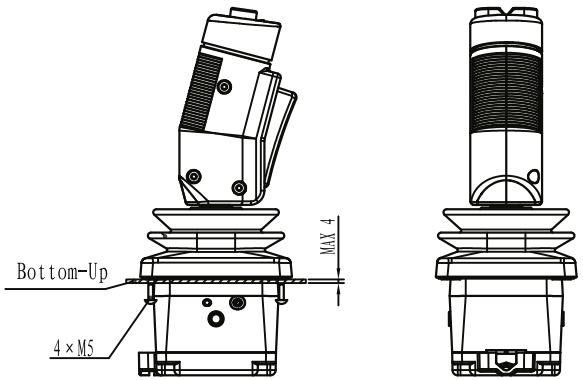


Selection	Palm Grips	Gate	Movement	Axis 1	Axis 2	Wiring
				Interface	Interface	
• KW: safety switch+ rocker switch • K: safety switch,without rocker switch • W: without safety switch,rocker switch						
• 1 -Axis ↑ • 2 Cross gate ⇄ • 3 All-direction(x, Y-Axis) ※						
• Z: Spring return						
• Hall 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						



SQ7-Industrial Joystick

⚙️ 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+		
White	X-axis back output-		
	+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)

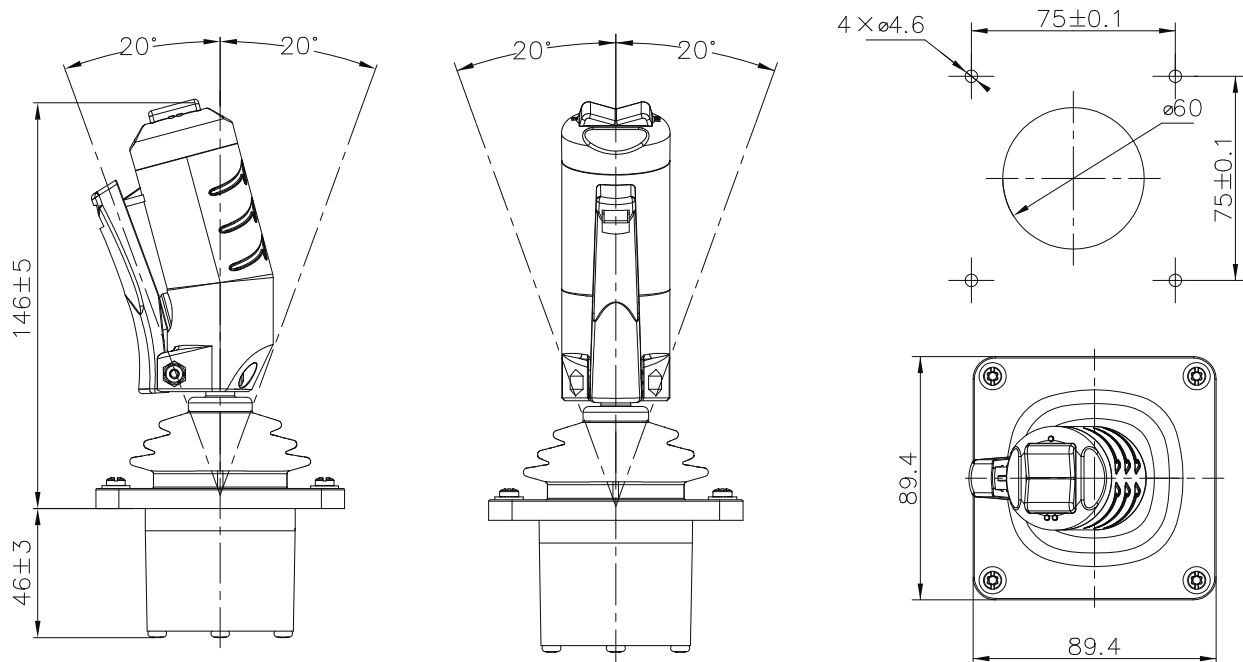


Selection	Palm Grips	Gate	Movement	Axis 1	Axis 2	Wiring
				Interface	Interface	
• KW: safety switch+ rocker switch • K : safety switch,without rocker switch • W: without safety switch,rocker switch See more options in the grip section						
• 1 -Axis ↑ • 2 Cross gate ⇄ • 3 All-direction(X, Y-Axis) ※						
• 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						



SQ7M-Industrial Joystick

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						



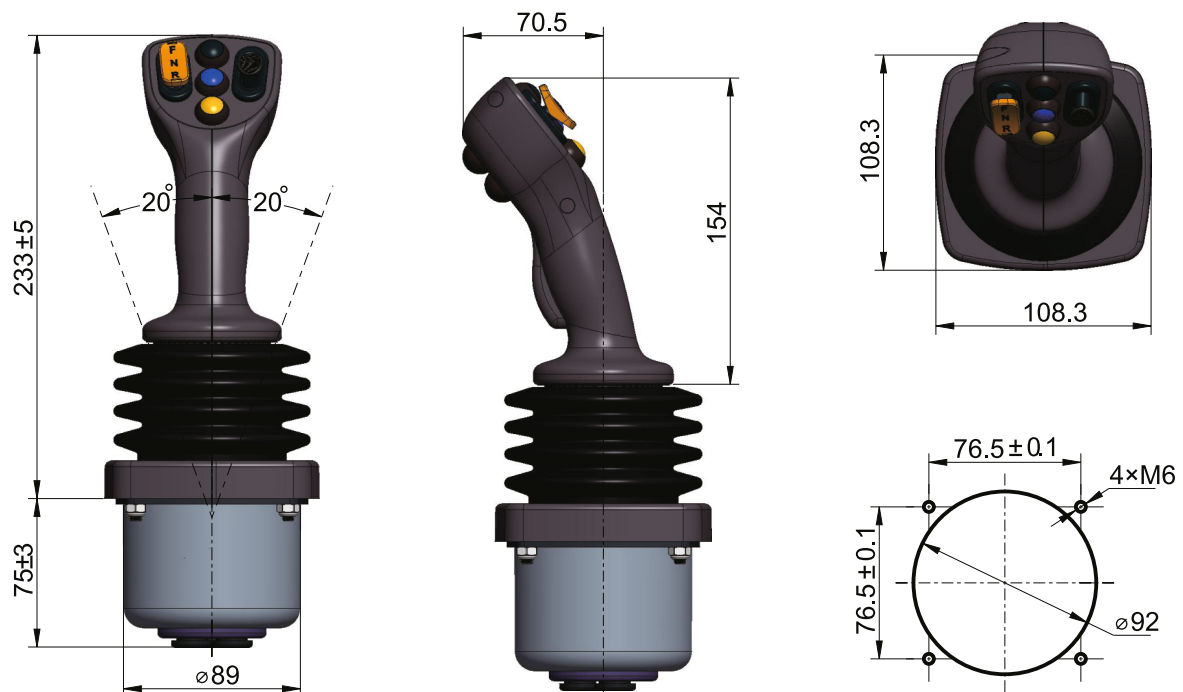
SQ8-Industrial Joystick



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



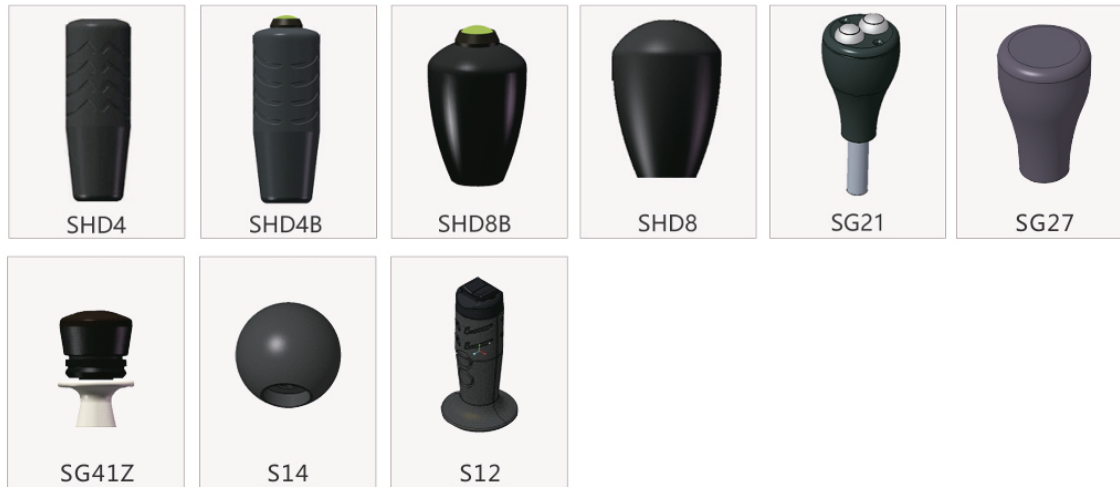
Selection	Palm Grips	Gate	Movement	Interface	Switch closed position	Wiring
• SHD4 • SHD48 • SHD8B • SHD8 • SG21 See more options in the grip section						
• 1 Bidirectional ↓ • 2 Unidirectional ↑						
• Z Spring return • R Friction brake						
• Hall output DC5V - HV1: 0-2.5-5V - HV2: 0.5-2.5-4.5V - HV3: 1.0-2.5-4.0V - HV4: 1.25-2.5-3.75V • Potentiometer output 1K 2K 5K 10K 20K						
• K1 • K2 • K3						
• C: Connector • L: Direct outgoing line						



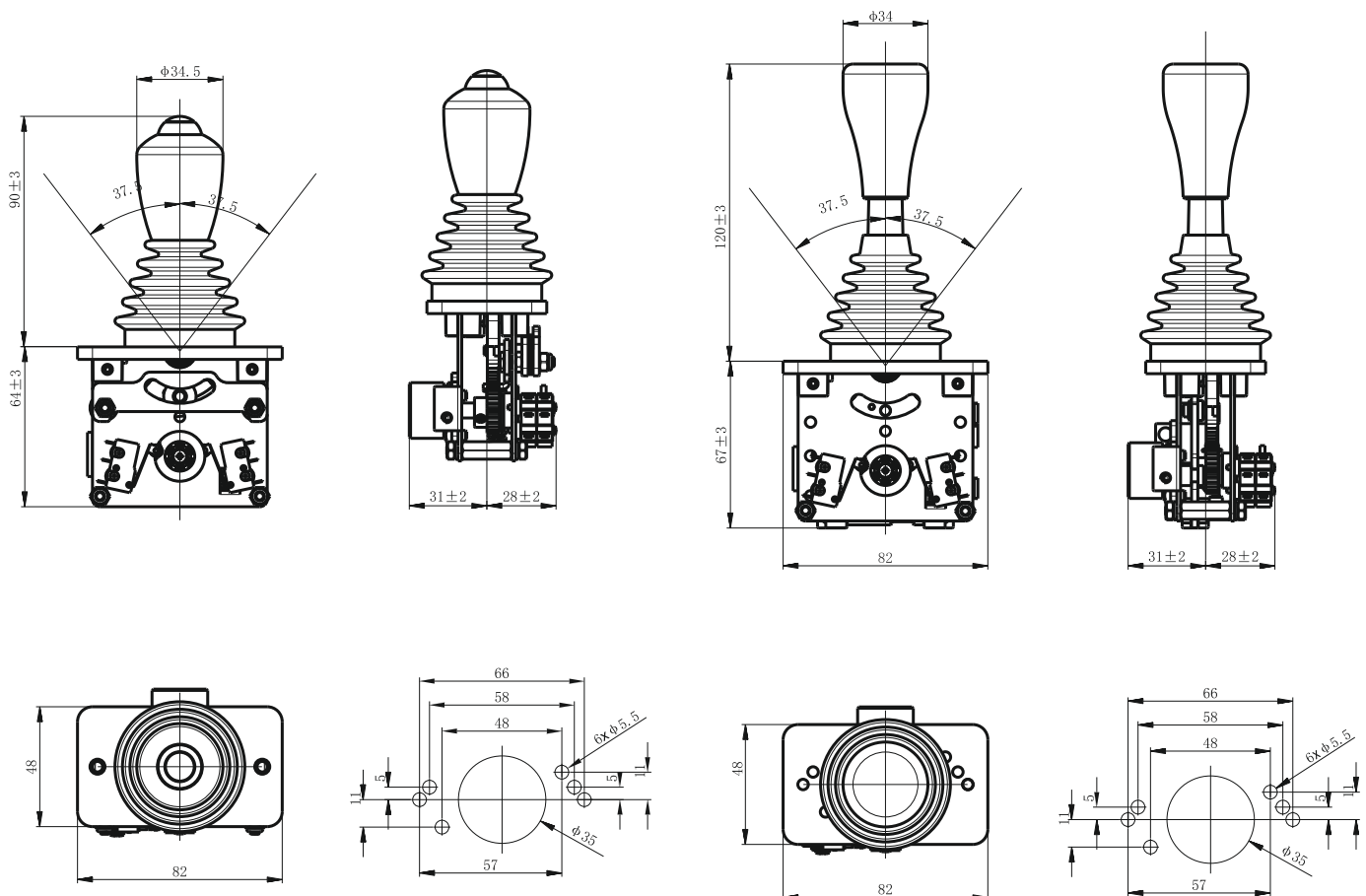
SQT0-Industrial Joystick



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)

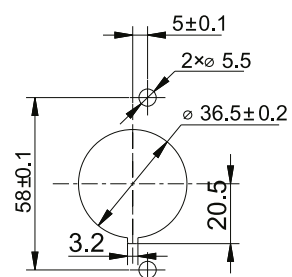
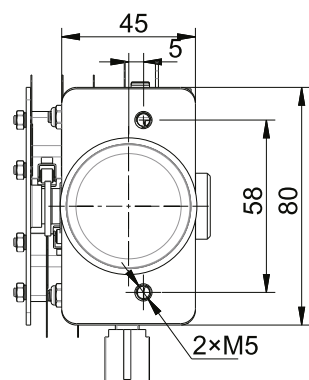
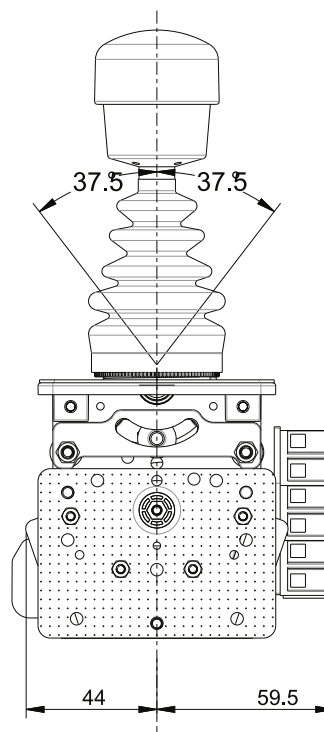


Selection		Palm Grips	Gate	Movement	Interface	Switch closed position	Wiring
• S5 Lift up zero mechanical interlock S5 • S6 Push-down zero mechanical interlock S6 • SB6 Straight Palm Grips with a button SB6 at the top See more options in the grip section							
• 1 Bidirectional ↑ • 2 Unidirectional ↑							
• Z: Spring return • R: Friction brake							
• Voltage output DC24V - V1: -10V~0~+10V - V2: +10V~0~+10V - V3: -5V~0~+5V - V4: +5V~0~+5V - V5: 0~+10V		• 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 • 1K • 2K • 5K • 10K • 20K		• Current output DC24V - I1: 4mA-12mA-20mA - I2: 20mA-4mA-20mA		
• K1 • K2 • K3							
• A: Terminal interface • L: Direct outgoing line • X: Customize							

SHD8	SHD2	S3	S5	S6	SHD1	SHD8B	SHD4B	SB6	S12

Technical drawing of the potentiometer assembly showing dimensions:

- Top diameter: $\varnothing 42$
- Overall height: 120
- Height of the potentiometer section: 87
- Width of the potentiometer section: 38.6
- Width of the base section: 28



50/69

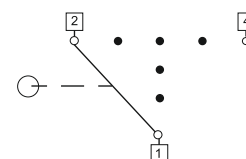


SQ20-Industrial Joystick

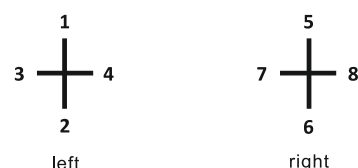
Contact Arrangement

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		

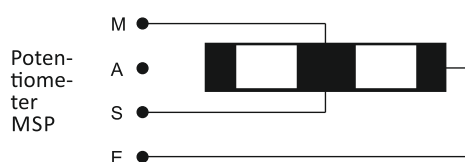
Micro change over
contact for control
handle with dead
man's button signal button
push button



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



Deflection directions designated
DIN 15025





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



Dimensions

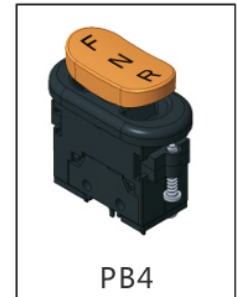
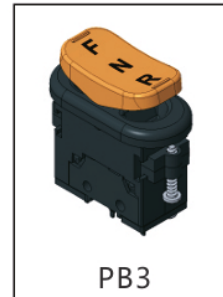
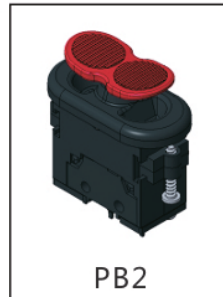
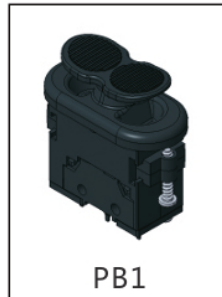
Selection	Palm Grips	Movement	Gate	Interface	Wiring
• PA • PB1 • PB2 • PB3 • PB4					
• Z: Spring return • R: Friction brake					
• 1: 1-Axis↑					
• SED → ON-OFF-ON					
• A: Terminal interface • L: Direct outgoing line 30mm • X: Customize					



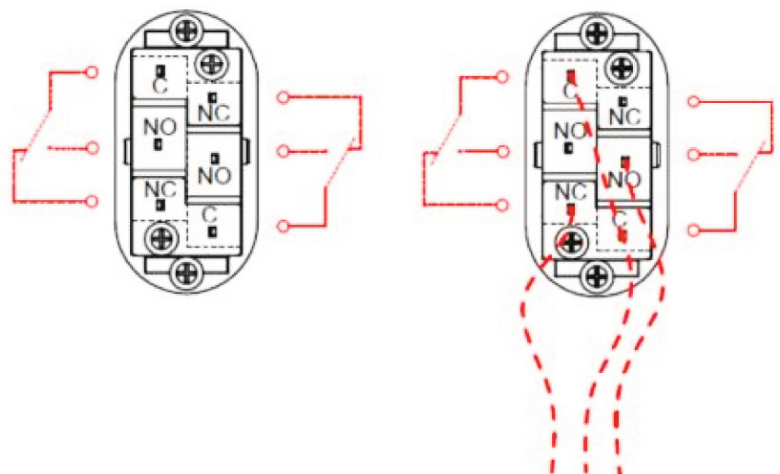
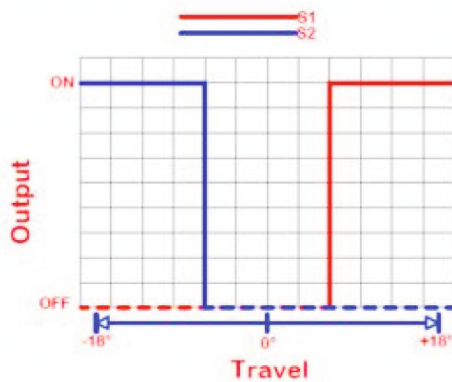
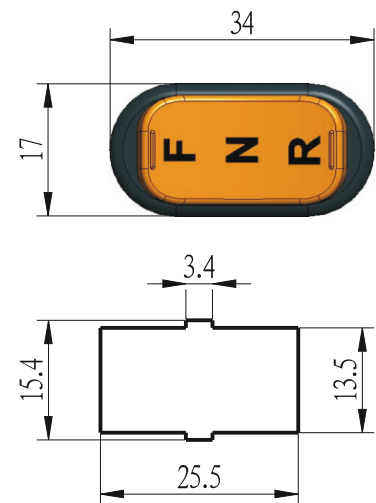
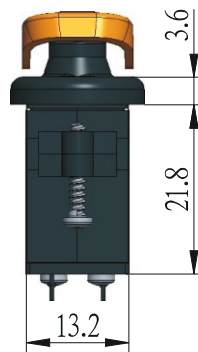
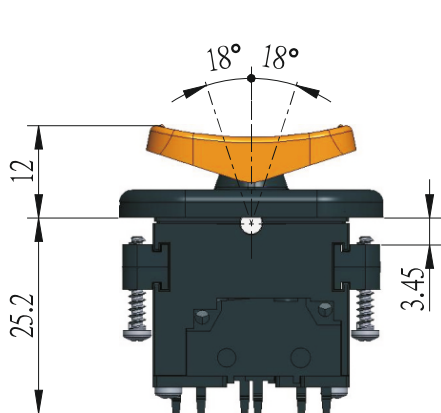
SW01-Fingertip Switch



Grip



Dimensions





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



Dimensions

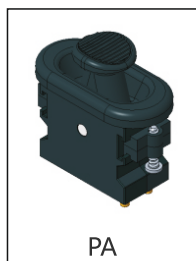
Selection	Palm Grips	Movement	Gate	Interface	Wiring
PA					
Z: Spring return					
1: 1-Axis†					
Hall output DC5V - Hv2: 0.5-2.5-4.5V - Hv3: 1.0-2.5-4.0V - Hv4: 1.25-2.5-3.75V DP - Dp2: 0.5-2.5-4.5V 4.5-2.5-0.5V - DP3: 1.0-2.5-4.0V 4.0-2.5-1.0V - DP4: 1.25-2.5-3.75V 3.75-2.5-1.25V					
- A: Terminal interface - L: Direct outgoing line 250mm - X: Customize					



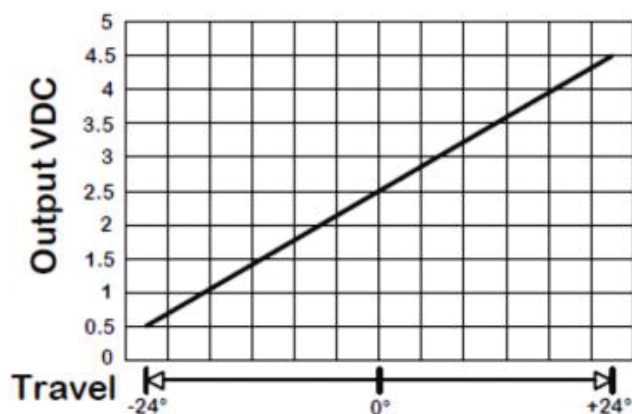
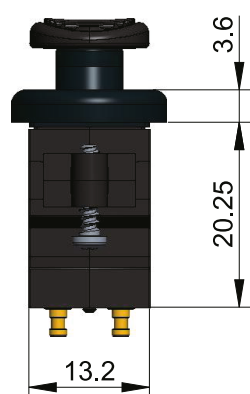
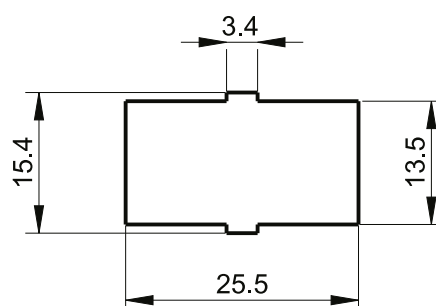
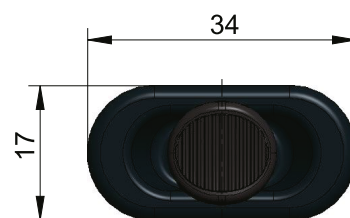
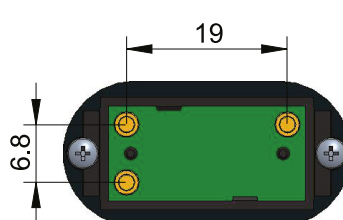
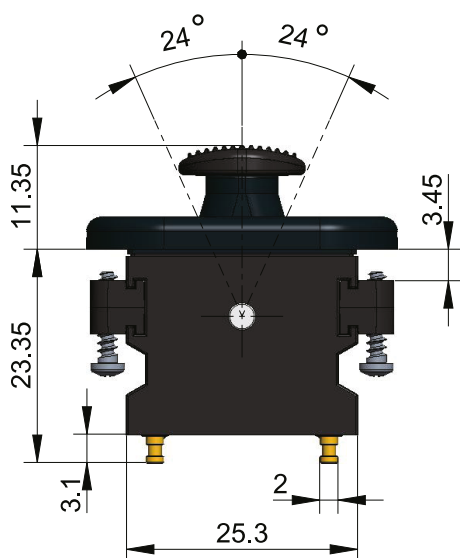
SW02-Fingertip Switch



Grip



Dimensions





SW03-Finger Wheel

Heavy-duty design for critical applications Suitable for CCTV, robotics, medical, and optical devices Single-axis with Hall sensor Three-color LED (white, green, red) Signal output: 0.5-2.5V-4.5V Durable and reliable

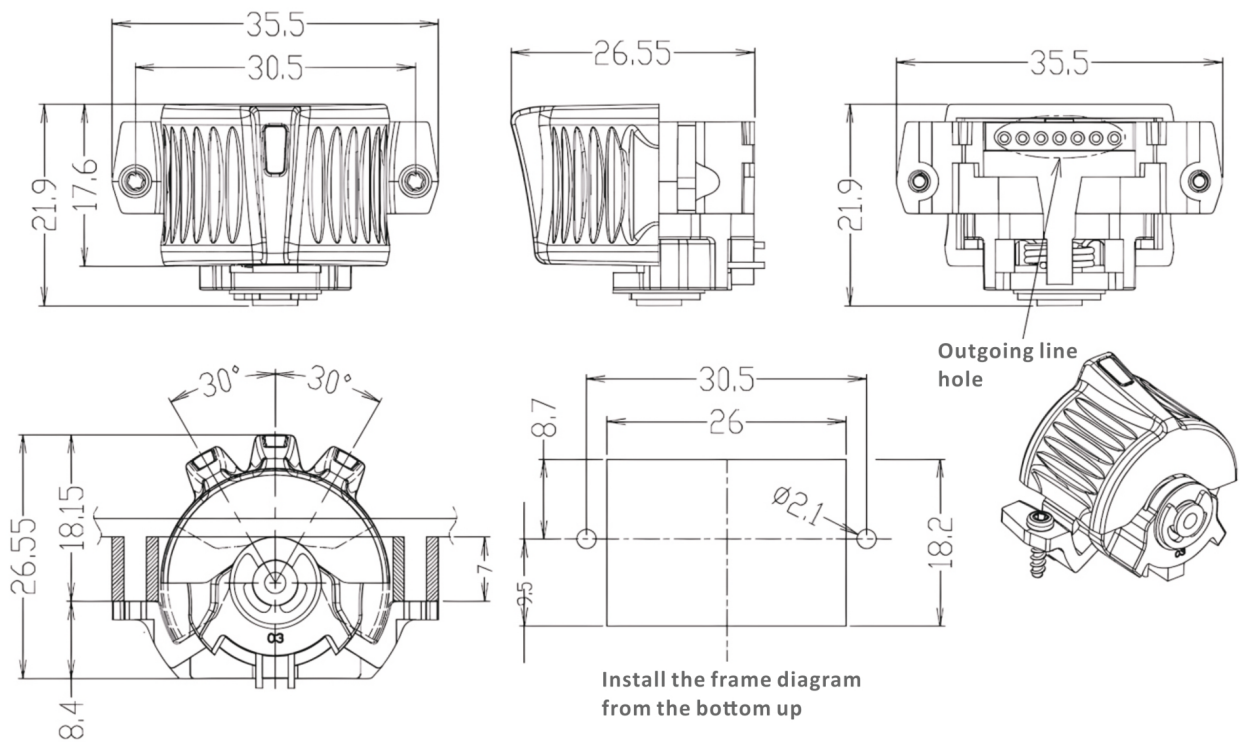
Fingertip Switch

Movement: Spring-return
Operating Angle: $\pm 30^\circ$
Power Supply: 12mA/DC5V
Lifetime: 1M
Operating Temperature: -40°C to $+70^\circ\text{C}$



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-Finger Switch

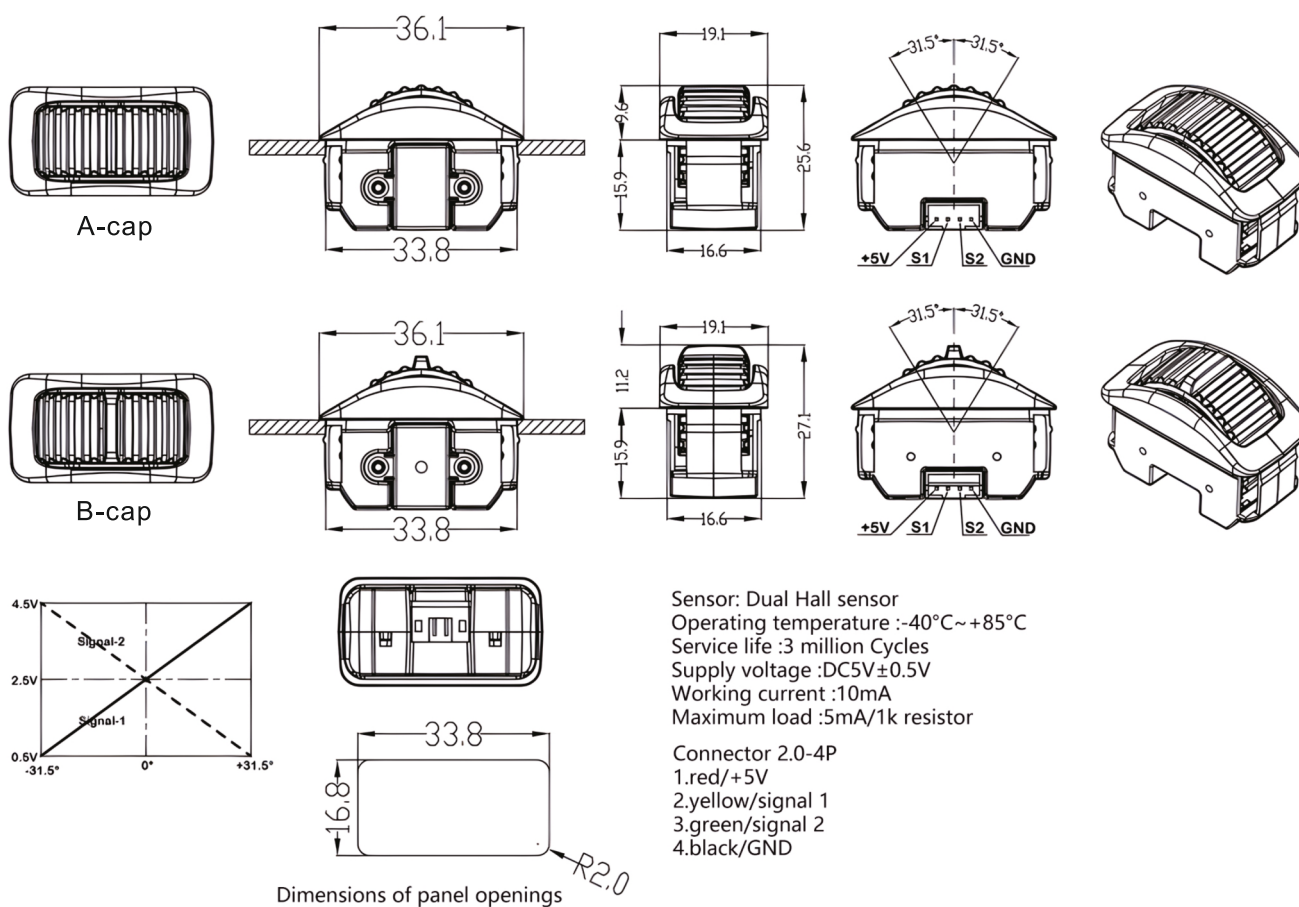
- Designed for Electro-hydraulic applications
- Hall sensor
- Robust service life
- Options for actuators, light, and colors

Technical Data

Operating Angle:	$\pm 31.5^\circ$
Signal Output:	0.5–2.5–4.5V
Operating Temp:	-40°C to $+85^\circ\text{C}$
Mechanism:	Spring return
Power Supply:	DC 5V/9mA
Mechanical Life:	3M
Protection Class:	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					

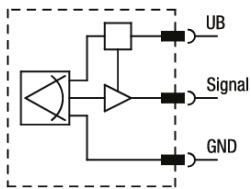


SW05-Fingertip Joystick

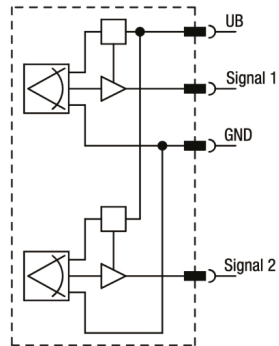


Dimensions

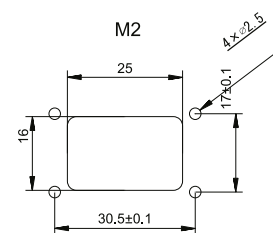
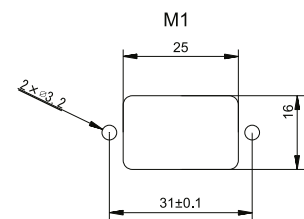
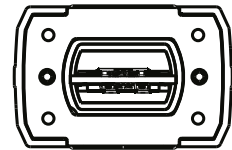
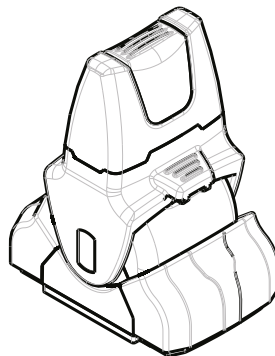
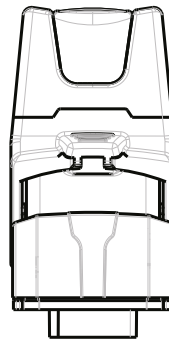
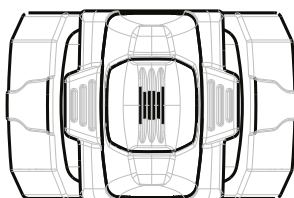
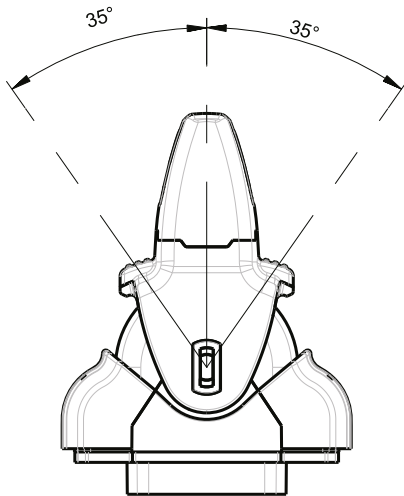
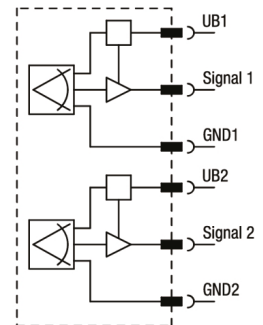
Analogue



Analogue semi-redundant



Analogue redundant



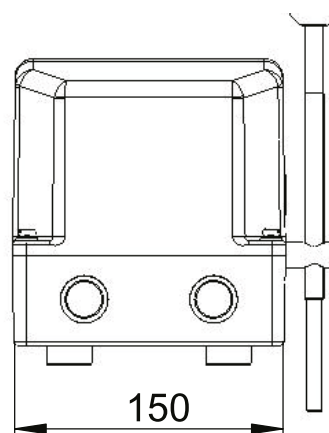
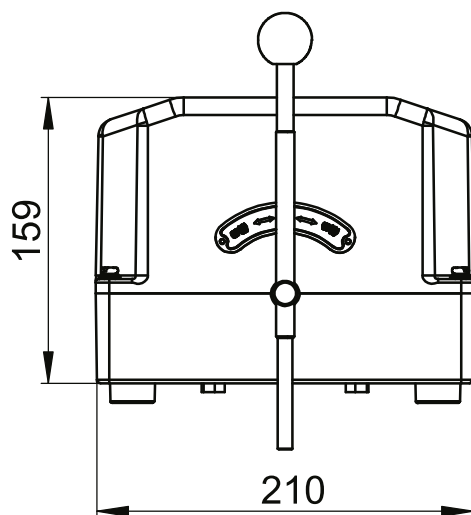
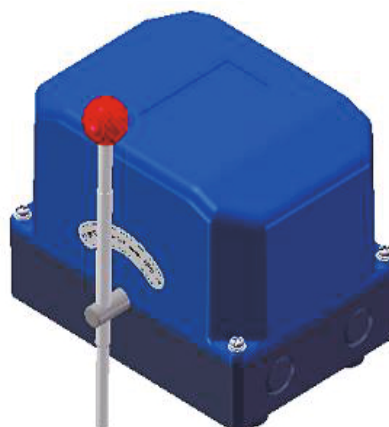
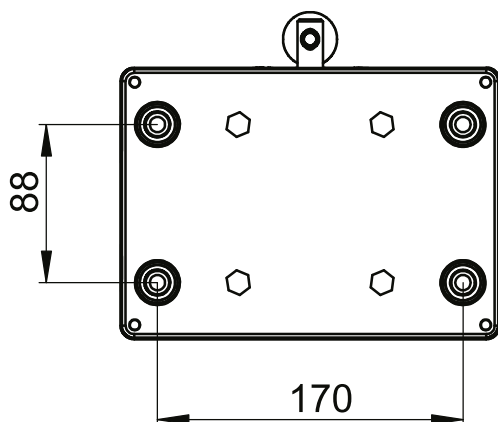


JK16-100AC-Limit Switch

JK16-100Ac limit switch, mainly used for AC 50HZ(60Hz), rated working voltage to 380V(440V) rated working current to 100A construction elevator power supply circuit. When lifting When the limit switch of the machine loses effect, the switch is used to break off the power supply of the lift to achieve construction Ultimate protection of aircraft landing.



Dimensions



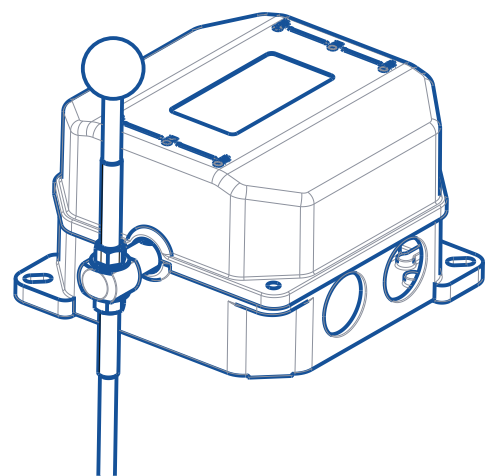
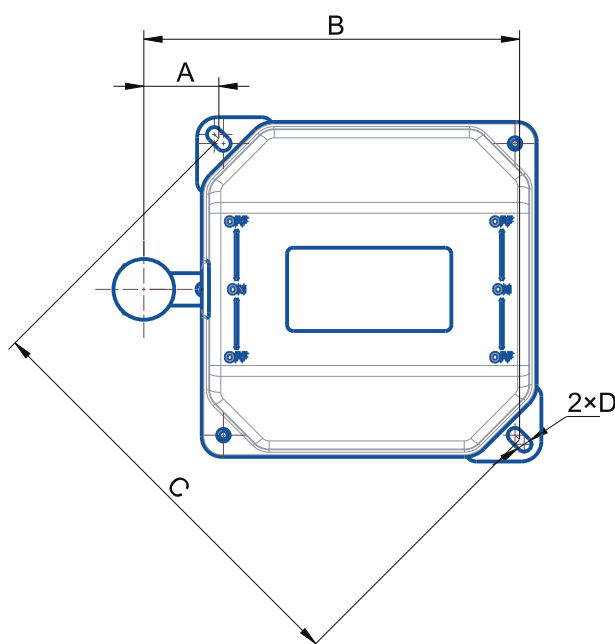
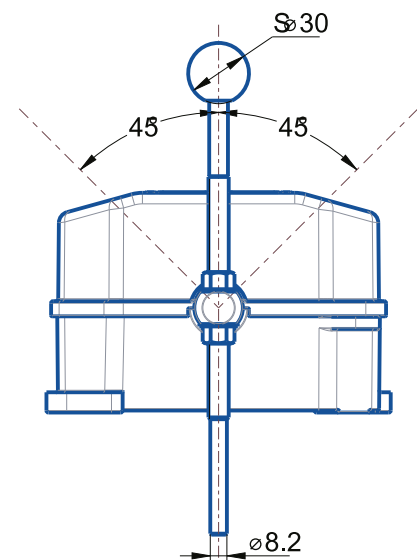
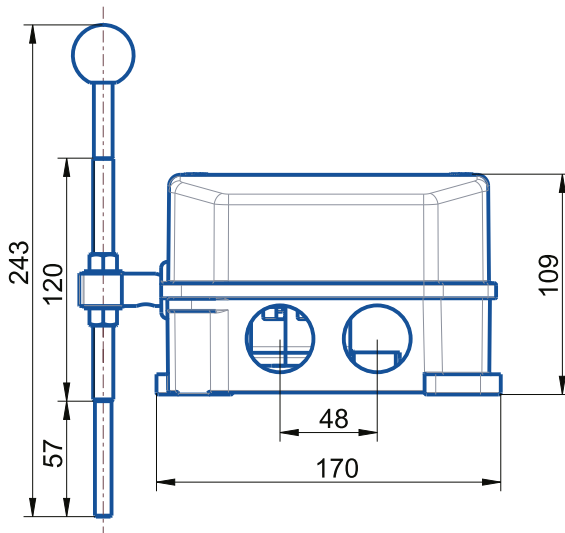


JK16-125AC-Limit Switch

JK18-125Ac limit switch, mainly used for AC 50HZ(60Hz), rated working voltage to 380V(440V) rated working current to 100A construction elevator power supply circuit. When lifting, when the limit switch of the machine loses effect, the switch is used to break off the power supply of the lift to achieve construction Ultimate protection of aircraft landing.



Dimensions

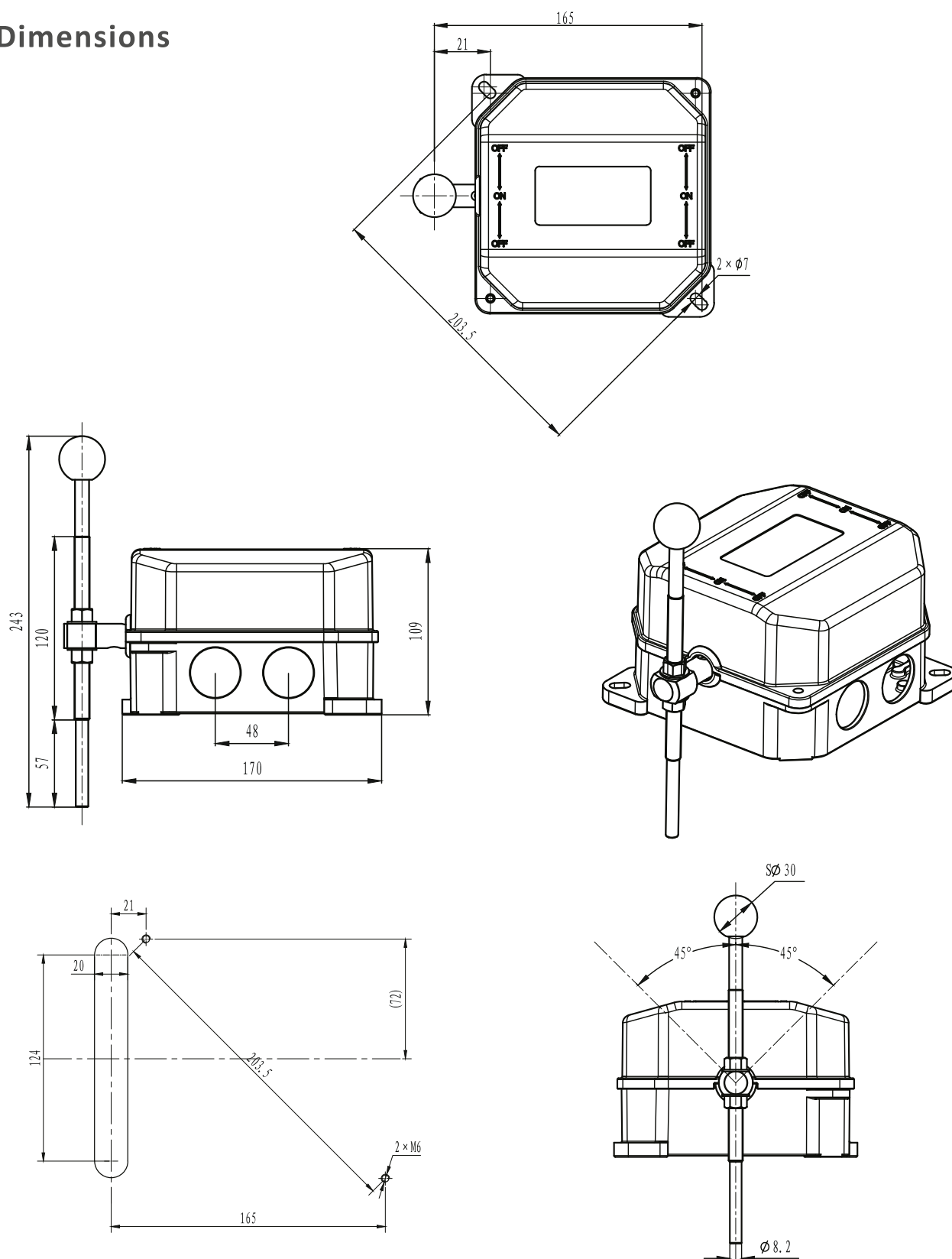


[illegible]



JK18-A/3AC-Limit Switch

Dimensions

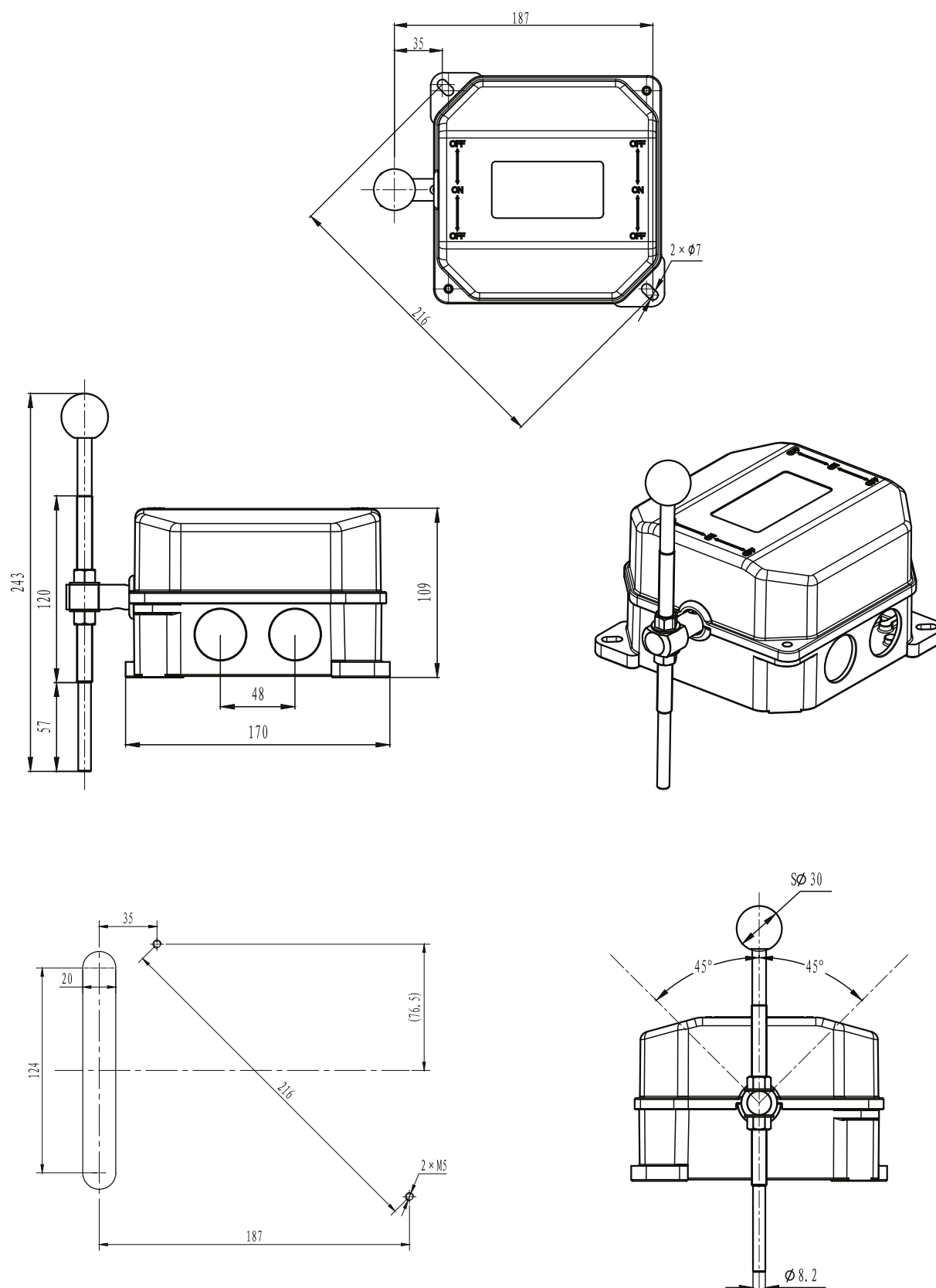




JK18-A/1.JK18-B/1-Limit Switch



Dimensions





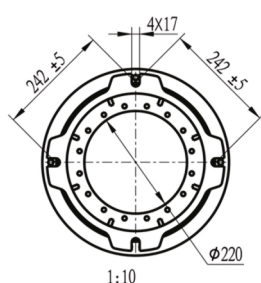
CZT-Control Console

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.

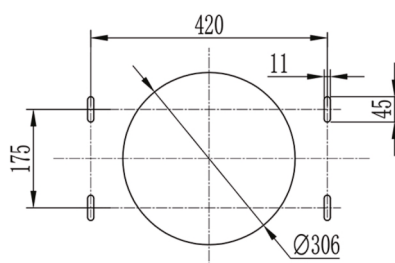
Control Box

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.

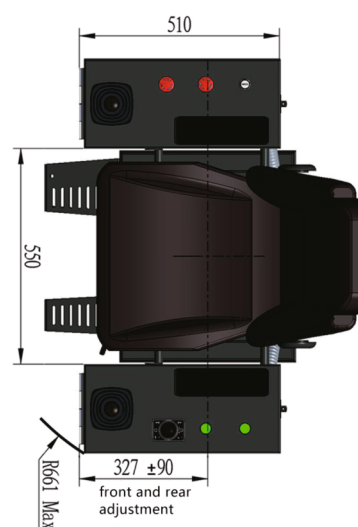
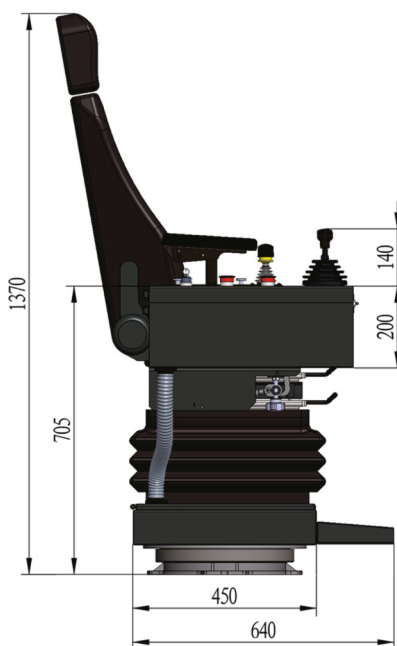
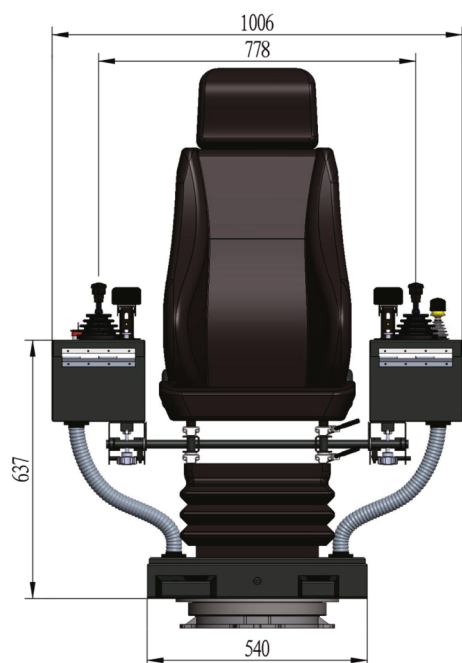
Dimensions



rotating base mounting



fixed base mounting





CT1-Control Console

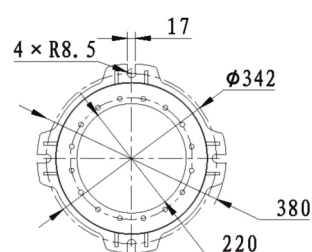
The CT1 crane console is engineered for AC 50Hz (60Hz) control circuits, accommodating a rated voltage of up to 380V (440V). It facilitates the control of motor start, speed regulation, commutation, and braking in crane machinery and related electrical control systems.

Control Box

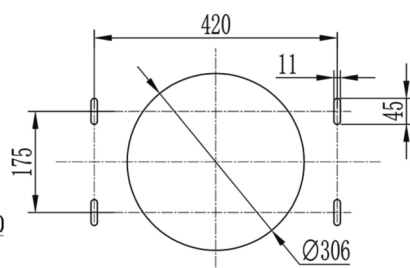
Constructed from steel plate, the control box features a hinged cover equipped with a standard locking function for simplified inspection and maintenance. The configuration of the joystick, indicators, and control elements is tailored to meet the specific requirements of the client.



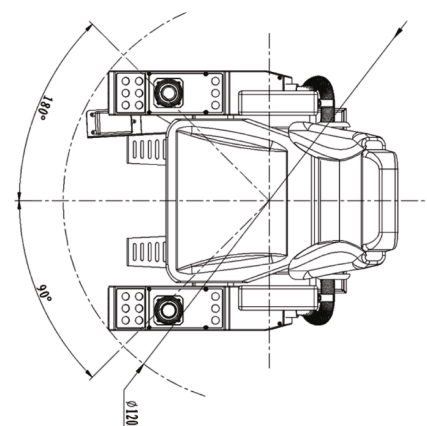
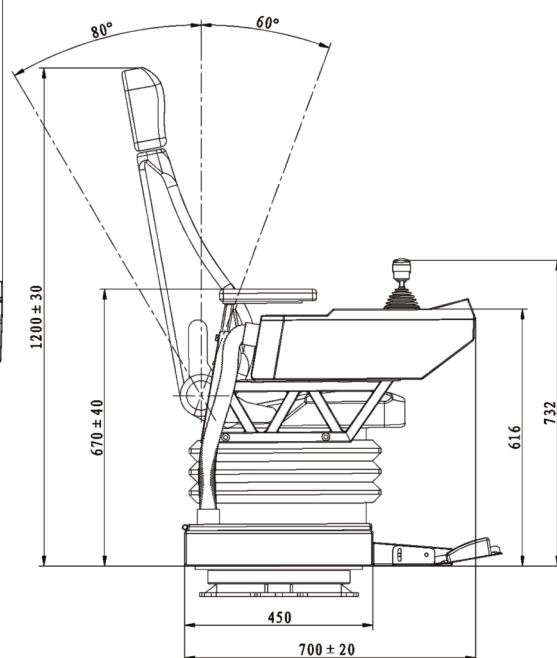
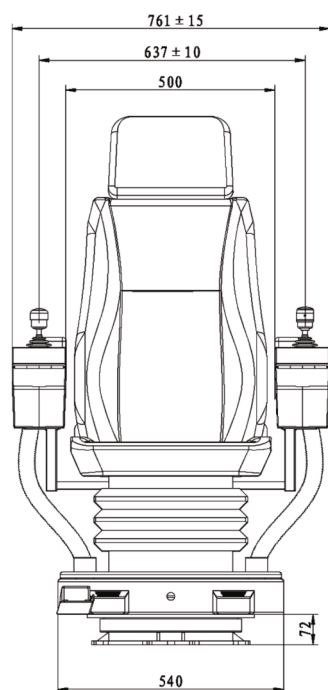
Dimensions



rotating base mounting



fixed base mounting





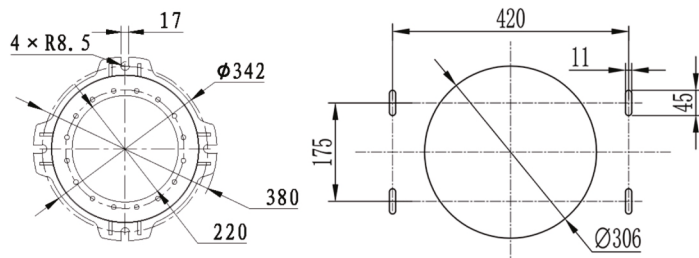
QT5BM-Control Console

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

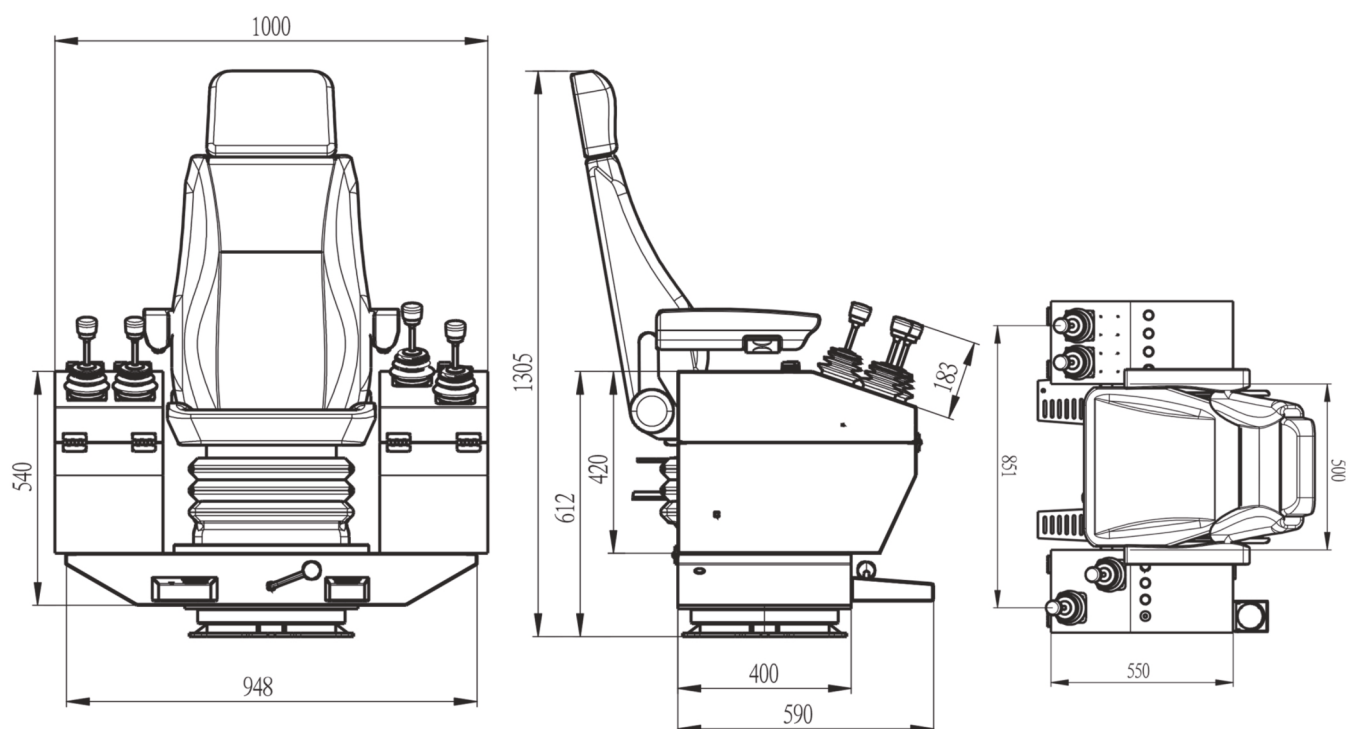
The control box is crafted from robust steel plate and includes a hinged cover with a standard locking mechanism, enhancing ease of maintenance and routine checks. It's custom-configured to accommodate the joystick, indicators, and controls, precisely aligned with the client's specifications.

Dimensions



rotating base mounting

fixed base mounting





QT5BX-Control Console

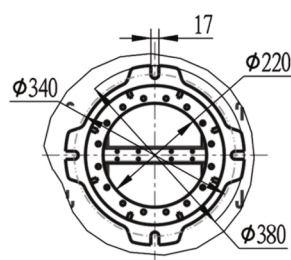
The QT5BX crane console is expertly engineered for AC 50Hz (60Hz) control circuits and supports voltages up to 380V (440V). This console is designed to manage the start, speed regulation, commutation, and braking of motors used in crane machinery and comparable electrical control systems.

Control Box

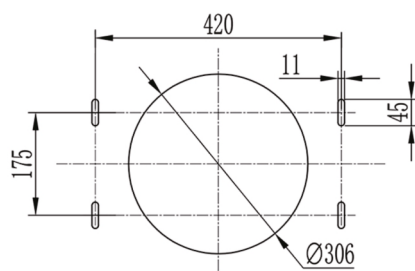
Constructed from durable steel plate, the control box features a hinged cover with a standard locking mechanism to facilitate easy access for maintenance. The arrangement of the joystick, indicators, and controls is tailored to meet the client's specific requirements.



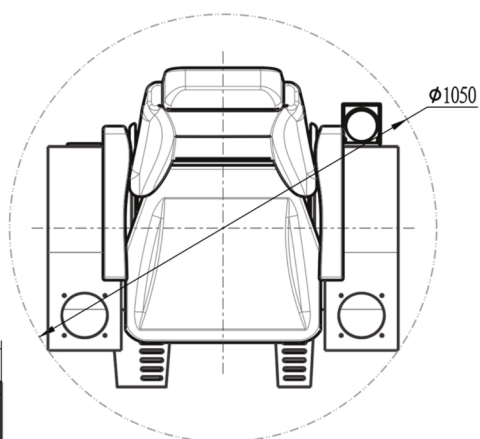
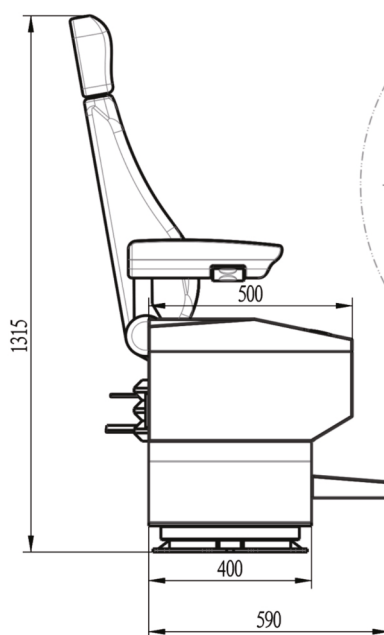
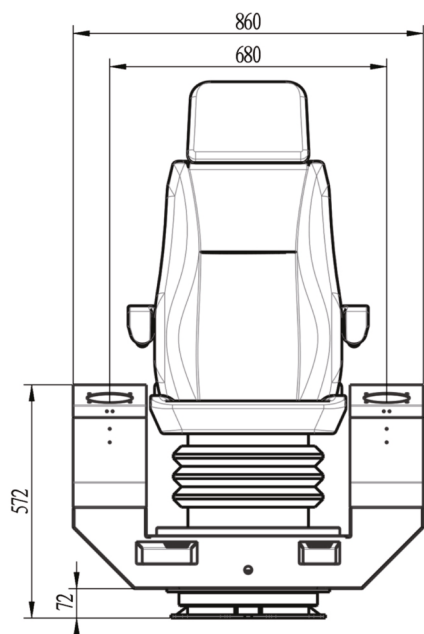
Dimensions



rotating base mounting



fixed base mounting





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

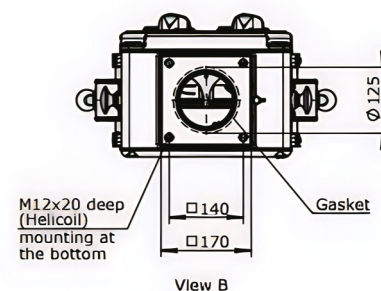
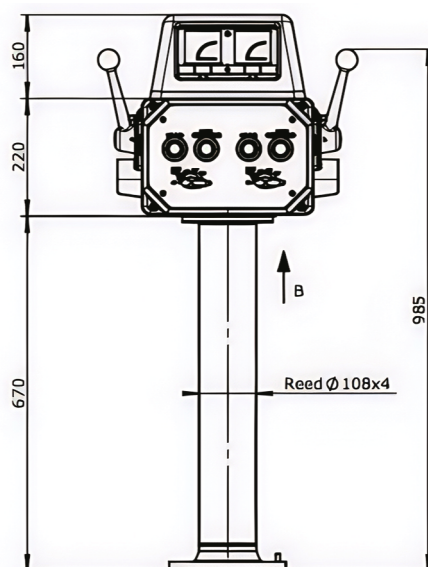
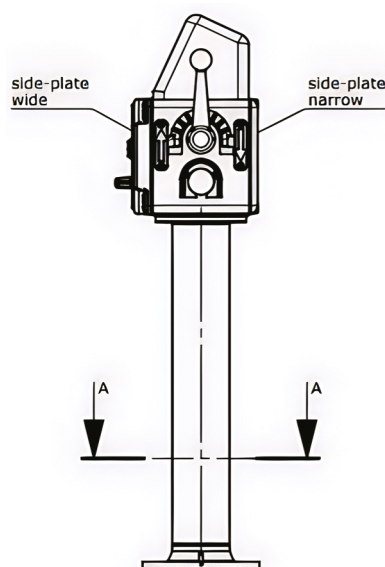
-40°C to +85°C

Degree of protection

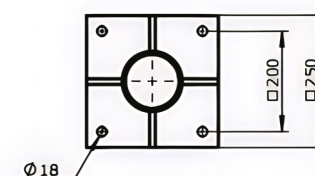
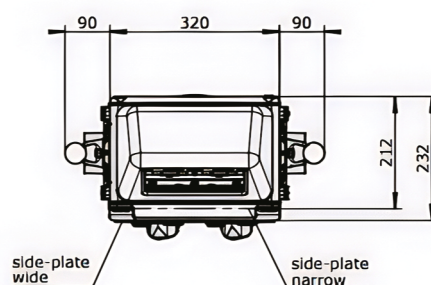
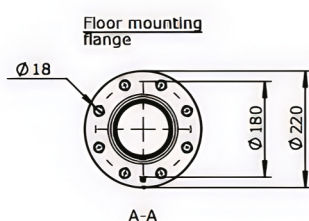
IP66



Dimensions



Optional plate

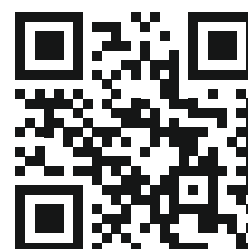


The specified data is for product description purposes only and may not be deemed to be guaranteed unless expressly confirmed in the contract.



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