



INDUSTRIAL JOYSTICK

The AT10 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



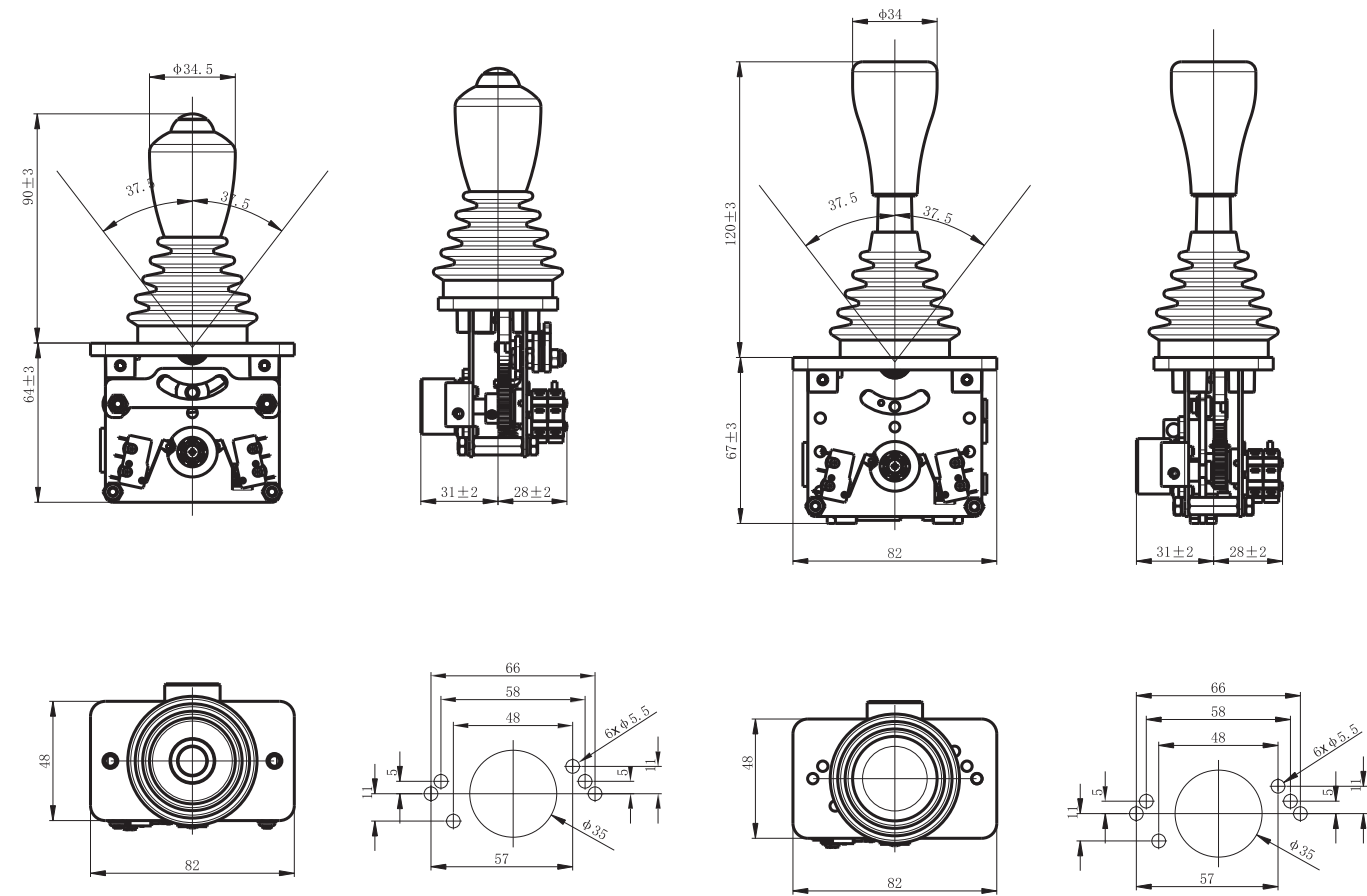
Selection	Palm Grips	Gate	Movement	Interface	Switch closed position	Wiring
• SHD4 • SHD48 • SHD8B • SHD8 • SG21 See more options in the grip section						
• 1 Bidirectional ↓ • 2 Unidirectional ↑						
• Z Spring return • R Friction brake						
• Hall output DC5V - HV1: 0-2.5-5V - HV2: 0.5-2.5-4.5V - 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						



Grip



Dimensions





INDUSTRIAL JOYSTICK

The AT11 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.

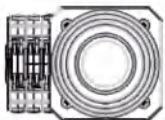
Technical Data

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↑ • 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	• 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: C-type(80*80)	• X:Customize								
• See the page 50											

Installation variant



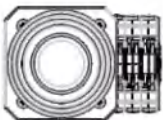
Single axis 30



Single axis 21



Single axis 12



Single axis 03

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



Double axis 3030



Double axis 2130



Double axis 2121



Double axis 1221



Double axis 1230



Double axis 0330



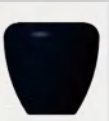
Grip



SHD8



S1



SHD2



S3



S4



S5



SG1



SG13



SG13B



SG9



SHD4B



SB34



SG25



SUGN



SUGA



SG51



S8



SB6



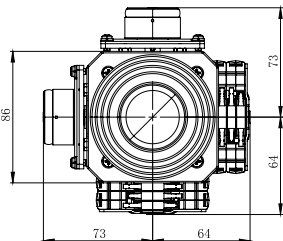
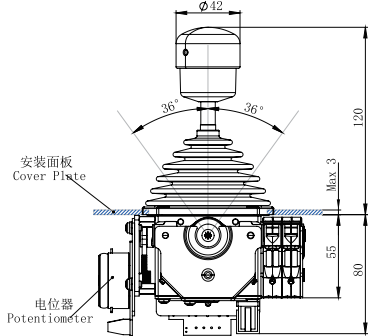
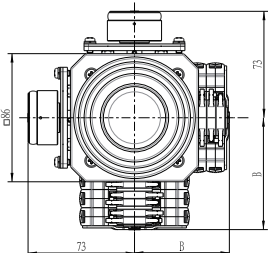
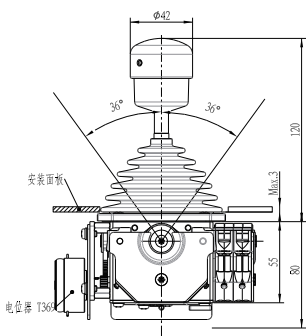
SG21



S9



Dimensions





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)



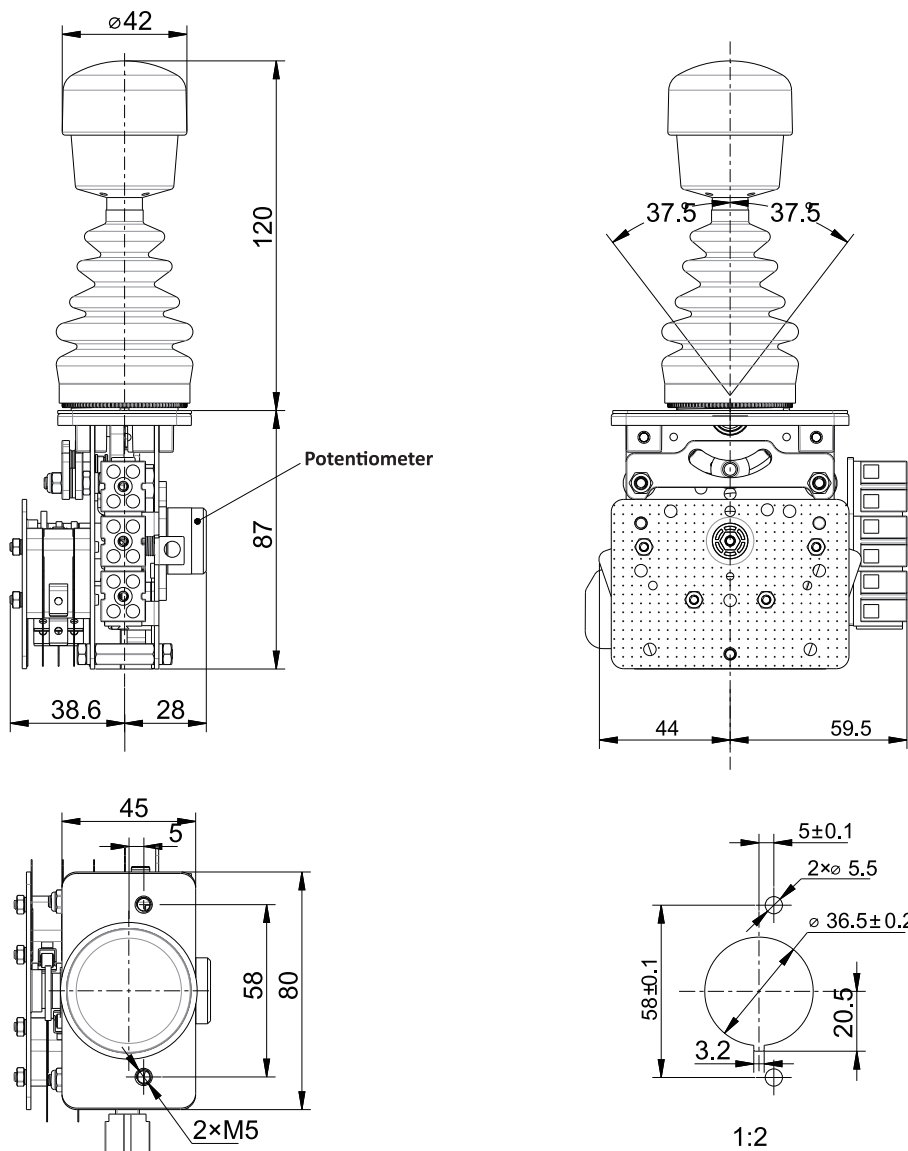
Selection	Palm Grips	Gate	Movement	Interface	Switch closed position	Wiring
• S5 Lift up zero mechanical interlock S5 • S6 Push-down zero mechanical interlock S6 • SB6 Straight Palm Grips with a button SB6 at the top See more options in the grip section						
• 1 Bidirectional ↓ • 2 Unidirectional ↑						
• 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						



Grip



Dimensions



Contact Arrangement

Typ MS11 A01	Form	Typ MS24 A11	Form
MS12 A02		MS214 A12	
MS13 A03		MS224 A13	
MS14 A04		MS25 A14	
MS21 A05		MS26 A15	
MS22 A06		MS0 A98	
MS212 A07		Zero contact NC A...0	
MS222 A08		Zero contact NO A...1	
MS23 A09		Potentiometer MSP 	
MS213 A10			



INDUSTRIAL JOYSTICK



The AT16 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

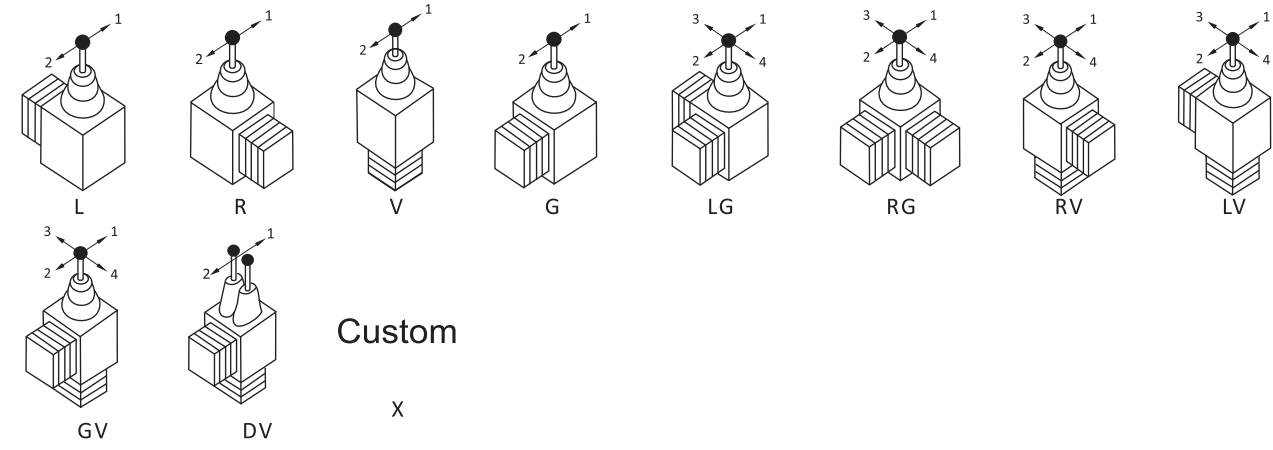
Technical Data

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 ㄹ											
	• 2: Cross gate ↑ • 4: Special gate											
	• Z: Spring return • R: Friction brake											
	• O1 2 contacts • O2 4 contacts • O3 6 contacts • O4 8 contacts • O5 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											
• O1 2 contacts • O2 4 contacts • O3 6 contacts • O4 8 contacts • O5 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												

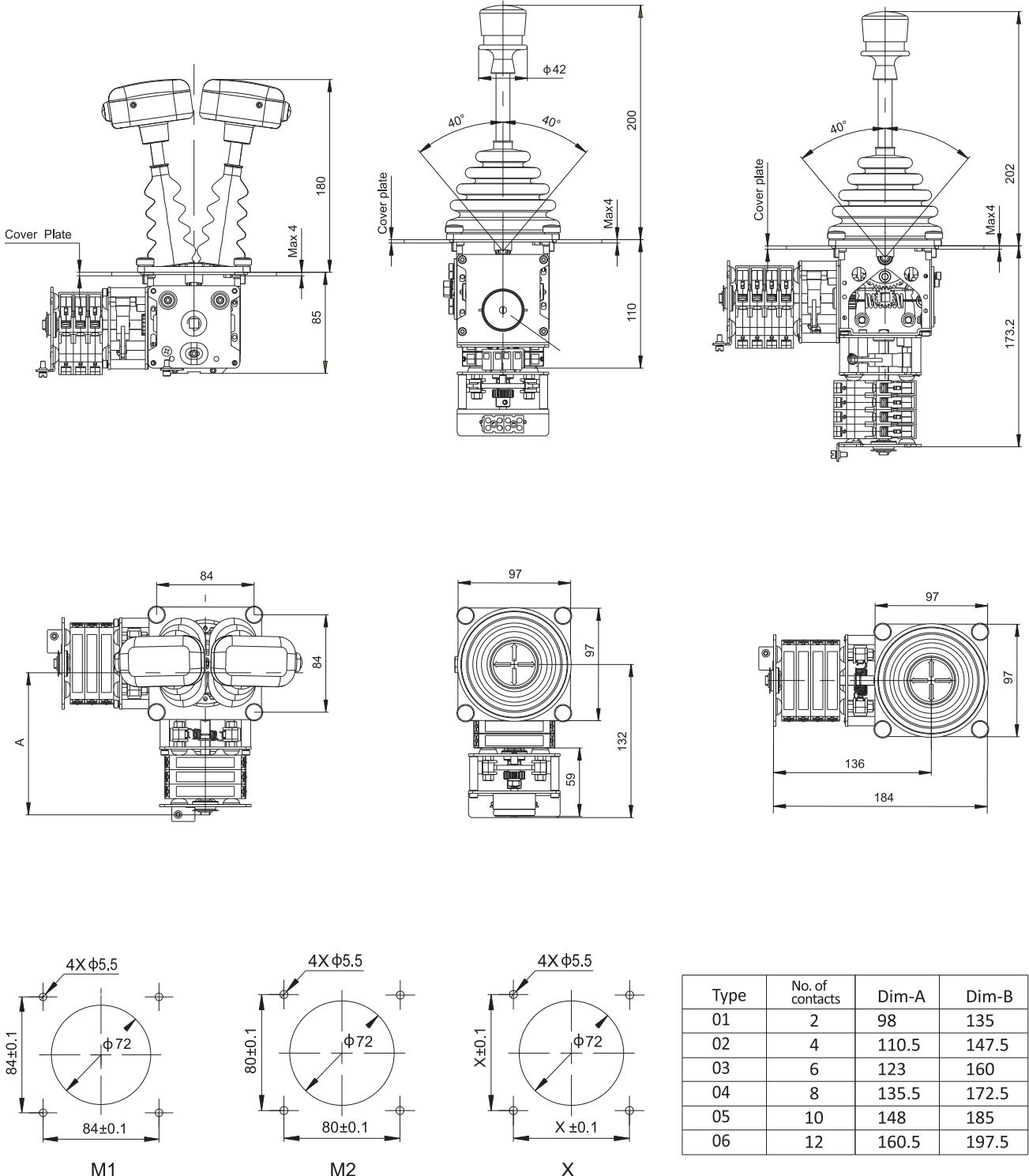
Installation contact group



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 AT20 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

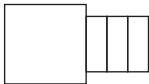


Selection	Installation variant	Palm Grips	Gate	Panel SIze	Axis1			Axis2			Installation dimensions	
					Movement	No. of contacts	Interface	Movement	No. of contacts	Interface		
	See the detaies in nextpage											
	• SG41Z Lift up zero mechanical interlock See more options in the grip section											
	• 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											

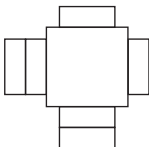
Installation variant



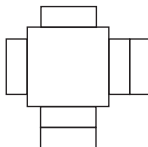
single axis 12



single axis 03

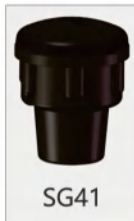


double axis 2121

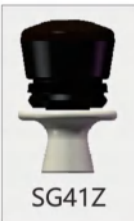


double axis 1221

Grip



SG41



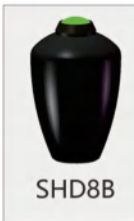
SG41Z



SG1



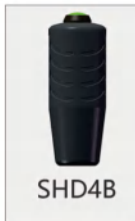
SG13



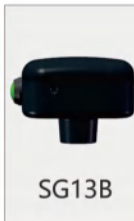
SHD8B



SHD1



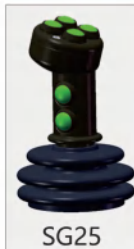
SHD4B



SG13B



SB34



SG25



SUGN



SUGA



SG51



SB6



SG21

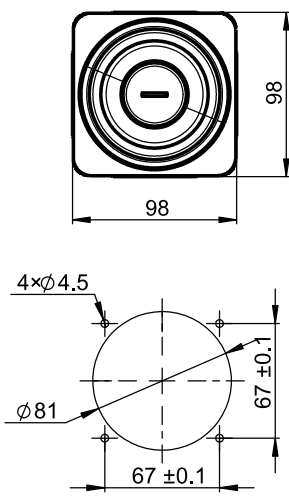
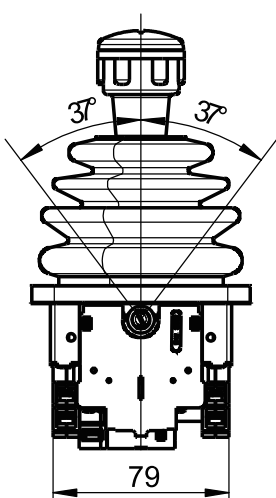
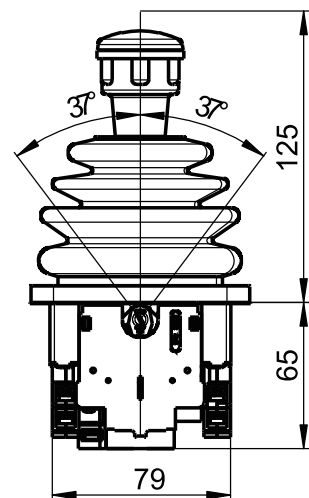


SG9



S9

Dimensions



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

The AT21 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.

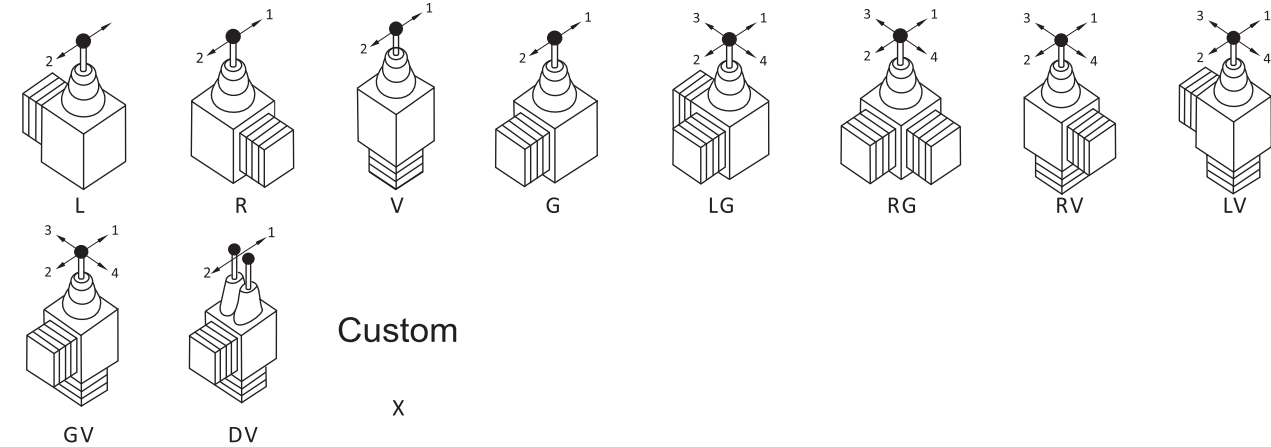
Technical Data

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 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										

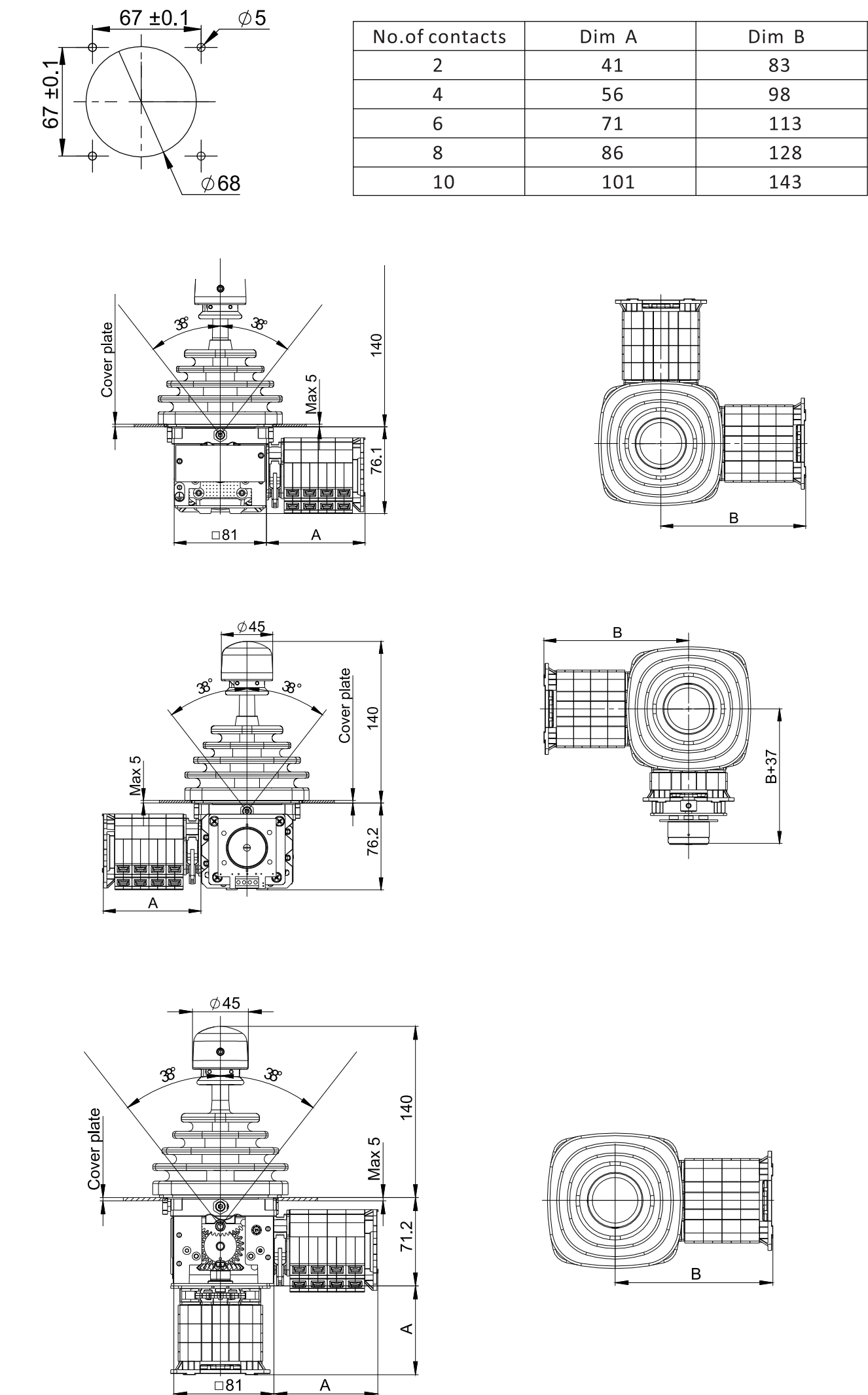
Installation variant



Grip



Dimensions





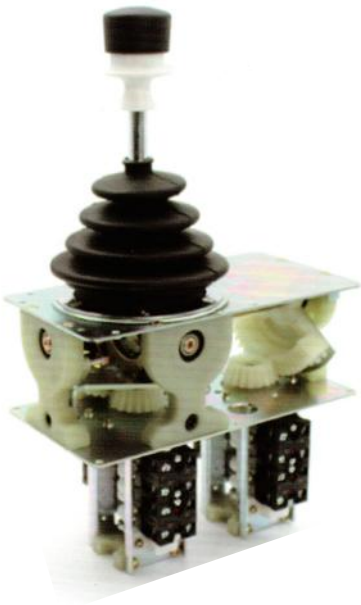
INDUSTRIAL JOYSTICK



The AT30 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



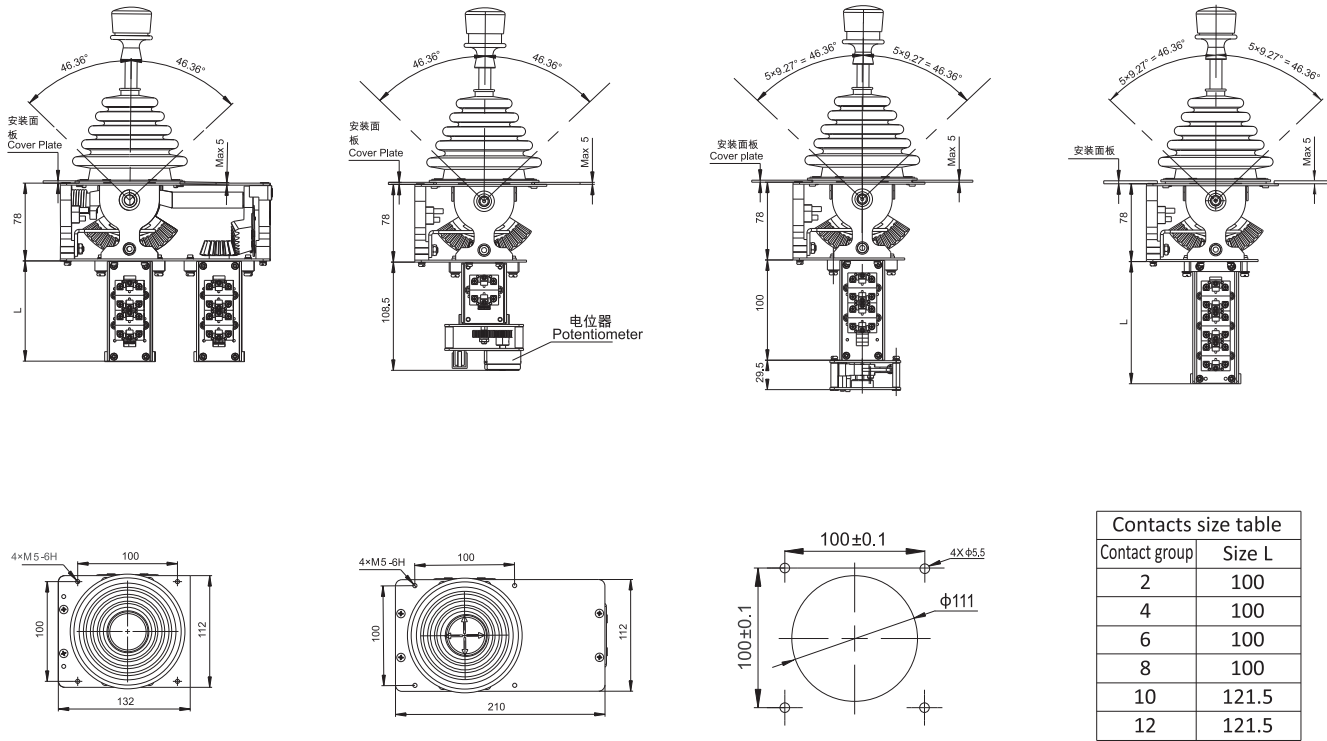
Selection	Palm Grips	Gate	Axis1			Axis2			Contact arrangement
			Axis 1	No. of contacts	Interface	Axis 2	No. of contacts	Interface	
• SHD8B • S7 • S2 • SHD8									
• 1 -Axis ↓ • 3 All-direction(x, Y-Axis) ※									
• Z: Spring return • R: Friction brake									
• 01 2 contacts • 04 8 contacts				• 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									



Grip



Dimensions





INDUSTRIAL JOYSTICK

The AT31 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

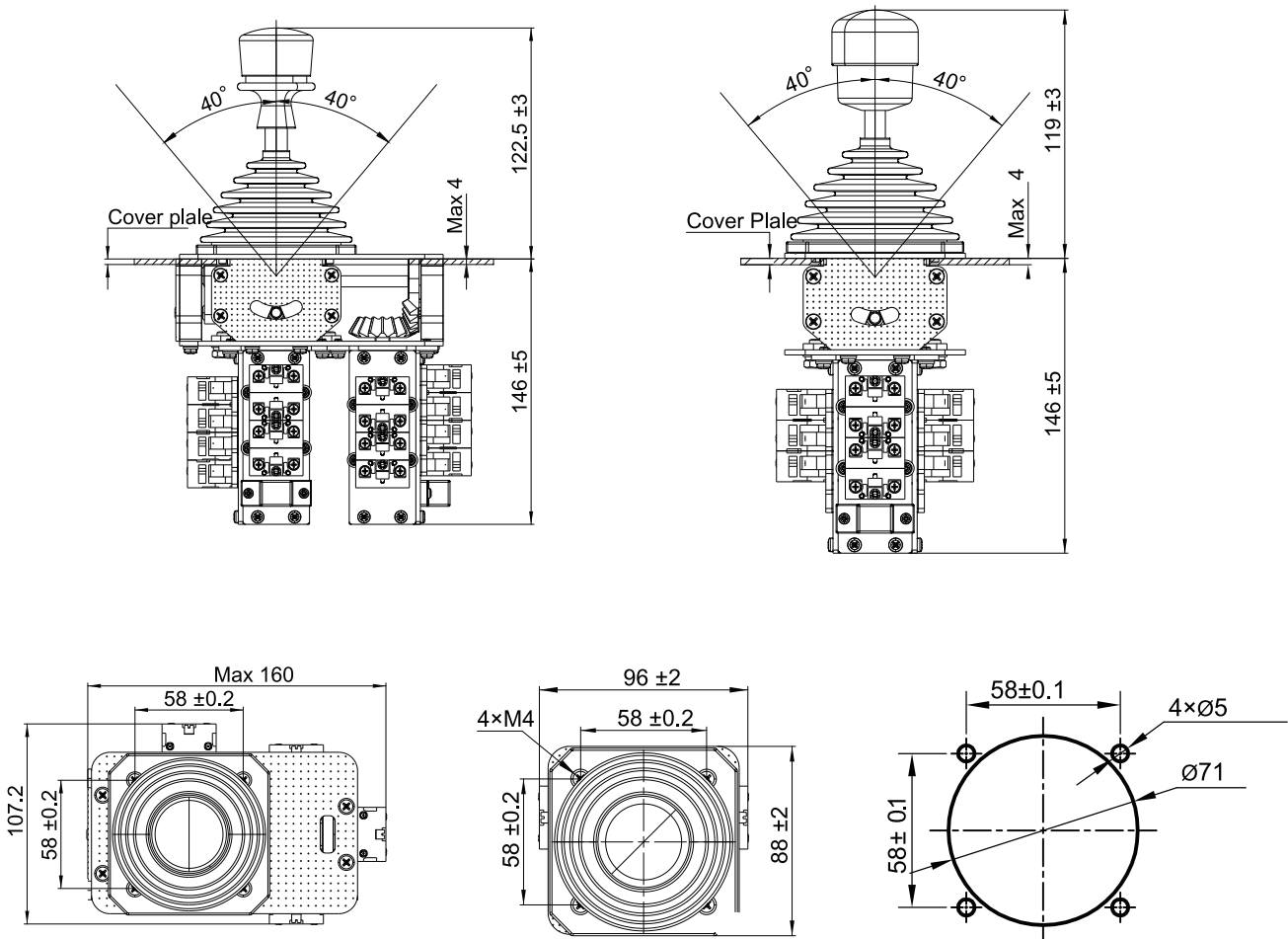
	Palm Grips	Gate	Axis1			Axis2			Contact arrangement
			Movement	No. of contacts	Interface	Movement	No. of contacts	Interface	
- S1 - S4 - S5 - S6 - SHD8 - SHD8B See more options in the grip section									
1: 1-Axis↓ 3: All-direction※		2: Cross gate ⇄ 4: Special gate							
- Z: Spring return - R: Friction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



Grip



Dimensions





COMPACT LIGHT JOYSTICK

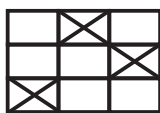
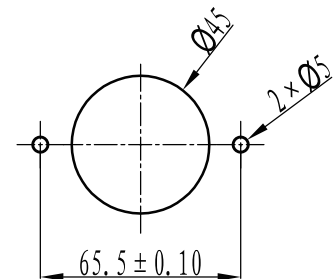
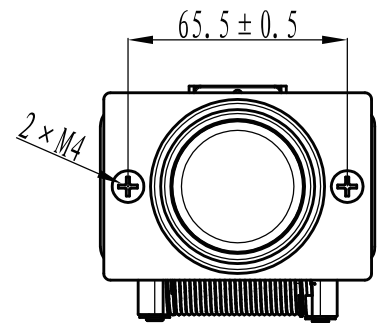
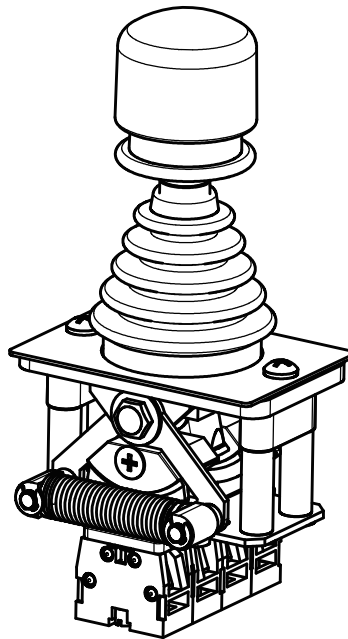
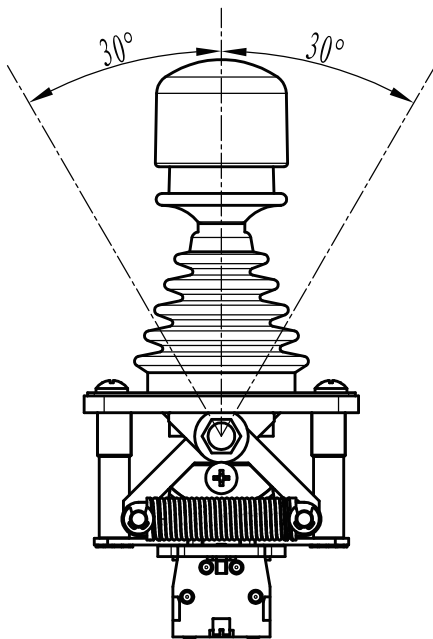
The AT40 joystick features a compact design, light and straightforward structure, enhancing ease of operation. Equipped with a zero position spring return and a self-locking mechanism, it ensures safety and reliability. It boasts a long service life and offers easy wiring, convenient installation, and low maintenance. This product line is primarily used in cranes, construction machinery, and various automated control systems

Technical Data

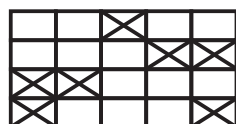
Operating Temperature:	-20°C to 60°C
Handle Operating Force:	≤20N
Mechanical Life:	1M
Power:	AC 2.6A / DC 0.3A
Rated Current:	15A
Rated Voltage:	380V (440V)



Dimensions



A10



A20



INDUSTRIAL JOYSTICK



- Ergonomics design
 - Three degree movement X,Y,Z
 - Wider voltage range
 - dual channel control system
 - Multiple interface
- The **GA4** 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 ↑
- 2 Cross gate ⇄
- 3 All-direction(x, Y-Axis) ⌘
- 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**

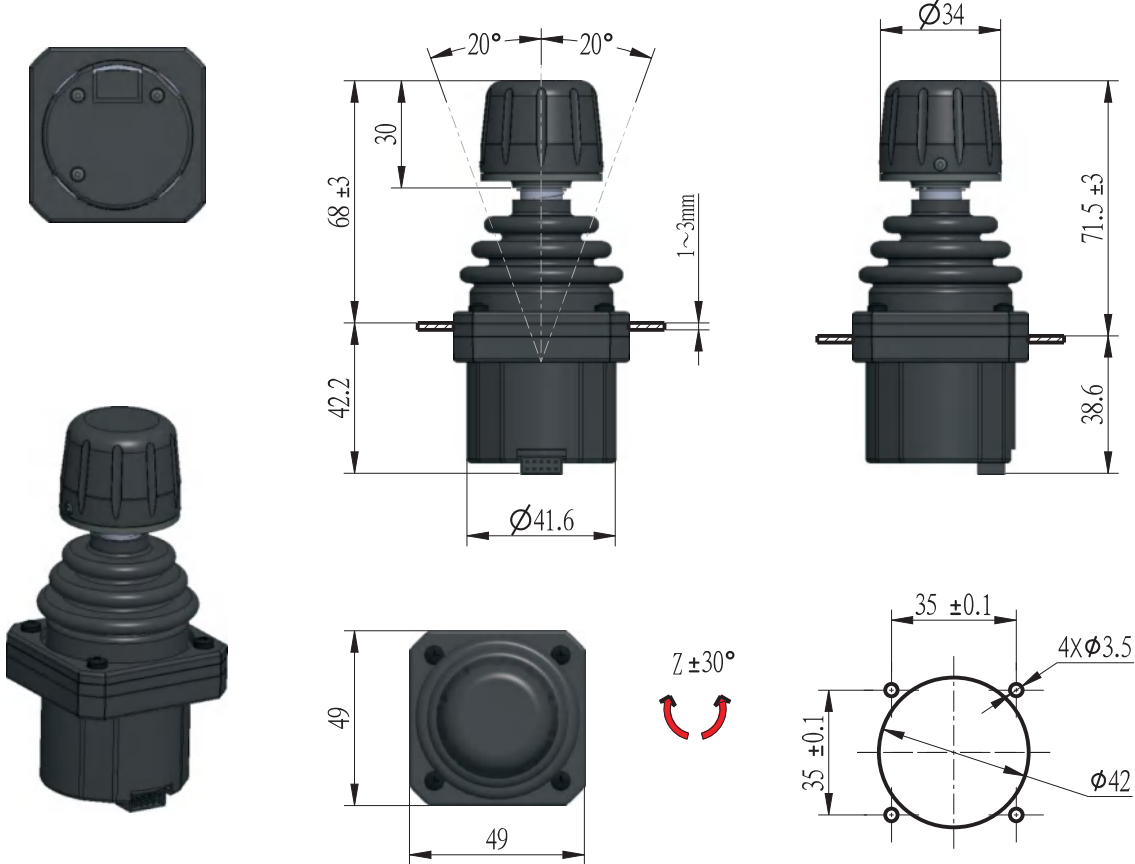
- A: Terminal interface
- L: Direct outgoing line
- X: Customize



Grip



Dimensions





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



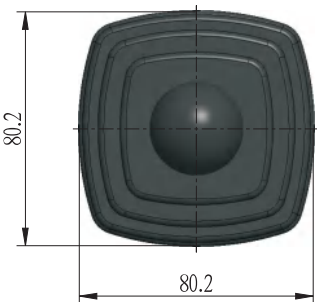
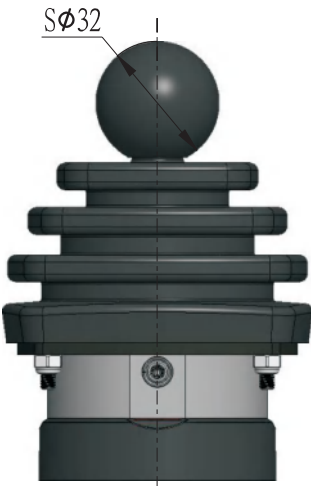
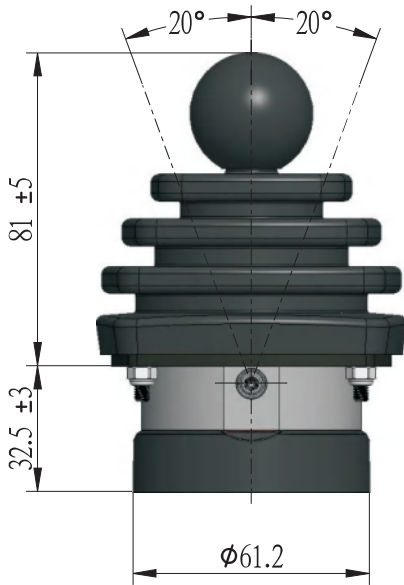
Technical Data

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

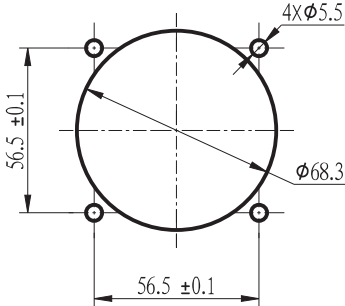
Selection	Palm grips	Gate	Axis 1		Axis 2		Wiring	Contact arrangement
			Movement	Interface	Movement	Interface		
• SHD1 • SHD4B • SHD8B • SHD8 See more options in the grip section								
• 1 -Axis ↑ • 3 Cross gate +			• 2: Y-Axis ↓ • 4: All-direction ✕					
• Z: Spring return								
• Voltage output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



Dimensions

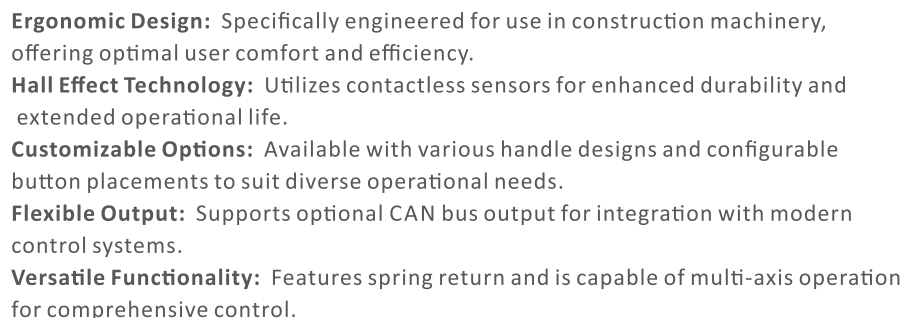


客户开孔尺寸



Grip





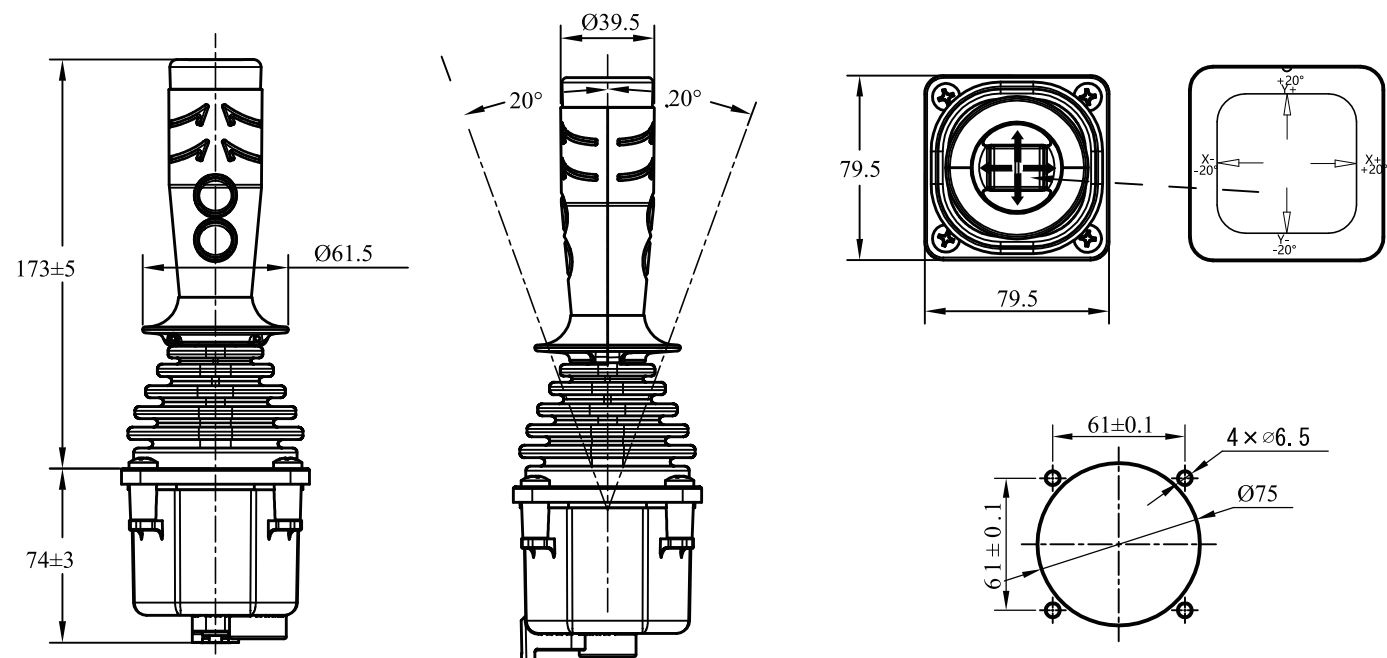
Applications

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



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

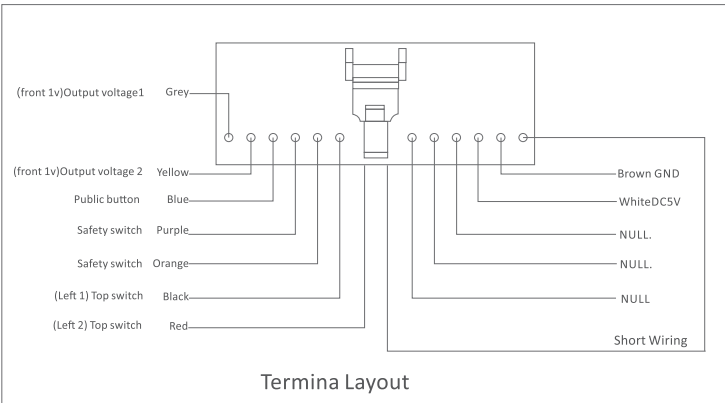
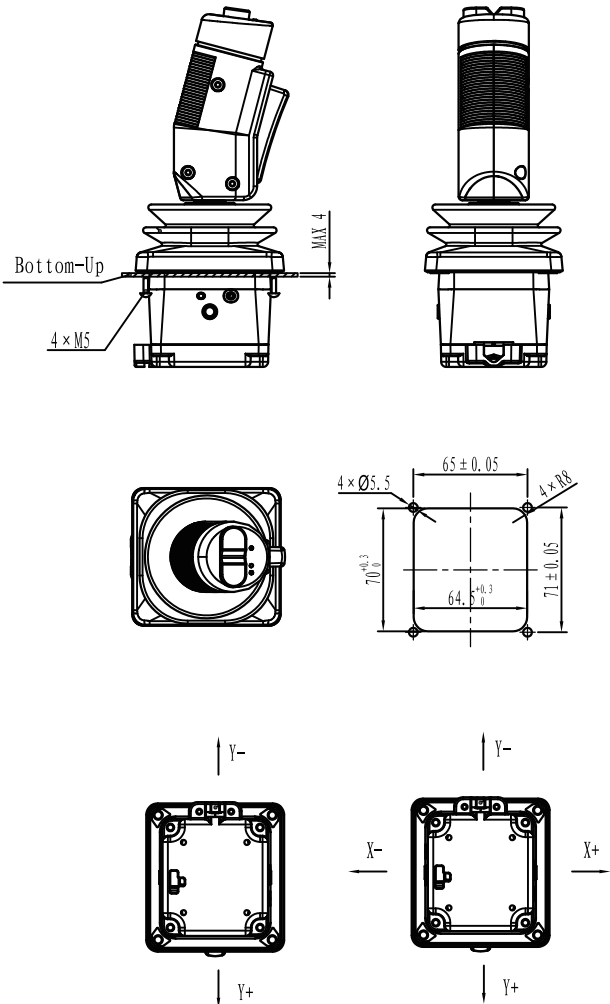
Operating Temperature:	-20℃ (-40℃) to +80℃
Handle Operating Force:	≤20N
Mechanical Life:	5 million cycles
Degree of Protection:	IP64

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 Interface	Axis 2 Interface	Wiring
• 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





INDUSTRIAL JOYSTICK



The **ZS30** 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.

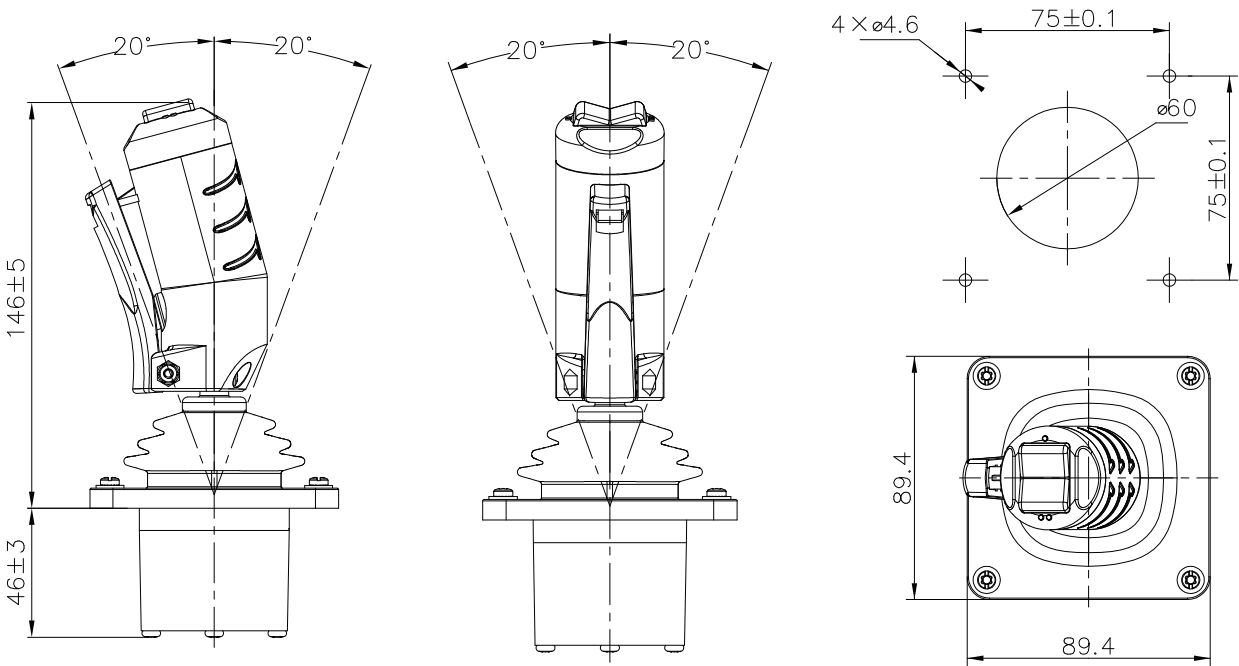
Technical Data

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 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						
• 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						
• C: Connector • L: Direct outgoing line						

Dimensions



Grip





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 ZS40 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

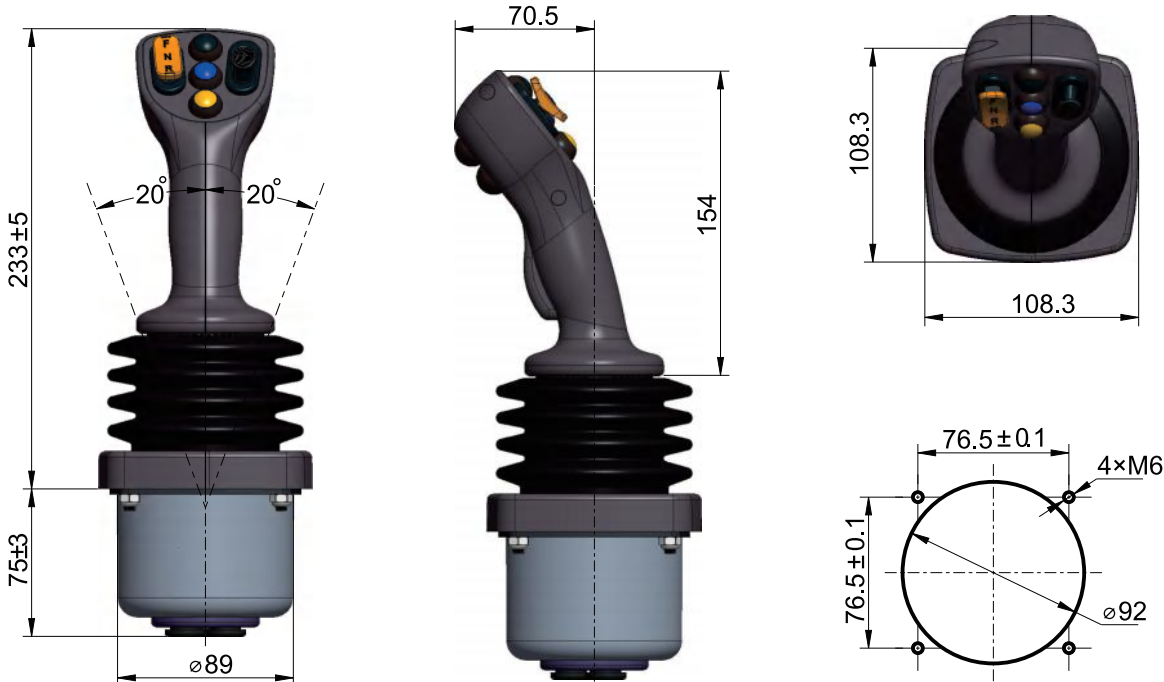
Ambient Temperature Range: -40°C to 85°C
Mechanical Life: 5M
Protection Class: IP54
Installation Mode: Bottom-to-top installation

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





ROTARY SWITCH



The NE00 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



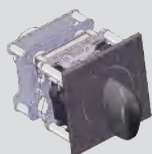
Selection

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 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

• 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



The **NE11** 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

- Z: Spring return
- R: Friction brake

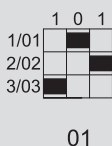
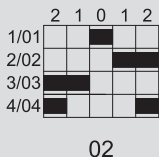
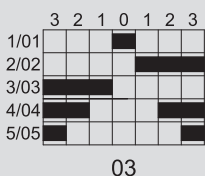
- 1: 1-Axis $\updownarrow$

- **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



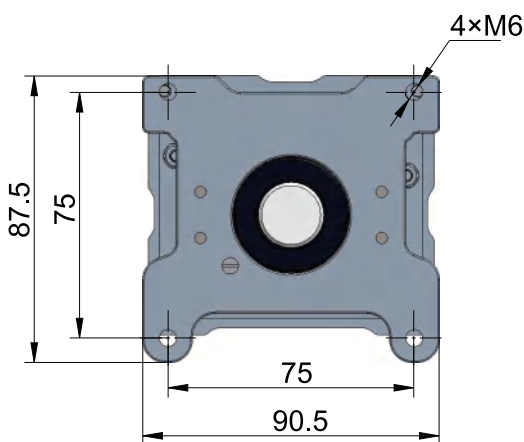
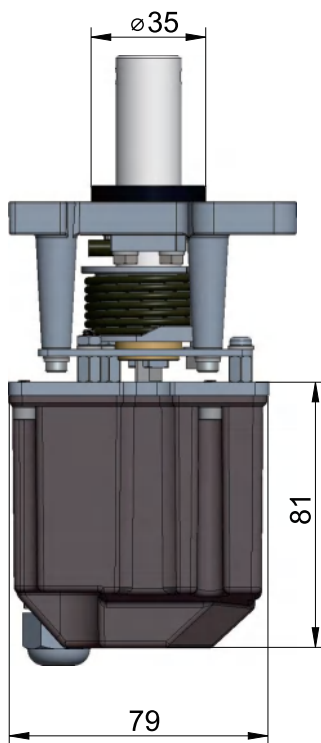
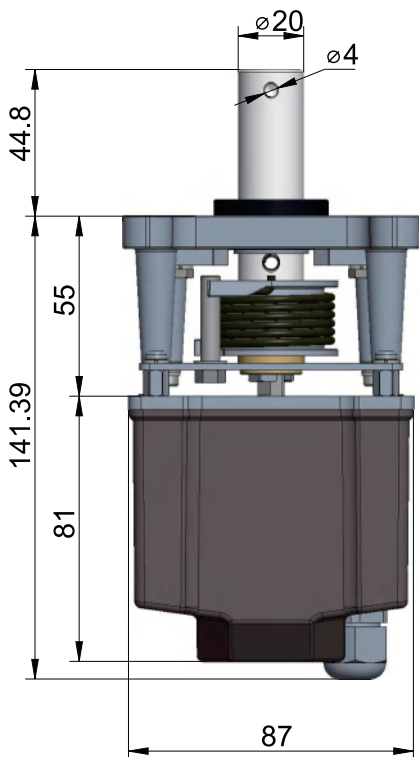
Special

X

- A: Terminal interface
- L: Direct outgoing line 30mm
- X: Customize



Dimensions



Angle $\pm 70^\circ$





MARINE DECK CONTROLLER

The NE40 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.

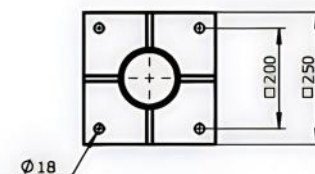
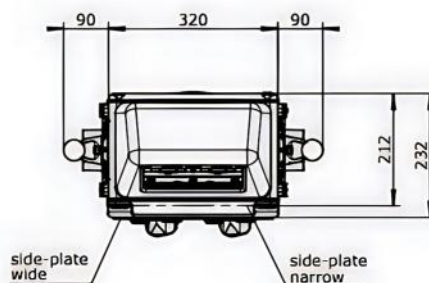
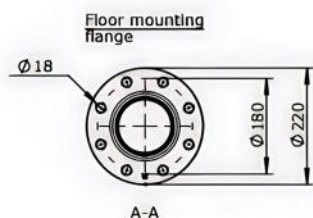
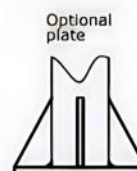
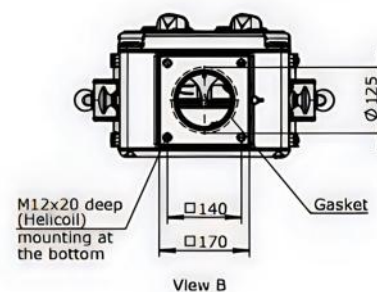
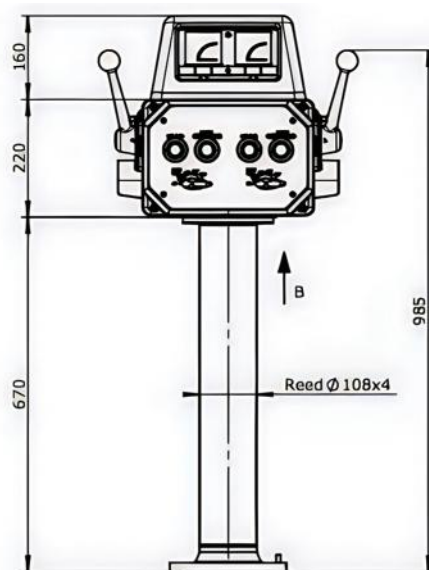
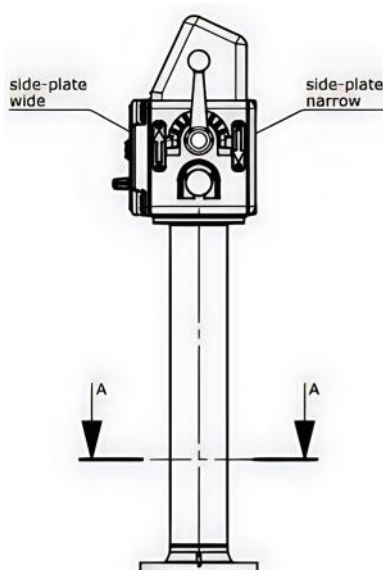
Technical Data

Operation temperature
Degree of protection

-40°C to +85°C
IP66



Dimensions





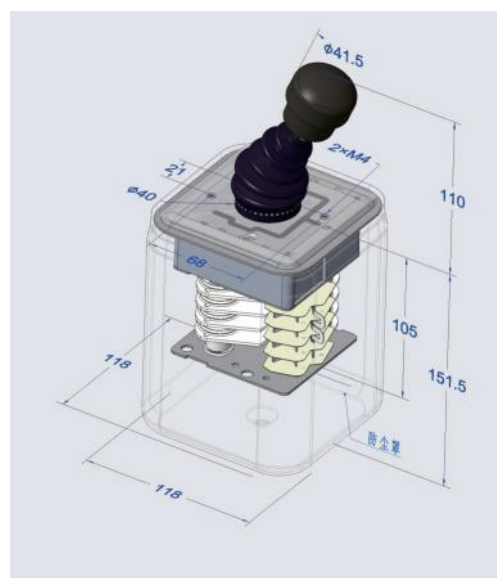
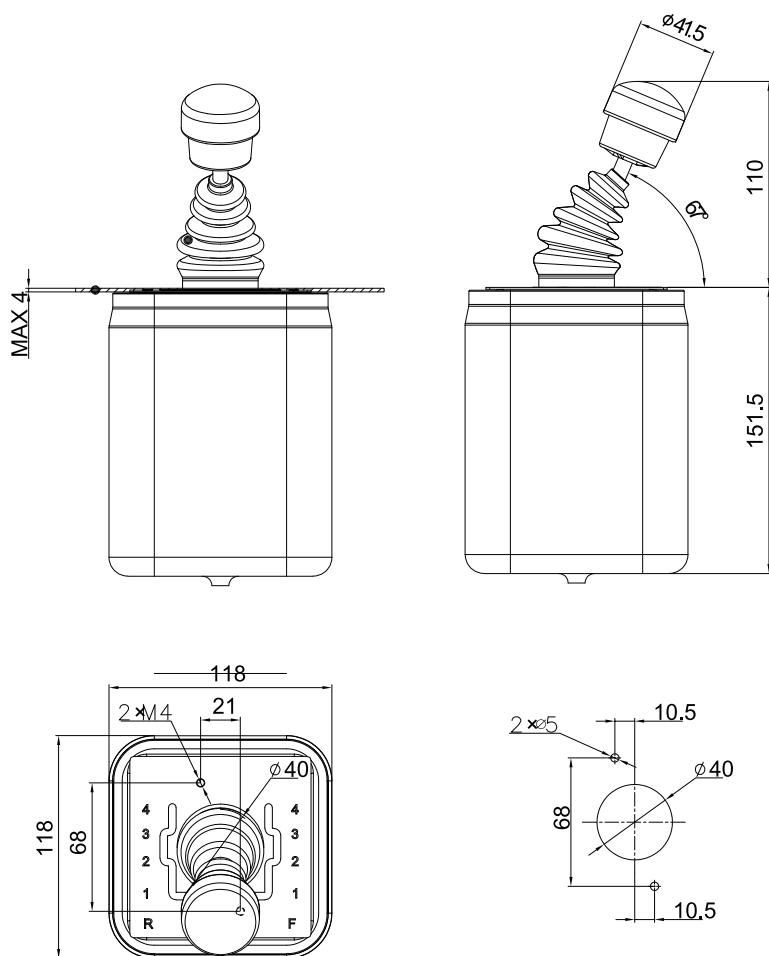
CONTROLLER

The YL01 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





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 GA1 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.

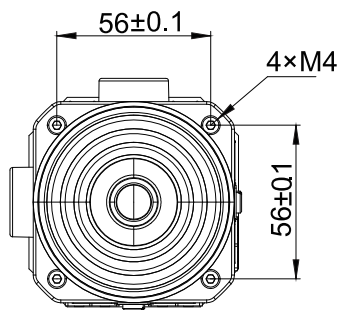
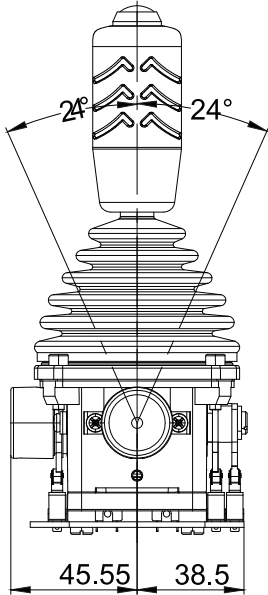
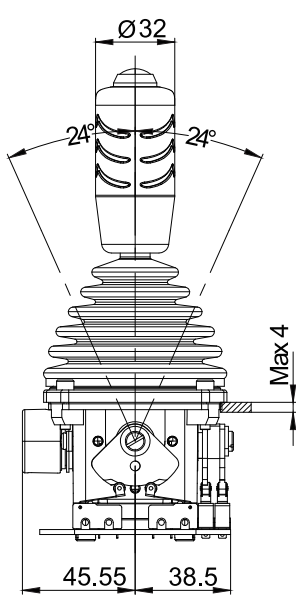
Technical Data

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.



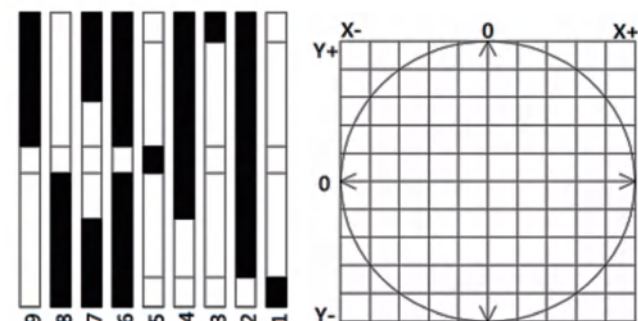
Selection	Palm Grips	Gate	Axis1			Axis2			Contact arrangement
			Axis 1	No. of contacts	Interface	Axis 2	No. of contacts	Interface	
• SHD8 SHD8 • S7 Press down mechanical interlock↓ • S2 Grab-type • SHD SHD8 with button • 8B SHD8 with button • S4 Lift-up mechanical interlock↑									
• 1 -Axis ↓ • 2 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	• 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	• 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 • 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	• 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 for exsample 03(589)									

Dimensions



Contact Arrangement

The entity represents the switch closing



Grip





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 GA2 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.

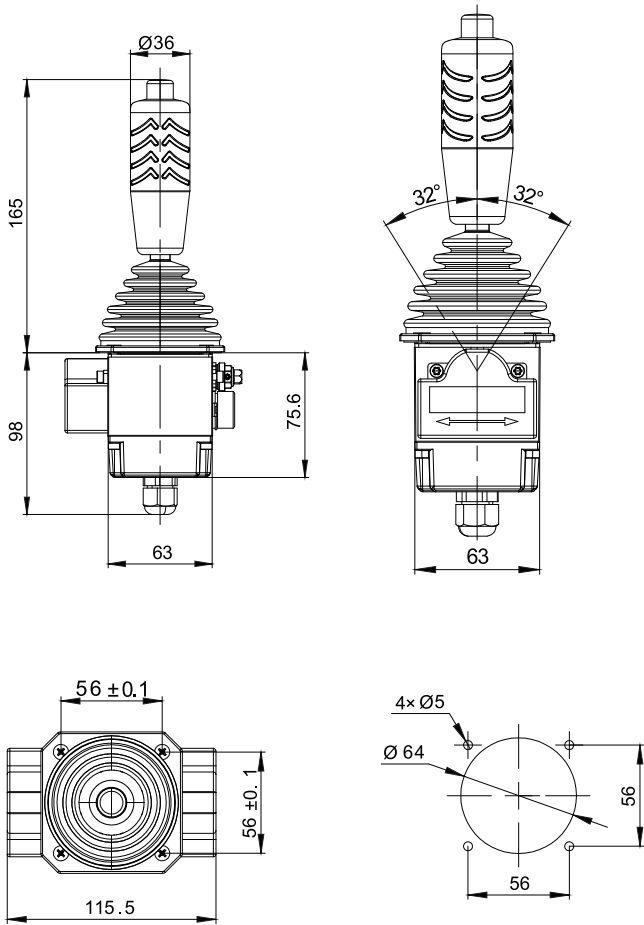
Technical Data

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.



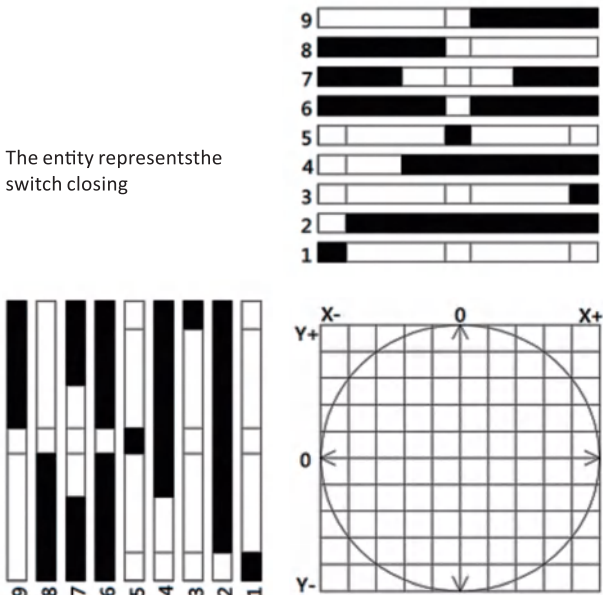
Selection	Palm Grips	Gate	Axis1			Contact arrangement
			Axis 1	No. of contacts	Interface	
• SHD8 SHD8 • S7 Press down mechanical interlock↓ • S2 Grab-type • SHD SHD8 with button • 8B SHD8 with button • S4 Lift-up mechanical interlock↑						
• 1 Bidirectional ↓		• 2 Unidirectional ↑				
• Z Spring return		• R Friction brake				
• 01 2 contacts • 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	• 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	For exampale 03(589)					

Dimensions



Contact Arrangement

The entity represents the switch closing



Grip





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		•



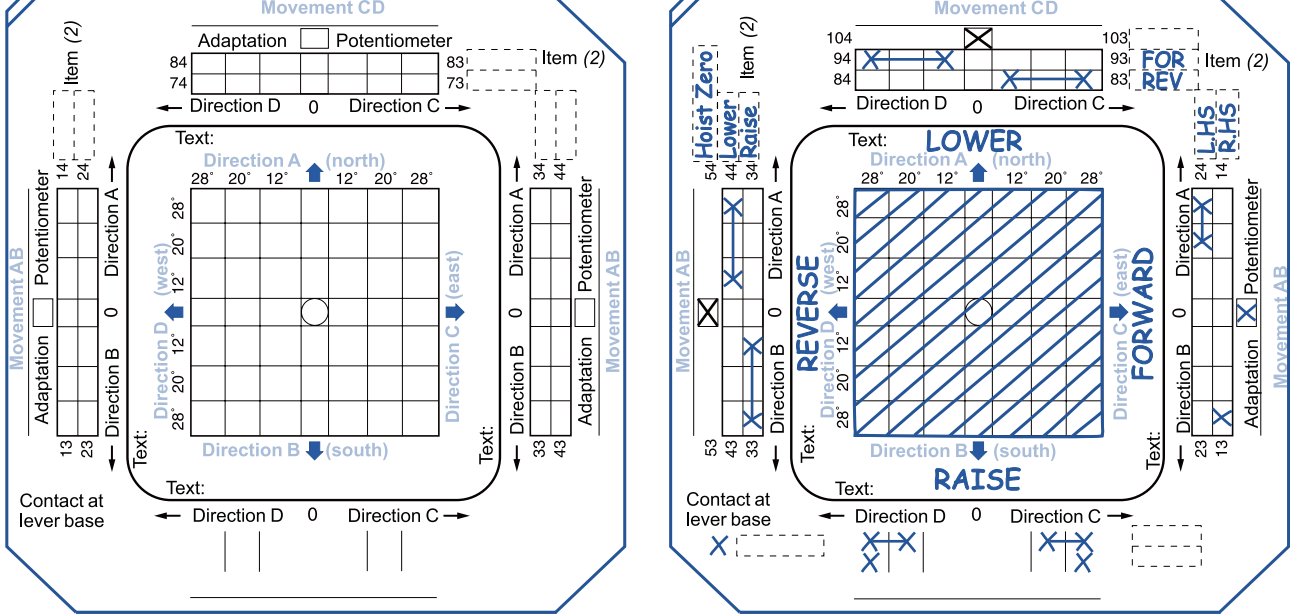
Direction	4Direction, can be linked		
Control lever	140mm maximum travel in one direction:28°		
Amount of notches in each direction	3		
Type of lever movement	①Notched positions, hold position: up to 3 gears(12°,20°;28°)in one direction		
	②Notched positions, spring return: up to 3 gears(12°,20°,28°)in 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(centre)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

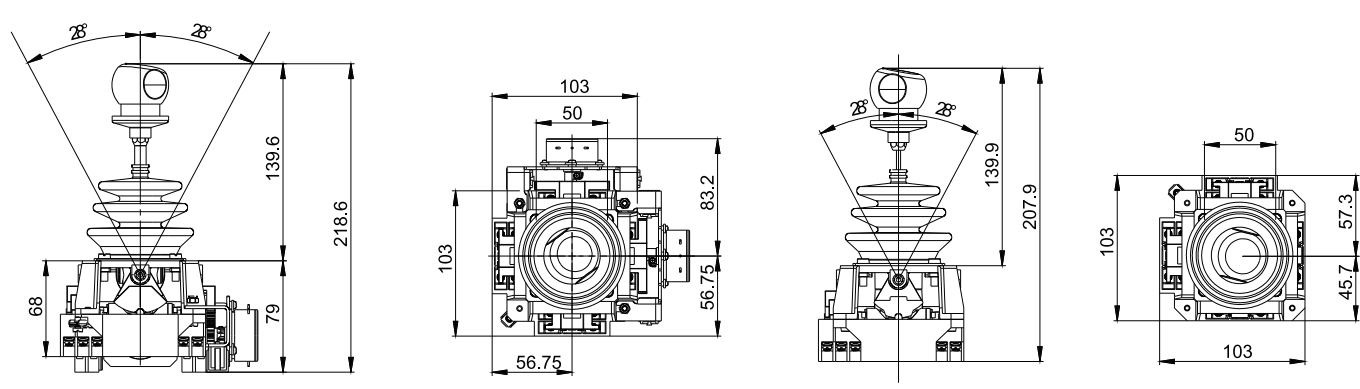
Contact Arrangement



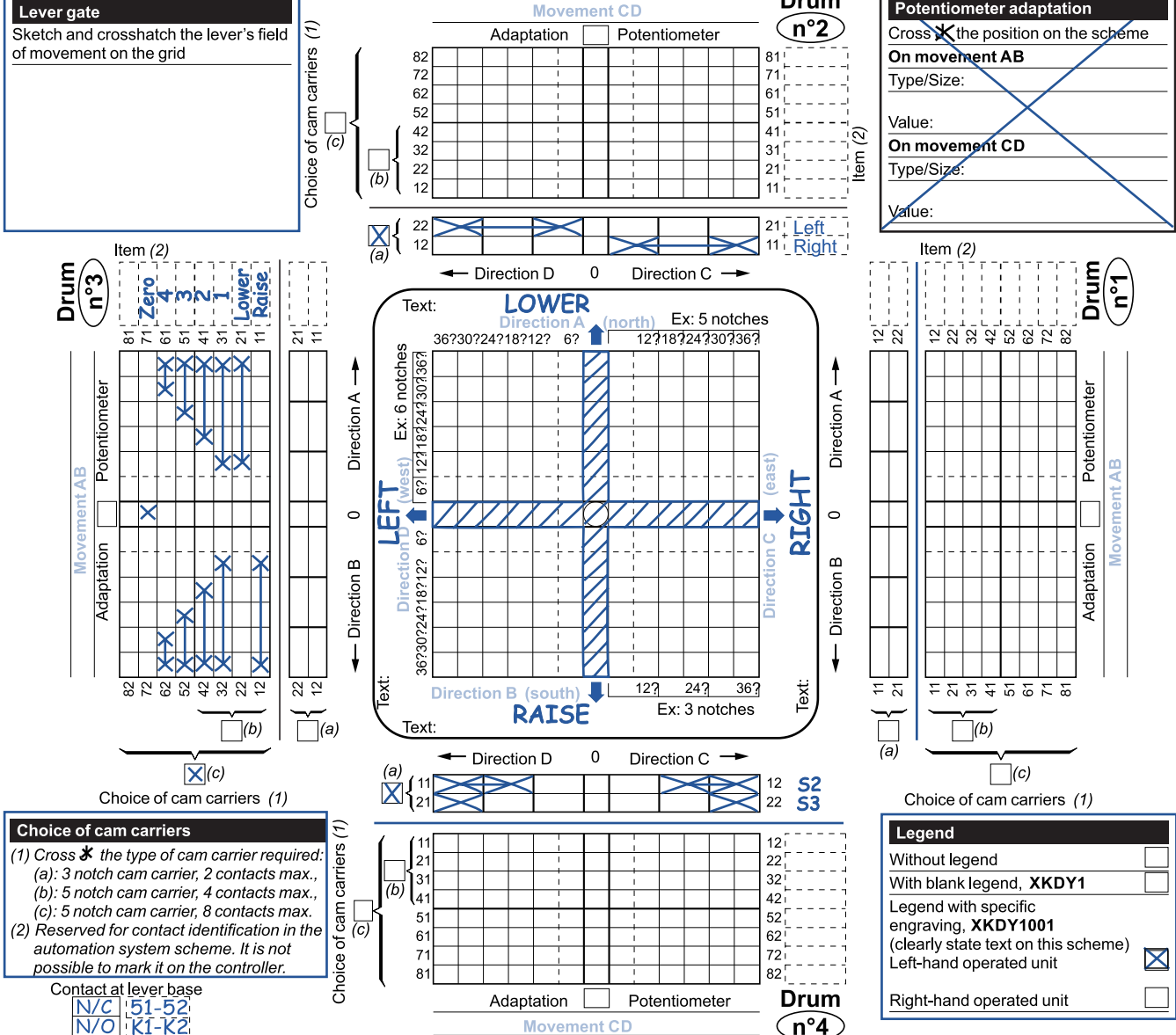
Selection	Lever	handle	handle	CD direction		handle	Contact arrangement
	Contacts	lever movement					
• A:Standard • E:Special							
• 4 contacts 1: screw connection 2: 6.3m clip connection	• 4+1 contacts 3: screw connection 4: 6.3m clip connection						
• 1: Standard handle + zero contact (closed at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





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 nuner 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 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 carrier		
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



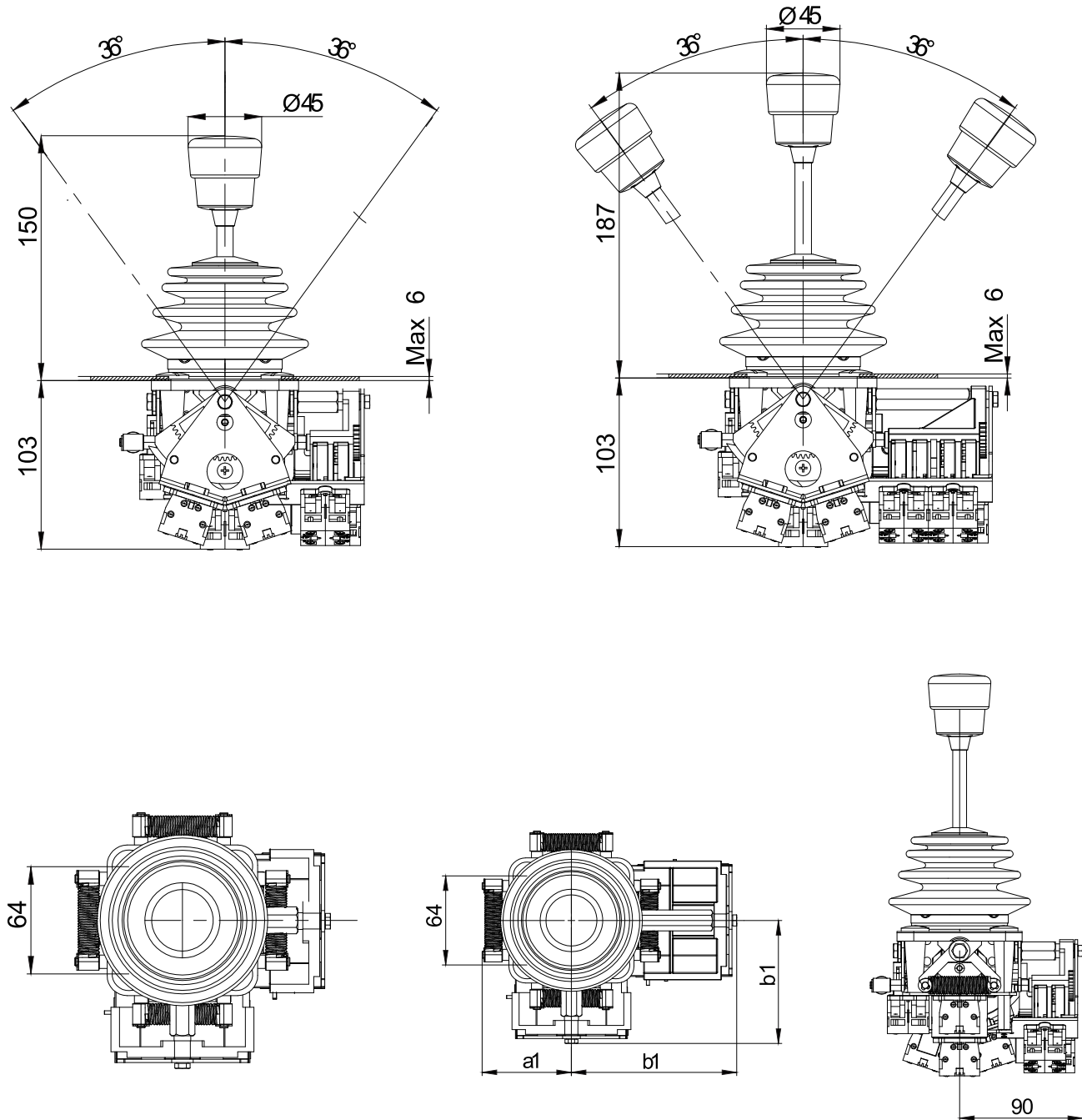
Selection	Lever		AB direction			CD direction		
	Contacts	lever movement	Potentiometer	Contacts	lever movement	Potentiometer		
• Standard model, length 200 mm								
• 1:Simple (standard model) 2:With zero (centre) position mechanical interlocking 3:With zero (centre) position mechanical & electrical interlocking (1 C/O contact) • Dead man's type 4:With N/C + N/O contact 5:With N/O + N/O contact • With built-in projecting 8:With N/C + N/O contact 9:With N/O + N/O contact • With built-in fush pushbutton 6:With N/C + NiO contact 7:With N/O + N/O contact								
• 0:block • 1:block • 2:block • 3:block • 8:block • 4:block • 5:block • 6:block • 7: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 • 8:block • 4:block • 5:block • 6:block • 7: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-contatvariable composition cams only
- (2)5 notches: by using 1 or 2 variabe composition 4or 8-contact cams, mechanical notch at 12°(6 electrical positions in each direction)
- (3)Type of lever movement recommened when using a potentiometer



Dimensions





FINGERTIP SWITCH



WK01 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



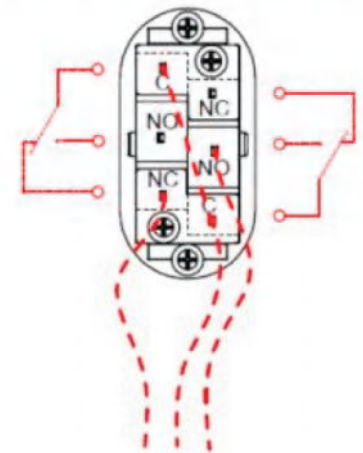
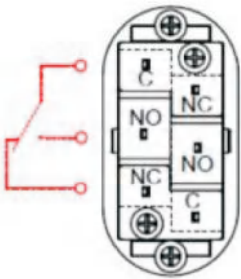
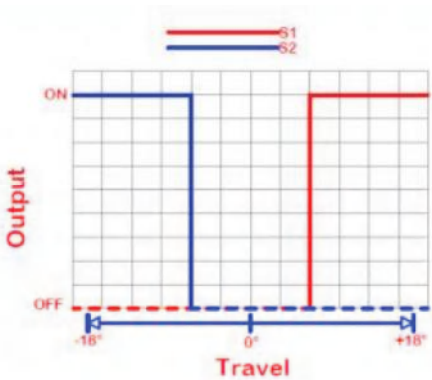
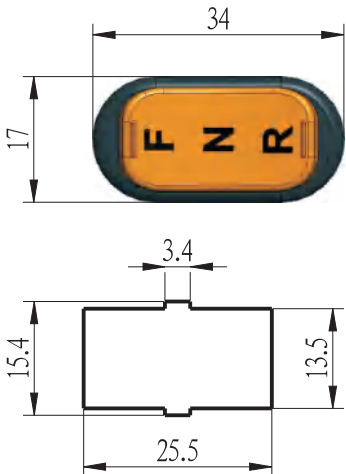
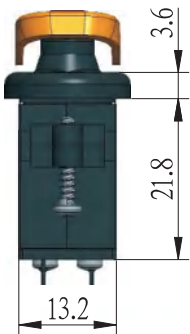
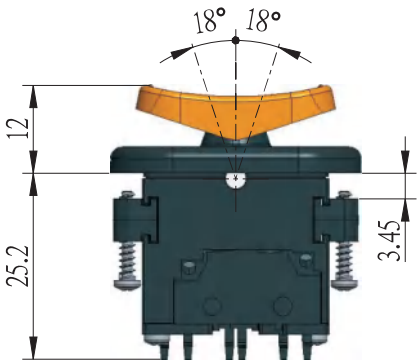
Dimensions

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					

Grip



Dimensions





FINGERTIP SWITCH



The WK02 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

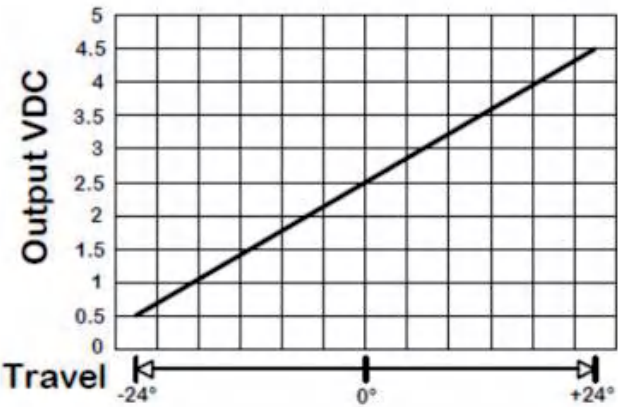
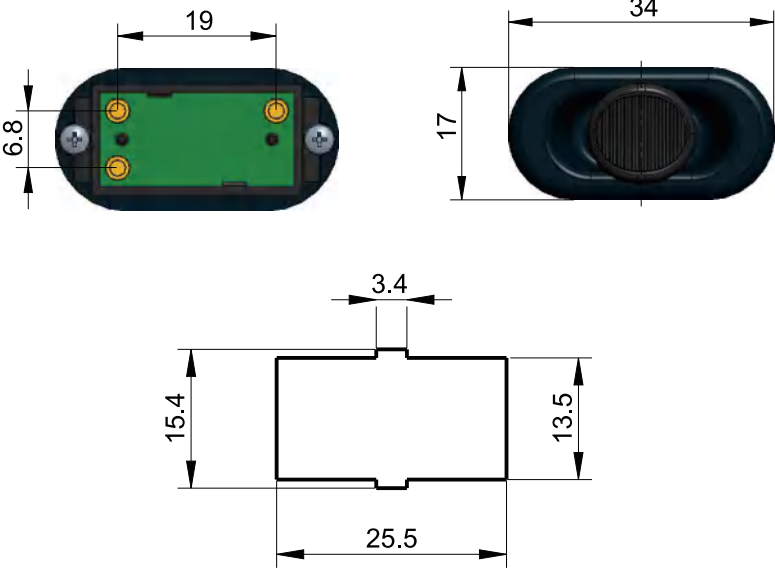
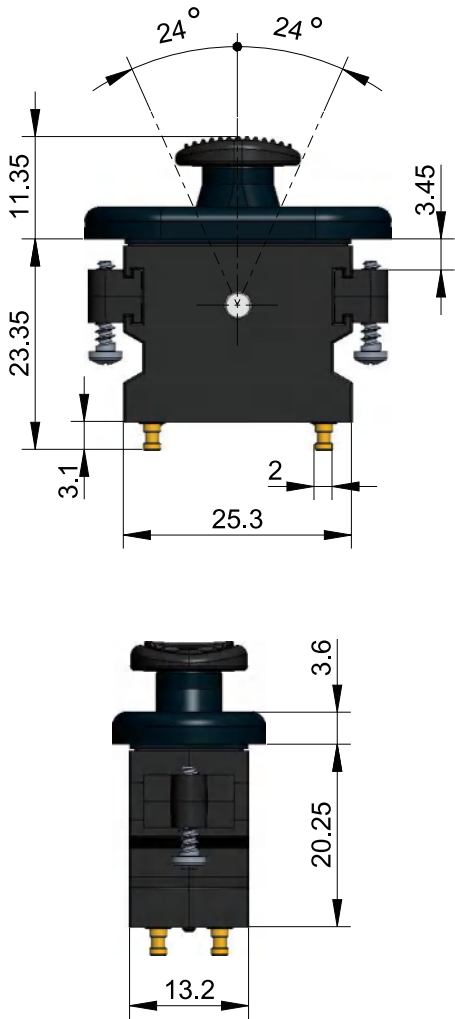
Selection	Palm Grips	Movement	Gate	Interface	Wiring
• PA					
• Z: Spring return					
• 1: 1-Axis↓					
• Hall output DC5V Hv2: 0.5-2.5-4.5V HV3: 1.0-2.5-4.0V Hv4: 1.25-2.5-3.75V	• DP Dp2: 0.5-2.5-4.5V 4.5-2.5-0.5V DP3: 1.0-2.5-4.0V 4.0-2.5-1.0V DP4: 1.25-2.5-3.75V 3.75-2.5-1.25V				
• A: Terminal interface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



Grip



Dimensions





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

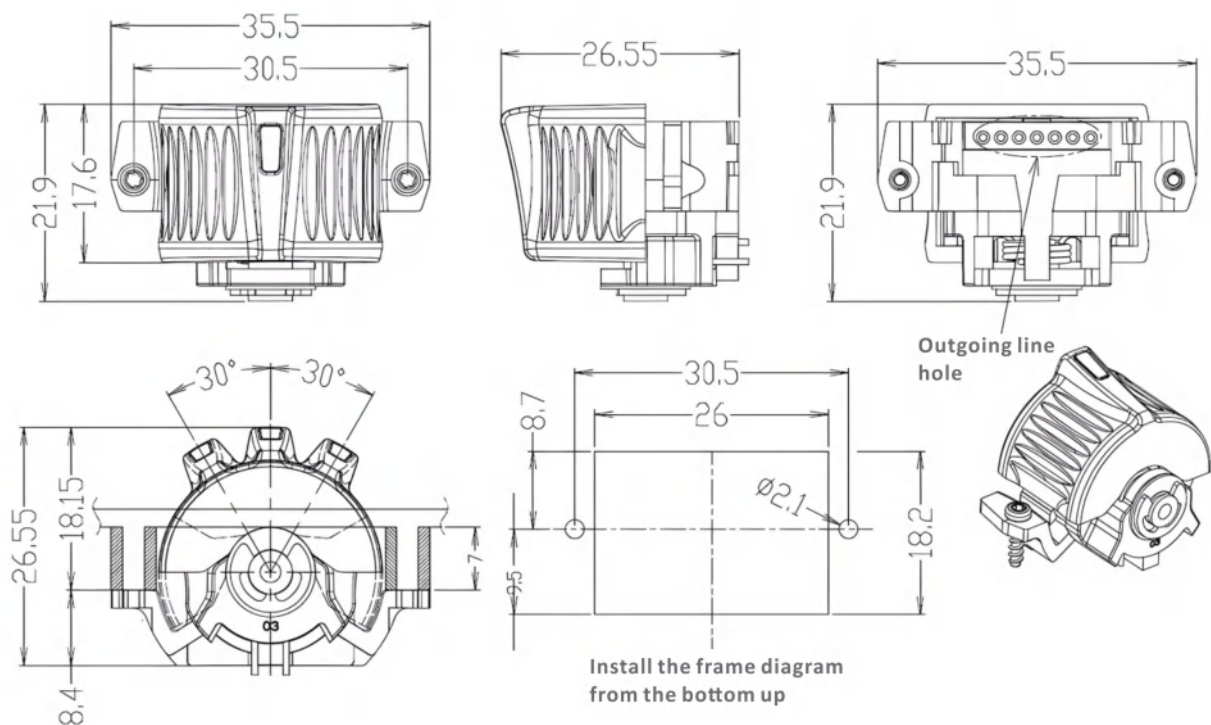
Fingertip Switch

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





FINGERTIP SWITCH



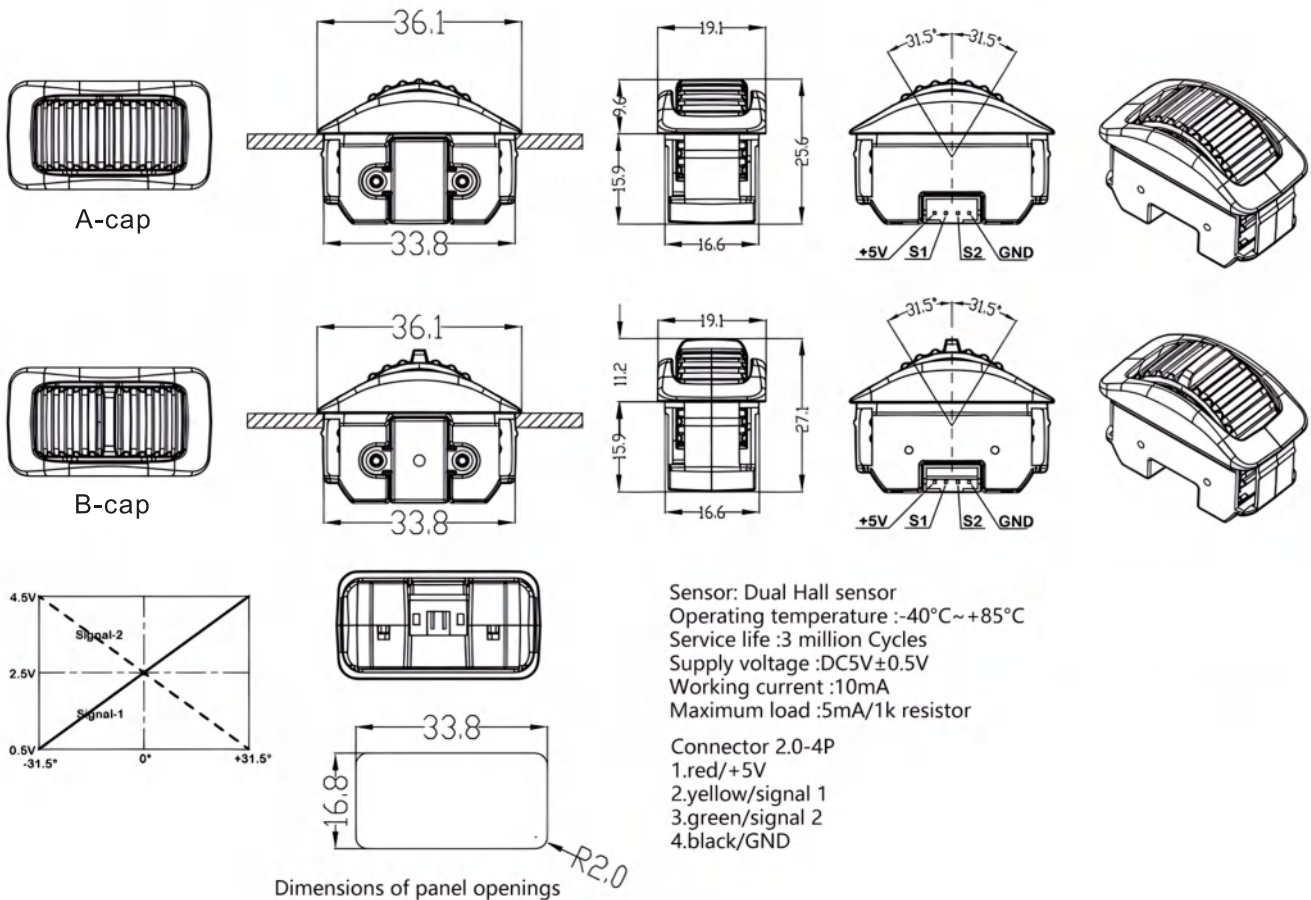
- Designed for Electro-hydraulic applications
- Hall sensor
- Robust service life
- Options for actuators, light, and colors

Technical Data

Operating Angle:	$\pm 31.5^\circ$
Signal Output:	0.5–2.5–4.5V
Operating Temp:	-40°C to +85°C
Mechanism:	Spring return
Power Supply:	DC 5V/9mA
Mechanical Life:	3M
Protection Class:	IP65



Dimensions





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.

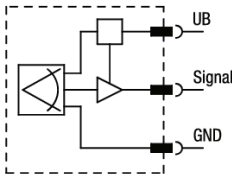


Selection

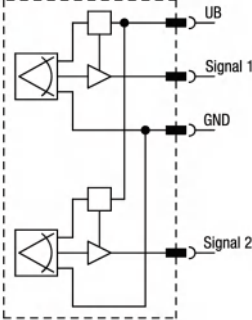
Selection	Hardware	Movement	colour	symbol	Connection
0: Analog 1: Semi-redundant 2: Redundant					
- ZB Spring return ⇅ - ZU Spring return ↑ - DL Dual-end locking with spring return - OL One-end locking with spring return - F Friction brake without detent - FD Friction brake with middle detent	- R3 3 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

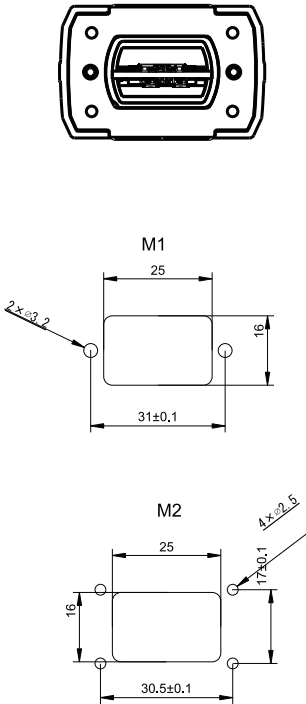
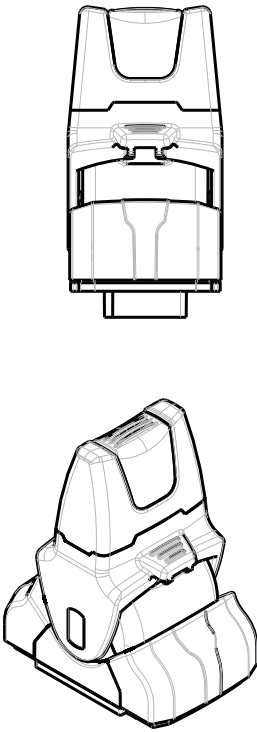
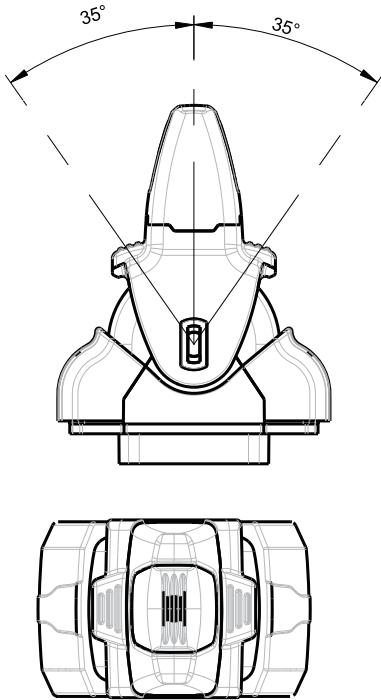
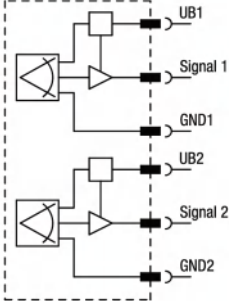
Analogue

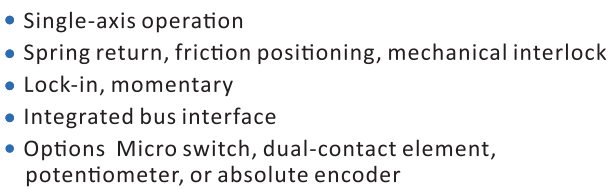


Analogue semi-redundant



Analogue redundant





The NE23 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.

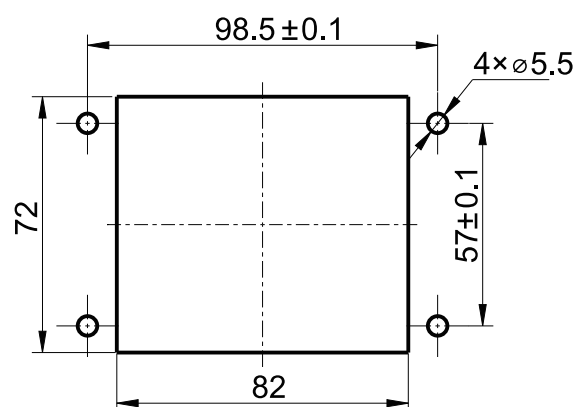
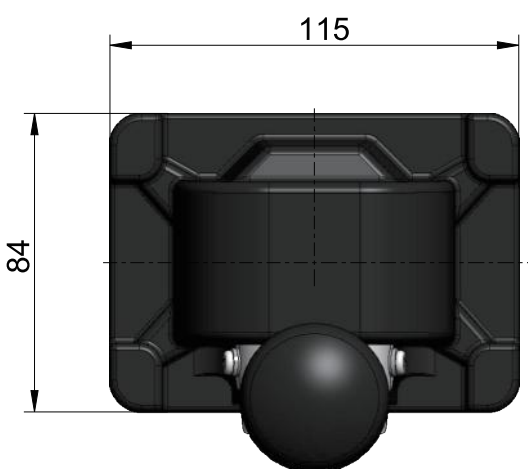
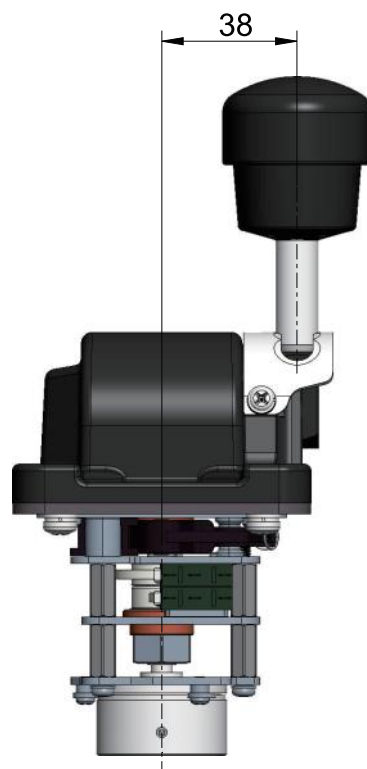
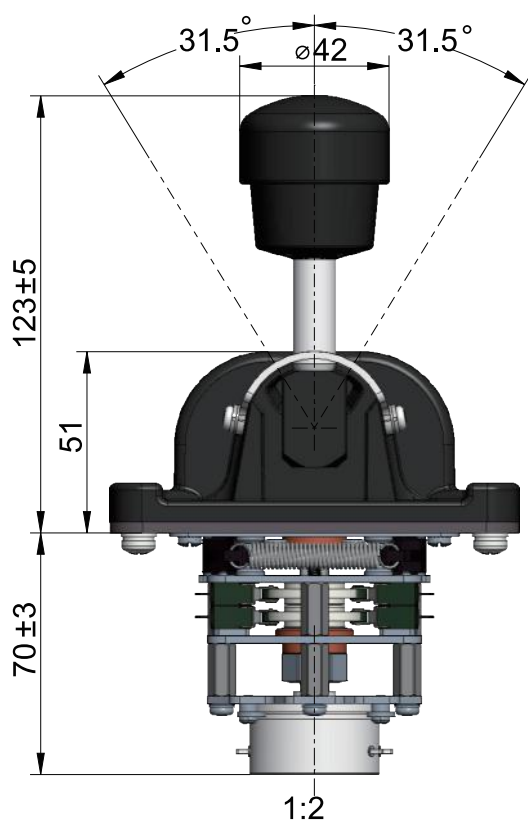


Technical Data

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							
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





CONTROL CONSOLE



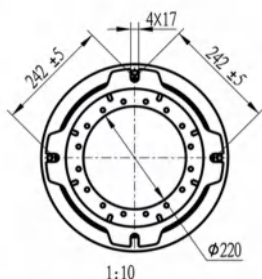
The EOS crane console is specifically designed for AC 50Hz (60Hz) control circuits, supporting a rated voltage up to 380V (440V). It efficiently manages the start, speed regulation, commutation, and braking of motors used in crane machinery and other similar electric control systems.

Control Box

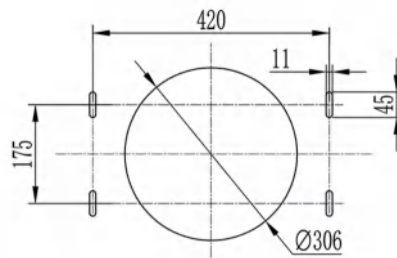
The control box, crafted from steel plate, features a hinged cover with a standard locking mechanism for easy access and maintenance. The arrangement of the joystick, indicators, and controls is custom-configured to meet the client's specifications.



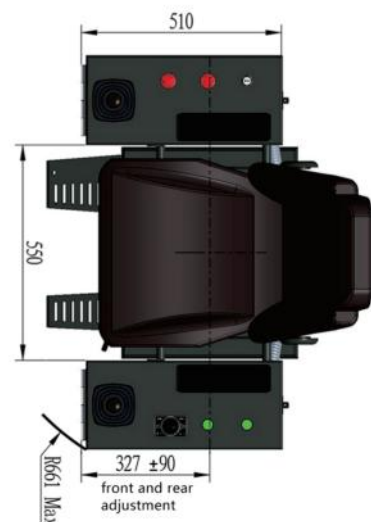
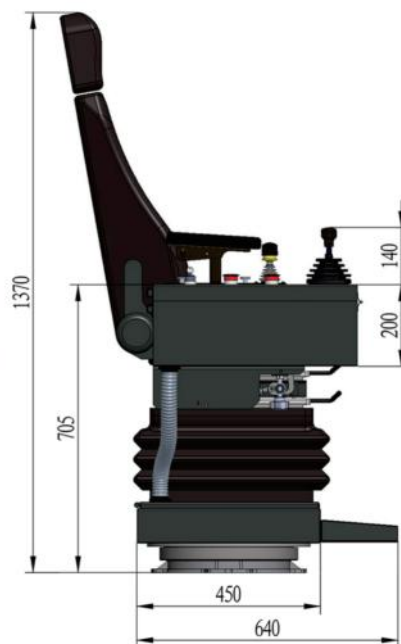
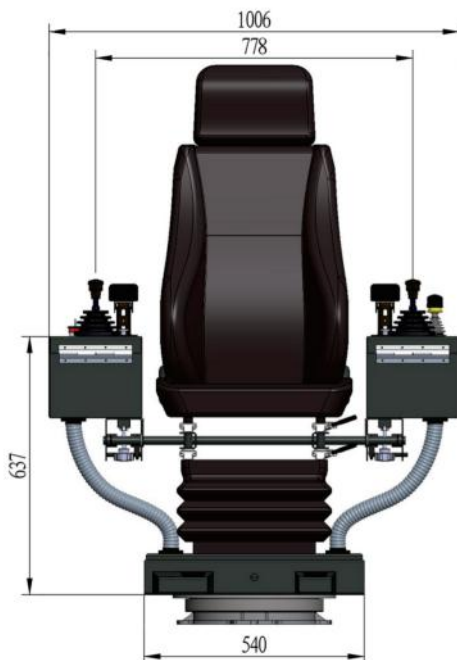
Dimensions



rotating base mounting



fixed base mounting





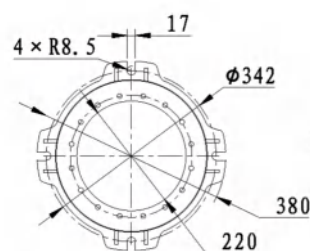
CONTROL CONSOLE

The EOS-U 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.

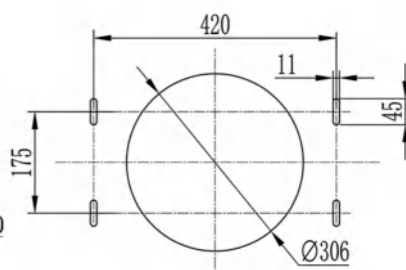
Control Box

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.

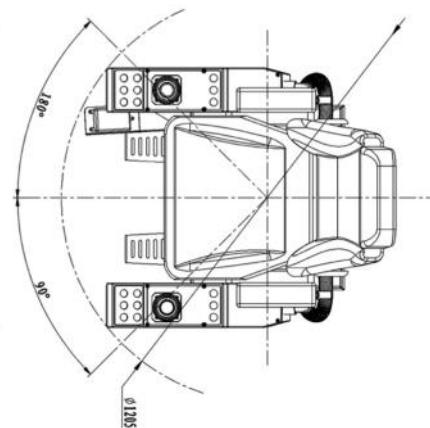
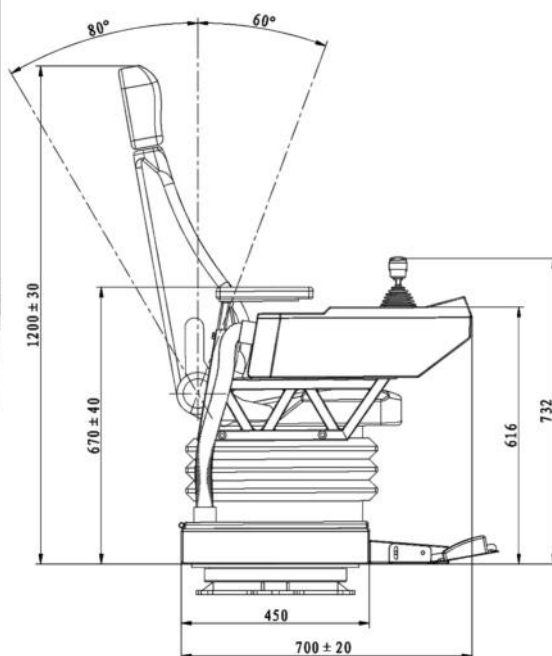
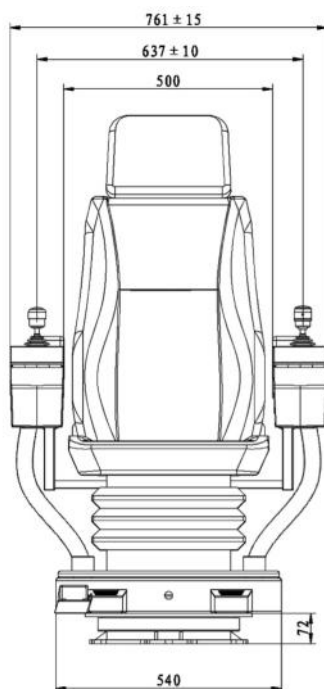
Dimensions



rotating base mounting



fixed base mounting





CONTROL CONSOLE



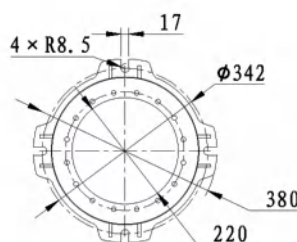
The TIA crane console is specifically designed for AC 50Hz (60Hz) control circuits with a maximum voltage capacity of 380V (440V). This console expertly manages the start, speed regulation, commutation, and braking of motors in crane machinery and associated electric control systems.

Control Box

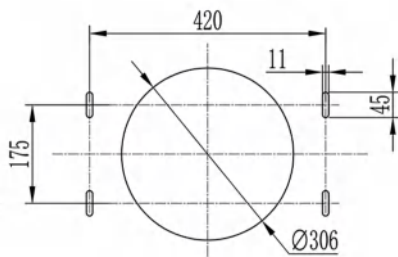
The control box is crafted from robust steel plate and includes a hinged cover with a standard locking mechanism, enhancing ease of maintenance and routine checks. It's custom-configured to accommodate the joystick, indicators, and controls, precisely aligned with the client's specifications.



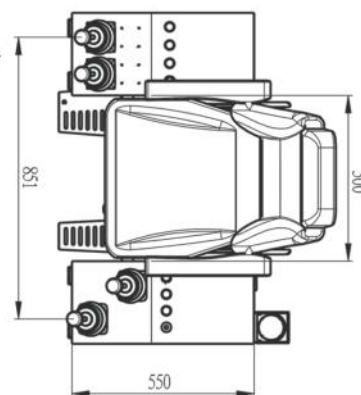
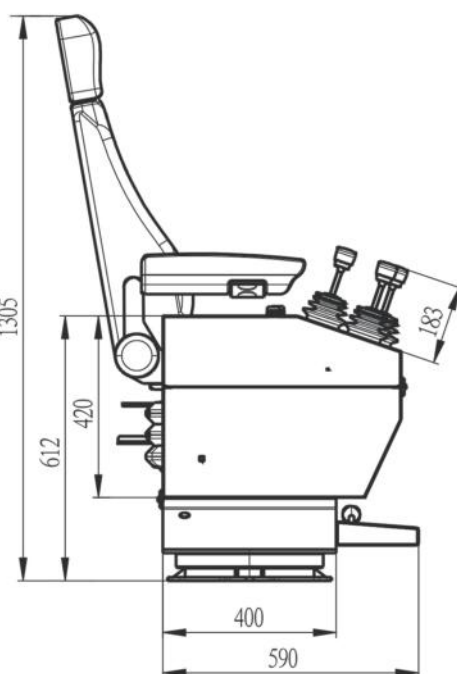
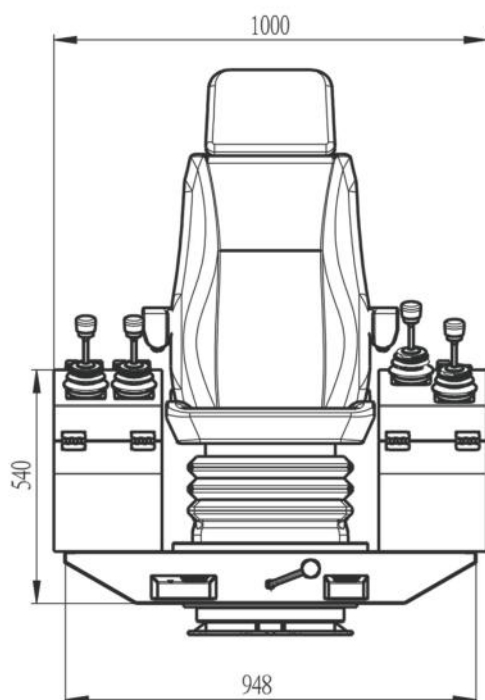
Dimensions



rotating base mounting



fixed base mounting





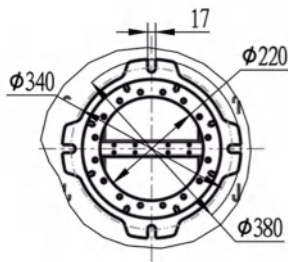
CONTROL CONSOLE

The TIA-X 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.

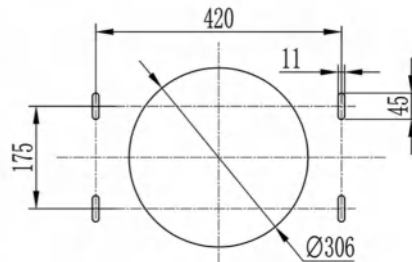
Control Box

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

