LT100 Multi-axis Joystick Controller

Product Features

1. Potentiometer type sensor or hall sensors
2. Single axis or Dual axis control
3. High strength control lever and the proportion of excellent control or switch output
4. Panel above protection grade IP65
5. Easy installation, flexible operation, uniform texture, maintenance free.

Application

LT100 series industrial multi-axis joystick controller is mainly used in hydraulic proportional control,variable frequency motor control, remote control or electro-hydraulic applications such as Rotary table(drilling rig), Crane, Aerial work platforms, Forklift trucks, Mobile hydraulics, Shield tunneling machine,Hoist, Marine, Construction machinery, Civil engineering, Military vehicles, Cabin vehicles, Military robotics,
Precision machine tools, Material handling equipment, etc.

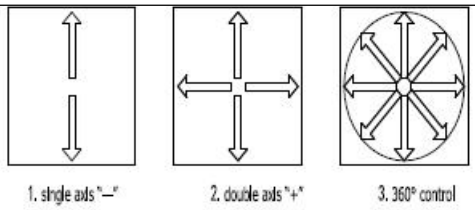
Technical Specifications

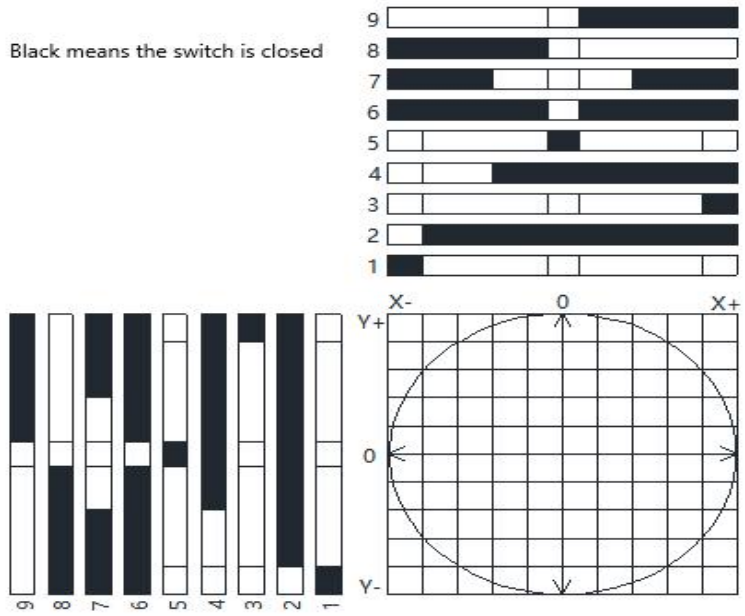
Environment Specifications	
Storage temperature	-50℃～+80℃
Operating temperature	-40℃～+80℃
protection grade	IP64
Vibration	amplitude of vibration ±3g, frequency 10HZ-200HZ
Shock	20g, 6ms, half sine type
EMC anti-interference grade	100V/m, 30MHZ-1GHZ, 80％Sine-wave modulation, satisfy EN 50082-2 (1995) standards
Transmit grade	150KHZ－30MHZ, grade B, satisfy EN 50081-2 (1993) standards
ESD anti-interference grade	Level 4, 8kv contact discharge, 15kv air discharge, satisfy IEC 61000-4-2 standards

Mechanical Specifications	
Mechanical rotation	±32° (potentiometer) ±20° (hall sensor)
Operating torque	5N（50Nmax）
Mechanical life	5,000,000 cycle
Mechanical tolerance	±0.5°

Electrical Parameters		
Hall type	Power supply voltage	5±0.5VDC
	The power consumption of current	6.5 mA/each hall chip
	Resolution	Infinite
	Maximum voltage	15 VDC continuous
	Reverse polarity maximum voltage	14.5VDC
	Load resistance	5KΩ
	The median voltage (no-load)	48～52%Vs
Potentiometer	Power supply voltage	DC24V
	Power supply current	<20mA
	Resolution	Infinite
	Resistance (10%)	5KΩ, 10KΩ
	Electrical rotation	±32°
	Output voltage range (Relative voltage)	0～100%；10～90%
	Maximum voltage	48%～52%
	Potentiometer maximum load of voltage	32VDC
	Maximum power consumption (25 ℃)	0.25W
	The direction of the switch	Switch position ±3°

Product Configuration

No.	Project	Content	
1	Series	LT100 Industrial Joystick	
2	Operation Method	M-friction T-automatic spring return MS-friction with self lock（single axis with HD5）	
3	Operation Direction		
4	Electrical Output Form Table LT100-1	Hall Output	HV1:DC5V 0-2.5-5V
			HV2:DC5V 0.5-2.5-4.5V
			HV3:DC5V 1.0-2.5-4.0V
			HV4:DC5V 1.25-2.5-3.75V
		Potentiometer Output	P1:Ordinary two directions output
			P2:Ordinary single direction output
			V1:DC24V-10V~0~+10V voltage output
			V2:DC24V+10V~0~+10V voltage output
			V3:DC24V-5V~0~+5V voltage output
			V4:DC24V+5V~0~+5V voltage output
			V5:DC24V 0~+10V voltage output
			V6:DC24V 0~+5V voltage output
			I1:4 wire4mA~12mA~20mA current output
			I2:4 wire20mA~4mA~20mA current output
5	Potentiometer Type	1K,2K,5K,10K,20K,H-Hall	
6	Quantity of Switch signal	01,02,03	
7	Common Closed Position		

		
8	Handle Type	HD1,HD2,HD4,HD5, HD7, HD8, HD10, HD15, HD26 and HD80
9	Mounting dimensions	M1 : 56×56, central hole 63 M2 : 85×85, central hole 63 M3 : 130×110, central hole 63 M7 : 85×85, central hole 80×80
10	Remark	Line with, special instructions, do not need not.

① **Series**
LT100

② **Operation Method**
M-Friction
T-automatic spring return
MS-friction with self Lock(single axis with HD5)

③ **Operation Direction**
1 X axis
2 XY axis
3 XY axis linkage

④ **Electrical Output**

Hall Output (supply voltage 5vdc)
HV1:DC5V 0-2.5-5V
HV2:DC5V 0.5-2.5-4.5V
HV3:DC5V 1.0-2.5-4.0V
HV4:DC5V 1.25-2.5-3.75V

Potentiometer output (supply voltage < 36vdc)
P1:Ordinary two directions output
P2:Ordinary single direction output

Voltage output (supply voltage 24vdc)
V1:DC24V-10V~0~+10V voltage output
V2:DC24V+10V~0~+10V voltage output
V3:DC24V-5V~0~+5V voltage output
V4:DC24V+5V~0~+5V voltage output
V5:DC24V 0~+10V voltage output
V6:DC24V 0~+5V voltage output

Current output (supply voltage 24vdc)
I1:4 wire4mA~12mA~20mA current output
I2:4 wire20mA~4mA~20mA current output

⑤ **Potentiometer Type**
(1-2-5-10-20)K
Halll type

⑥ **Quantity of Switch signal**
01
02
03

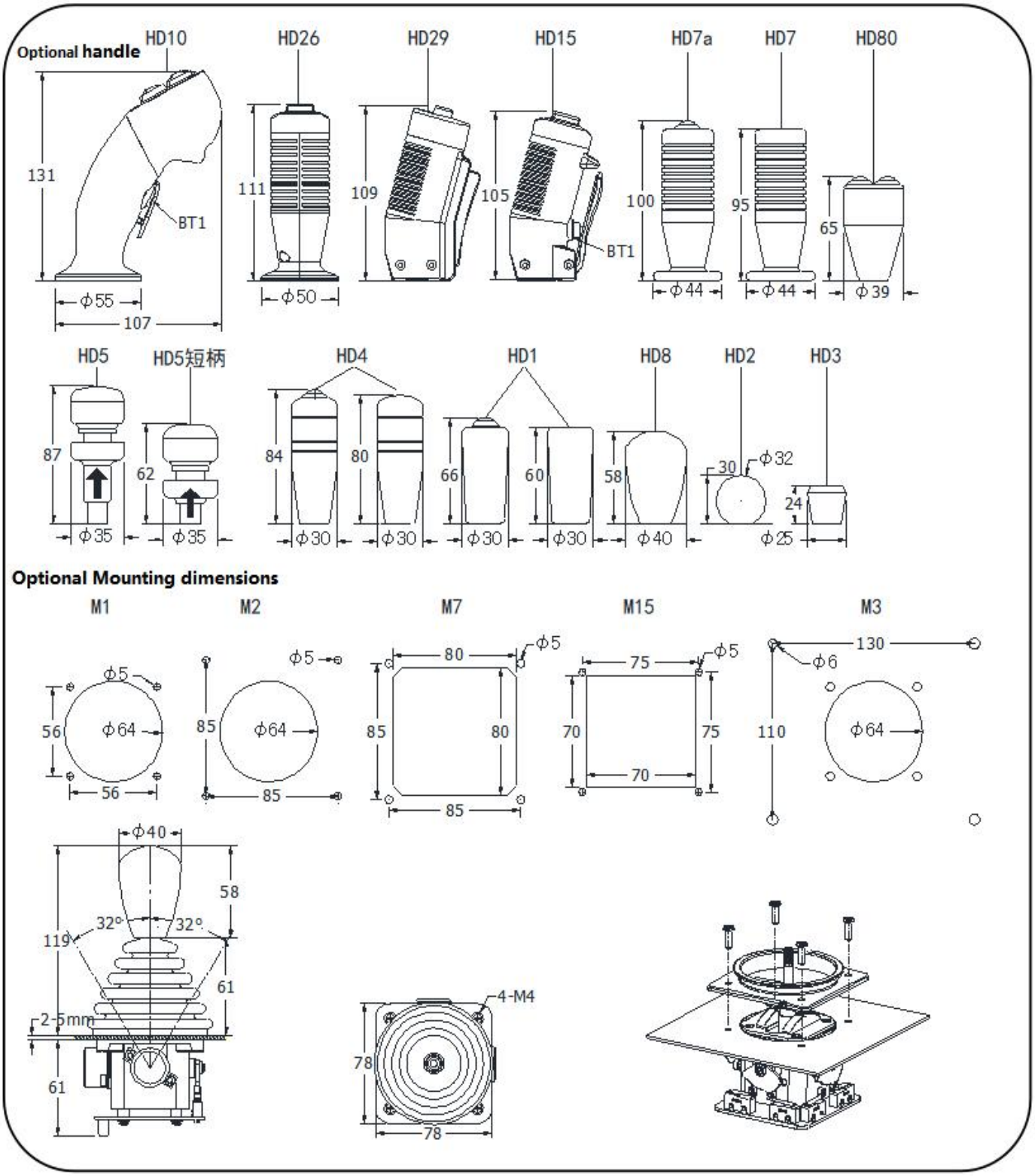
⑦ **Switch Closed Position**
(1)
(89)
(589)

⑧ **Handle Type**
HD1
HD2
HD3
HD4
HD5
HD7
HD8
HD10
HD15
HD26
HD29
HD80

⑨ **Mounting dimensions**
M1
M2
M3
M7
M15

⑩

Product Installation

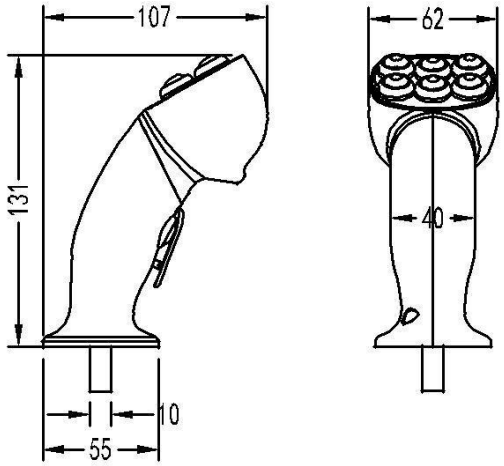


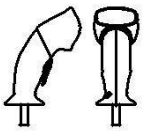
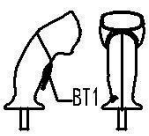
HD10 Handle

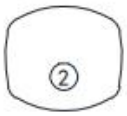
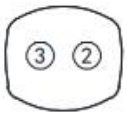
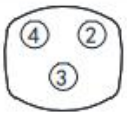
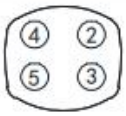
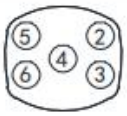
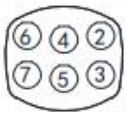
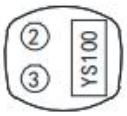
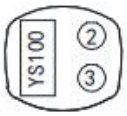
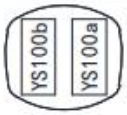
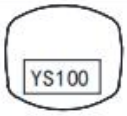
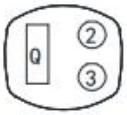
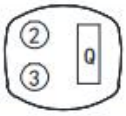
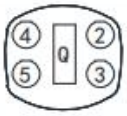
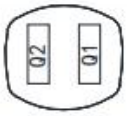
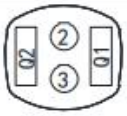
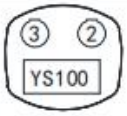
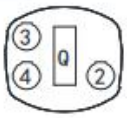
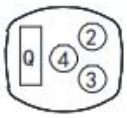
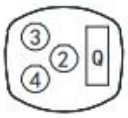
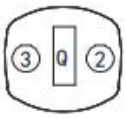
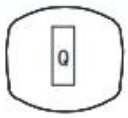
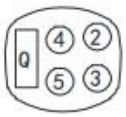
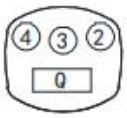
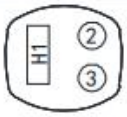
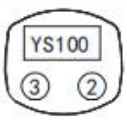
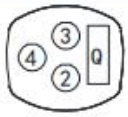
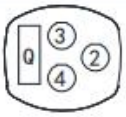
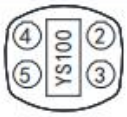
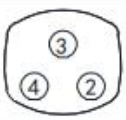
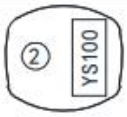
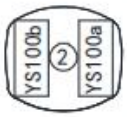
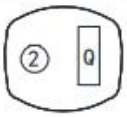
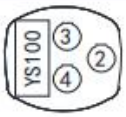
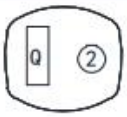
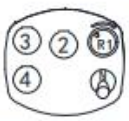
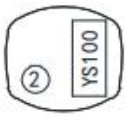
HD10 industrial handle is ergonomically designed, provides a high degree of comfort, highly integrated, multi-channel buttons control output, and the handle can be installed with a variety of accessories: analog output finger dial wheel, self-locking button, self-resetting button. With different combinations to meet the industry's needs: solenoid valve amplifier control, variable frequency motor control. We can customize satisfied technical parameters according to your requirements.HD10 handle use PA66 + 305GF, with excellent high temperature performance, can be installed in YJ100, YJ300, YJ01, and YJ02 to achieve multi-axis control

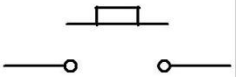
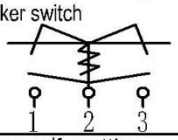
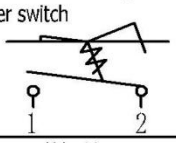
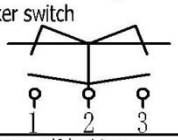
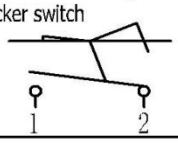
Handle operating Limit

Operation Temperature	-40-85°C
Storage Temperature	-40-85°C
Meet	IEC68 2-30
Protection Grade	IP64/65



Model Selection	Style	Description (all functions selection reference the table2-1
HD10a		No Dead man's button
HD10b		Dead man's button

							
一按钮 1	二按钮 2	三按钮 3	四按钮 4	五按钮 5	六按钮 6	左二按钮 右一指拨轮 7	右二按钮 左一指拨轮 8
							
二指拨轮 9	一指拨轮 10	右二按钮 左一翘板开关 11	左二按钮 右一翘板开关 12	四按钮 一翘板开关 13	二翘板开关 14	二按钮 二翘板开关 15	上二按钮 下一指拨轮 16
							
三按钮 一翘板开关 17	右三按钮 左一翘板开关 18	左三按钮 右一翘板开关 19	二按钮 一翘板开关 20	一翘板开关 21	右四按钮 左一翘板开关 22	右二按钮 左二翘板开关 23	上三按钮 下一翘板开关 24
							
右二按钮 左一滑动开关 25	下二按钮 上一指拨轮 26	一指拨轮 27	左三按钮 右一翘板开关 28	右三按钮 左一翘板开关 29	四按钮 一指拨轮 30	三按钮 31	左一按钮 右一指拨轮 32
							
上一按钮 下一指拨轮 33	一按钮 二指拨轮 34	左一按钮 右一翘板开关 35	右三按钮 左一指拨轮 36	右一按钮 左一翘板开关 37	一旋转电位器 一纽子开关 一指拨轮 38	一旋转电位器 一纽子开关 三个按钮 39	左一按钮 右一指拨轮 40
右一按钮 左一指拨轮 41	四按钮 42	二按钮 43	上二按钮 下一翘板开关 44				

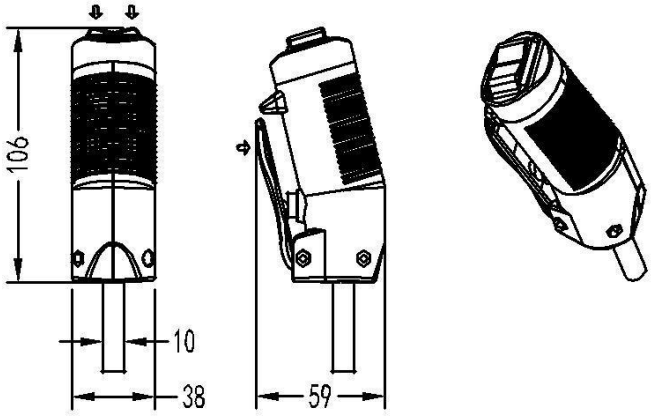
No.	Type	Description	Parameter	Additional
1	BT	Self-resetting button 	24V2A	Button color: Red–R Black–B Yellow–Y Green–G
2	BS	Self-locking button 	24V2A	Button color: Red–R Black–B Yellow–Y Green–G
3	QTOT	3 gears self-resetting rocker switch 	3 pins 250V15A	
4	QTO	2 gears self-resetting rocker switch 	2 pins 250V15A	
5	QSOS	3 gears self-locking rocker switch 	3 pins 250V15A	
6	QSO	2 gears self-locking rocker switch 	2 pins 250V15A	
7	QSOT	3 gears with one side self-resetting, another side self-locking	3 pins 250V15A	
8	YS100	Hall Finger dial wheel	input5V output0–2.5–5V	Warning: Do not bring magnetic objects close
9	YS100 (□)	Potentiometer	1KΩ 2KΩ 5KΩ 10KΩ 20KΩ	

HD15 Handle

HD15 industrial handle is ergonomically designed, provides a high degree of comfort, highly integrated, multi-channel buttons control output, and the handle can be installed with QTOT rocker switch and dead man's button, with advantages of long-life high-current and good hand feeling.HD15 handle use PA66 + 305GF, with excellent high temperature performance, can be installed in YJ100, YJ300, YJ01, and YJ02 to achieve multi-axis control

Handle operating Limit

Operation Temperature	-25-85℃
Storage Temperature	-25-85℃
Meet	IEC68 2-30
Protection Grade	IP64/65



HD15 - BT1 -QTOT

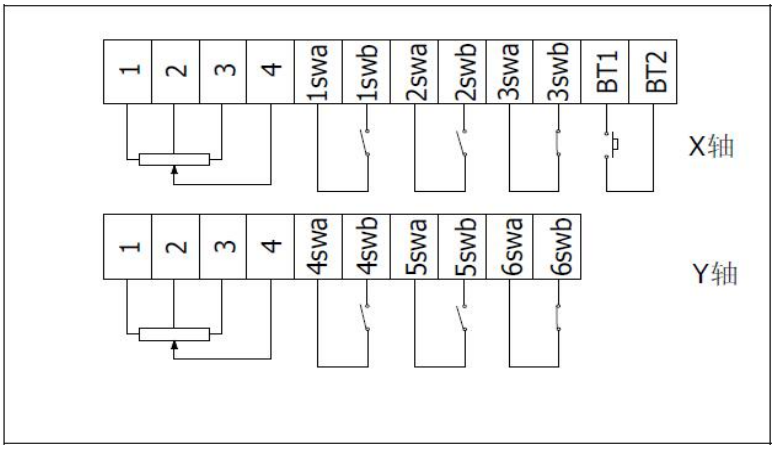
Handle Type

Control-handle with dead man's button 250V2A

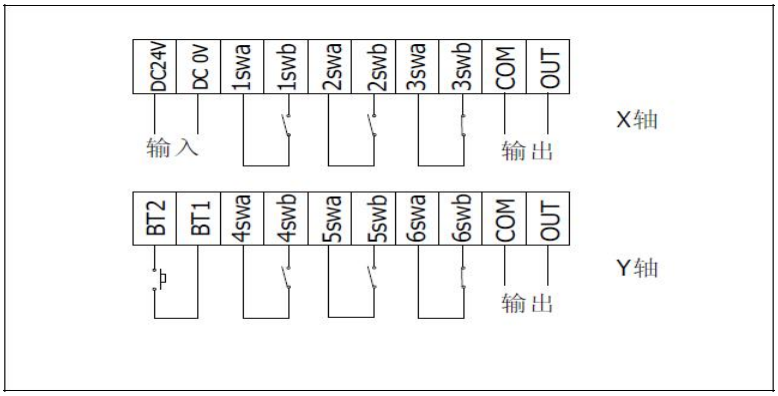
Top rocker switch double resetting

Wiring instructions

Potentiometer output



DC24V Power,voltage,current output



Hall type voltage output