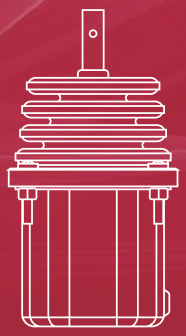
C25 series

Multi-axis joystick



PRODUCT FEATURES

- Single axis or multi-axis operation, spring return or Y axis friction brake
- Robust joystick, applicable for severe environment
- Non-contacting Hall effect technology, high reliability, long lifetime
- Optional high current switch output
- Optional CANbus output
- Variety of multi-function handle available

MARKET FOCUS

- Drive on-off valve and proportional valve, electrohydraulic control system
- Apply to construction machinery, hoisting machinery, agricultural machinery, road Machinery, Earth-moving machinery

TECHNICAL SPECIFICATIONS

① Mechanical data

- Travel angle: ±20°(spring return) ±25° (friction hold)
- Operating Force*: 10~20N (spring return)
- 1.7~2.2N·m (friction hold)
- Service life:
  >5 million cycles(spring return)
  >1 million cycles (friction hold)
- Product weight: Appr. 850g

* The measuring point is 126.4mm from the pivot center

② Electrical data

Analog/Hall voltage output

- Supply voltage(Vs): 5.0 ± 0.5Vdc or 9~32Vdc
- Power current consumption: <9mA (per channel)
- Center voltage: 2.5V±3%Vs
- Output linearity tolerance: ± 3%
- Maximum overload voltage: 30Vdc
- Maximum reverse voltage: -16Vdc
- Load resistance: 10KΩ

Analog/Current output

- Supply voltage: 9~32Vdc
- Current consumption: <30mA

Analog/Modulation voltage output

- Supply voltage: 9~32Vdc
- Power current consumption: <35mA

CANbus

- Supply voltage: 9~32Vdc
- Power current consumption: <100mA（24V）
- CAN version: CAN2.0b
- CAN protocol: J1939 or CANopen Protocol
- Baud rate: 250Kbps（J1939 protocol）
  10Kbps~1Mbps（CANopen Protocol）

③ Environmental data

- Operating temperature: -40°C~+85°C
- Storage temperature: -40°C~+85°C
- Protection class: IP65 (above the panel)
- EMC: EN6100-6-4-2007, 30MHz-1GHz
  EN6100-6-2-2019, 80MHz-6GHz
- Impact: IEC60068-2-27, 50g, 11ms, 3 times/direction impact,in total 6 directions
- Vibration: IEC60068-2-64, random vibration, 3.6gRMS, 100-200Hz, each axis lasts for one hour

ORDERING CODES

C25 - ① - ② - ③ - ④ - ⑤

① Operating mode

1AX	Single axis operation, aligned X axis direction, spring return
1AY	Single axis operation, aligned Y axis direction, spring return
1AF	Single axis operation, aligned Y axis direction, friction hold, center detent
1AE	Single axis operation, aligned Y axis direction, friction hold, front, middle and back detent
2AS	Dual-axis operation in arbitrary direction, spring return, rigid guidance(convex point)
2AD	Dual-axis operation in arbitrary direction, spring return, soft guidance (Non-convex point)
2AP	Dual-axis crossing operation, spring return

② Output signal

H11	Supply voltage 5Vdc, 10%～50%～90%Vs ratiometer output
H13	Supply voltage 5Vdc, 20%～50%～80%Vs ratiometer output
H14	Supply voltage 5Vdc, 25%～50%～75%Vs ratiometer output
H21	Supply voltage 5Vdc, 10%～50%～90%Vs and 90%～50%～10%Vs redundant ratiometer output
H23	Supply voltage 5Vdc, 20%～50%～80%Vs and 80%～50%～20%Vs redundant ratiometer output
H24	Supply voltage 5Vdc, 25%～50%～75%Vs and 75%～50%～25%Vs redundant ratiometer output
W11	Supply voltage 9~32Vdc, 0.5~2.5~4.5V output
W13	Supply voltage 9~32Vdc, 1~2.5~4V output
W14	Supply voltage 9~32Vdc, 1.25~2.5~3.75V output
W21	Supply voltage 9~32Vdc, 0.5~2.5~4.5V and 4.5~2.5~0.5V redundant output
W23	Supply voltage 9~32Vdc, 1~2.5~4V and 4~2.5~1V redundant output
W24	Supply voltage 9~32Vdc, 1.25~2.5~3.75V and 3.75~2.5~1.25V redundant output
U11	Supply voltage 11.5~32Vdc, 0~10V regulated output
U13	Supply voltage 11.5~32Vdc, -10~0~+10V regulated output
I11	Supply voltage 9~32Vdc，4~12~20mA regulated output
J33	CANbus output, protocol J1939, node address 33
J34	CANbus output, protocol J1939, node address 34
J35	CANbus output, protocol J1939, node address 35
J36	CANbus output, protocol J1939, node address 36
CA	CANbus output, protocol CANopen
RS232*	RS232 serial digital signal output
USB*	Digital output USB port
NA	No analog output

ORDERING CODES

③ Micro switch

N	No micro switch
S1	Single axis, center switch
S2	Single axis, forward and backward direction switch
S4	Double axis, each axis with forward and backward direction switch

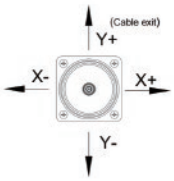
④ Handle options

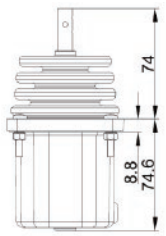
HA	HA handle
HB	HB handle, without top button switch
HBS	HBS handle, with top button
HBR	HBR handle, with top rocker switch
HD	HD handle, without top button switch
HDS	HDS handle, with top button switch
HDR	HDR handle, with top rocker switch
K5DR	K5 handle, with deadman switch and top rocker switch
K5NR	K5 handle, without deadman switch, with top rocker switch
K5DN	K5 handle, with deadman switch, without top rocker switch
K5NN	K5 handle, without deadman switch and top rocker switch
K2##	K2 handle, refer to K2 manual for detailed configurations
K4##	K4 handle, refer to K4 manual for detailed configurations
K7##	K7 handle, refer to K7 manual for detailed configurations
K8##	K8 handle, refer to K8 manual for detailed configurations
K9##	K9 handle, refer to K9 manual for detailed configurations
K11##	K11 handle, refer to K11 manual for detailed configurations
K13##	K13 handle, refer to K13 manual for detailed configurations

⑤ Wiring

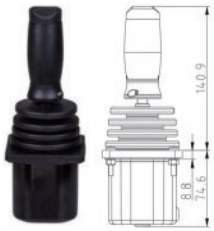
L	Cable wiring（AF200, AWG28#, length 500mm）
C	Connector wiring, Molex 5557, (additional terminal of plug-in connector: molex-5559)
D	Deutsch connector (Deutsch DTM04-6P, only for CANbus output)

SHAPE DIMENSIONS



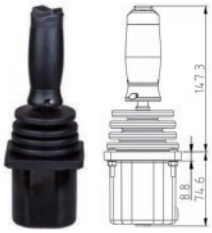


HA handle



HB handle

HBS handle



HBR handle

HD handle

HDS handle

HDR handle

K1 handle

K2 handle

K4 handle

K7/K8 handle

K9 handle

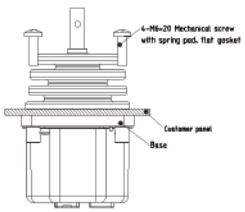
K11 handle

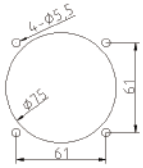
K13 handle

INSTALL

① MECHANICAL INSTALLATIONS

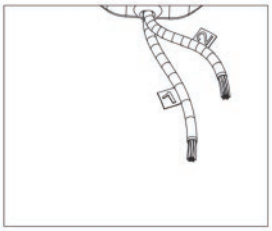
Note: The thickness of the panel is ⩽4mm



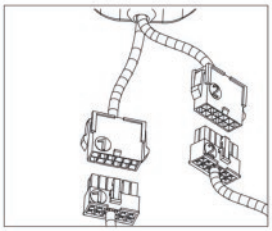


Panel cut-out dimensions

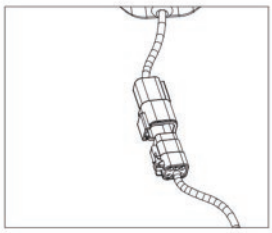
② ELECTRICAL CONNECTIONS



Cabel wiring



Connector
(Molex 5557 Connector)



Connector
(DTM04-6P Connector)