



H4 Series

FEATURES

- Double-axis operation, spring return
- Non-Contacting Hall effect technology, high reliability, long life time
- Design for harsh working conditions, the operating feel similar to the hydraulic pilot valve
- CANbus output
- Two stroke force can be configured
- Various types of handles option

APPLICATIONS

- Excavator
- Rotary drilling rig
- Wheel loaders
- Electrohydraulic control system



SPECIFICATIONS

Mechanical data	
Travel angle	±20°or other travel angel can be customized
Operating force ¹	6-10N, 18-20N (End stroke version)
Mechanical life	5 million cycles
Product weight	Appr. 1550g (Only the base 1050g)
Electrical data	
Supply voltage(Vs)	9~32Vdc
Power current consumption	<55mA
CAN version	CAN2.0b
CAN protocol	J1939 protocol or CANopen protocol
Baud rate	250Kbps (J1939 protocol) 10Kbps-1Mbps (CANopen protocol)
Environmental data	
Operating temperature	-25°C~+85°C
Storage temperature	-40°C~+85°C
Protection class	IP ratings may vary from model to model for more information, please consult our sales staff
EMC	EN IEC 6100-6-4-2019, EN IEC 6100-6-2-2019
¹ The measuring point is 195mm from the pivot center	

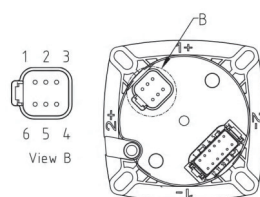


MECHANICAL INSTALLATIONS

Diagram illustrating the assembly of the Customer panel to the main unit. The panel is secured by two M6x20 screws and two M6 Nuts.

Technical drawing of a circular plate with concentric circles and dimensions. The drawing shows a circular plate with a central hole. The outermost circle is labeled $\phi 113$. The middle circle is labeled $\phi 100$. The innermost circle is labeled $\phi 85$ (cut-out). The plate has a thickness of 80×80 . The distance from the center to the edge of the plate is 70.5×70.5 . The distance from the center to the edge of the cut-out is 7 . The angle between the center and the edge of the cut-out is 90° .

ELECTRICAL CONNECTIONS



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ORDER GUIDE

For instance:

Customer Requirements: H4 series handle, dual-axis operation in any direction with spring return, two-stage stroke force configured in all four directions, K12 multi-function handle grip, front panel with 1 FNR on the left + 1 thumb wheel and 2 buttons on the right, 1 button on the lower rear panel, signal input from upper end to lower end, vertical installation, power supply voltage 9-32 VDC, CAN bus output, CANopen protocol, Deutsch connector (model DT04-6P) integrated at the bottom of the housing for wiring.

Product Selection: H4-2AS-02-K120102 (MTW10-H11-L)-M-CA-D1

H4		Multi-axis Joystick		
		Code	Operation mode	
		2AS	Dual-axis operation in arbitrary direction, spring return	
			Code	Stroke type
			01	Four directions with single-stage stroke
			02	Four directions with two-stage stroke
			03	1+ direction with single-stage stroke, other directions with two-stage stroke
			04	1- direction with single-stage stroke, other directions with two-stage stroke
			05	2+ direction with single-stage stroke, other directions with two-stage stroke
			06	2- direction with single-stage stroke, other directions with two-stage stroke
			07	1+1- direction with single-stage stroke, 2+2- directions with two-stage stroke
			08	1+2+ direction with single-stage stroke, 1-2- with two-stage stroke
			09	1+2- direction with single-stage stroke, 1-2+ directions with two-stage stroke
			10	1-2+ direction with single-stage stroke, 1+2- directions with two-stage stroke
			11	1-2- direction with single-stage stroke, 1+2+ directions with two-stage stroke
			12	2+2- direction with single-stage stroke, 1+1- directions with two-stage stroke
			13	1+1-2+ direction with single-stage stroke, 2- directions with two-stage stroke
			14	1+1-2- direction with single-stage stroke, 2+ directions with two-stage stroke
			15	1+2+2-direction with single-stage stroke, 1- directions with two-stage stroke
			16	1-2+2- direction with single-stage stroke, 1+ directions with two-stage stroke
NA	NO handle			
K12##	K12 handle, specific configuration refer to K12 datasheet			
K14##	K14 handle, specific configuration refer to K14 datasheet			
H4	2AS	02	K120102 (MTW10-H11-L)	

ORDER GUIDE (CONTINUED)

H4		Multi-axis Joystick	
		Code	Handle installations
		L	Left hand installation, handle tilt to the right for 15°
		M	Vertical installation, handle vertical installation without tilt
		R	Right hand installation, handle tilt to the left for 15°
		Note: No handle, vertical installation instead	
		Code	Output signal
		H11	Supply voltage 5Vdc, 10%~50%~90%Vs output
		H13	Supply voltage 5Vdc, 20%~50%~80%Vs output
		H14	Supply voltage 5Vdc, 25%~50%~75%Vs output
		H21	Supply voltage 5Vdc, 10%~50%~90%Vs and 90%~50%~10%Vs redundant output
		H23	Supply voltage 5Vdc, 20%~50%~80%Vs and 80%~50%~20%Vs redundant output
		H24	Supply voltage 5Vdc, 25%~50%~75%Vs and 75%~50%~25%Vs redundant output
		W11	Supply voltage 9~32Vdc, 0.5~2.5~4.5V ratiometric output
		W13	Supply voltage 9~32Vdc, 0.5~2.5~4.5V ratiometric output
		W14	Supply voltage 9~32Vdc, 1.25~2.5~3.75V ratiometric output
		W21	Supply voltage 9~32Vdc, 0.5~2.5~4.5V and 4.5~2.5~0.5V redundant ratiometric output
		W23	Supply voltage 9~32Vdc, 1~2.5~4V and 4~2.5~1V redundant ratiometric output
		W24	Supply voltage 9~32Vdc, 1.25~2.5~3.75V and 3.75~2.5~1.25V redundant ratiometric output
		CA	CANbus output, protocol CANopen
		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
		Code	Wiring
		D1	6 pin Deutsch connector outlet, DT04-6P (default)
		D2	4 pin Deutsch connector outlet, DT04-4P
		L	Cable wiring (length 250mm)
H4	M	CA	D1
Complete Type Specification			