

C25 SERIES

PRODUCT FEATURES

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- Ergonomic design, grip-type operation
- Single axis or multi-axis operation, spring return
- Y axis friction brake
- Robust joystick, applicable for severe environment
- Non-contacting Hall effect technology, high reliability, long life span
- Configured with 2A@30Vdc microswitch
- Optional CAN main line outgoing interface
- Variety of multi-function handle available

MARKET FOCUS

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- Electro-hydraulic control
- Apply to construction machinery, hoisting machinery, aerial work machinery



Robust hand-operated
multi-axis joystick



TECHNICAL SPECIFICATIONS

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Mechanical data

Travel angle: $\pm 20^{\circ}$
 Operating Force*: 10~20N (spring return), 1.7~2.2Nm
 (Friction hold)
 Maximum allowable force: 300N
 Service life: 5 million cycles (spring return), 1 million
 cycles (friction load)
 Product weight: 850g

Electrical data

Analog/Hall voltage output

Supply voltage: 5.0 \pm 0.5Vdc or 9~36Vdc
 Power current consumption: <9mA (per channel)
 Center voltage: 2.5 \pm 0.15V
 Output linearity tolerance: $\pm 3\%$
 Maximum overload voltage: 20Vdc
 Maximum reverse voltage: -15Vdc
 Load resistance: >10K Ω
 Insulation resistance: >1000M Ω
 EMC: 100V/m

Analog/Current output

Supply voltage: 9~36Vdc
 Current consumption: <30mA

Analog/Modulation voltage output

Supply voltage: 9~36Vdc
 Power current consumption: <30mA

CANbus

Supply voltage: 9~36Vdc
 Power current consumption: <55mA
 CAN version: CAN2.0b
 CAN protocol: J1939 or CANopen
 Baud rate: 20Kbps (J1939 protocol)
 10Kbps~1Mbps (CAN protocol)

Micro switch channel

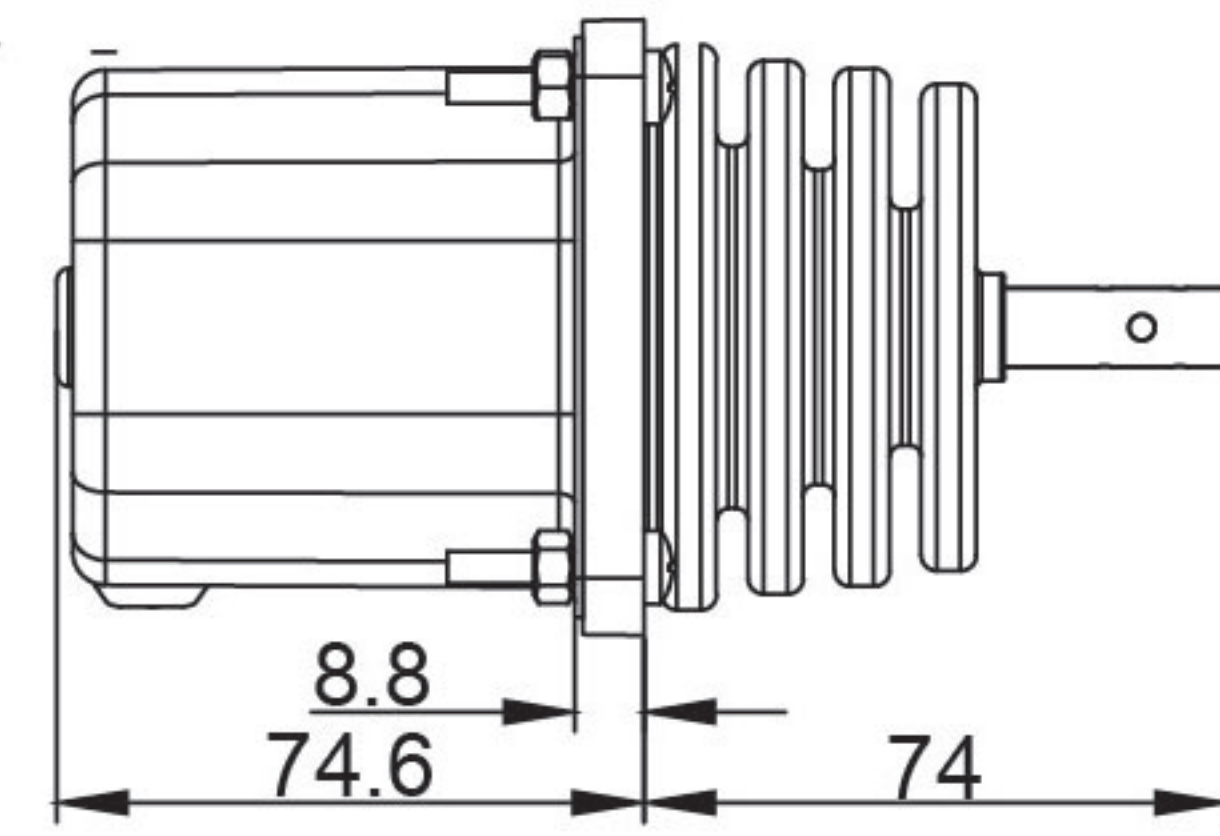
Configuration: 2 micro switches per axis, normal open
 Open angle: 2°~5°
 Load capacity: 3A@125Vac ; 2A@30Vdc

Environmental data

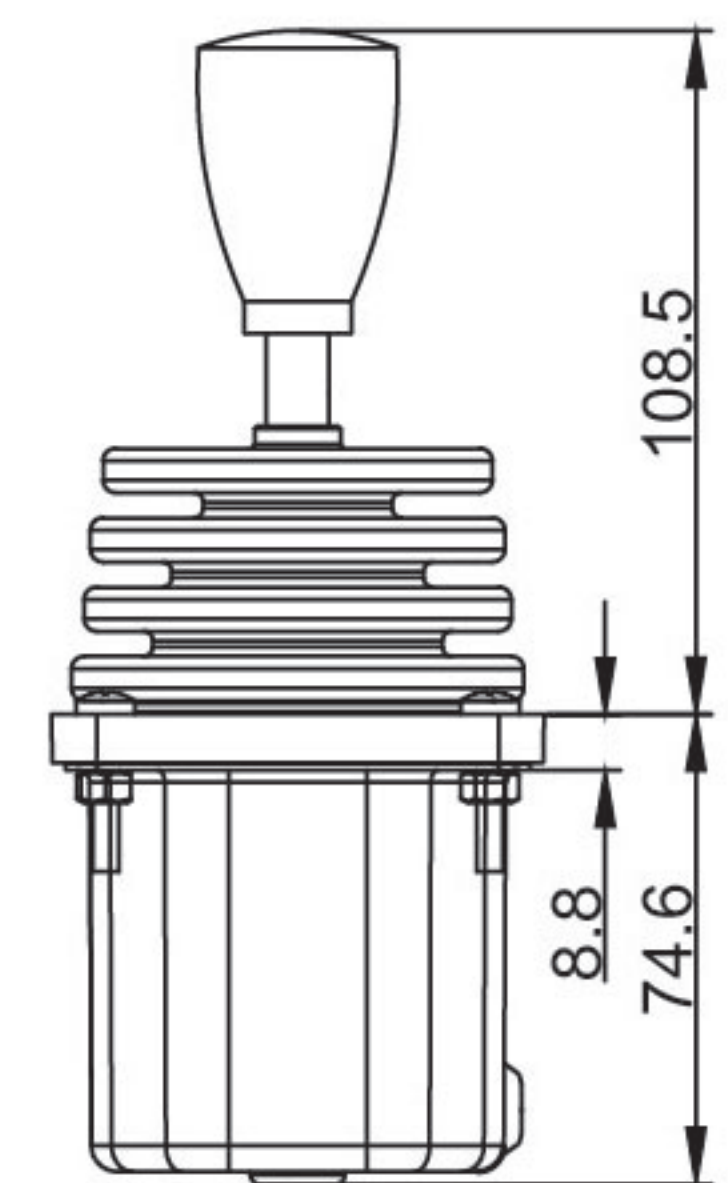
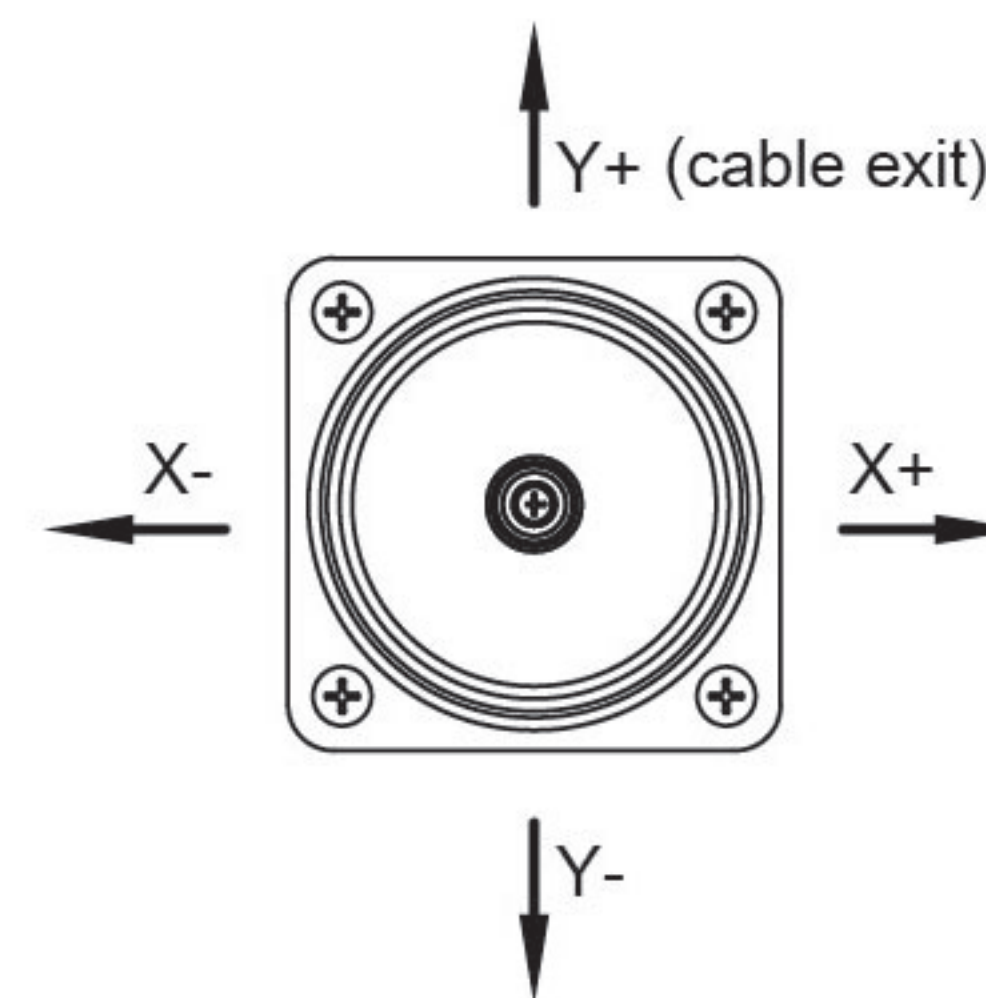
Operating temperature: -40 $^{\circ}$ C ~ +85 $^{\circ}$ C
 Storage temperature: -40 $^{\circ}$ C ~ +85 $^{\circ}$ C
 Protection class: IP65 (above the panel)
 EMC: EN6100-6-4-2007, 30MHz-1GHz
 EN6100-6-2-2019, 80MHz-6GHz
 Impact: IEC60068-2-27, 50g, 11ms, 3 times/direction impact,
 in total 6 directions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

SHAPE DIMENSIONS

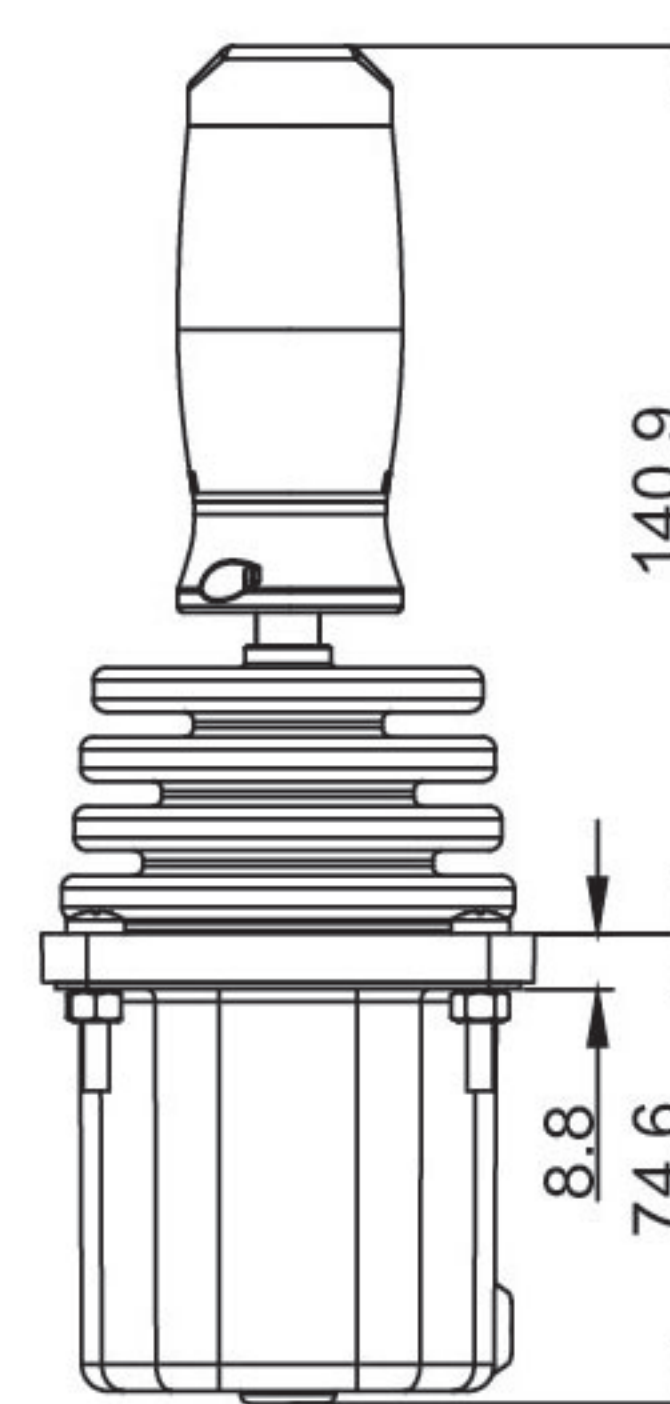
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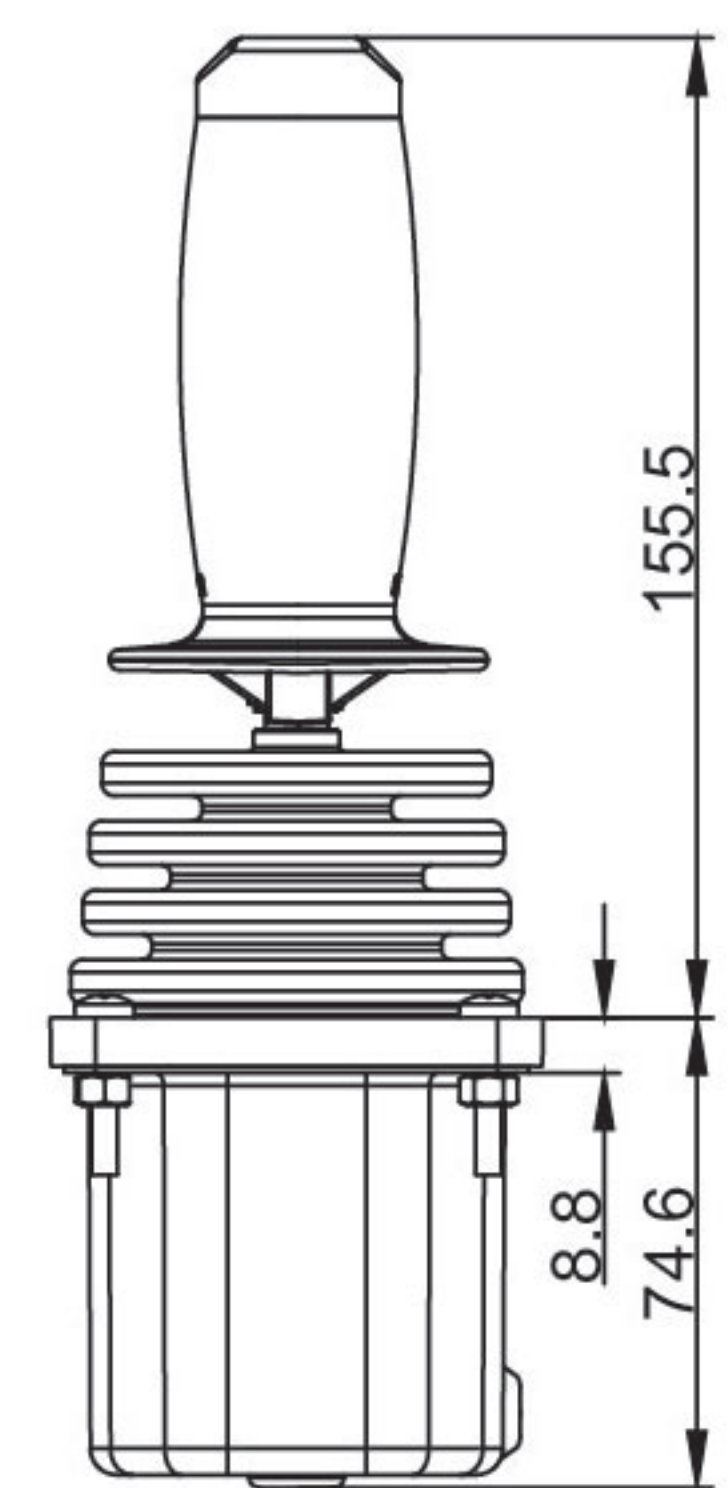
C25P_shape



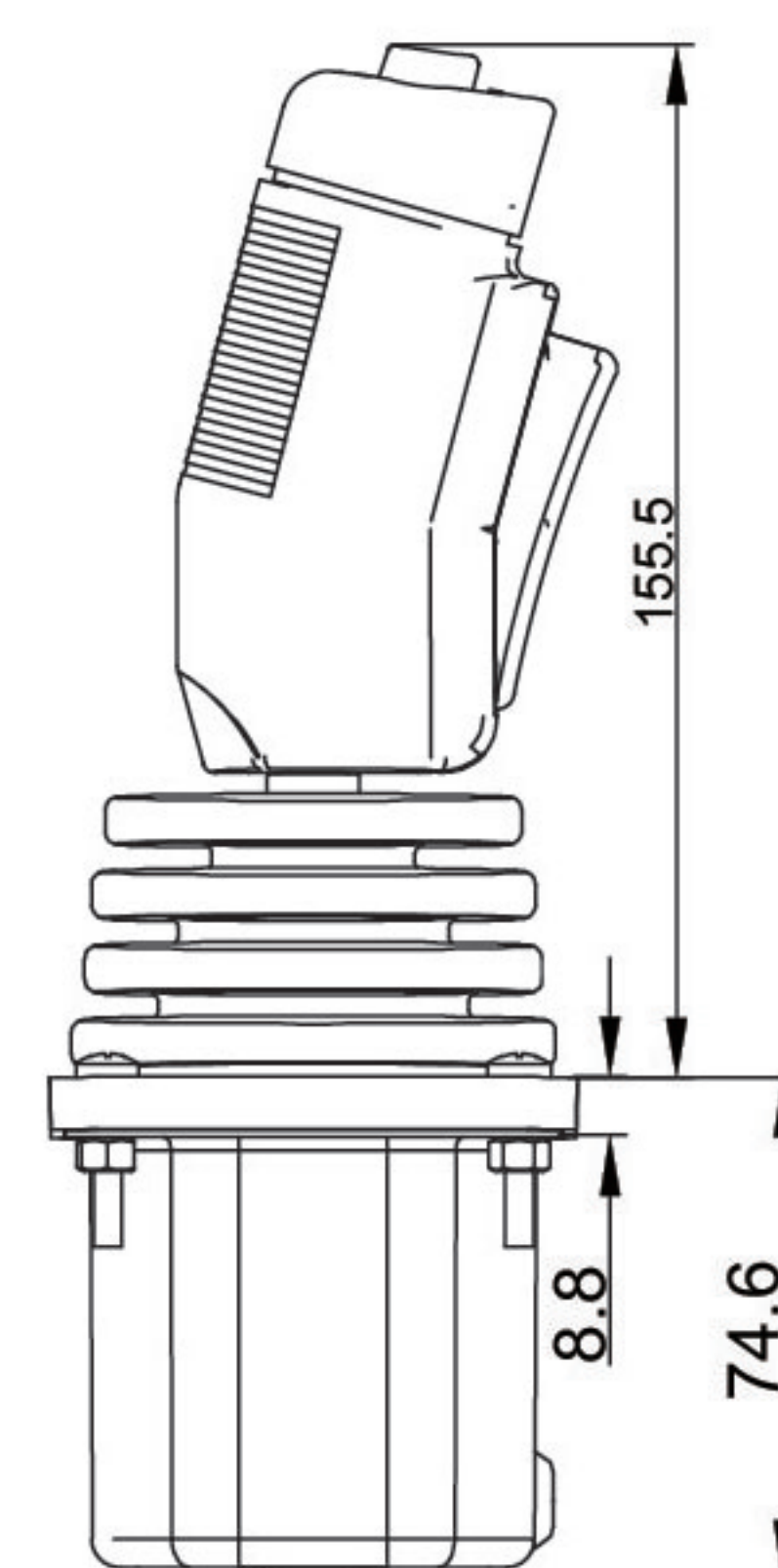
HA handle



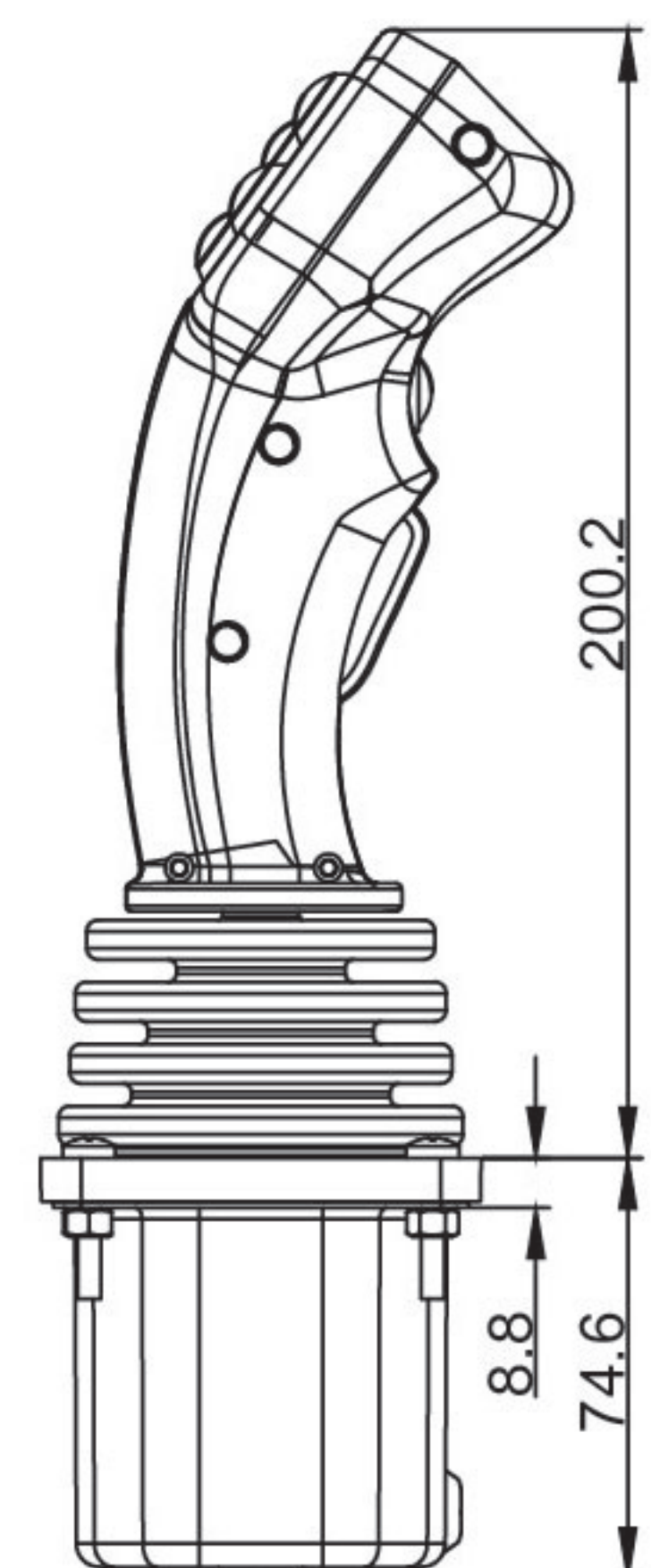
HB handle



HD handle



K5 handle



K2 handle

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
2AD	Dual-axis operation in arbitrary direction,spring return,soft guidance
2AP	Dual-axis crossing operation,spring return

③ Micro switch

N	No switch
S1	1 microswitch for single axis,center position
S2	2 microswitch for single axis,forward and reverse position
S4	4 microswitch for double axis,forward and reverse position

④ Handle options

HA	HA handle
HB	HB handle,without top button switch
HBS	HB handle,with top button
HBR	HB handle,with top rocker switch
HD	HD handle,without top button switch
HDS	HD handle,with top button switch
HDR	HD handle,with top button 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

② Output signal

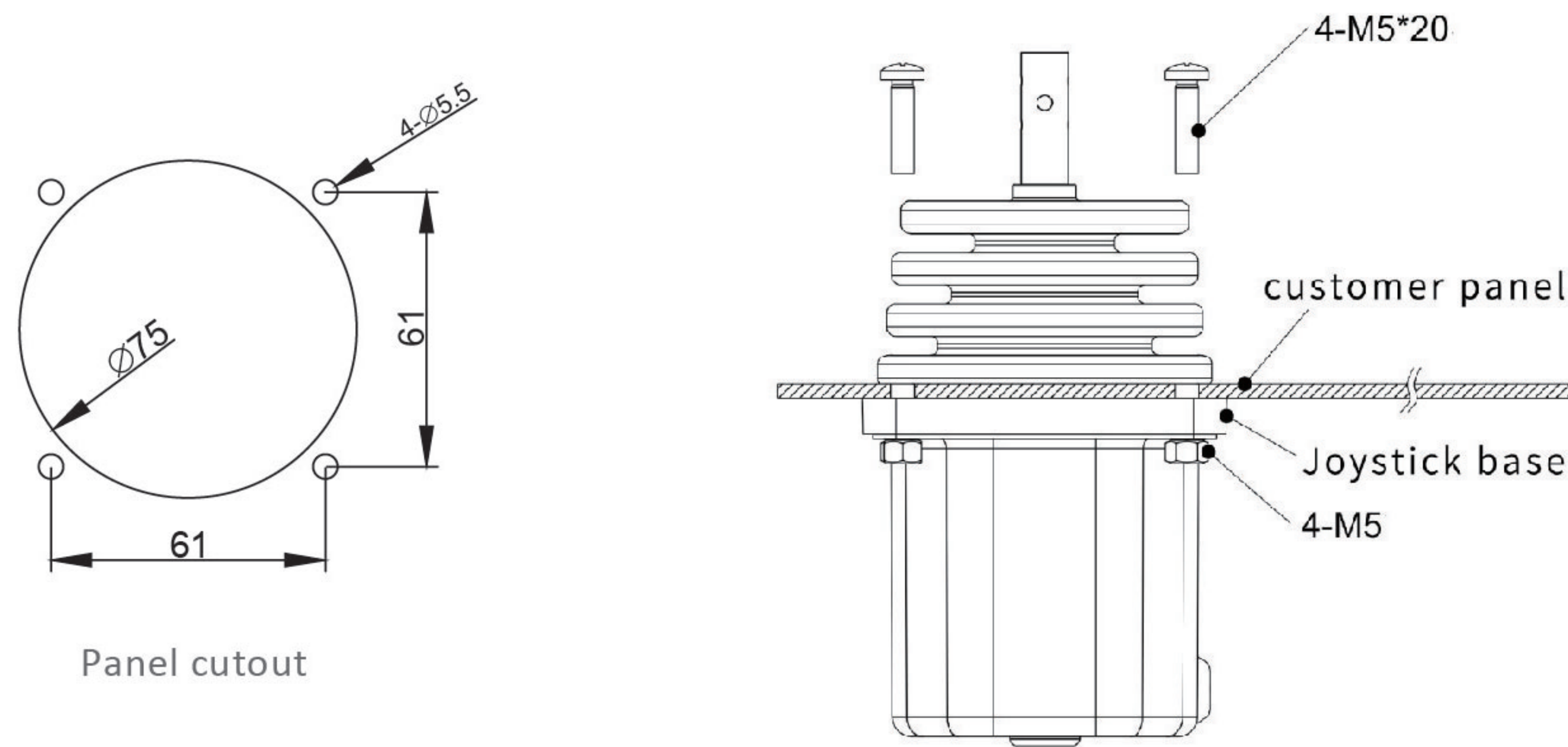
H11	Supply voltage 5Vdc,10%~50%~90%Vs ratiometer output
H13	Supply voltage 5Vdc,20%~50%~80%Vs ratiometer output
H14	Supply voltage 5Vdc,25%~50%~75%Vs ratiometer output
H21	Supply voltage 5Vdc,10%~50%~90%Vs and 90%~50%~10%Vs redundant ratiometer output
H23	Supply voltage 5Vdc,20%~50%~80%Vs and 80%~50%~20%Vs 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 ratiometer output
W13	Supply voltage 9~32Vdc,1~2.5~4V ratiometer output
W14	Supply voltage 9~32Vdc,1.25~2.5~3.75V ratiometer output
W21	Supply voltage 9~32Vdc,0.5~2.5~4.5V and 4.5~2.5~0.5V redundant ratiometer output
W23	Supply voltage 9~32Vdc,1~2.5~4V and 4~2.5~1V redundant ratiometer output
W24	Supply voltage 9~32Vdc,1.25~2.5~3.75V and 3.75~2.5~0.5V redundant ratiometer 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
USB*	Digital output.USB port
RS232*	Digital output.serial port
NA	NO electronic interface

Note:The options *should be configured with external module

⑤ Wiring

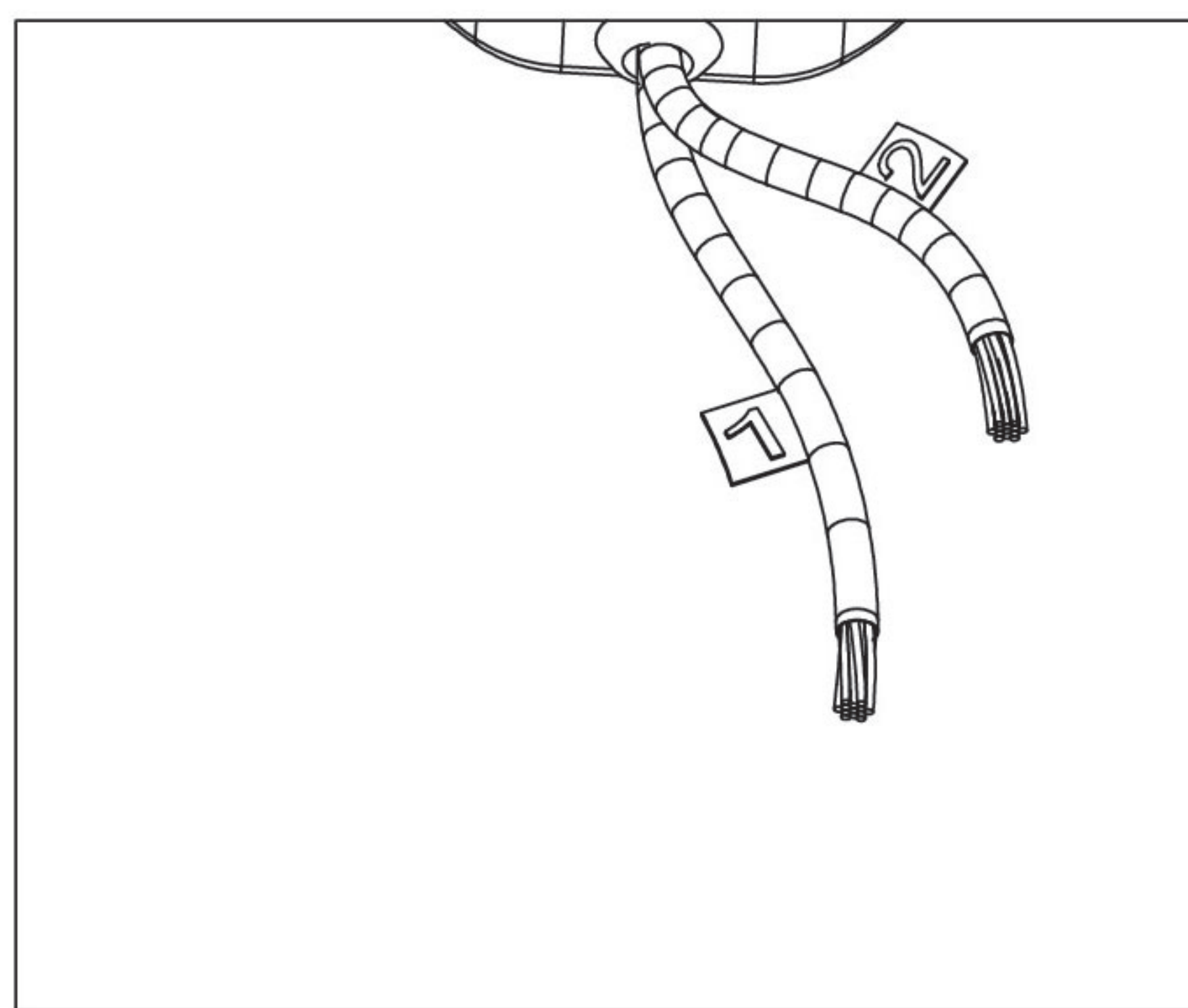
L	Cable wiring (AF200,28#,length 500mm)
C	Connector wiring,connector model molex-5557
D	Deutsch connector (only for CANbus output)

MECHANICAL INSTALLATIONS » » » » » » » » » »

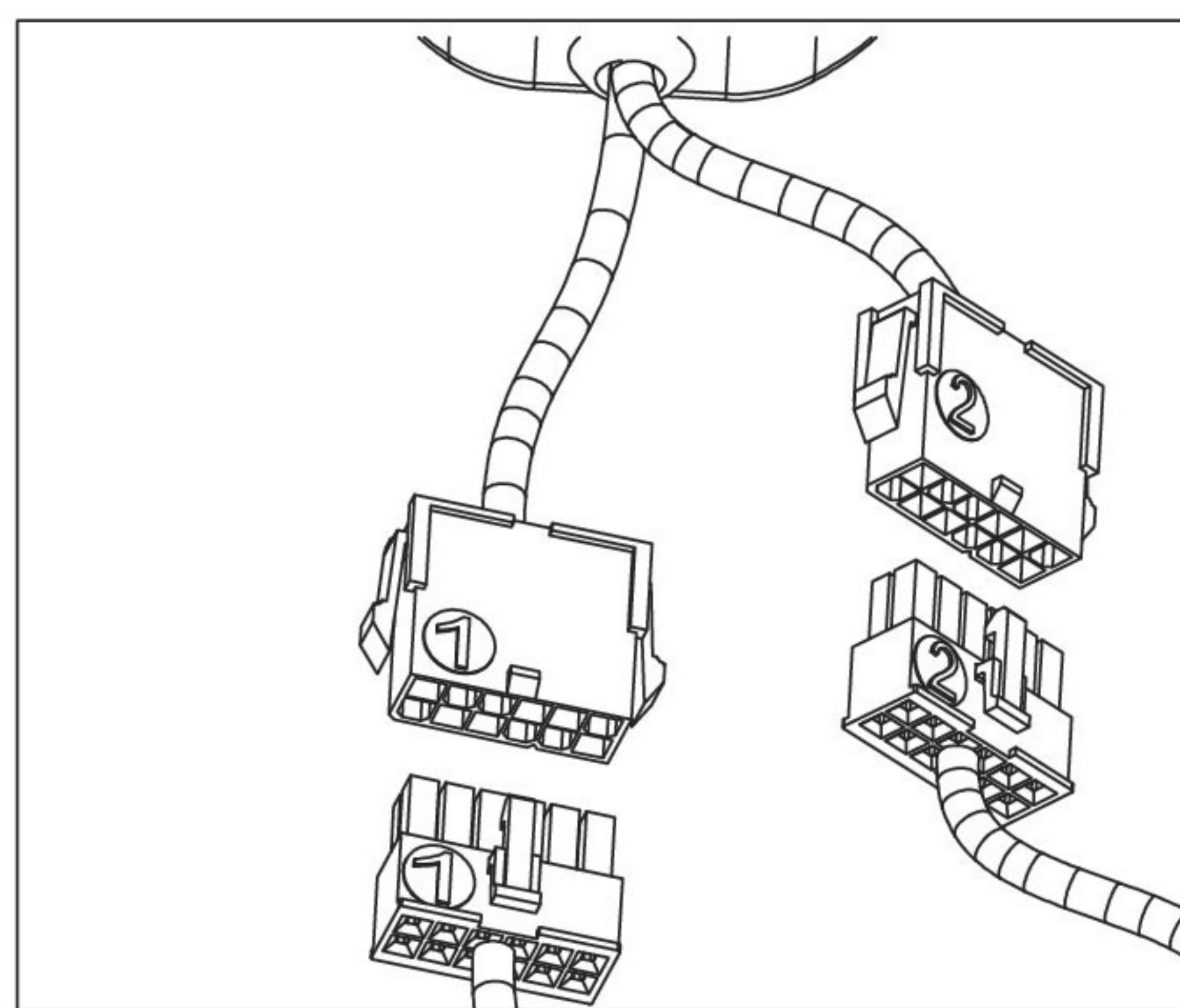


Note: the thickness of panel less than 4mm

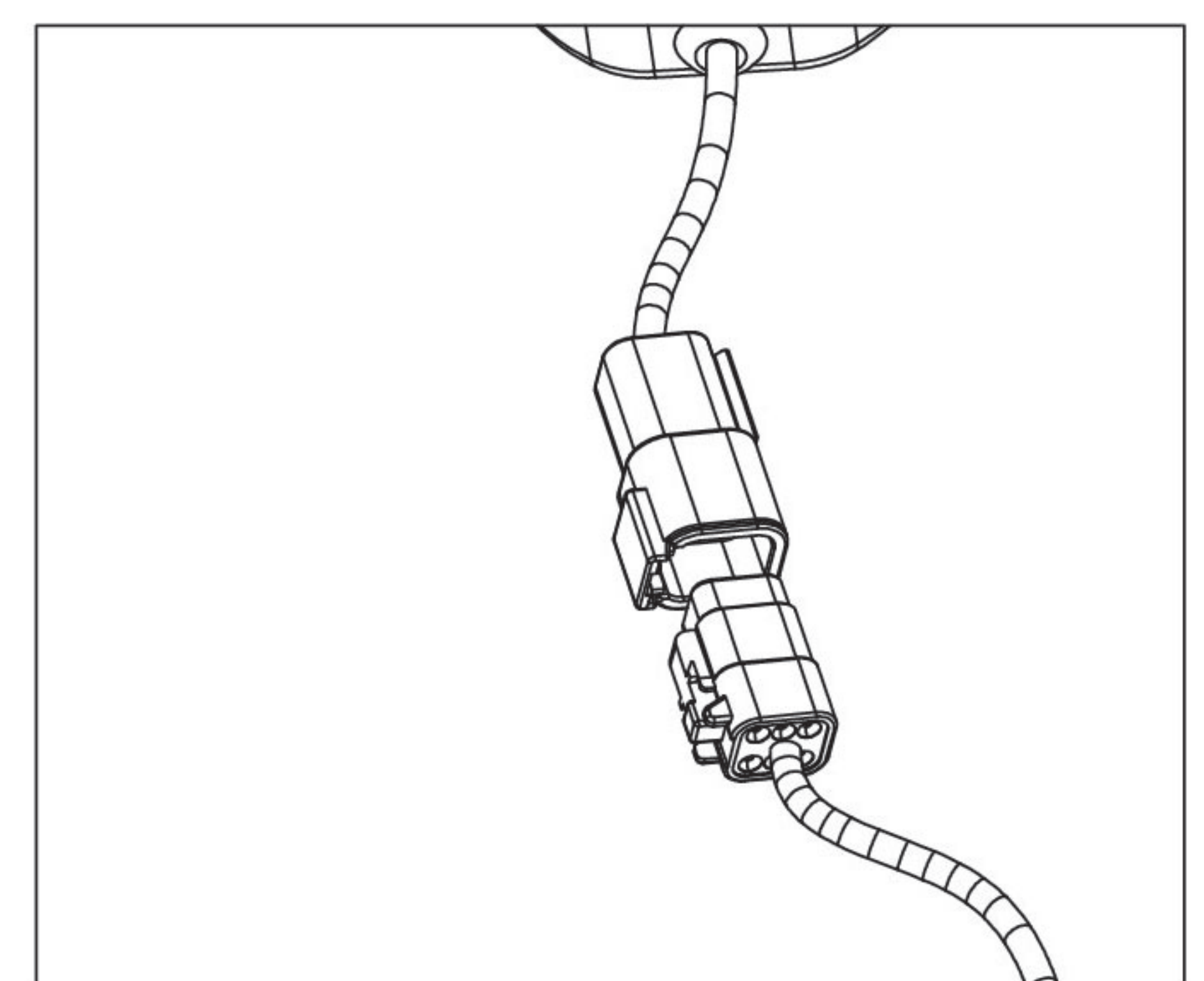
ELECTRICAL CONNECTIONS » » » » » » » » » »



Cabel wiring

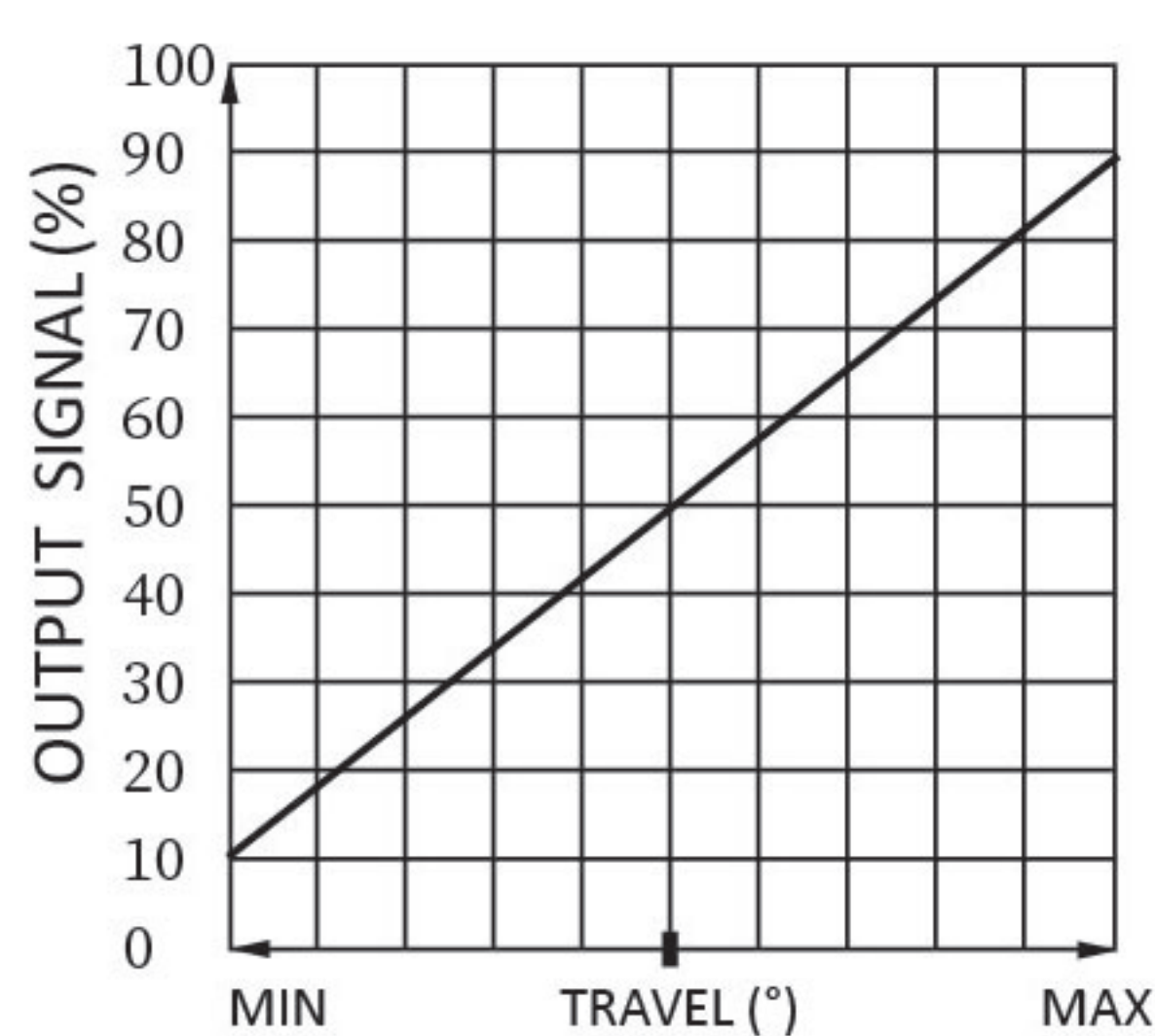


Connector
(molex 5557 Connector)

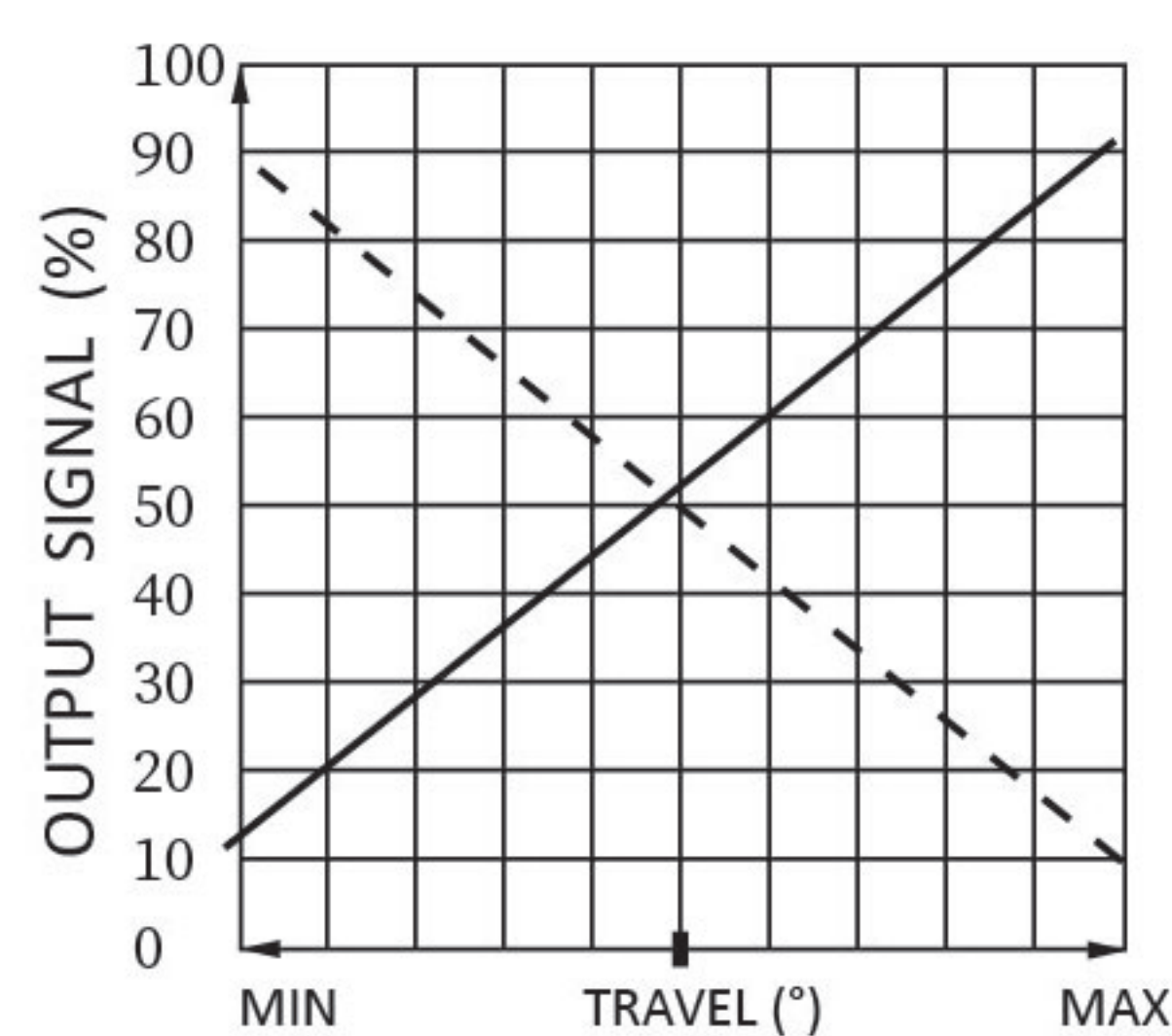


Connector
(DTM04-6P Connector)

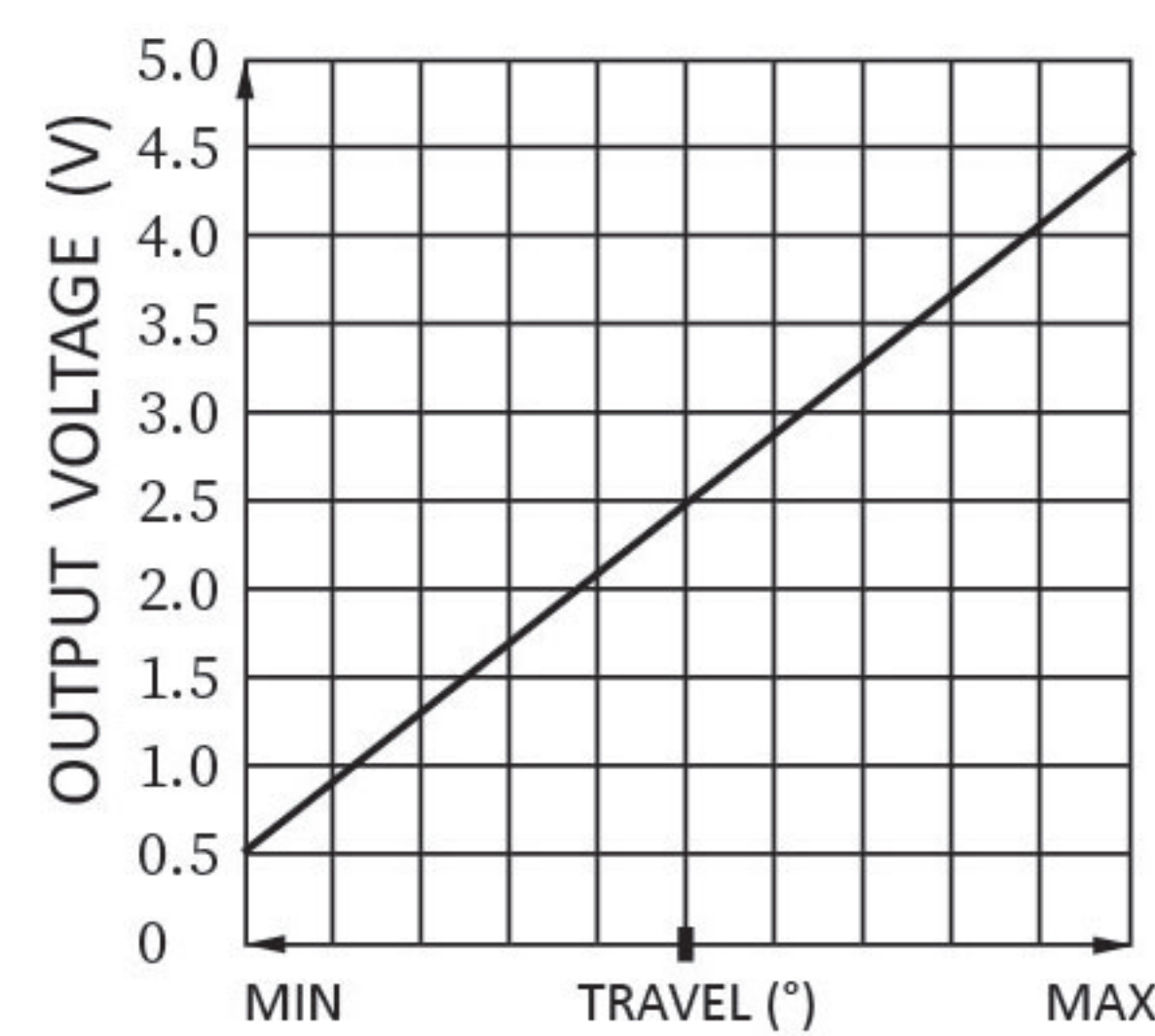
OUTPUT SIGNAL CURVE » » » » » » » » » »



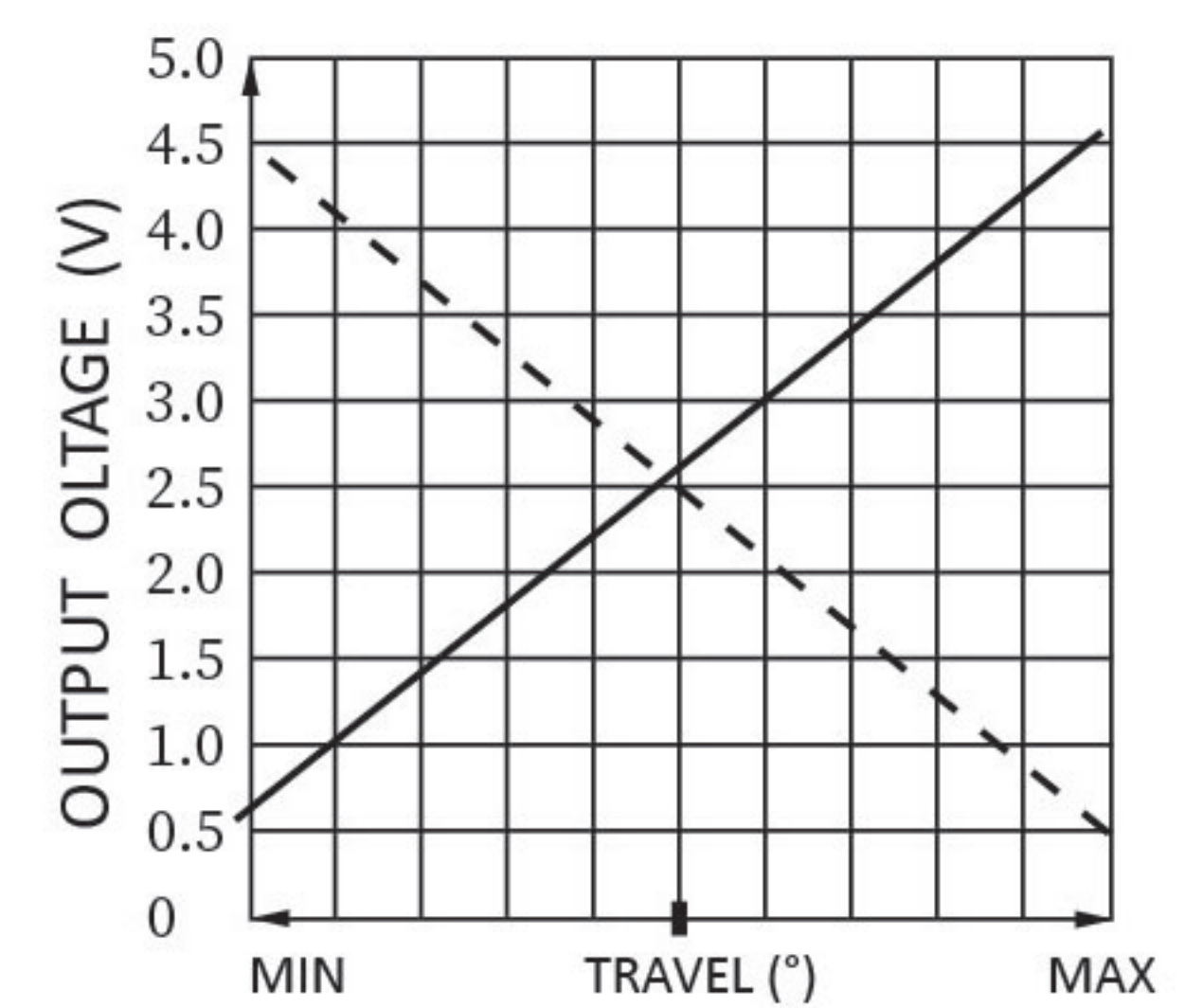
H11



H21



W11



W21