



2.1.1

ELECTRIC PILOT REMOTE CONTROL JOYSTICK

Type : RVEH1、RVEH3

Benefits:

- Several ergonomic grips with various E contacts
- CAN BUS output
- High proportional output accuracy

02



RVEH1
(Multi-function handle lever)



RVEH3

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Features

1. General introduction

- Two hall angle sensors integrated.
- Proportional output to the angle, overall control accuracy within 2% of full scale.
- Angle sensor endures more than 10 million cycles, protection level: IP67.
- Integrated PCB board, CAN-Bus or PWM output available.
- Ergonomic joystick lever.

2. Applications



Excavator



Tractor loader backhoes



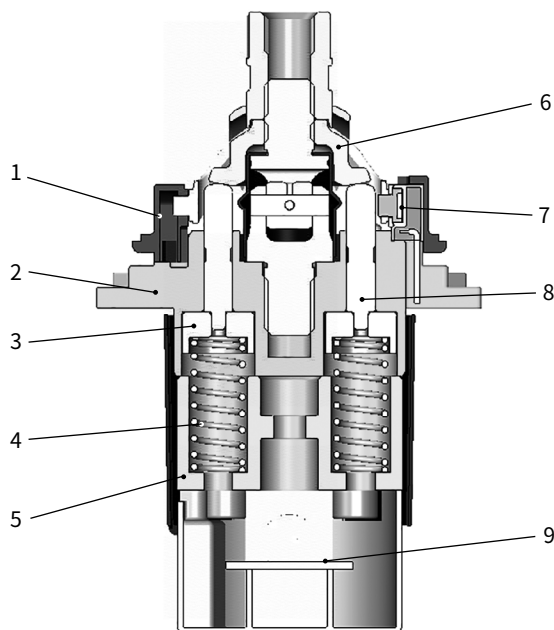
Wheel loaders



Cranes

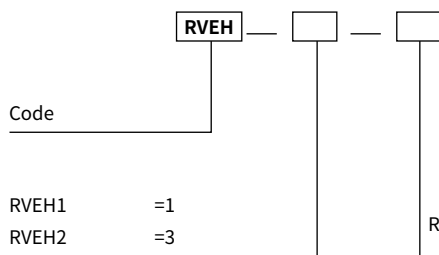
Section view

· RVEH1、RVEH3



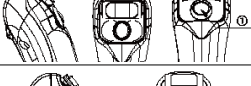
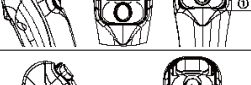
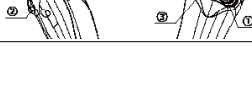
1. Clamp plate
2. Valve body A
3. Spring seat
4. Return spring
5. Valve body B
6. Top cover
7. Angle sensor
8. Rubber boot
9. Reserved area for PCB board

Ordering code



No button joystick	=N0
Single button joystick	=N1
Dual button joystick	=N2
Three button joystick	=N3
Four button joystick	=N4
Rocker switch+single button joystick	=A1
Rocker switch+dual button joystick	=A2
Rocker switch+three button joystick	=A3
Finger wheel+single button joystick	=B1
Finger wheel+dual button joystick	=B2
Dial wheel+three button joystick	=B3

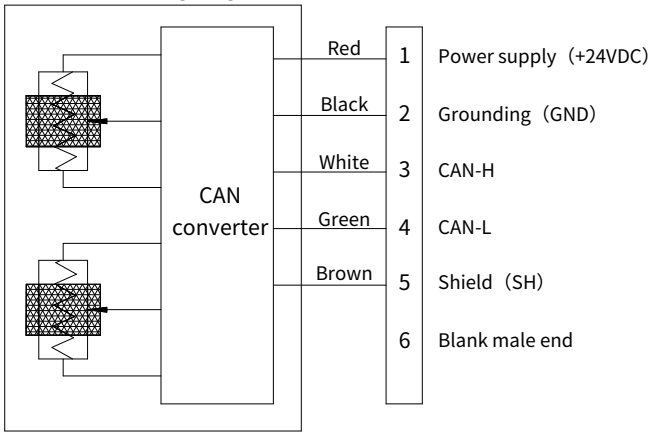
Schematic diagram of joystick

Describe	Number	Graphic
No button joystick	N0	
Single button joystick	N1	
Dual button joystick	N2	
Three button joystick	N3	
Four button joystick	N4	
Rocker switch+single button joystick	A1	
Rocker switch+dual button joystick	A2	
Rocker switch+three button joystick	A3	
Finger wheel+single button joystick	B1	
Finger wheel+dual button joystick	B2	
Dial wheel+three button joystick	B3	

Hydraulic diagram

• RVEH1

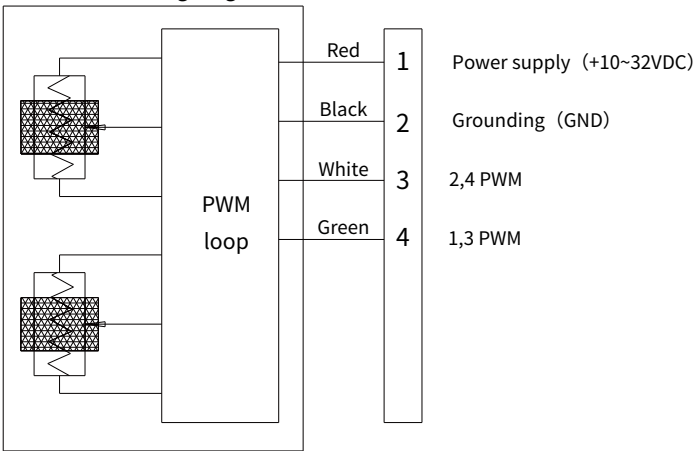
Electrical wiring diagram



02

• RVEH3

Electrical wiring diagram



Technical data

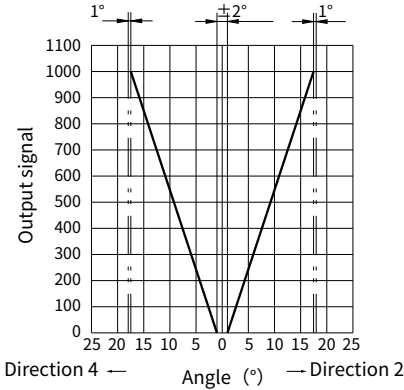
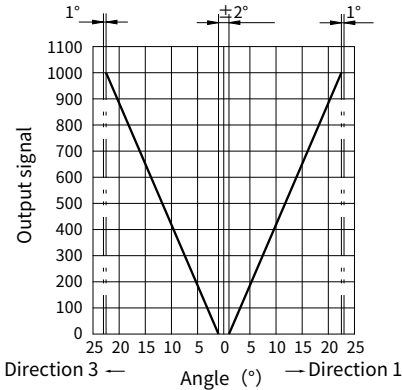
• RVEH1

Power supply	Voltage	10 ~ 32VDC			
	Current consumption	< 100mA			
	Impulse current	< 10A			
Signal output	Communication protocol	CAN (SAE J1939)			
	Source address	249			
	Communication rate	250kbps			
	Sampling period	10ms			
	Output accuracy	Temperature range	Neutral position	+END	-END
		-10~15℃	±2%	±1% -2%	+2% -1%
		-40~75℃	±3%	+1% -4%	+4% -1%
	Hysteresis	< 1.6%			
Mechanical neutral position		< 0.5			
Application temperature range		-40 ~ 75℃			

02

Joystick output signal

• RVEH1



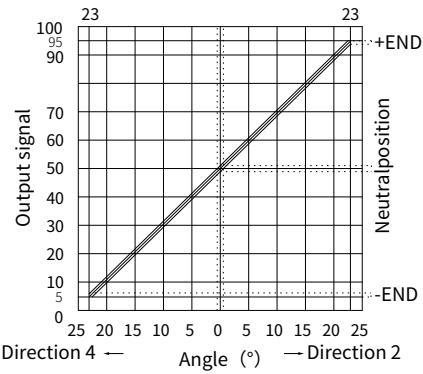
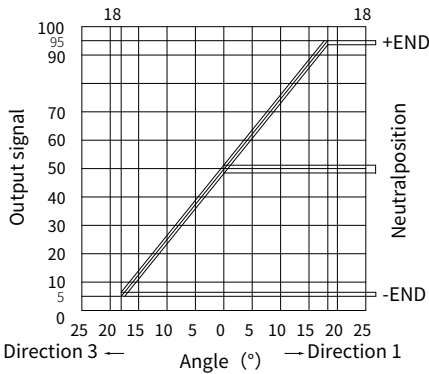
Technical data

• RVEH3

Power supply	Voltage	10 ~ 32VDC			
	Current consumption	1.0V < Output voltage < 4.0V			
Signal output	Output form	PWM			
	PWM Duty cycle	5~95%			
	PWM Frequency	500±50HZ			
	Output accuracy	Tempetature range	Neutralposition	+END	-END
		-10~15°C	±2%	±1% -2%	+2% -1%
		-40~75°C	±3%	+1% -4%	+4% -1%
	Hysteresis	< 1.6%			
Mechanical neutral position		< 0.5			
Application temperature range		-40 ~ 75°C			

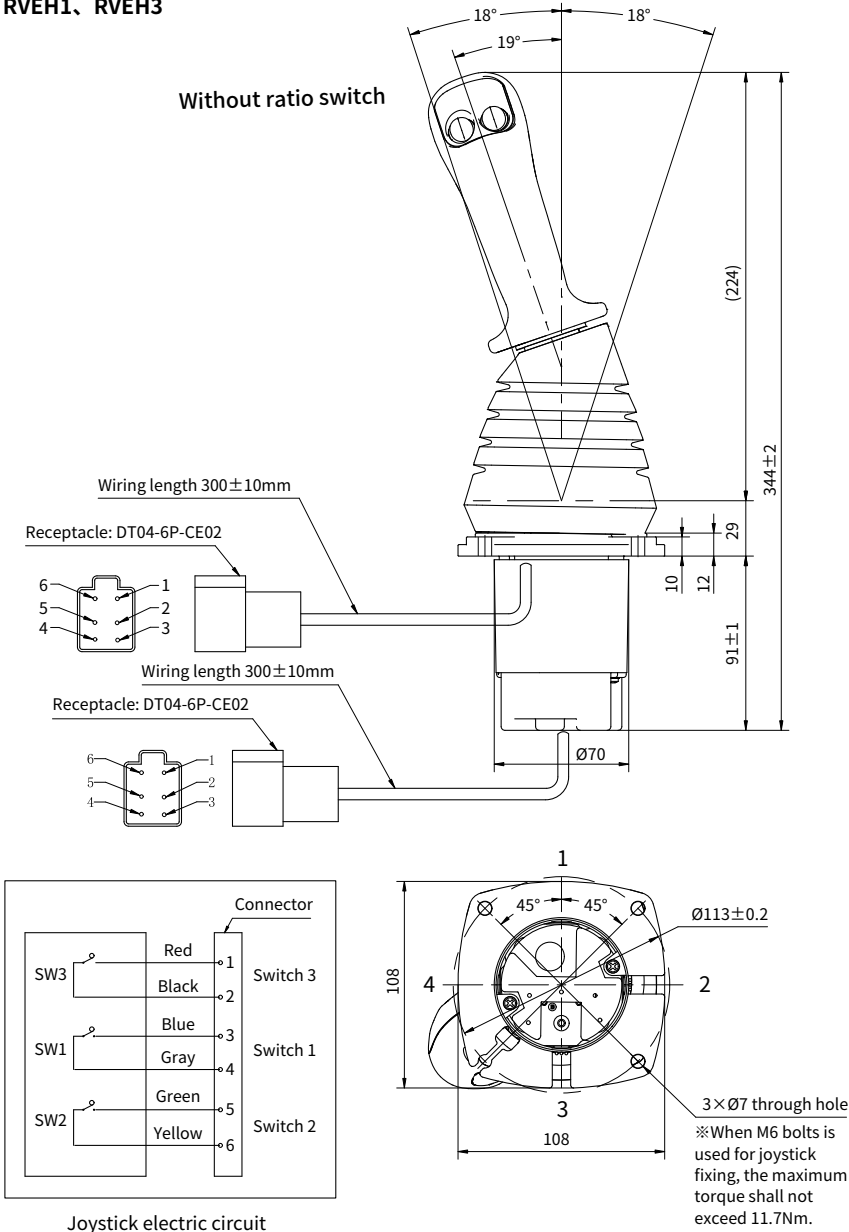
Joystick output signal

• RVEH3



Unit dimension

• RVEH1、RVEH3



Unit dimension

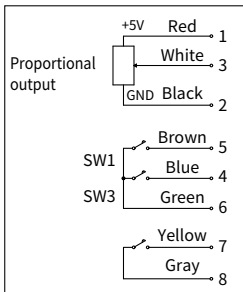
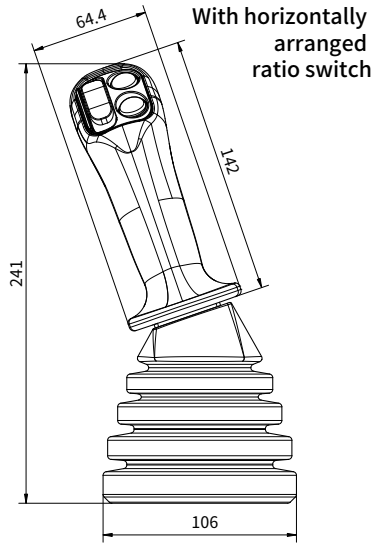
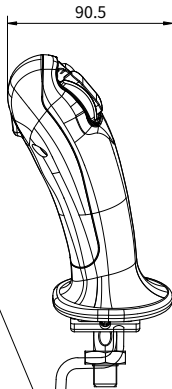
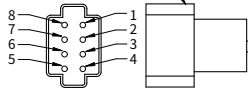
· RVEH1、RVEH3

Wiring length $300 \pm 10\text{mm}$

Receptacle: DT04-8PA-CE02

Wedge: W8P

Pin: 0460-202-16141



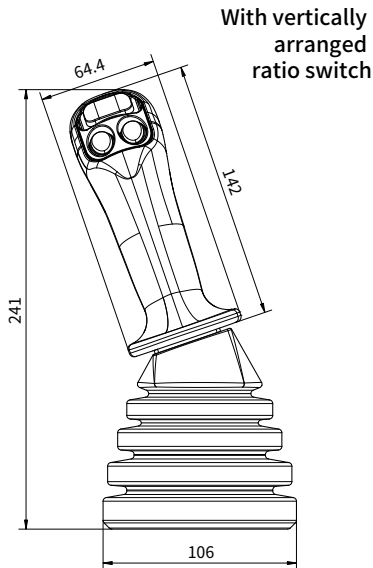
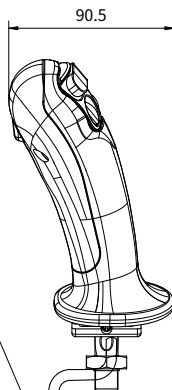
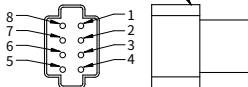
Joystick electric circuit

Wiring length $300 \pm 10\text{mm}$

Receptacle: DT04-8PA-CE02

Wedge: W8P

Pin: 0460-202-16141



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2.1.2

ELECTRIC PILOT REMOTE CONTROL JOYSTICK

Type : RVEH2

Benefits:

- Several ergonomic grips with various E contacts
- CAN BUS output
- High proportional output accuracy



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Features	03
Ordering code	04
Hydraulic diagram	04
Joystick output signal, Technical data	05
Unit dimension	06

Features

1. General introduction

- Two sensors integrated.
- Proportional output to the angle.
- Integrated PCB board, CAN-Bus output available.
- It can be used for more than 10 million cycles.

2. Applications



Excavator



Tractor loader backhoes

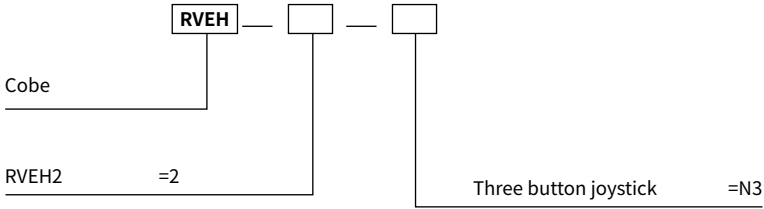


Wheel loaders



Cranes

Ordering code

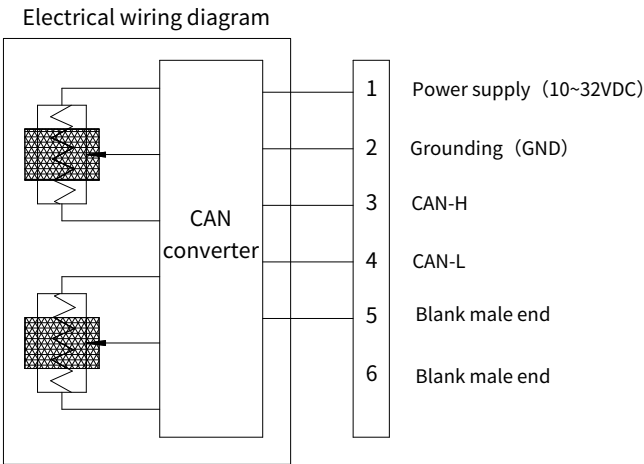


Schematic diagram of joystick

Describe	Number	Graphic
Three button joystick	N3	

Hydraulic diagram

· RVEH2



Technical data

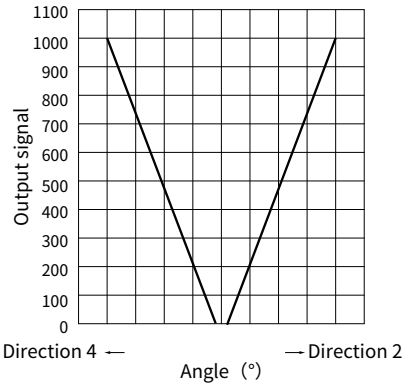
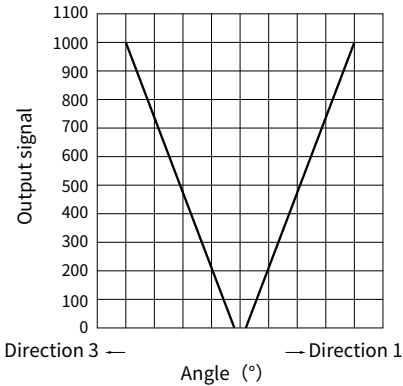
• RVEH2

Power supply	Voltage	10 ~ 32VDC			
	Current consumption	< 100mA			
	Impulse current	< 10A			
Signal output	Communication protocol	CAN (SAE J1939)			
	Source address	249			
	Communication rate	250kbps			
	Sampling period	20ms			
	Output accuracy	Temperature range	Neutral position	+END	-END
		-10~15°C	±2%	±1% -2%	+2% -1%
		-40~75°C	±3%	+1% -4%	+4% -1%
	Hysteresis	< 1.6%			
Mechanical neutral position		< 0.5			
Application temperature range		-40 ~ 75°C			

02

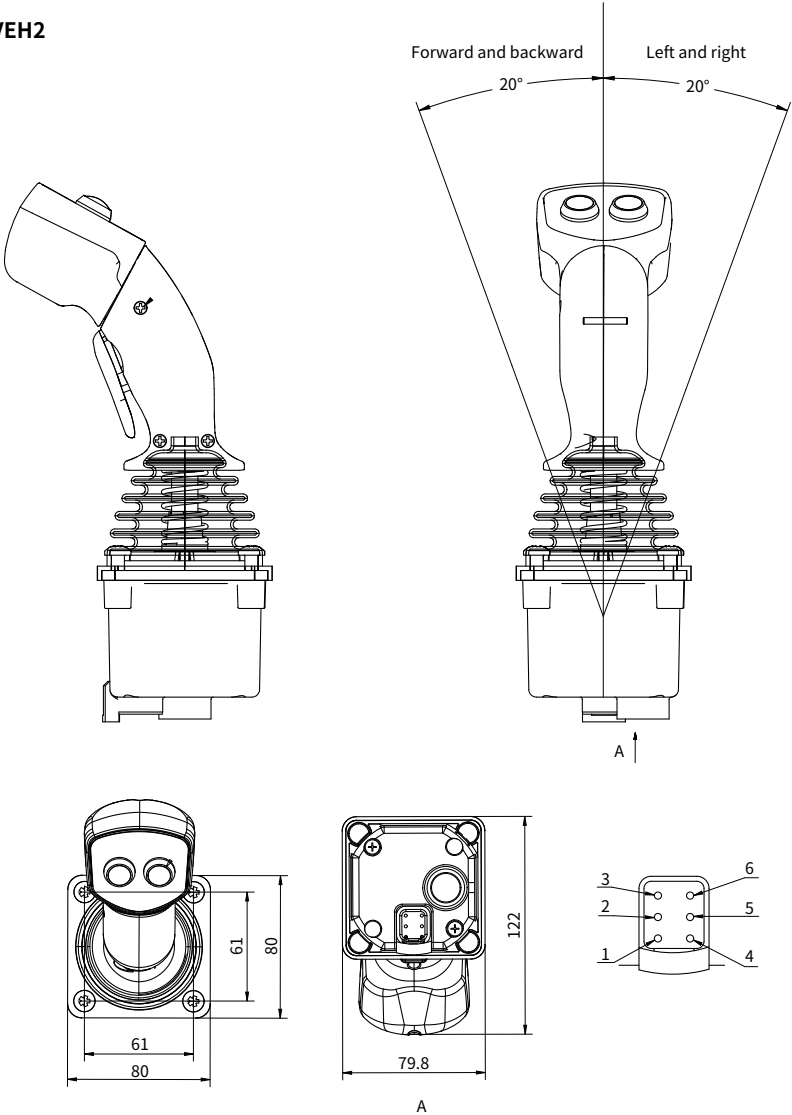
Joystick output signal

• RVEH2



Unit dimension

· RVEH2



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