



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



RVEH1  
(Multi-function handle lever)



RVEH3

## Contents

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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



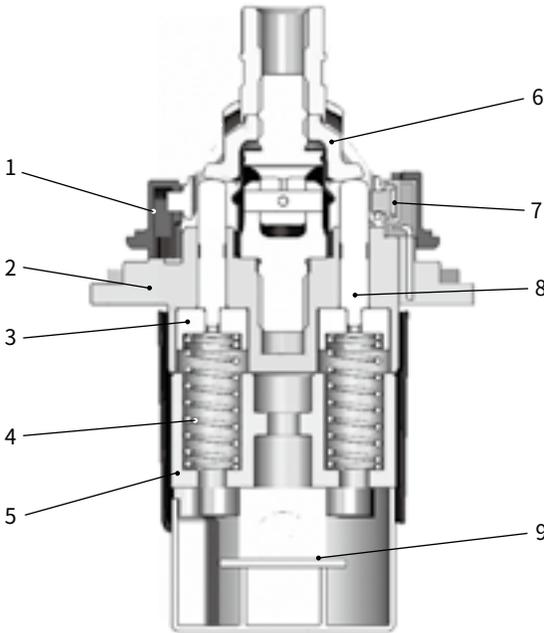
Wheel loaders



Cranes

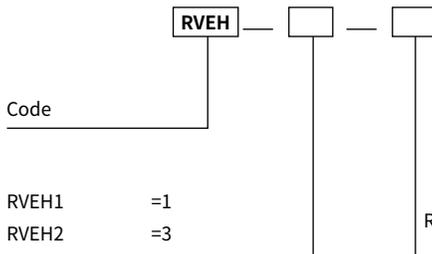
## Section view

· RVEH1、RVEH3



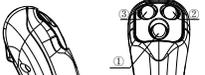
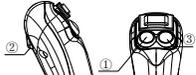
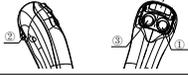
- 1. Clamp plate
- 2. Valve body A
- 3. Spring seat
- 4. Return spring
- 5. Valve body B
- 6. Top cover
- 7. Angle sensor
- 8. Rubber boot
- 9. Reserved area for PCB board

## Ordering code



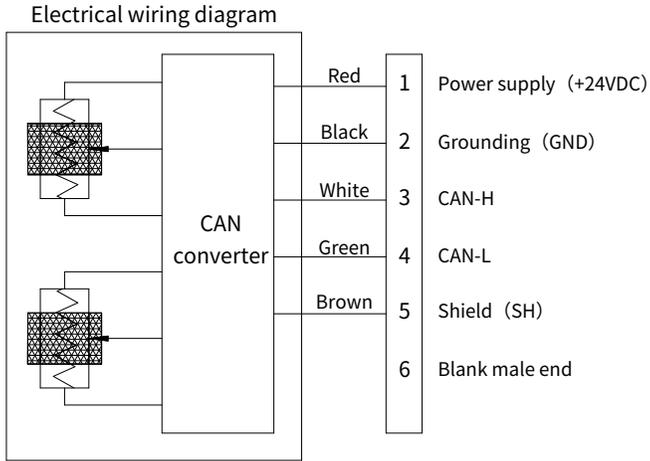
- No button joystick =N0
- Single button joystick =N1
- Dual button joystick =N2
- Three button joystick =N3
- Four button joystick =N4
- Rocker switch+single button joystick =A1
- Rocker switch+dual button joystick =A2
- Rocker switch+three button joystick =A3
- Finger wheel+single button joystick =B1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

## Schematic diagram of joystick

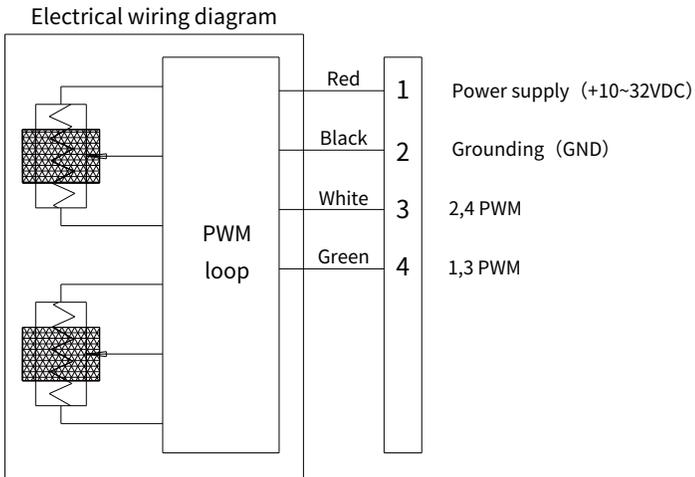
Describe	Number	Graphic
No button joystick	N0	
Single button joystick	N1	
Dual button joystick	N2	
Three button joystick	N3	
Four button joystick	N4	
Rocker switch+single button joystick	A1	
Rocker switch+dual button joystick	A2	
Rocker switch+three button joystick	A3	
Finger wheel+single button joystick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

## Hydraulic diagram

### · RVEH1



### · RVEH3



## Technical data

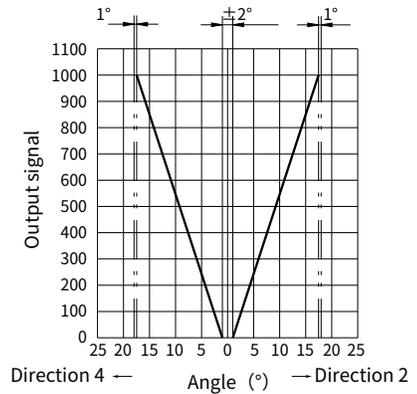
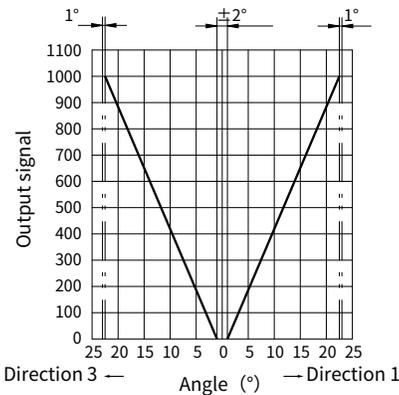
• RVEH1

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°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

• RVEH1



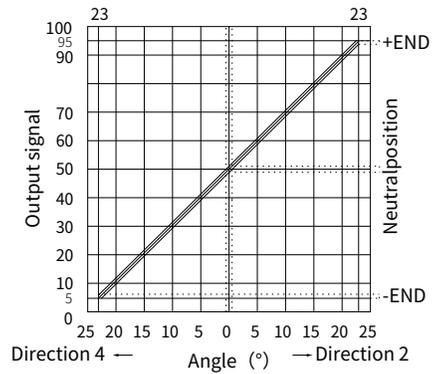
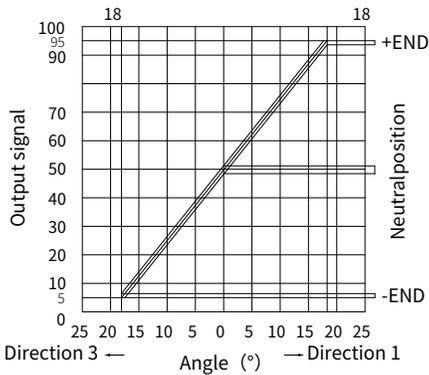
## Technical data

### · 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	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			

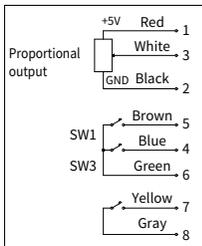
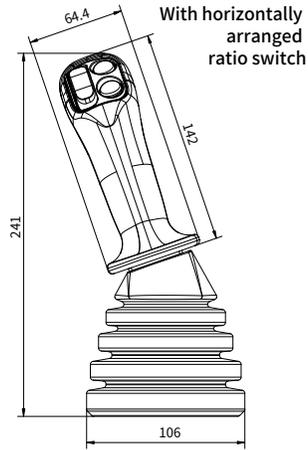
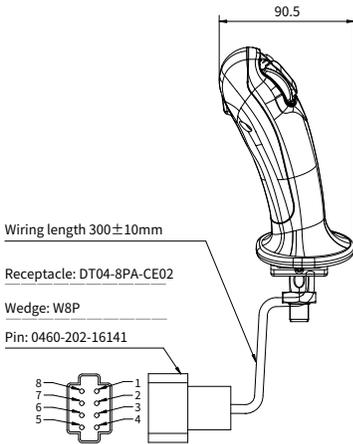
## Joystick output signal

### · RVEH3

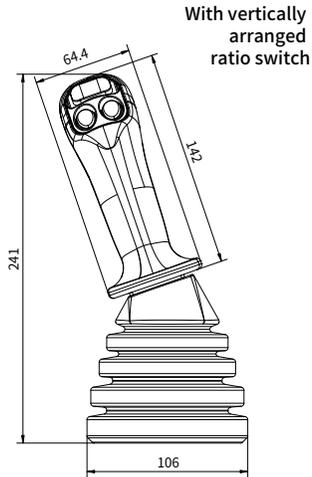
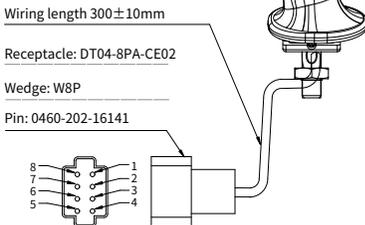




· RVEH1、RVEH3



Joystick electric circuit



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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



## Contents

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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

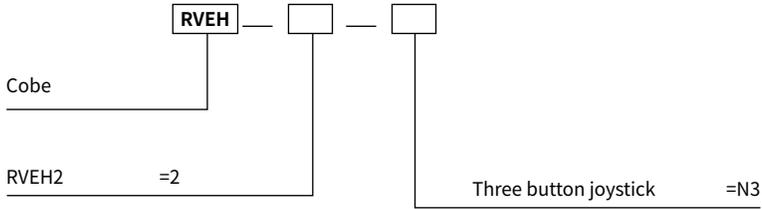


Wheel loaders



Cranes

### Ordering code

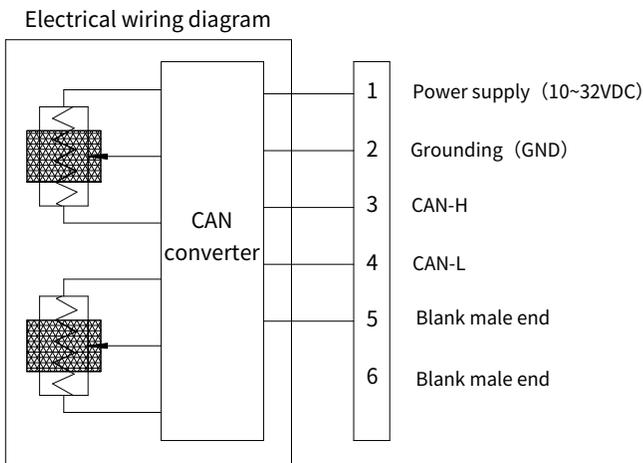


### Schematic diagram of joystick

Describe	Number	Graphic
Three button joystick	N3	

### Hydraulic diagram

• RVEH2



## Technical data

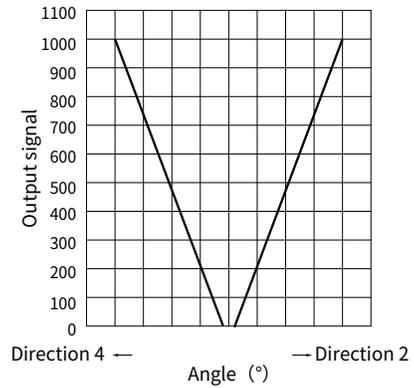
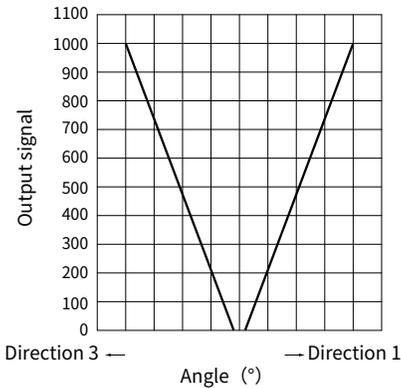
• RVEH2

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

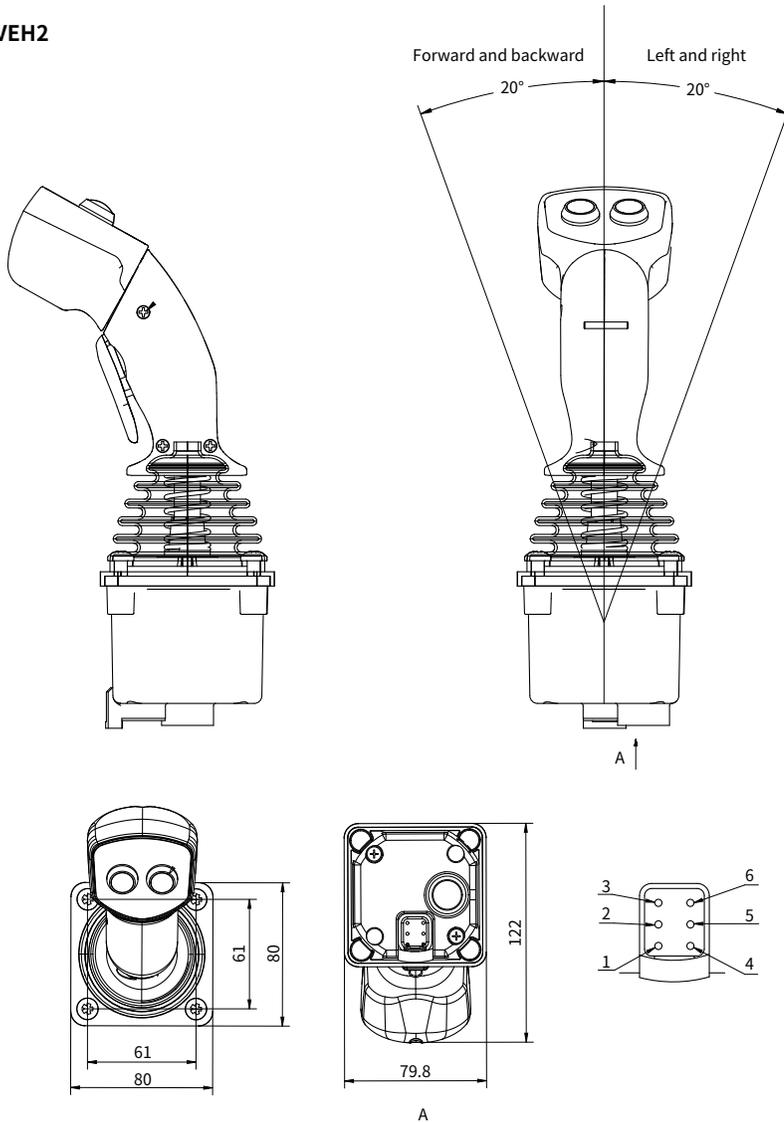
## Joystick output signal

• RVEH2



## Unit dimension

· RVEH2



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