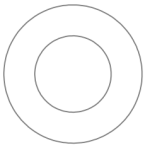
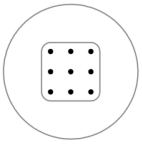
M18 Series

Dual-axis Hall-effect thumb joystick





M18-RR
Spring-return



M18-MM
Nine-position detent

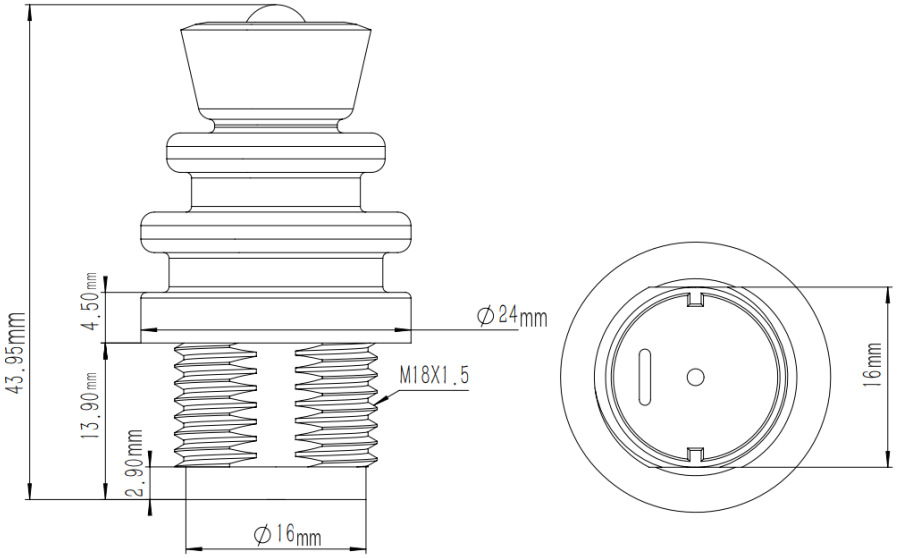
Key features

- Dual-channel output
- 3D Hall-effect sensing
- IP65–IP68 protection rating (customised on request)
- Output: analogue (0.5–4.5 V) / PWM (optional)
- Mechanical mode: spring-return / nine-position detent friction (optional)
- Top push-button output (optional)
- M18×1.5 mounting thread

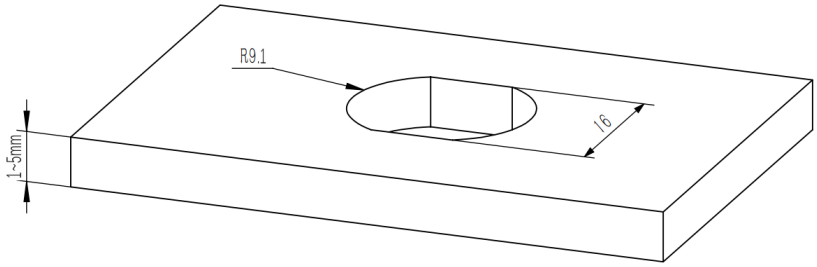
This document is for selection reference only. Final parameters, configurations and supply terms are subject to confirmation with Gudao and to the technical documents or contract agreed by both parties.

Chengdu Gudao Technology Co., Ltd.
No. 24, Section 1, South 1st Ring Road, Wuhou District, Chengdu, Sichuan, China
Tel / WeChat: +86 139 8004 0082 · Email: 13980040082@139.com · www.gudao-tech.com

General mounting dimensions



Recommended panel cut-out



General parameters · Environment

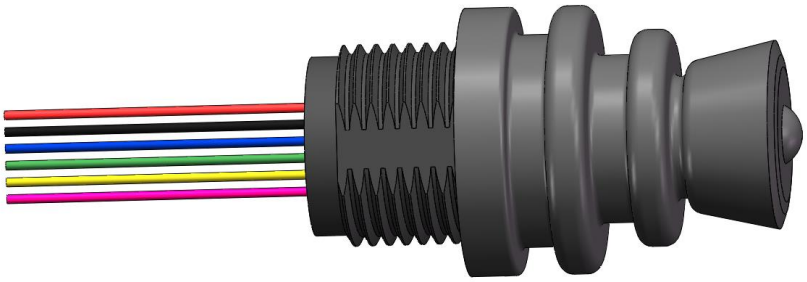
Protection rating	IP65–IP68 (customised on request)
Operating temperature	−40 °C to +85 °C
Storage temperature	−40 °C to +85 °C
EMC	Testing to the applicable standard (e.g. EN ISO 14982, ISO 13766-1) can be arranged per project.

This document is for selection reference only. Final parameters, configurations and supply terms are subject to confirmation with Gudao and to the technical documents or contract agreed by both parties.

Chengdu Gudao Technology Co., Ltd.
No. 24, Section 1, South 1st Ring Road, Wuhou District, Chengdu, Sichuan, China
Tel / WeChat: +86 139 8004 0082 · Email: 13980040082@139.com · www.gudao-tech.com

Electrical parameters

Supply voltage	5 V
Output mode	Dual-channel analogue / dual-channel PWM
Output voltage range	0.5–4.5 V (customisable)
PWM duty cycle range	5%–95% (customisable)
PWM frequency	1000 Hz
Output current	8 mA (analogue output); 20 mA (PWM output)
Sensing method	Hall-effect



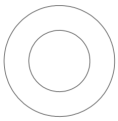
Wiring

Wire colour	Function
Red	Supply +5 V
Black	GND
Blue	OUT1
Green	OUT2
Yellow (optional)	Button terminal A
Purple (optional)	Button terminal B

This document is for selection reference only. Final parameters, configurations and supply terms are subject to confirmation with Gudao and to the technical documents or contract agreed by both parties.

Chengdu Gudao Technology Co., Ltd.
No. 24, Section 1, South 1st Ring Road, Wuhou District, Chengdu, Sichuan, China
Tel / WeChat: +86 139 8004 0082 · Email: 13980040082@139.com · www.gudao-tech.com

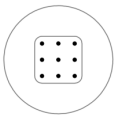
M18-RR · Spring-return



Operating characteristic: always returns to the centre position.

Maximum angle (each direction)	±25°
Operating force	3 N ± 0.5 N
Service life	> 1,000,000 cycles
Centring accuracy	0.3°

M18-MM · Nine-position detent friction



Operating characteristic: nine discrete positions with a detent feel; the stick stays where it is placed.

Operating angle (non-diagonal, each direction)	±25°
Operating force	2 N ± 0.5 N
Service life	> 1,000,000 cycles

This document is for selection reference only. Final parameters, configurations and supply terms are subject to confirmation with Gudao and to the technical documents or contract agreed by both parties.

Chengdu Gudao Technology Co., Ltd.
No. 24, Section 1, South 1st Ring Road, Wuhou District, Chengdu, Sichuan, China
Tel / WeChat: +86 139 8004 0082 · Email: 13980040082@139.com · www.gudao-tech.com

M18 series ordering code

M18	-	MM	-	N	-	45

Series

M18

Operating type

RR = spring-return

MM = nine-position detent friction

Top button

N = without top button

K = with top button

Output type

50 = 0–5 V

45 = 0.5–4.5 V

40 = 1–4 V

PWM = PWM output

Example: M18-MM-N-45 = M18 series, nine-position detent friction, without top button, 0.5–4.5 V analogue output.

This document is for selection reference only. Final parameters, configurations and supply terms are subject to confirmation with Gudao and to the technical documents or contract agreed by both parties.

Chengdu Gudao Technology Co., Ltd.
No. 24, Section 1, South 1st Ring Road, Wuhou District, Chengdu, Sichuan, China
Tel / WeChat: +86 139 8004 0082 · Email: 13980040082@139.com · www.gudao-tech.com