

Fingertip Joystick

JFT...

Single-axis joystick for easy and ergonomic actuation

- + Compact design for simple "on top" installation in control panels
- + Parallel arrangement in the tightest installation spaces possible
- + High reliability and long lifetime thanks to contactless, shielded Hall Effect technology
- + Developed for adverse environmental conditions, protection class IP 67 (electronics)
- + Completely sealed above installation level, protection class IP 67
- + Angled actuator with soft-touch finger rest for optimum ergonomics
- + Colour-coded actuator cap and customized symbol imprints for maximum user-friendliness



Use

Due to its compact design, the fingertip joystick is ideal for use in control panels and armrests. The area of application ranges from industrial trucks, agricultural and construction machinery to countless industry applications.

The JFT with its easy "on top" installation and unique ergonomic design is the optimum solution for controlling functions in forklifts, tractors and wheel loaders.

Variants

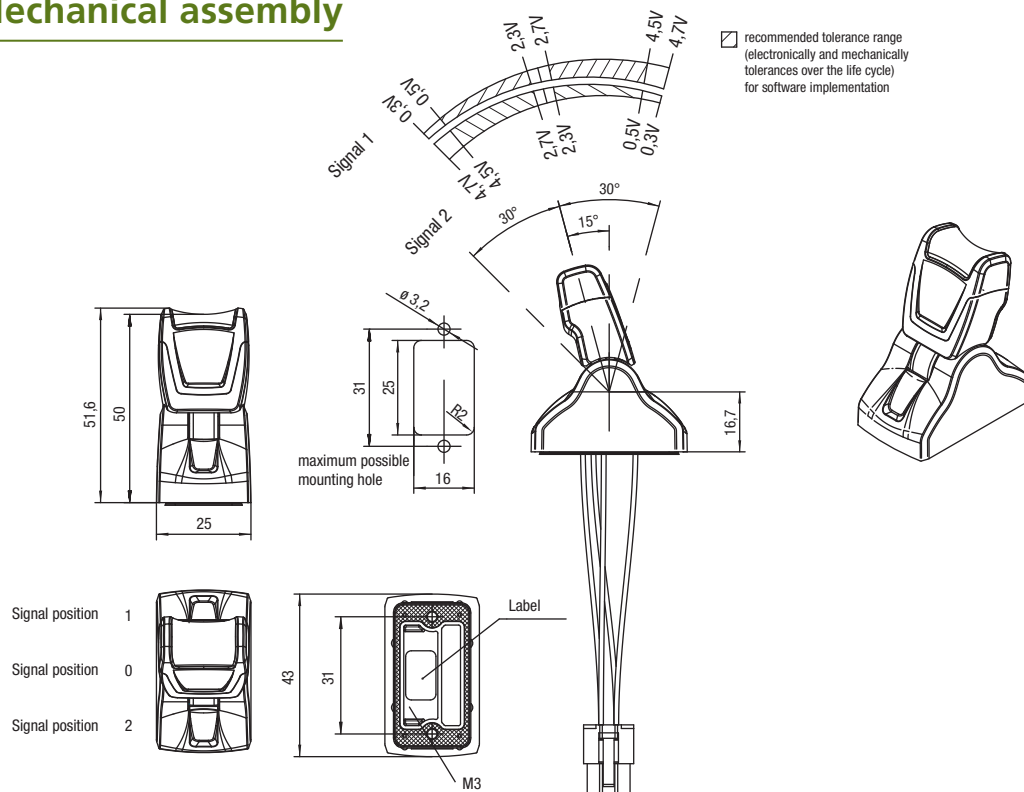
The JFT is available with single and dual channel, ratiometric-analogue output signals. The detent or no-detent end positions allow a broad range of commercial vehicle functions to be implemented. The large selection of actuator colours and symbols enable the operator to visually assign functions.

The relevant corresponding technical documents will be supplied with the product.

Certain product descriptions can be similar therefore please ensure that you have the latest version of documentation for your specific product prior to any use. elobau reserves the right to change technical data and documentation without notice.

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Mechanical assembly



Installation dimensions

Installation size	43 x 25 x 51.6 mm installation depth below fastening level 0 mm
Installation	Threaded holes for 2 x M3 screws
Height of operating lever	35 mm from pivot point

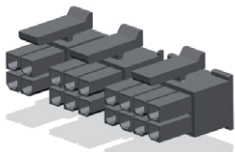
Key mechanical data

Technology	Contactless Hall sensor technology
Actuation	Single-axis
Mechanical service life	≥ 5 million cycles - no detent ≥ 4 million cycles - detent
Deflection	± 30°
Actuation type	No detent, detent, no detent with feel points
Actuation force	No detent 3.5 N... 4 N Detent 12 N... 14 N
Detent position	± 30°
Position of feel points	± 23°
Static capacity	200 N at 35 mm from pivot point
Chemical resistance	petrol, diesel, biodiesel, motor oil, gear oil, brake fluid, grease, antifreeze, degreaser/cold cleaner, salt water, cola, coffee, urea, NPK fertiliser, antifreeze windscreen washer, washing solution

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Working temperature range	-40°C...+85°C DIN IEC 68
Storage temperature range	-40°C...+105°C DIN IEC 68
Protection class electronic	IP 69K DIN EN 60529
Protection class mechanical	IP 54 DIN EN 60529
Protection class above installation level	IP 69K DIN EN 60529
Connection wire outlet	0.1 mm ² , 0.34 mm ² , 0.5 mm ²
Connector	4/6 pin Molex Mini-Fit Jr. series 5557 4/6 pin Molex Micro-Fit
Wire length	300 mm ±15



Molex Micro-Fit

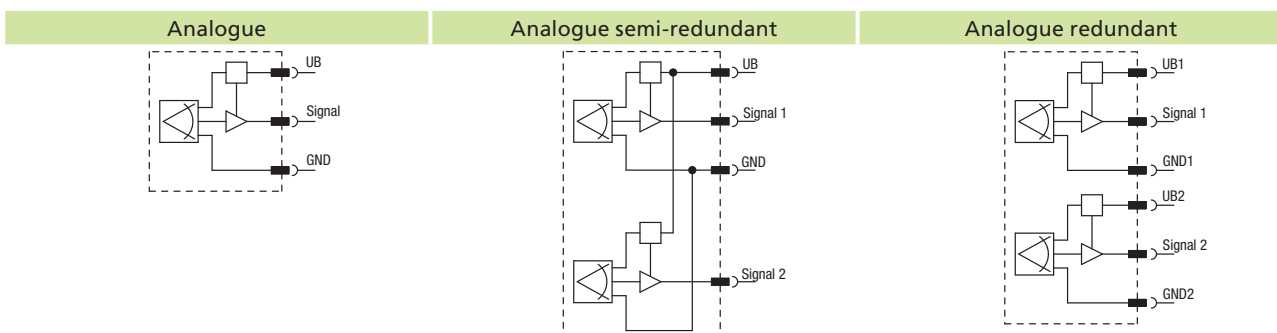


Molex Mini-Fit Jr.

Analogue electrical data

	Analogue output
Operating voltage	4.5...5.5 V DC
Max. operating current	15 mA
Output signal	0.5...4.5 V DC
Neutral position	2.5 V DC
Load resistance	> 20 kΩ
EMC	Tested in accordance with DIN EN 12895 (Electromagnetic compatibility for industrial trucks) Tested in accordance with DIN EN 13309 (Electromagnetic compatibility for construction machinery) Tested in accordance with DIN EN ISO 14982 (Electromagnetic compatibility for agricultural and forestry machinery) Tested in accordance with DIN EN ISO 13766 (Earth-moving machinery — Electromagnetic compatibility)
Power frequency magnetic field immunity test in accordance to 61000-4-8	4000 A/m, ± 3,5 %

Wiring

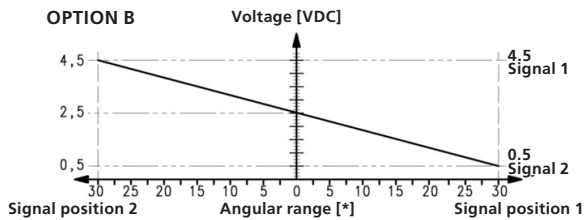
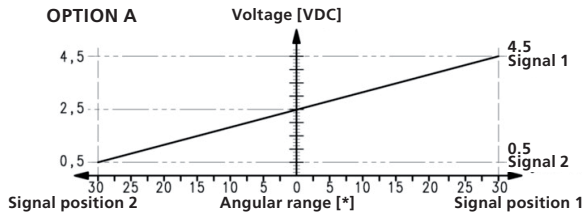


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Circuitry signal pattern

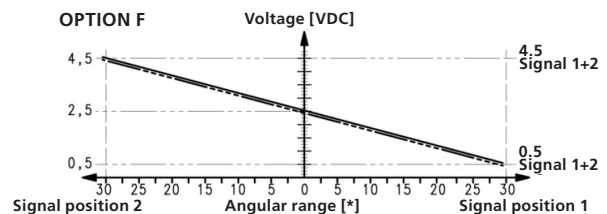
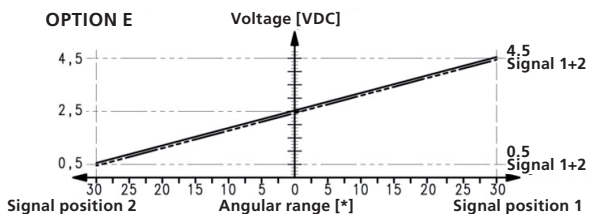
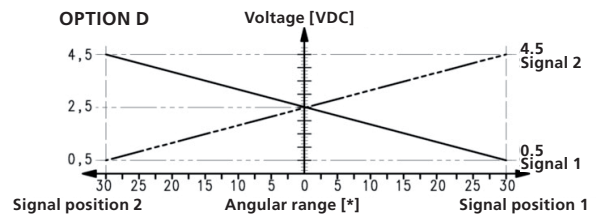
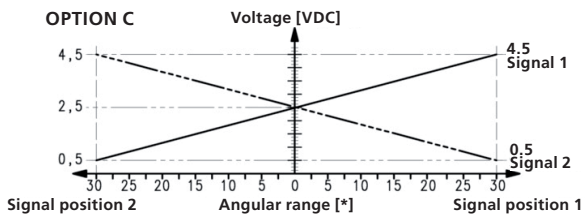
Analogue, one signal output

- 4.5...0.5 V DC, $\pm 30^\circ$ displacement
- 0.5...4.5 V DC, $\pm 30^\circ$ displacement



Analogue, two signal outputs

- Opposing signals, 0.5...4.5 V DC/4.5...0.5 V DC, $\pm 30^\circ$ deflection
- Synchronous signals, 0.5...4.5 V DC or 4.5...0.5 V DC, $\pm 30^\circ$ deflection













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Actuator colours



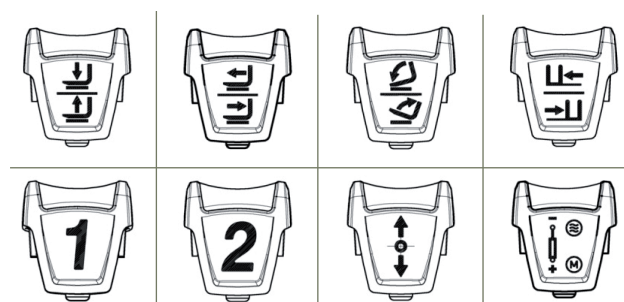
The following actuator colours are included in our standard range:

	RAL 9004 Signal Black		RAL 3001 Signal Red
	RAL 5005 Signal Blue		RAL 6010 Grass Green
	RAL 1023 Traffic Yellow		RAL 8001 Ochre Brown
	RAL 2010 Signal Orange		RAL 7042 Traffic Grey A
	RAL 7043 Traffic Grey B		RAL 4008 Signal Violet

Symbols

Individual symbols can be printed by means of pad printing and hot embossing.
 The maximum size for symbols is 9 x 13 mm.

Some examples of symbols:

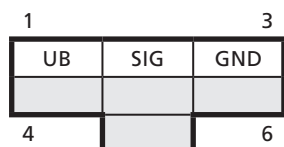


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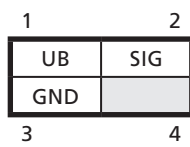
Standard pin assignment

Illustration shows all connectors viewed from wire side.

Analogue single-channel

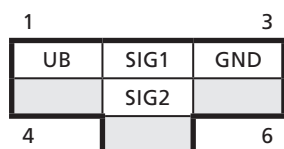


6-pin male connector

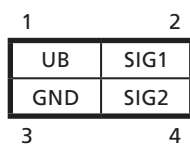


4-pin male connector

Analogue semi-redundant

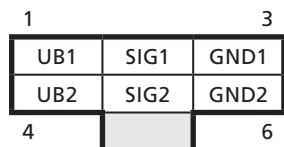


6-pin male connector



4-pin male connector

Analogue fully-redundant



6-pin male connector

Specifications are defined using our online configurator at http://www.elobau.com/elobau_konfiguratoren/JFT

