



Built for heavy duty

The Caldaro C14 joystick provides the best combination of full grip size and perfect precision. It's large enough to match the full-sized heavy-duty machines and strong enough to withstand the toughest operators. You can rely on the C14 to stay intact and keep its detent year after year.

It stands all the tests we can think of

- **All temperatures** – Hot or cold, the C14 will endure all temperatures from -40°C to $+85^{\circ}\text{C}$.
- **The best materials** – The best material has been chosen for each component. The rubber mixture endures the toughest conditions.
- **The strongest shaft** – The shaft is manufactured in one single piece with extended dimensions, which makes it practically impossible to bend.
- **Protected from fluids** – Thanks to its sealed panel mounting, the electronics are protected from all kinds of fluids and chemicals, such as water, salt, and oil.
- **Precision that lasts** – It will withstand more than 10 million operations and keep its detent precision.

Developed with customer input

- Tested in salt and copper mines.
- The guide feeling is excellent.
- Made in Sweden.

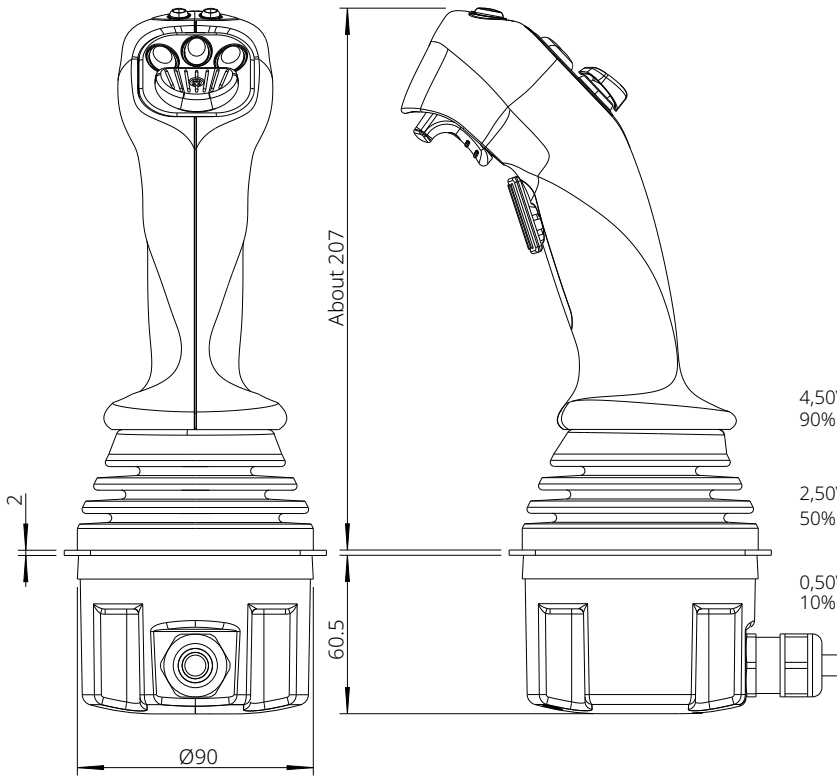
The C14 is available with a palette of handles to be suitable for every situation. We can do custom-made handles even with a relatively small production batch; see the below examples.



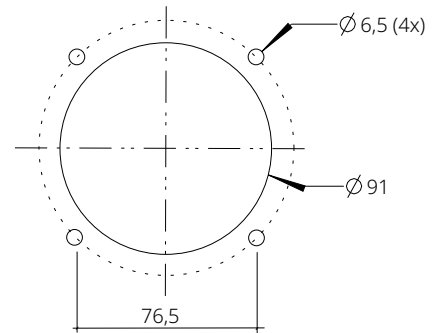


JOYSTICK C14

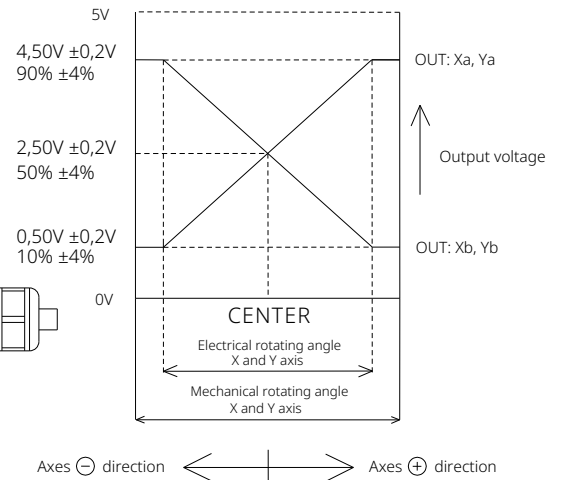
STANDARD DIMENSIONS



PANEL CUTOUT



OUTPUT CHARACTERISTICS



SPECIFICATIONS

MECHANICAL AND ELECTRICAL SPECIFICATIONS

Mechanical operating angle	X/Y axis: ±12° or ±20°
Operating force	X/Y axis: ≈4N–8,5N (≈400gf–850gf)
Lever strength	Max 500N (max 50kgf) (Static load)
Life expectancy	10,000,000 full operations
Sensor type	Hall-effect
Total current consumption	Typically 17mA; max 22mA
Applied voltage	5VDC ±10%
Load resistance	4,7kΩ–100kΩ pull down

Effective output	≈10%–90% V _{in}
Resolution	Essentially infinite

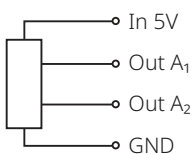
ENVIRONMENTAL SPECIFICATIONS

Operating temperature range	–40°C to +85°C
Storage temperature range	–40°C to +85°C
EMC	100V/m
ESD	±8kV (contact discharge) ±15kV (air discharge)

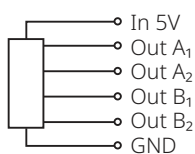


OUTPUT OPTIONS

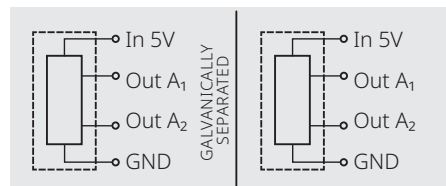
SINGLE OUTPUT



DUAL OUTPUT



DUAL INDEPENDENT OUTPUT



CAN INTERFACE

CANOpen or J1939 protocol

