

Simplicity

By reducing the number of components, Caldaro has managed not only to simplify the design of this pedal, but also to give it more precision, better ergonomics and resistance to challenging environments. This ensures a longer lifetime, improved reliability, and higher end-user value.

Compact, tough, precision

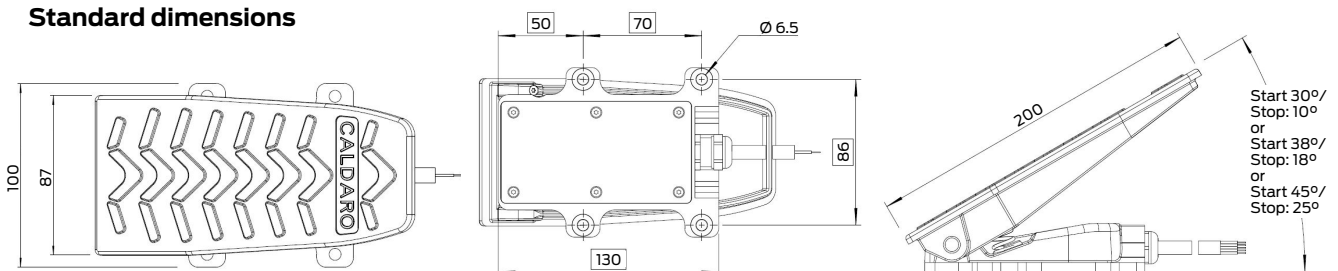
- **Few components, less problems** – Our team fundamentally readdressed pedal design. The result is a better product with a reduced component count for improved reliability and electronics are protected by placement inside the casted pedal house.
- **Low pivot point** – Our pedal improves both ergonomics and control precision. Comfort is assured as an operator may rest his heel on the floor or floorboard.
- **Compact design** – The compact and rational design with its casted plate and slimmed housing might fool you, but the P09 pedal contains hi tech that will fit in the most complexed machines.
- **Withstands tough conditions** – The electronics are coated and sealed. The surface of the pedal body and plate is both anodised and powder-coated. This pedal will withstand virtually all chemicals and offers extreme wear resistance.

It's time for a modern pedal

This pedal represents a radical new way of designing a pedal – attractive and made in Sweden! For the best ergonomics in your application, the P09 comes in three standard angles. Customised logotypes on the pedal plate are available upon request.



Standard dimensions





P09

Specifications

Mechanical and electrical specifications

Start angle	Standard 30°, 38° and 45° Other angle possible on request
Max. Static load	1500 N to treadle at 180 mm from pivot point
Life expectancy	Min. 5,000,000 operations
Sensor type	Hall effect
Total current consumption	17 mA- 22 mA
Independent linearity tolerance	± 1,5% FS (FS=24°)
Applied voltage	5 VDC ± 10%
Load resistance	4,7 kΩ - 100 kΩ pull down
Effective output	Standard 10% - 90% Vin, other ratios on request
Resolution	Essentially infinite

Environmental specifications

Thermal shock	100 cycles -40° C ~ +85° C
Exposure at low temp.	24 hours at -40° C
Exposure at high temp.	1000 hours at +85° C
Operating temp. range	-40° C ~ +85° C
EMC	100 V/m
ESD	According to ISO 11452
	± 8 kV contact discharge
IP-classification	± 15 kV air discharge
	According to ISO 10605
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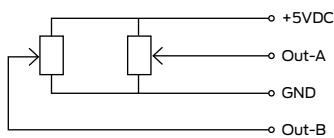
Cable/ harnessing:

Standard 0.5m PUR insulated cable, flying leads. 6 cores size awg 20. With connector Deutsch DTM or DT 4/6-way (male) as option, other types available on request.



Output options

Standard configuration A (dual analog outputs)

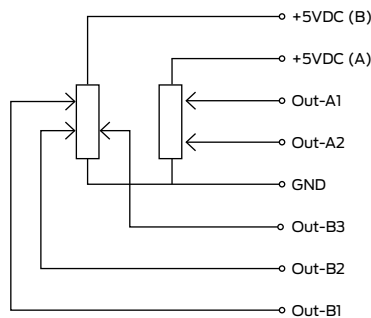


Pinning order

1. +5VDC regulated supply
2. Out A (10-90%)
3. Out B (90-10%)
4. GND

Parallel or non-intersecting outputs and other output ratios available on request.

Standard configuration C (dual analogue + changeover type IVS +kick down signal) +5VDC (B)



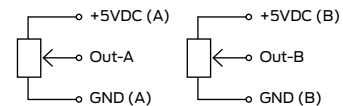
Pinning order

- 1-1. +5VDC regulated supply (A)
- 1-2. Analog Out-A1 (10-90%)
- 1-3. Out-A2* (Kick-down signal. 0V at idle switching to 5V at abt. 80% output on A)
- 1-4. GND
- 2-1. +5VDC regulated supply (B)
- 2-2. Out-B1 (IVS-NC signal open collector output, max 20mA@24VDC. Switching at approx. 16% output on A1)
- 2-3. Out-B2 (IVS-NO signal open collector output, max 20mA@24VDC. Switching at approx. 16% output on A1)
- 2-4. Analog Out-B3 (90-10%)

*Digital outputs from hall-effect sensor.

Other analogue output ratios and IVS/kick-down switch activation points available on request.

Standard configuration D (dual independent analog outputs)

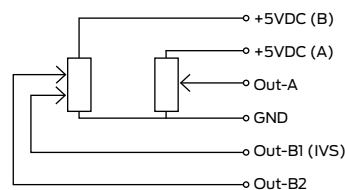


Pinning order

1. +5VDC regulated supply (A)
2. +5VDC regulated supply (B)
3. Analog Out-A (10-90%)
4. Analog Out-B (10-90%)
5. GND (A)
6. GND (B)

Crossed or non-intersecting outputs and other output ratios available on request.

Standard configuration B (dual analog + IVS signal)



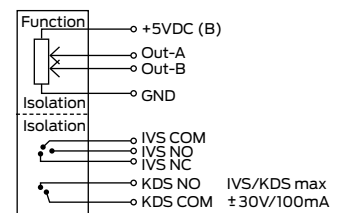
Pinning order

1. +5VDC regulated supply (A)
2. +5VDC regulated supply (B)
3. Analog out-A (10-90%)
4. Out B1* (Idle validation signal. 0V at idle switching to 5V at approx. 16% output on A)
5. Analog Out B2 (90-10%)
6. GND

*Digital output from hall-effect sensor.

Other analogue output ratio and IVS activation point available on request.

Standard configuration F (dual analog + potential free switch)



Pinning order

- 1.1 +5VDC regulated supply (A)
- 1.2 Analogue Out-A (10-90%)
- 1.3 Analogue Out-A (90-10%)
- 1.4 GND
- 2.1 IVS COM
- 2.2 IVS NC (Switching at approx. 16% output on A)
- 2.3 IVS NO (Switching at approx. 16% output on A)
- 2.4 KDS COM
- 2.5 KDS NO
- 2.6 (Empty)

Other analogue output ratios and IVS/kickdown switch activation points available on request.

Controller Area Network:

Available with CANopen & J1939. Please consult us.

Dual analogue output signals are available as following:

• Crossed • Parallel • Non intersecting