ELEN
industrial vehicles sensors

Double Lever Electronic Pedal
XELIDON Series

Hard work is our job

XELIDON Electronic Pedal – Applications

The XELIDON Electronic Pedal is a brand new product in ELEN portfolio.

It has been designed for vehicles which require two separate driving controls for forward and reverse.
It is an alternative solution to hydraulic pedals for hydrostatic transmission vehicles.

This pedal combines mechanical robustness and reliability, and it is suitable to be used in harsh environments.

MAIN FUNCTIONS

- Accelerator pedal for electronically driven heat-engines
- Accelerator pedal for electrically driven vehicles

FIELDS OF APPLICATION

- Counterbalanced forklifts
- Railways vehicles
- Multifunction vehicles
- Electrical vehicles
- Big indoor and outdoor cleaning machines
- Constuction machineries

XELIDON Electronic Pedal – Distinctive features (1/4)

NEW

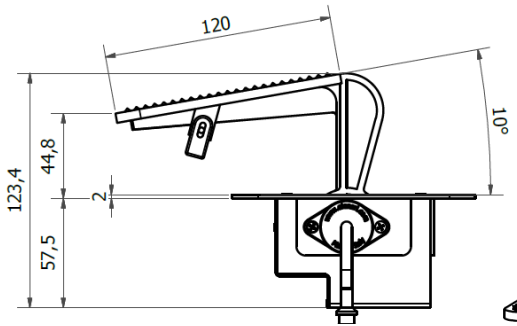
MECHANICAL CONFIGURATIONS

- Double lever floor type pedal
- Ergonomic design
- Robust plastic structure
- Pedal travel: 15°
- Easy mounting solution
- Mounting on the cabin platform
- Customizable fixing flange (metal part)
- Double cable outlet
- Cable lenght and connector type: fully customizable

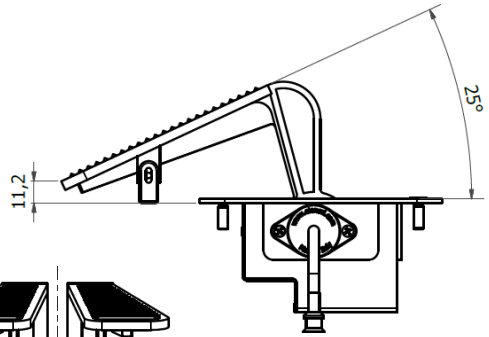
XELIDON Electronic Pedal – Distinctive features (2/4)

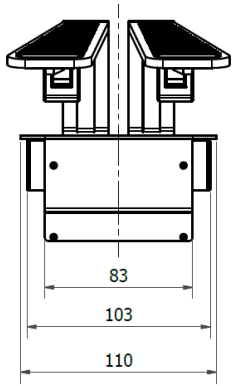
MECHANICAL DIMENSIONS

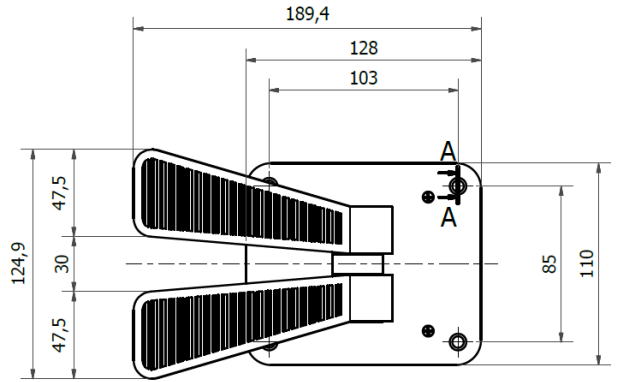
STAND-BY POSITION



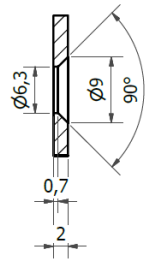
PUSHED POSITION







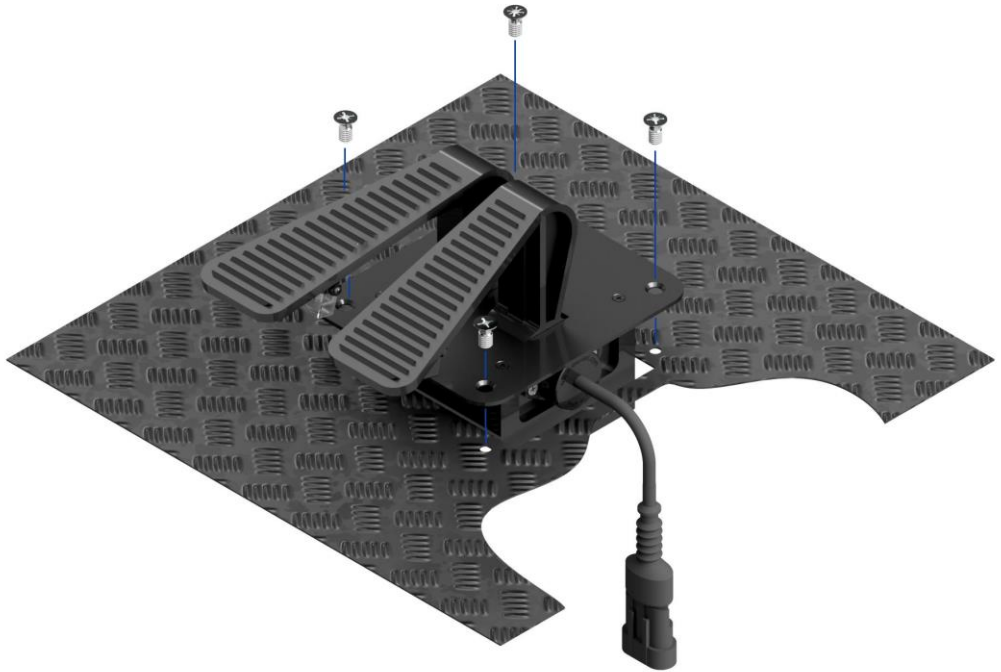
A-A (2 : 1)



XELIDON Electronic Pedal – Distinctive features (3/4)

INTERNAL STRUCTURE

INSTALLATION



XELIDON Electronic Pedal – Distinctive features (4/4)

MECHANICAL LAYOUT AND MOUNTING SIZES

1. STANDARD layout and mounting sizes

2. ADJUSTABLE mounting sizes:

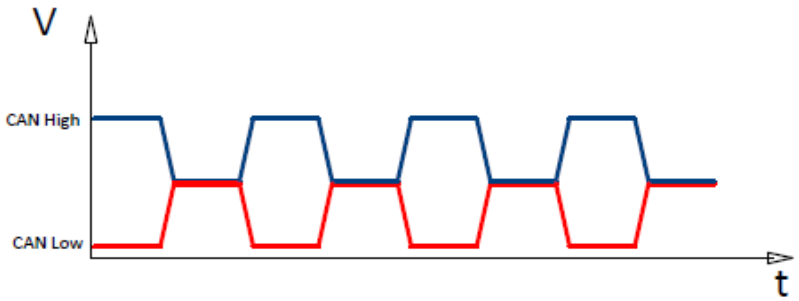
The fixing flange can be realized as a custom element in accordance with specific mounting requirements.

XELIDON Electronic Pedal - Electronic configurations

- Versatile electronics
- Supply voltage: 5V; 10-30V
- Single or double output signal
- Programmable analogue output (current or voltage); min.-max. levels within the supply voltage range
- Single or double IVS (N.O. or N.C.); Programmable tripping threshold
- PWM output available; Programmable [%]duty-cycle
- CAN-BUS output option available (SAE J1939 version); Customizable CAN message

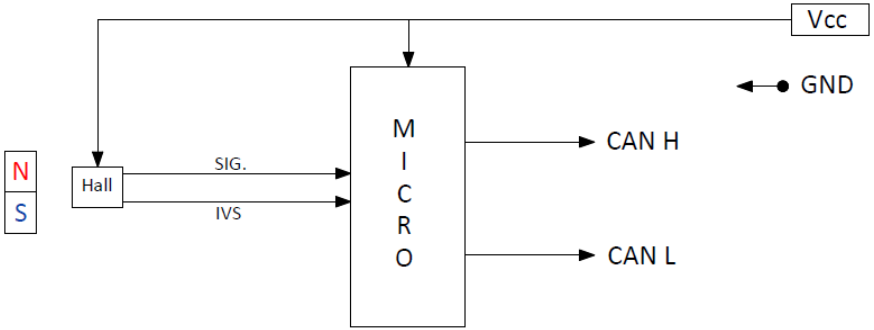
XELIDON Electronic Pedal – CAN J1939 Output

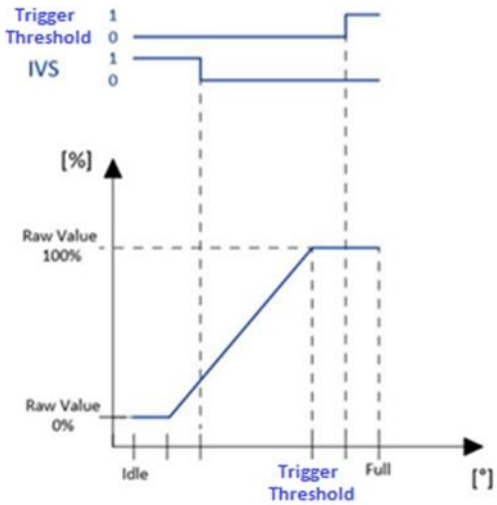
Output Signal



CAN message can be electronically configured in accordance with motor's specific requirements.

Functional Scheme

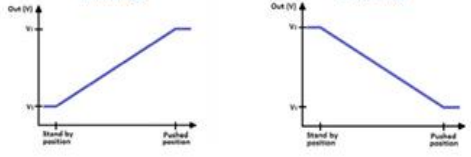




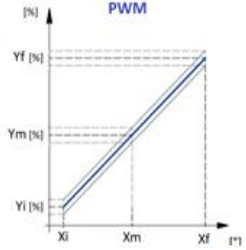
XELIDON Electronic Pedal – Other output configurations

SINGLE SIGNAL

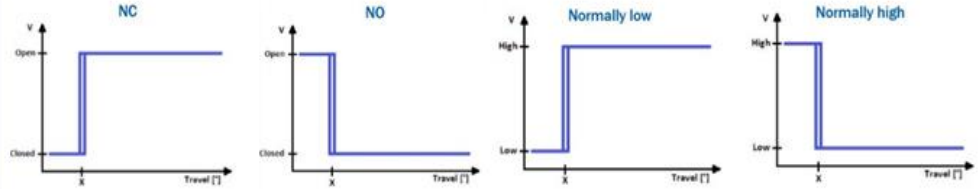
Analogic



PWM

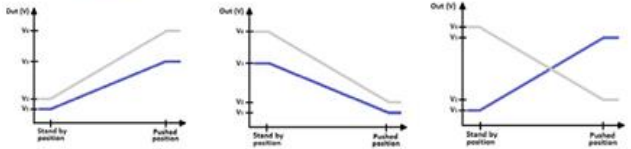


IVS (Idle Validation Switch)

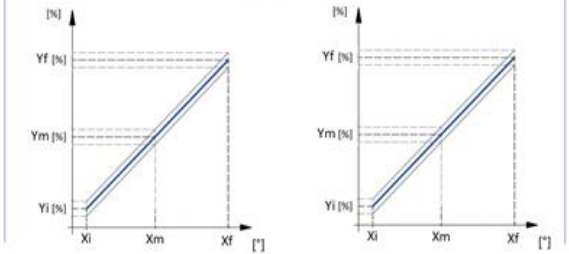


DOUBLE SIGNAL

Analogic



PWM



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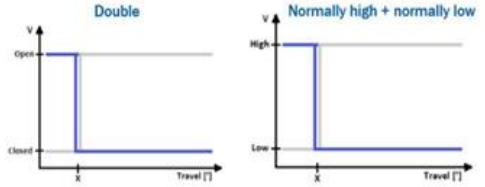

XELIDON Electronic Pedal – Overall technical features 1/2

HALL EFFECT TECHNOLOGY - CONTACTLESS

An hall-effect sensor detects the field strength of a magnet integral with the lever. It guarantees a reliable signal, immune to premature failures due to mechanical wear.

INDEPENDENT CIRCUITS – TWO SEPARATE SENSORS

The output signal of both levers is obtained by using two separate sensors with completely independent and galvanically isolated circuits, in compliance with functional safety standards (EN ISO 13849).

PROGRAMMABLE ELECTRONIC BOARD

The programmable electronic board allows to set up the output signal values and the trigger threshold for the switch signal without hardware interventions and manual calibrations. It provides a wide range of output configurations and it guarantees the highest level of signal reliability, precision and repeatability.

RETURN TO STARTING POSITION

It is implemented to maintain the minimum overall dimensions and at the same time to guarantee the redundancy of the spring, a suitable operating load as well as a high life cycle.

XELIDON Electronic Pedal – Overall technical features 2/2

RELIABILITY

- Operating principle: Hall-effect contactless
- Output and IVS are handled by firmware without any contact switch or manual calibration
- IP67 rating
- Impermeability to water/dust/corrosive agents infiltrations
- Operating temperature: -40°C to 85°C
- Immune to vibrations and electromagnetic interferences
- Protection against ESD, load-dump, overvoltage, reverse polarity, short-circuits
- Independent isolated circuits for output redundancy in accordance with Functional Safety standards
- Life cycle over 10 million cycles