ENGINEERING TOMORROW

Data Sheet

# Electronic Foot Pedal
## Over Center Rocker Type/Bi-directional

The rocker type Electronic Foot Pedal is used to drive off-highway vehicles equipped with hydrostatic transmissions and/or electronically controlled engines. The foot pedal typically provides speed commands to the electronic transmission or the engine controller, where the output signal of the foot pedal is proportional to the angle of the foot pedal actuation. The rocker type foot pedal is commonly used on vehicle applications that have a high duty cycle of direction changes (forward/neutral/reverse). For example: warehouse trucks, piggy-back fork trucks, and other material handling equipment.

The electronic foot pedal features a specially designed sensor for heavy equipment applications which uses Hall effect technology. This special sensor offers two different types of redundant signals to fit a variety of control strategies. In addition, the redundant sensors have independent isolated circuits and protection against electrical misconnection.

**Features**

- Robust over-center rocker pedal
- 14 +/- 2 degrees angular rotation fore and aft
- 3 million full actuation cycle life
- Non-contact ratiometric Hall effect sensors
- Independent isolated redundant sensors
- Protected against electrical misconnection
- IP 66 sealed electronics
- Wide operating temperature
- Withstands high static loads

Comprehensive technical literature online at *powersolutions.danfoss.com*




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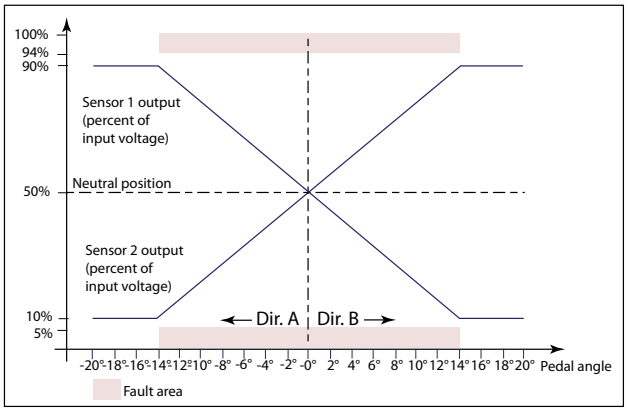
Th. Niehues GmbH • Bahnhofstraße 81 • D - 48308 Senden / Westf. • Tel: +49 2536 990-01 • Fax: +49 2536 990-19 • E-Mail: info@niehues.com • www.niehues.com

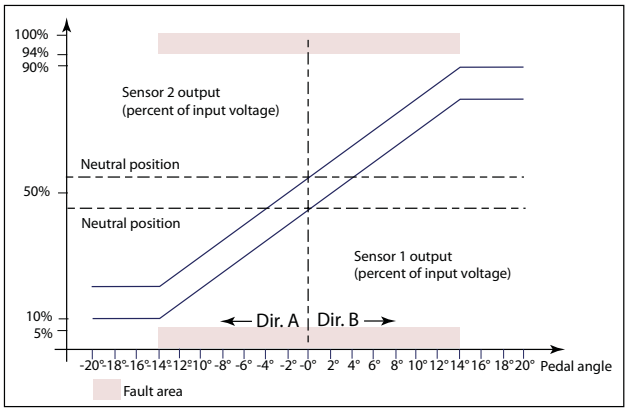
Data Sheet
**Electronic Foot Pedal Bi-directional**

## Technical Data

*Option 1: 10%-90% and 90%-10%*




*Option 2: 20%-90% and 10%-80%*




*Option 1: Signal Level*

| | |
|---|---|
| **Signal 1 range nominal (APS1)** | Minimum (Uout/Ucc): 10%, +4% and -2% |
| | Maximum (Uout/Ucc): 90%, +2% and -4% |
| **Signal 2 range nominal (APS2)** | Minimum (Uout/Ucc): 90%, +2% and -4% |
| | Maximum (Uout/Ucc): 10%, +4% and -2% |
| **Neutral 1 range nominal (APS1)** | 50% ± 4% |
| **Neutral 2 range nominal (APS2)** | 50% ± 4% |

*Option 2: Signal Level*

| | |
|---|---|
| **Signal 1 range nominal (APS1)** | Minimum (Uout/Ucc): 20%, +4% and -2% |
| | Maximum (Uout/Ucc): 90%, +2% and -4% |
| **Signal 2 range nominal (APS2)** | Minimum (Uout/Ucc): 10%, +4% and -2% |
| | Maximum (Uout/Ucc): 80%, +2% and -4% |
| **Neutral 1 range nominal (APS1)** | (Uout/Ucc): 45% ± 4% |
| **Neutral 2 range nominal (APS2)** | (Uout/Ucc): 55% ± 4% |

## Specifications

| | |
|---|---|
| **Supply voltage (Ucc1, Ucc2) Current consumption (each Hall element)** | 5 Vdc ± 0.5 Vdc |
| | Maximum: 10 mA (for both Hall elements 20 mA) |
| **Operating temperature** | -40 to +85° C [-40 to +185° F] |
| **Sealing of electronics** | IP 66 |

*Material*

| | |
|---|---|
| **Casting** | Irridited aluminum |
| **Hall element shaft** | Stainless steel |
| **Base plate** | Zinc plated steel |
| **Spring** | Stainless steel |
| **Weight** | Typical: 2.6 Kg [5.6 lbs] |

*Mechanical Ratings*

| | |
|---|---|
| **Pedal angle (toeboard angle)** | Maximum: 14° ± 2° |
| **Activations (full stroke)** | Minimum: 3 million |
| **Static load limit (forward or reverse)** | Maximum: 1500 N (measured 150mm from pivot) |
| **Side load limit** | Maximum: 500 N (measured 150mm from pivot) |
| **Vertical load limit (neutral)** | Maximum: 1000 N (measured center of treadle on pivot axis) |

*Signal Output*

| | |
|---|---|
| **Signal current (APS1, APS2)** | Maximum: 0.5 mA |
| **Signal load** | Maximum: 10 K Ohms |
| **Short circuit of signal (APS1, APS2)** | Maximum: 20 minutes |



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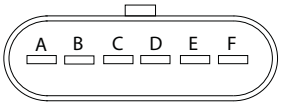
*Sensor Connections*




| Pin | Function | Color |
|---|---|---|
| A | Signal 1 = Us1 | Black |
| B | Ground 1 = GND1 | White |
| C | Supply 1 = Ucc1 | Red |
| D | Supply 2 = Ucc2 | Green |
| E | Ground 2 = GND2 | Blue |
| F | Signal 2 = Us2 | Orange |

**Ordering Information**

| Part number | Description | |
|---|---|---|
| 11065877 | Option 1 | Bi-directional |
| 11065874 | Option 2 | Bi-directional |
| 11065878 | 100 cm | Cable |

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