



## COMPANY PROFILE

# **ELEN designs and manufactures electronic sensors and control devices for industrial vehicles and agricultural machines**

## **■ why ELEN?**

**ELEN offers to its customers a specialised know-how in the field of applications and regulations for the off-highway sector, and supports them in the technological development of productive, ergonomic, safe and environmentally friendly vehicles.**



### **Specialization**

**All products are internally designed and tested in order to ensure maximum reliability in heavy-duty applications.**



### **Innovation**

**ELEN offers to its customers cutting-edge technological solutions as well as a complete and constantly updated range of products.**



### **Customization and Co-design**

**If you don't find the product suitable for your needs, ELEN can realize it on the basis of your requirements.**



### **Quick service**

**Company's internal processes ensure flexibility and quick response from development stage to after-sales.**

## ■ selected target customers

**ELEN targets all those manufacturers of machinery operating without interruption under hard conditions.**



Construction vehicles



Lifting vehicles



Material handling



Professional cleaning



Agricultural machines



Special vehicles

TARGET SECTORS

Towed machinery

Self-propelled machinery

Front-end equipment



VEHICLES AND COMPLETARY MACHINERY



Heat engines



Electric motors



Power transmission



Hydraulic systems

SUBASSEMBLIES

*Hard work is our job*

## ■ product range


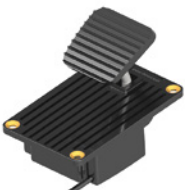

ELEN offers a complete and wide range of products, designed to perfectly meet those specific application requirements for the farm machinery industry and the industrial vehicles' sector.

### Sensors





Angular		<b>Hall effect sensors, with shaft</b> <ul style="list-style-type: none"> <li>- Angular range: 5°-360°</li> <li>- Supply Voltage: 5V / 10÷30V</li> <li>- Output: 0,5÷4,5V / 4÷20mA</li> <li>- Signal: single / double</li> </ul>		<b>Hall effect sensors, with external magnet</b> <ul style="list-style-type: none"> <li>- Angular range: 5°-360°</li> <li>- Supply Voltage: 5V / 10÷30V</li> <li>- Output: 0,5÷4,5V / 4÷20mA</li> <li>- Signal: single / double</li> </ul>
Speed		<b>Hall effect sensors</b> <ul style="list-style-type: none"> <li>- Signal: single / double</li> <li>- Output: NPN / PNP / CAN / In corrente</li> <li>- Fixing: threaded / flanged / adjustable</li> <li>- Optional diagnostic</li> </ul>		<b>Inductive sensors</b> <ul style="list-style-type: none"> <li>- Signal: single</li> <li>- Output: analog signal</li> <li>- Fixing: flanged / adjustable</li> <li>- Customizable connector and cable</li> </ul>
Linear position		<b>Hall effect sensors, with shaft</b> <ul style="list-style-type: none"> <li>- Supply Voltage: 5V / 10÷30V</li> <li>- Output: 0,5÷4,5V / 4÷20mA</li> <li>- Signal: single / double</li> <li>- Mechanical stroke: max 12,5 mm</li> </ul>		<b>Hall effect sensors, contactless</b> <ul style="list-style-type: none"> <li>- Supply Voltage: 5V/10÷30V</li> <li>- Output: linear voltage signal</li> <li>- Signal: single/double</li> <li>- Option: external magnet</li> </ul>
Proximity		<b>Sensors for Steering cylinders</b> <ul style="list-style-type: none"> <li>- Output: NO / NC</li> <li>- Signal: single / double</li> <li>- Material cylinder: iron / stainless steel</li> <li>- Option: diagnostic led</li> </ul>		<b>Sensors for translating shaft</b> <ul style="list-style-type: none"> <li>- Output: NO / NC</li> <li>- Signal: single/double</li> <li>- Customizable connector and cable</li> <li>- Option: external magnet</li> </ul>
		<b>Inductive sensors</b> <ul style="list-style-type: none"> <li>- Output: NO / NC</li> <li>- Signal: single / double</li> <li>- Adjustable fixing</li> <li>- Customizable connector and cable</li> </ul>		<b>Electromechanical limit switches</b> <ul style="list-style-type: none"> <li>- Output: NO</li> <li>- Open stroke: 0,5 ÷ 1,5 mm</li> <li>- Option: Diagnostics</li> <li>- Degree of protection: IP 67</li> </ul>
		<b>Reed switch, limit switches</b> <ul style="list-style-type: none"> <li>- Output: NO</li> <li>- Signal: single/double</li> <li>- Magnet positioning : internal/external</li> <li>- High pressure resistant</li> </ul>		<b>Reed switch, proximity sensors</b> <ul style="list-style-type: none"> <li>- Output: NO</li> <li>- Signal: single/double</li> <li>- Degree of protection: IP 67</li> <li>- Customizable connector and cable</li> </ul>
Temperature		<b>NTC</b> <ul style="list-style-type: none"> <li>- Configurable NCT curve</li> <li>- Degree of protection: IP 67</li> <li>- Option: alarm signal</li> <li>- Customizable connector and cable</li> </ul>		<b>Thermostats</b> <ul style="list-style-type: none"> <li>- Output: NO / NC</li> <li>- Degree of protection: IP 67</li> <li>- Adjustable tripping threshold</li> <li>- Customizable connector and cable</li> </ul>
Pressure		<ul style="list-style-type: none"> <li>- Supply Voltage: 8÷30 / 5± 0,5 Vcc</li> <li>- Output: 4-20mA, 0-5V, 0-10V, 10-90% ratiometric</li> <li>- Signal: single/ single + switch</li> <li>- Customizable connector</li> </ul>		

**ELEN proposes, in the short terms, customized products as well as co-design solutions, both for small and big quantities, relying on the support and advice of its qualified technicians.**

## Pedals

Mythos		<ul style="list-style-type: none"> <li>- Programmable Hall effect</li> <li>- Supply Voltage: 5V/12 ÷ 48 V</li> <li>- Output: 0,5 ÷ 4,5 V</li> <li>- Signal: single/double</li> <li>- IVS: NO/NC/absent</li> </ul>	<p>“Heavy duty” pedals are suitable for open-cabin agricultural and industrial vehicles.</p> <p>Three Footboard lengths are available; Bracket for cable-pulling can be required as optional.</p>
Nomos		<ul style="list-style-type: none"> <li>- Programmable Hall effect</li> <li>- Supply Voltage: 5V/12 ÷ 48 V</li> <li>- Output: 0,5 ÷ 4,5 V</li> <li>- Signal: single/double</li> <li>- IVS: NO/NC/absent</li> </ul>	<p>Ideal solution for heat-engine and electric motor's vehicles.</p> <p>Output signal and IVS are obtained through a firmware in the electronic board, starting from the rotation of the lever pin.</p>
Logos		<ul style="list-style-type: none"> <li>- Programmable Hall effect</li> <li>- Supply Voltage: 5V/12 ÷ 48 V</li> <li>- Output: 0,5 ÷ 4,5 V</li> <li>- Signal: single/double</li> <li>- IVS: NO/NC/absent</li> </ul>	<p>Ideal solution for electric motor's vehicles.</p> <p>The internal mechanics is simple and robust; it doesn't contains micro-switches and other parts subjected to mechanical wear.</p>

## Hand controls

Praxis		<ul style="list-style-type: none"> <li>- Programmable Hall effect</li> <li>- Supply Voltage: 5V/12 ÷ 48 V</li> <li>- Output: 0,5 ÷ 4,5 V</li> <li>- Signal: single/double</li> <li>- IVS: NO/NC/absent</li> </ul>	<p>Suitable for operating under hard conditions, especially in environment subjected to strong vibrations and exposure to external agents.</p>
Themis		<ul style="list-style-type: none"> <li>- Programmable Hall effect</li> <li>- Supply Voltage: 5V/12 ÷ 48 V</li> <li>- Output: 0,5 ÷ 4,5 V</li> <li>- Signal: single/double</li> <li>- IVS: NO/NC/absent</li> </ul>	<p>Suitable for mounting on dashboards with tight installation spaces and uniform design.</p>
Metis		<ul style="list-style-type: none"> <li>- Programmable Hall effect</li> <li>- Supply Voltage: 5V/12 ÷ 48 V</li> <li>- Output: 0,5 ÷ 4,5 V</li> <li>- Signal: single/double</li> <li>- IVS: NO/NC/absent</li> </ul>	<p>Designed to ensure maximum reliability for all electrically powered vehicles endowed with wheelhouse.</p>
Axios		<ul style="list-style-type: none"> <li>- Programmable Hall effect</li> <li>- Supply Voltage: 5V/12 ÷ 48 V</li> <li>- Output: 0,5 ÷ 4,5 V</li> <li>- Signal: single/double</li> <li>- IVS: NO/NC/absent</li> </ul>	<p>Designed for all vehicles and machinery that require a side lever for the motor and/or hydraulic pump RPM control.</p>



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***Hard work is our job***