

# AGNOSTIC TOUCH

ULTRA SENSITIVE FORCE TOUCH TECHNOLOGY

**Smart meets stable:  
Robust in any environment.**

With the new **Agnostic Touch** from the Algra Group 

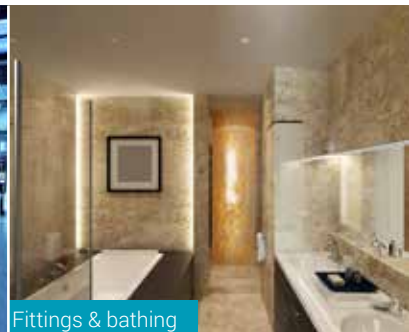
Input systems in the field of



Medical devices



Public transportation



Fittings & bathing



Vandalism protection



Kitchens & food production



Machine tools



### Typical material thicknesses:

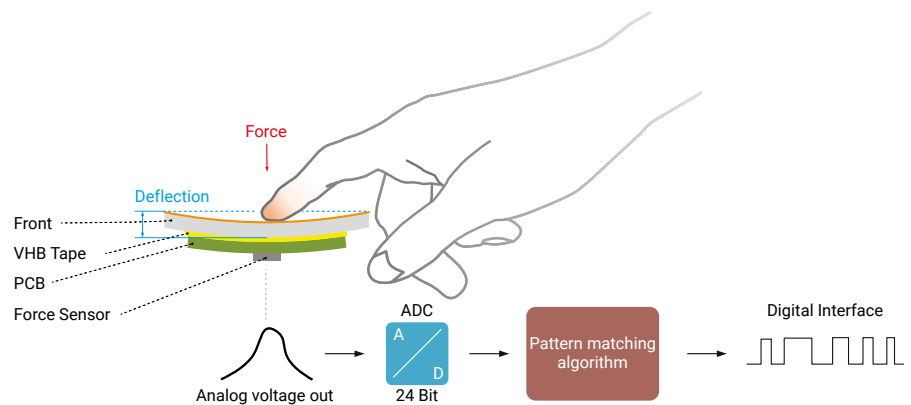
Aluminium:	up to 1.2mm
Stainless steel:	up to 1.0mm
Glass:	up to 1.0mm
Plastic:	up to 2.0mm
Wood:	up to 2.0mm

## AGNOSTIC INPUT TECHNOLOGY

### INTEGRATED SIGNAL EVALUATION

The **AGNOSTIC** technology detects the smallest deformations of the control panel.

A sensor is situated behind each key on the PCB. A network of several strain gauge sensors identifies mechanical deformations and filters out the key input using intelligent evaluation. The strain gauge power sensors recognise even the smallest strain changes in the  $\mu\text{m}$  range (0.001 mm) – even in metals such as stainless steel or aluminium.



### Technical data

Operating temperature/storage temperature::	-40 °C bis +85 °C
Supply voltage:	3,3 V (typically)
Power consumption:	600 $\mu\text{A}$ /key
IP protection class:	All IP classes can be implemented
Key sensitivity:	50 g to 1000 g, adjustable
Life cycles:	> 10 million
Minimum key spacing (centre to centre):	>12 mm (depending on material and its thickness)

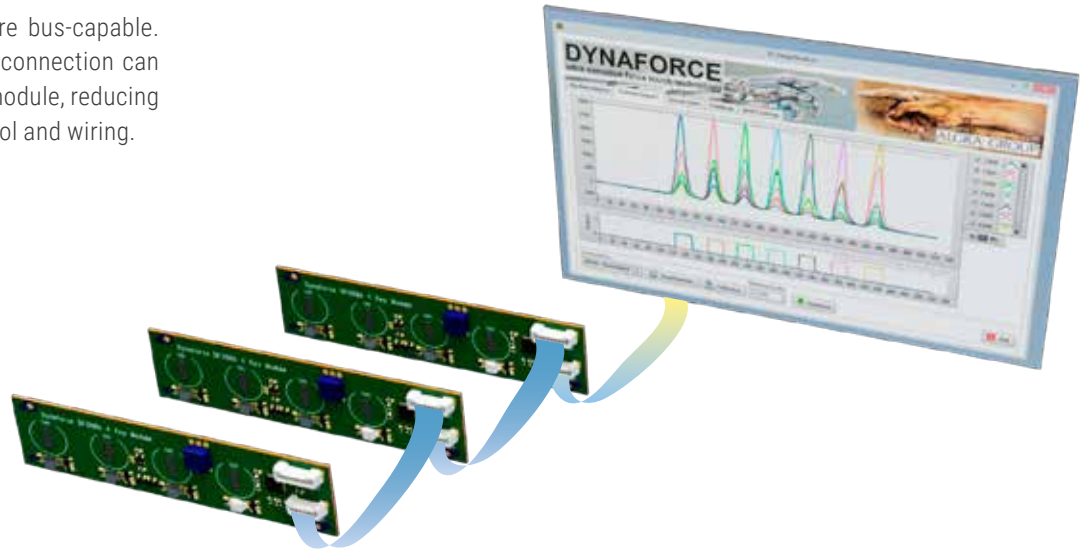
**«The AGNOSTIC-input technology is incredibly sensitive, yet unsusceptible to interference.»**

Dieter Matter, CEO Algra tec AG

## AGNOSTIC TOUCH

### Bus-capable modules

The AGNOSTIC modules are bus-capable. This means that the serial connection can be looped from module to module, reducing the effort required for control and wiring.



## INTERFACES

### Electrical

UART / RxTx	3V3
USB-C:	Virtual ComPort
RS232:	2-wire, full-duplex
RS485	2-wire, half-duplex, adressable
DigitalOutput per key:	3V3 - 24Vdc (open collector)

Additional interfaces or a customer-specific protocol implementation can be realised as required.

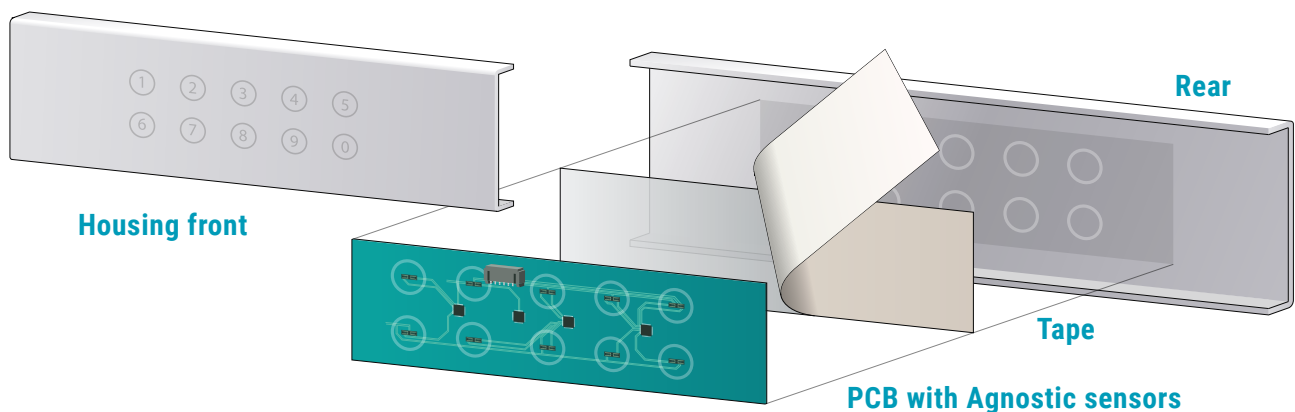
### Recommended 4-pin standard connector

Plug-in system	Molex MicroLockPlus 1.25mm
PCB Connector	Molex 505568-0401
Cable Connector	Molex 505565-0471
Crimp Terminal	Molex 5054311000



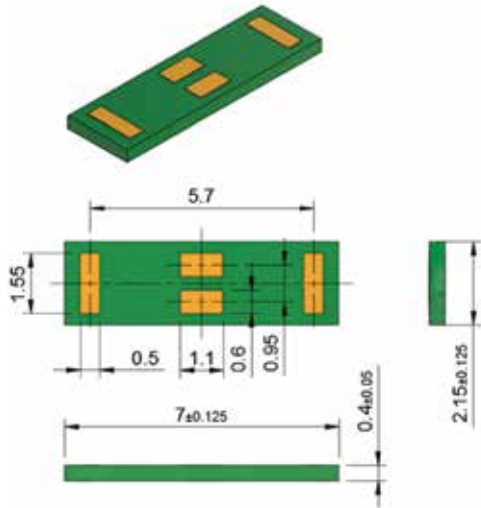
Additional connectors on request.

## PEEL-AND-STICK



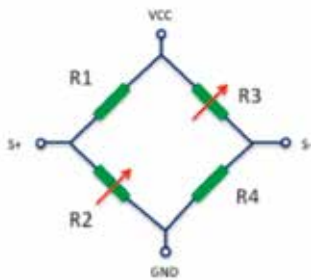
Agnostic modules are adhered to the rear of the control panel.

## GEOMETRY AND STRUCTURE OF THE AGNOSTIC SENSOR

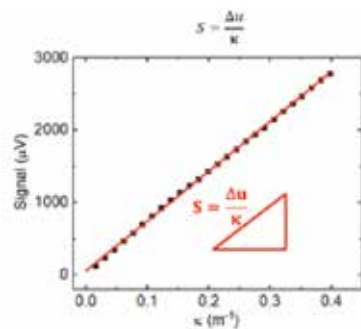


Agnostic sensor as strain gauge on FR4 material. There is a connection pad on the bottom which enables standard assembly using SMD technology.

Sensor size l/w/h: 7 x 2.15 x 0.4mm



The sensor consists of four strain-dependent resistors which together form a measuring bridge. Even minimal bending changes the differential voltage detected by the evaluation.



The change in differential voltage is proportional to the bending of the sensor.

The Agnostic sensor can be used as a force sensor.