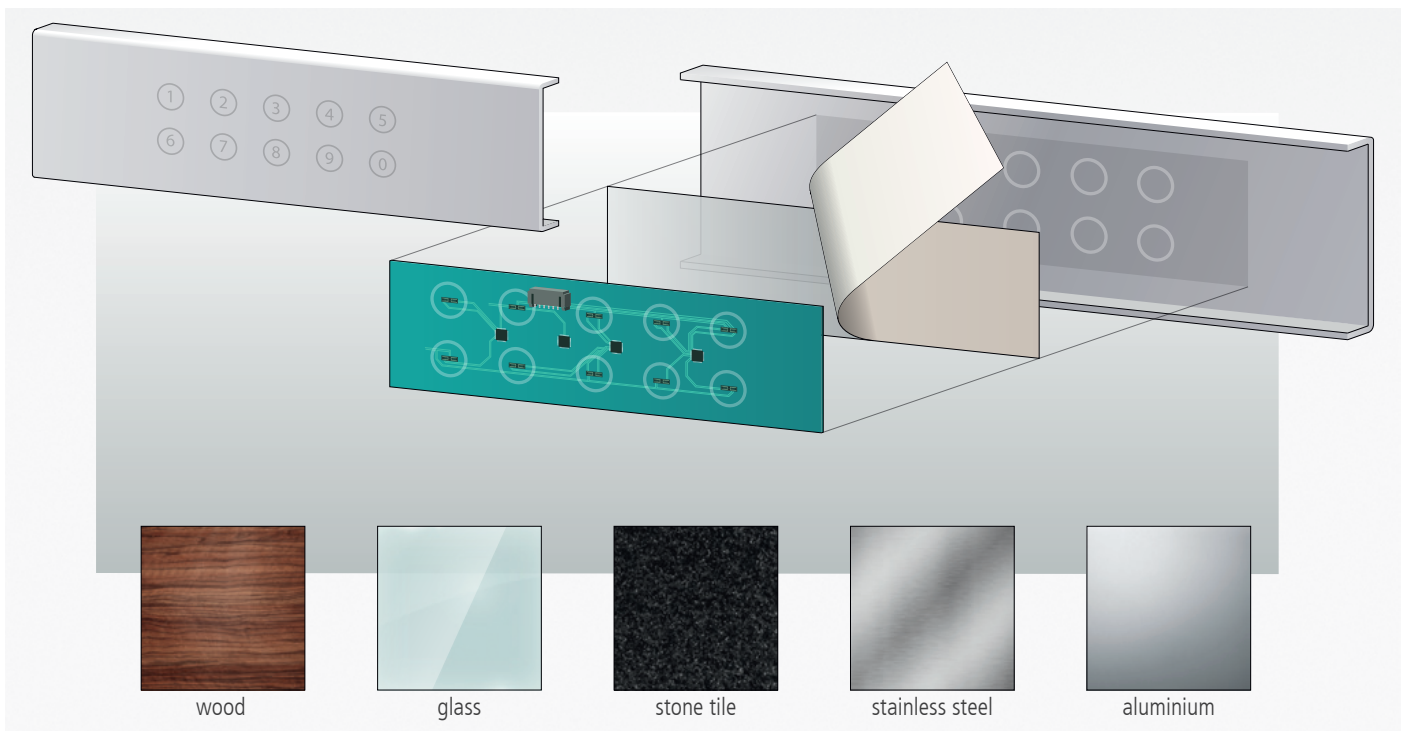




DYNAFORCE

EXTREMELY SENSITIVE METAL TOUCH SENSOR KEYS

ALGRA

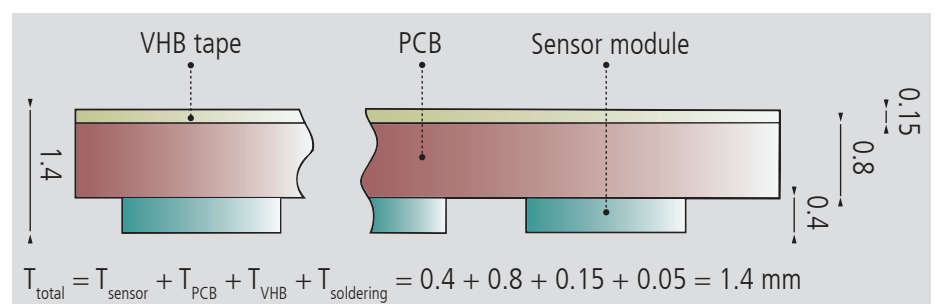


'Metal touch with DYNAFORCE input technology is incredibly sensitive, yet unsusceptible to interference.'

Dieter Matter, CEO, Algra Group

Metal touch detection is easier than ever thanks to DYNAFORCE. The strain gauge technology enables sensitive operation with thicker metal surfaces. The touch creates mechanical deformation, which generates signals that are detected through metal sheets of 0.3 to 1.2 mm without interference.

A strain gauge sensor is situated behind each key on the PCB. A network of several sensors recognises extremely sensitive mechanical deformations and filters out interference thanks to intelligent evaluation. The gauges recognise even the smallest strains in extremely rigid, metallic materials, such as stainless steel or aluminium. Typical areas of application include products such as household goods, industry and outdoor devices with special aesthetic design and products that must be highly robust and waterproof.



Benefits

High level of design exclusivity:

The control panel front is made using an integrated metal touch layer.

Glove-sensitive operation:

Operation is just as sensitive with gloves on as without.

Highest water protection rating:

Can be used to full capacity in wet conditions.

Vandalism protection:

Use of metal control panel fronts protects against vandalism.

Dynamic key sensitivity:

The key sensitivity can be set from 100 g.

High temperature operational capability:

Temperature range of -40°C to $+85^{\circ}\text{C}$

Long service life:

The tested service life is over 10 million cycles.

Easy assembly:

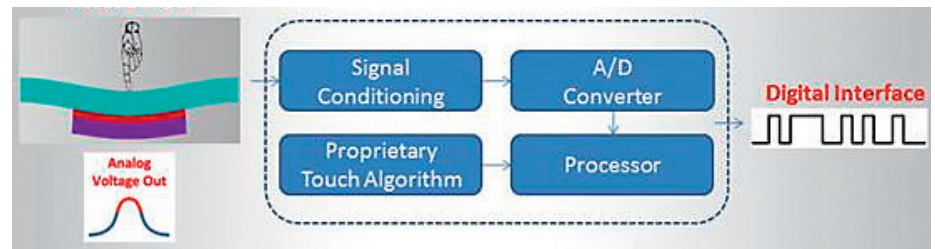
Assembly using self-adhesive tape (peel-and-stick).

Each key layout possible:

The key arrangement is, taking into account the minimum distance, freely selectable.

'Typical areas of application include products such as household goods, industry and outdoor devices with special aesthetic design and products that must be highly robust and waterproof.'

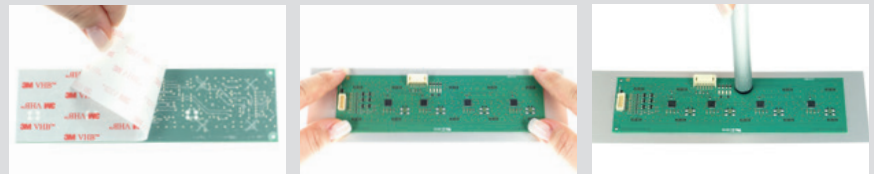
Integrated signal processing



Peel-and-stick

The DYNAFORCE module can be easily adhered to the back of a front made of any material using the peel-and-stick process:

1. Remove protective foil from module
2. Align module
3. Press on firmly



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Materials

Plastic:	1.0–2.0 mm
Aluminium:	0.3–1.2 mm
Stainless steel:	0.3–1.0 mm
Glass:	0.5–1.0 mm

Material thickness at maximum sensitivity

Technical data

Operating temperature / storage temperature:	-40°C to $+85^{\circ}\text{C}$ / -40°C to $+85^{\circ}\text{C}$
Supply voltage:	3.3 V (typically)
Power consumption:	600 μA /button
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):	15–20 mm
Sensor size:	2 x 7 mm