

4 Intelligent Force Sensors

- Based on Strain Gauge Technology
- Digital and Analog Interfaces

- Compression Force Sensors
- Donut-shaped Compression Force Sensors
- Compression and Tension Force Sensors

Measurement Ranges:

100 N

...

200 kN



The sensor interface is optionally equipped with an input for an incremental encoder to measure the displacement. Please let us know your demands.

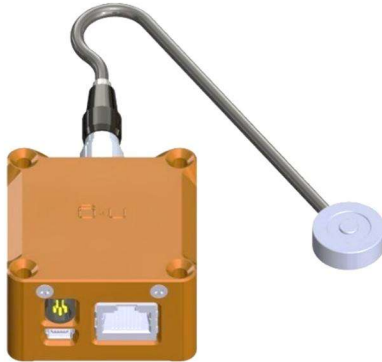
Force Sensor Type Nomenclature:

ng-FTS-□ □-□□ □

- = i = intelligent (USB + Ethernet + *ng-Link*)
- = u = intelligent (USB)
- = b = button load cell (compression force)
- = d = donut shape load cell (compression force)
- = z = z-shape load cell (compression/tension force)
- = Measurement range in N
- = S = Stationary
- = FT = Force Transducer
- = ng = n·gineric Product

4.1 Compression Force Load Cells ng-FTS-bi

- High precision button load cells based on strain gauges
- USB Interface
- Ethernet Interface
- *ng-Link* Interface
- Force window control
- Standard USB and Ethernet connectors



Article Number	Type	Force Range N	Interface	Size mm	Measurement Accuracy [*]
01-01-00126-01	ng-FTS100-bi	100	intelligent	Ø 31.8 x 9.9	0.25 %
01-01-00127-01	ng-FTS200-bi	200	intelligent	Ø 31.8 x 9.9	0.25 %
01-01-00547-01	ng-FTS500-bi	500	intelligent	Ø 31.8 x 9.9	0.25 %
01-01-00129-01	ng-FTS1000-bi	1000	intelligent	Ø 31.8 x 9.9	0.25 %



Article Number	Type	Force Range kN	Interface	Size mm	Measurement Accuracy [*]
01-01-00153-01	ng-FTS2000-bi	2	intelligent	Ø 31.8 x 9.9	0.5 %
01-01-00177-01	ng-FTS5000-bi	5	intelligent	Ø 31.8 x 9.9	0.5 %
01-01-00132-01	ng-FTS10000-bi	10	intelligent	Ø 31.8 x 9.9	0.5 %
01-01-00084-01	ng-FTS20000-bi	20	intelligent	Ø 38.1 x 16.0	0.5 %
01-01-00633-01	ng-FTS50000-bi	50	intelligent	Ø 38.1 x 16.0	0.5 %

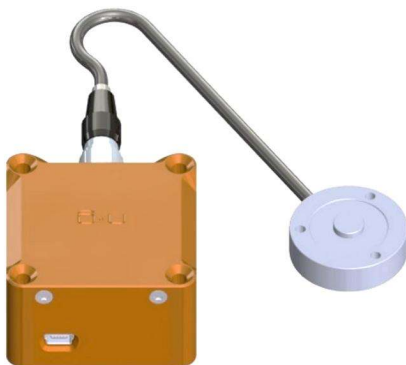
[*] refer to the measurement range

4.2 Compression Force Load Cells ng-FTS-bu

- High precision button load cells based on strain gauges
- USB Interface
- Force window control
- Standard USB connector



Article Number	Type	Force Range N	Interface	Size mm	Measurement Accuracy [*]
01-01-00133-01	ng-FTS100-bu	100	USB	Ø 31.8 x 9.9	0.25 %
01-01-00134-01	ng-FTS200-bu	200	USB	Ø 31.8 x 9.9	0.25 %
01-01-00548-01	ng-FTS500-bu	500	USB	Ø 31.8 x 9.9	0.25 %
01-01-00136-01	ng-FTS1000-bu	1000	USB	Ø 31.8 x 9.9	0.25 %



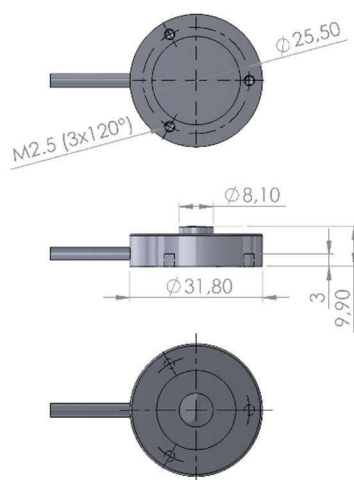
Article Number	Type	Force Range kN	Interface	Size mm	Measurement Accuracy [*]
01-01-00155-01	ng-FTS2000-bu	2	USB	Ø 31.8 x 9.9	0.5 %
01-01-00292-01	ng-FTS5000-bu	5	USB	Ø 31.8 x 9.9	0.5 %
01-01-00139-01	ng-FTS10000-bu	10	USB	Ø 31.8 x 9.9	0.5 %
01-01-00549-01	ng-FTS20000-bu	20	USB	Ø 38.1 x 16.0	0.5 %

[*] refer to the measurement range

Button Shape Load Cells ng-FTS-b

- Measurement Accuracy: 0.5 % of the F.S.R.
- Operating Overload: 120 % of the F.S.R.
- Safe Overload: 150 % of the F.S.R.
- Operating Temperature: 0 °C to +100 °C (+32 °F to 212 °F)

Dimensions:

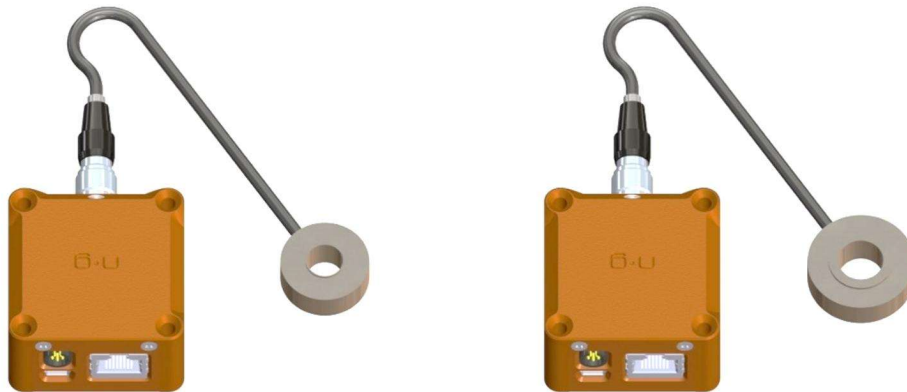


ng-FTS100-bi
ng-FTS200-bi
ng-FTS500-bi
ng-FTS1000-bi
ng-FTS2000-bi
ng-FTS5000-bi
ng-FTS10000-bi

ng-FTS100-bu
ng-FTS200-bu
ng-FTS500-bu
ng-FTS1000-bu
ng-FTS2000-bu
ng-FTS5000-bu
ng-FTS10000-bu

4.3 Compression Force Load Cells ng-FTS-di

- High precision button load cells based on strain gauges
- USB Interface
- Ethernet Interface
- *ng-Link* Interface
- Force window control
- Standard USB and Ethernet connectors



Article Number	Type	Force Range kN	Interface	Size mm	Drilling	Measurement Accuracy [*]
01-01-00156-02	ng-FTS1000-di	1	intelligent	Ø 38.0 x 10.0	Ø 7.0	2 %
01-01-00180-01	ng-FTS2000-di	2	intelligent	Ø 38.0 x 10.0	Ø 7.0	2 %
01-01-00172-01	ng-FTS5000-di	5	intelligent	Ø 38.0 x 10.0	Ø 7.0	2 %
01-01-00184-01	ng-FTS10000-di	10	intelligent	Ø 38.0 x 10.0	Ø 7.0	2 %
01-01-00185-01	ng-FTS20000-di	20	intelligent	Ø 49.0 x 16.0	Ø 15.0	2 %
01-01-00186-01	ng-FTS50000-di	50	intelligent	Ø 49.0 x 16.0	Ø 15.0	2 %



Article Number	Type	Force Range kN	Interface	Size mm	Drilling	Measurement Accuracy [*]
01-01-00157-01	ng-FTS100000-di	100	intelligent	Ø 78.0 x 25.0	Ø 28.0	2 %
01-01-00167-01	ng-FTS200000-di	200	intelligent	Ø 78.0 x 25.0	Ø 28.0	2 %

[*] refer to the measurement range

Donut Shape Load Cells ng-FTS-d

- | | |
|-------------------------|-----------------------------------|
| ▪ Measurement Accuracy: | 3 % of the F.S.R. |
| ▪ Operating Overload: | 120 % of the F.S.R. |
| ▪ Safe Overload: | 150 % of the F.S.R. |
| ▪ Operating Temperature | 0 °C to +80 °C (+32 °F to 176 °F) |

4.4 Tension and Compression Force Sensor ng-FTS-zi

These intelligent tension and compressive force sensors are available in measuring ranges from +/- 10 N to +/- 200 kN.

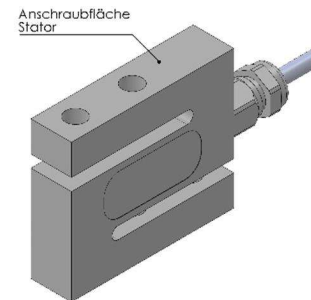
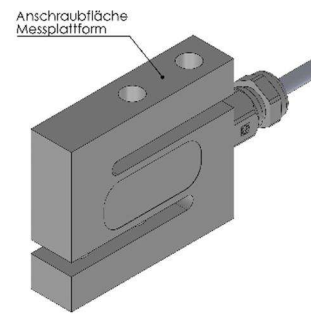
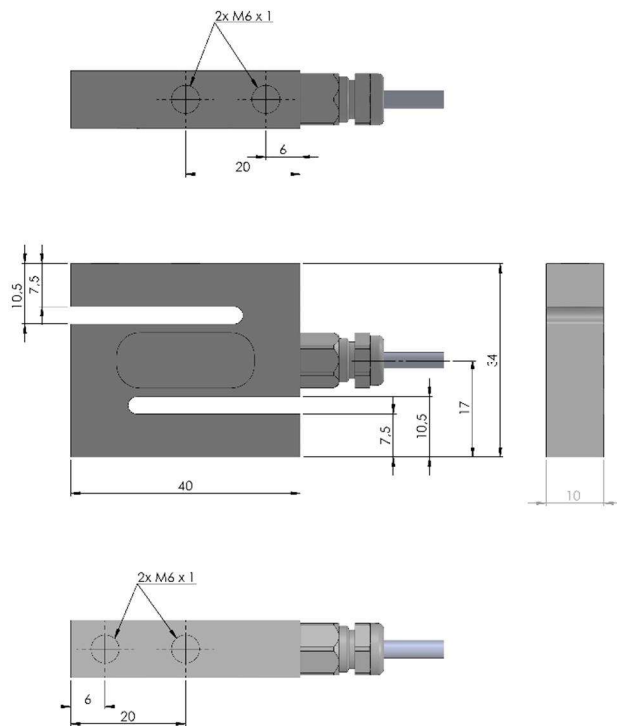
- USB Interface
- Ethernet Interface
- *ng-Link* Interface
- Force window control
- Standard USB and Ethernet connectors



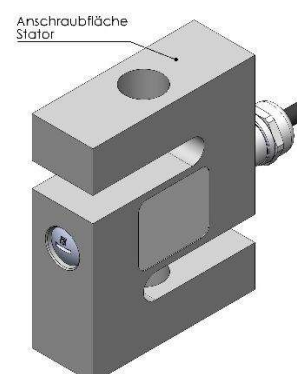
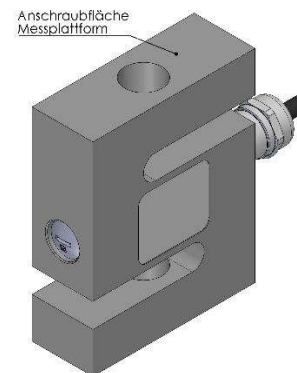
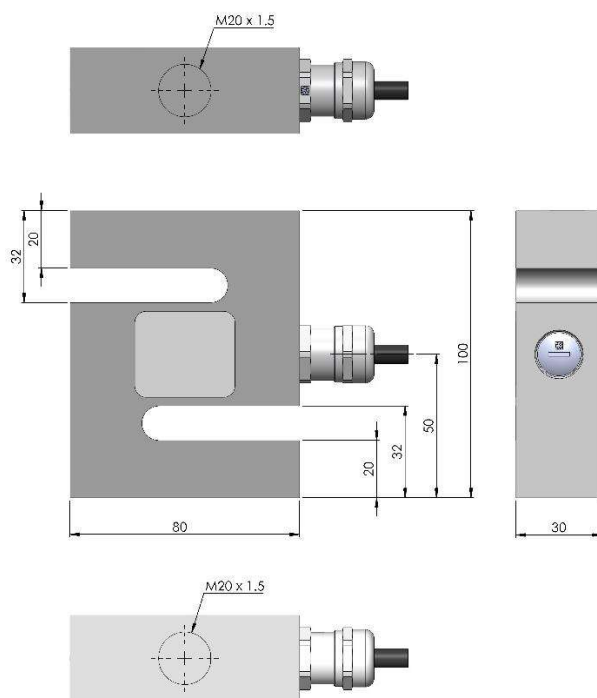
Article Number	Type	Force Range kN	Interface	Size mm	Accuracy Class
01-01-00676-01	ng-FTS2000-zi	2	intelligent	40 x 34 x 10	0,1 %



Article Number	Type	Force Range kN	Interface	Size mm	Accuracy Class
01-01-00657-01	ng-FTS50000-zi	50	intelligent	80 x 100 x 30	0,05 %



ng-FTS2000-zi



ng-FTS50000-zi