BoltSafe

Load Measuring Systems

Product sheet | Network with PDI-NT

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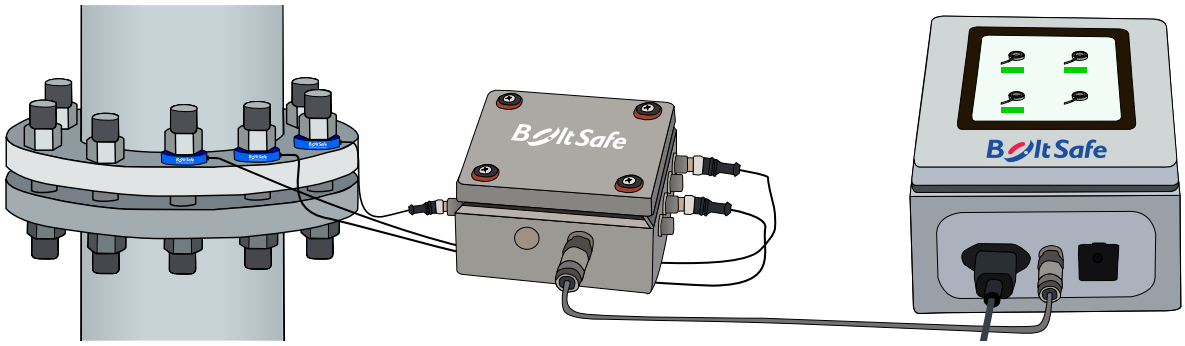
How does the Network with PDI-NT work?

Our network with PDI-NT readout method consists of a PDI-NT (Power Data Interface New Technology) box and a CM-1000 box or a network of these boxes. Using these boxes, the bolt load from CMS sensors can be continuously visualized. The PDI-NT is a connection box that connects the BoltSafe sensor network. The difference with the PDI box in our product range is that with the PDI-NT box, no PC is needed because it has an integrated display.

Another benefit of the PDI-NT is the option to provide various analog output signals, like 4-20 mA or 0-10 Vdc. Besides that, it is capable of generating an alarm when bolt load has reached levels that are too high or too low. It can trend the bolt load during a predefined period and it is able to create custom-made applications. Last but not least, it is capable of connecting the BoltSafe load cells to other platforms. The CM-1000 Network box is designed to connect individual BoltSafe CMS bolt load cells to a network. A network can consist of several CM-1000 boxes. The unit is designed to provide excellent shielding against rough environments and EMC noise (noise from ElectroMagnetic Compatibility).

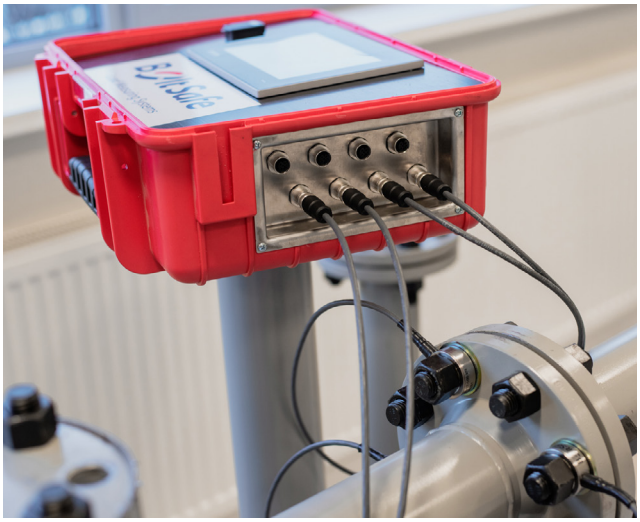


How is the Network with PDI-NT used?

Up to eight BoltSafe CMS bolt load sensors can be connected to one CM-1000 box. As many as 32 different CM-1000 boxes can be connected in a network to one PDI-NT box. The bolt load data can be read out directly on the display of the PDI-NT box. The CM-1000 Network box processes the bolt load data locally, where it converts the sensor values. Decentralizing the data processing in this way speeds up the network data polling considerably. Even in a very large network of boxes and sensors, the data from the BoltSafe load sensor can be updated every one to three seconds.

The PDI-NT makes it possible to have a standalone BoltSafe system. When the system is configured, the software automatically assigns node numbers to each unit connected to the system.

There is no need for any extra settings or coding during installation. The data is directly logged to the PDI-NT. The Network box has short circuit protection for each of the load cells. This prevents a situation in which the malfunction of one cable or cell takes down the whole network. The CM-1000 box comes with connectors to connect the BoltSafe CMS load cells with connector plugs.



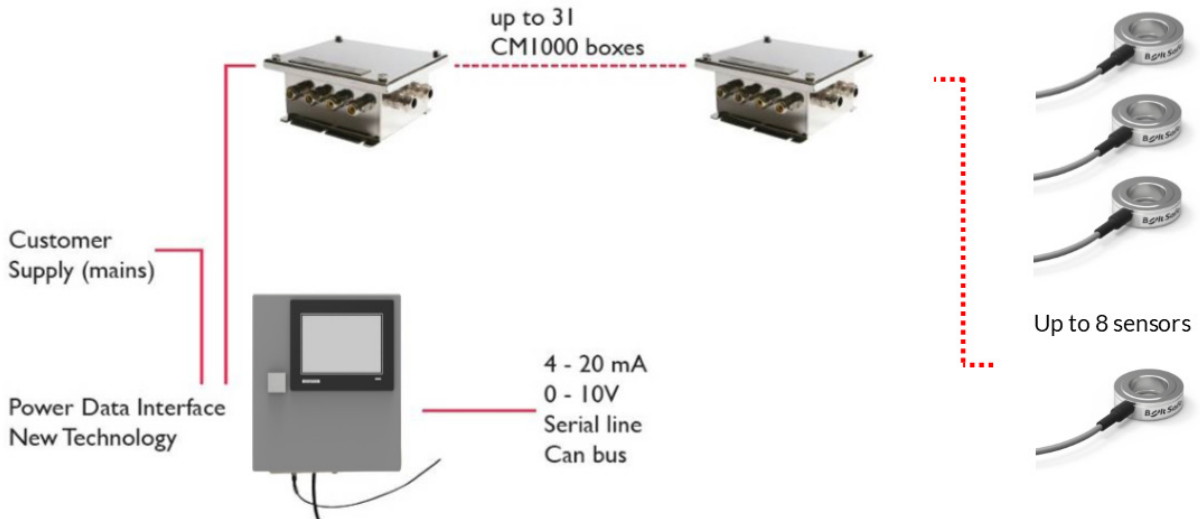
Possible variations of Network with PDI-NT

It is possible to use only one network box and PDI-NT and link this to a maximum of eight bolt load sensors. It is also possible to connect multiple CM-1000 boxes to one PDI-NT (up to 32 boxes) so that a maximum of 256 load cells can be read at once. Most of the time, the network boxes and PDI-NT are installed in a permanent location. If you want to be able to frequently change the location of the network with PDI-NT, we recommend using the entire system in a case.

This is one of our optional features and is very useful if you want to use the system for temporary measurement and then change the location of the system to temporarily measure data somewhere else. These cases are also available for rent. Because the PDI-NT is a standalone system, all that is needed for acquiring the bolt load data would be the case. Another optional feature for the network with PDI-NT is a 4G module. This module makes it possible to read out the data from the network remotely with any device that is connected to the internet.

Technical data CM-1000 box

Connection capacity	8 BoltSafe CMS sensors
Temperature range	-25°C to +80°C
Sealing	IP66
Dimensions	150x150x80mm
Material	Stainless steel 1.4301 (AISI 304)
Weight	1,75 kg
Sensor cable inlets (8)	Phoenix M12 female connectors
Network cable inlets (2)	Phoenix M12 female connectors
CE-approval	Tested to comply with: Emission EN 50081-1, EN 55022B Immunity, EN 61000-6-2, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, ENV 50204



Technical data PDI-NT

Entry voltage	100V-230V AC / 24 V DC
Measure frequency	1 Hz
Display size	2.4 Inch
Maximum number of BoltSafe's	256
Number of digital entries	12
Number of digital exits	6 (relais)
Height	400 mm
Width	300 mm
Depth	130 mm
CM1000 integrated	Yes
Standard number of BoltSafe's	8
Read-out	Display
Analog outputs	4-20 mA, 0-20 mA, 0-10 V
Serial communication	RS232 / RS485
Ethernet	Network possibilities
CAN bus	Coupling of signals
Wireless network	LAN
GPRS and SMS module	Alarm signal