

Straininstall bondura[®] load pin



The revolutionary Straininstall-bondura[®] load pin eliminates play and ovality during operation, simultaneously providing intelligence and wireless capabilities.

To remove the issue of ovality, the wear and tear that occurs from load pins moving within a structure, and eliminate the need for expensive repairs. The Straininstall-bondura[®] load pin offers the remedy for ovality and provides long-term savings.

While a certain amount of tolerance is required during the installation and extraction of a load pin, this often leads to issues during operation as it allows the pin to move during its lifetime cycle as a result of heavy loads and vibrations.

This movement causes ovality, which though repairable, is costly and often results in operational down time.

The Straininstall-bondura[®] is designed to overcome such wear and tear. Innovative cone sleeves, with corresponding tapering, expand on the pin upon tightening with an agreed torque value, securely fixing the load pin while still allowing for the required tolerance for installation and extraction.

The Straininstall-bondura[®] load pin eliminates play during operation, while still providing an accurate means of load monitoring.

Straininstall technology

The Straininstall-bondura[®] load pin incorporates bondura's[®] innovative pin design to eliminate play and ovality and combines Straininstall's load monitoring technology to supply complementary intelligence and memory directly onto the load pin.

This provides multiple benefits for the user including;

Long term load monitoring - With Straininstall's technology, load pins can be supplied with a wireless data logger. Operators can

select the 'silent logging mode' which disables the radio transmitter, extending the battery life to six months of uninterrupted data logging. This provides data which easily identifies if a load pin has been overloaded at any point during its operational. If the load cell hasn't been during this timeframe, there's no need to replace it reducing overall lifetime costs.

Wireless capabilities - The SmartLoad[®] transmitter provides a wireless range of up to 250m and has an in-built high-capacity SD card with automatic data logging.

Features:

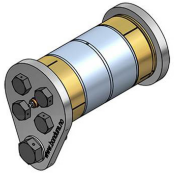
- Unique load pin design eliminates tolerance during the operational
- Long term, six months plus data logging available
- Cabled mV/V or 4-20mA outputs available
- Wireless SmartLoad[®] variant available
- Straininstall-bondura[®] load pins are DNV GL type approved and have ABS PDA certification
- The SmartLoad[®] wireless devices are all available in Zone 1 and Zone 2 hazardous area variants with ATEX, IECEx and North American/Canadian Hazloc certification.

Benefits:

- Eliminate play and ovality, reducing lifetime maintenance costs
- Notification if the pin needs replacing
- Extended battery life of over six months
- Reduces NPT

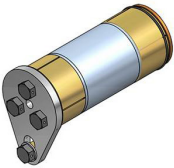


Which pins are available?



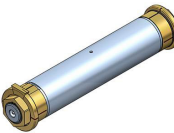
bondura® 6.6

bondura® 6.6 is recommended when a pin can be installed from both sides of a support.



bondura® 6.2

bondura® 6.2 is used when one of the support holes is located in such a way that the bondura® pin cannot be installed from that position. bondura® 6.2 is assembled from one side, but requires access for a torque wrench on both sides.



bondura® 3.3

bondura® 3.3 requires access for a torque wrench on both sides of the support. One of the benefits for the bondura® 3.3 is that the conical sleeves and nuts are put together to form a unit. This means that as the nuts are unscrewed the conical sleeves loosen as well, eliminating any requirement for a separate disassembly tool.

Viewing options

SmartLoad® handset

The optional SmartLoad® handset connects to any SmartLoad® enabled load cell in range automatically with no pairing required.

The SmartLoad® handset can display four loads simultaneously with sum and average load values and includes visual and audio overload notifications. You can also start/stop logging of the load cell from the handset.



SmartLoad® wall mount display

The optional SmartLoad® wall mount display connects as the handset to any SmartLoad® enabled load cell in range automatically with no pairing required.

The SmartLoad® wall mount display can display four loads simultaneously with sum and average load values and includes visual and audio overload notification. In addition it can output over serial, ethernet or canBUS as standard to enable data to be incorporated directly into existing systems.



Straininstall-bondura® load pin configuration

- Minimum standard load pin diameter 114mm (smaller diameters are subject to functional review)
- Subcon wet-mateable connector supplied as standard
- Cabled or wireless variant available
- Cabled outputs available: mV/V, 4-20mA or 0-10V
- Single bridge, dual bridge and X-Y variants available
- Wireless handset, wall-mount display or Windows software with wireless USB dongle options available
- Wireless variant has up to 350m range to a handset or optional long-range wireless USB dongle
- Wireless wall-mount display can output 4-20mA, RS-232, RS-422, RS-485, ethernet or canBUS as standard for remote integration into an existing system
- High and low temperature compensated load monitoring pins available
- Pin suitable for minimum 24 months subsea use as standard. Long term subsea variant available. Subsea data-logger also available
- Zone 1 and Zone 2: ATEX, IECEx and North American/Canadian Hazloc hazardous area certified

Technical specification:

Typical specifications	mV/V output	mA output	Wireless output
Rated load	As required		
Proof load	150% of rated load		
Accuracy	< ± 0.3% of full scale		
Environmental protection	IP67/IP68		
Safety factor	Minimum 3:1 (or as required)		
Operating temperature	-25°C to +70°C (or as required)		
Storage temperature	-30°C to +80°C (or as required)		
Output signal	mV	4-20mA	Wireless
Electrical connection	4 core	2 or 3 wire	N/A
Cable connection	Connector	Connector	Connector
Cable length	As required	As required	As required
Recommended excitation voltage	10V	N/A	N/A
Maximum excitation voltage	15V	N/A	N/A
Recommended supply voltage	N/A	24V	N/A
Maximum supply voltage	N/A	30V	N/A
Bridge resistance	700 Ohm	N/A	N/A
Sensitivity	1.0 to 2.0 mV	N/A	N/A
Data logging	N/A	N/A	As standard
Battery type	N/A	N/A	2 or 4 (AA or D)
Active battery life	N/A	N/A	Up to 350hrs (AA)
Standby battery life	N/A	N/A	Up to 1700hrs (AA)
Logging only battery life	N/A	N/A	6 months+ (D)
Telemetry frequency	N/A	N/A	2.4GHz ISM
System range	N/A	N/A	Up to 350m
Sampling rate	N/A	N/A	10Hz (500Hz max)