

Product Overview

For almost 20 years Delphi Force Measurement have been producing high quality load pins to suit a variety of loading applications. Measurement ranges of 100kg up to a massive 500t have been designed, machined, assembled and tested in our manufacturing facility on Queensland's Gold Coast.

Our load pins are well known within the crane, lifting and winch industries – thanks largely to the safety factor our designs – which typically exceeds 7:1 (minimum 6:1) to fall in line with rope safety factors in the lifting industry.

Many of our load pins are used to replace a pin in an existing machine or at the design/assembly phase of new equipment – often as part of a wedge socket, sheave or shackle.

Our custom build capability and short lead times are critical to our success.

Application examples

- Crane lifting weight and overload readings
- Cargo and material handling reading
- Winching and cable laying
- Rigging and lifting
- Conveyor monitoring (weight)
- Dynamometers
- Axle Shaft or Pin replacement to record weight and force

The advantage of choosing Delphi

- Safety - 300% safe overload, 600% ultimate
- Rugged - Internally gauged, IP67 rated
- Short lead-time
- **One off, custom pins**
- Custom design – assistance and recommendation of load pin design provided.
- Output variety– load cell, amplified (4-20mA or V) and wireless options
- Pin locking/anti-rotation – solutions provided for locking the pin into place including key slot/s, circlips, anti-rotation bars, locking nuts/bolts etc.



General Specifications

Load Range	0.1 - 100 Tonnes
Accuracy	+/-0.5% of range*
Repeatability	+/-0.15% of range*
Excitation	<10V DC
Output	1.00mV/V nominal
Pin Dia. tolerance	g6 (-0.02mm -0.04mm) **
Overload	>300% (No damage) >600% (Ultimate)
Thermal effects	+/-0.005%/°C on output or zero*
Termination	3106A 14S 6S 300 **

Electrical

Sensing	Full bridge strain gauge, (dual bridge optional). 4-wire standard, (6-wire optional).
Input resistance	760 ± 8% Ohms **
Output resistance	700 ± 0.5% Ohms **
Connection	Delphi 6 pin connector <i>M12 (optional)</i> <i>Integral cable (optional)</i>

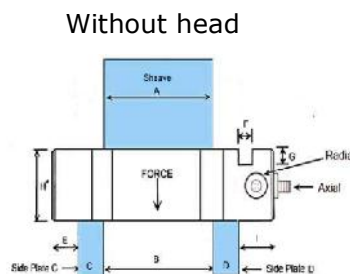
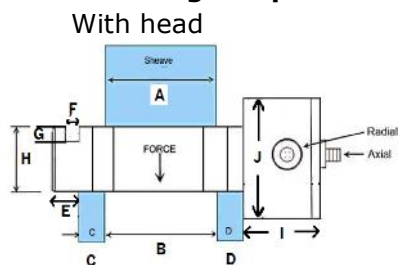
Wiring

	Pin	Cable	Description
4 wire	A	Red	+ Excitation
	C	Black	- Excitation
	E	White	- Signal
	F	Green	+ Signal
<i>Opt 6 wire</i>	<i>B</i>	<i>Yellow</i>	<i>+ Sense</i>
	<i>D</i>	<i>Blue</i>	<i>- Sense</i>

Mechanical

Material	630 grade Stainless Steel
Hardness	38-45 HRC.

Custom design requirements



Diameter (H above) and overall length required for quotation.
Dimension B, C and D are required as a minimum to make

*Typical

**Standard unless otherwise stated