

PCM 称重传感器 T-LP



An externally strain gauged load pin.



An internally strain gauged load pin.

产品型号:

T-LP



传感器 | 控制仪表 | 推拉力计 | 扭力计

www.sensortop.cn

负载销-定制设计

模型: $t-lp$

主要特点:

按订单建造。

典型的线性 $\pm 0.25-2\% R_o$ 。

IP67 等级。

应用:

在线称重

重工业

离岸的

航空航天

恶劣的环境

数据表: 加载引脚-自定义设计

TLP 负载引脚

称重传感器是基于应变计的传感器, 用于测量负载、过载或张力条件。负载销是典型的负载单元, 通常安装在机器上, 代替实心轴, 而负载单元作为组装中的直接元件。PCM 设计的双剪应力法测力销。

PCM 负载引脚完全定制适合。所有的单元都是围绕客户的要求而设计的, 如果需要的话, 可以从我们有经验的技术团队中得到帮助来指导这些决定。

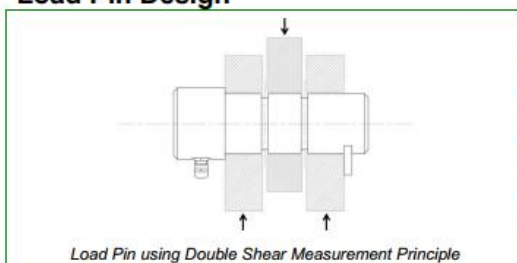
负载引脚设备采用通用件和大量的各种应用, 如: 起重机、绞车, 绞车, 等绳, 链, 和制动锚、轴承座、枢轴和束缚, 电梯和地面输送机以及在农业、航空应用, 化学和研发产业。

由于 PCM 制造所需的所有负载引脚, 我们要求加载 PIN 调查问卷 (参阅我们的数据表的第 4 页) 完成并发送到我们的销售团队。一旦收到, 我们的工程师团队将审查您的查询, 并确认如果负载引脚标准是机械实现的和安全的。然后我们将提交一份有竞争力的交货期的报价单。收到采购订单后, 将向客户提交技术概要图和规范, 以便在生产前批准。

所有 PCM 负载引脚都配有校准证书，使用的测试机器可追溯到国家标准。但是，我们建议进行现场校准，以获得最大的性能。

为了完成您的系统，PCM 可以为您提供内置放大器，如果需要，我们也可以提供几乎所有所需的仪器，从无线遥测、大型显示器、外壳面板/手持指示器到累加装置和过载/松弛绳检测设备等设备。

Load Pin Design



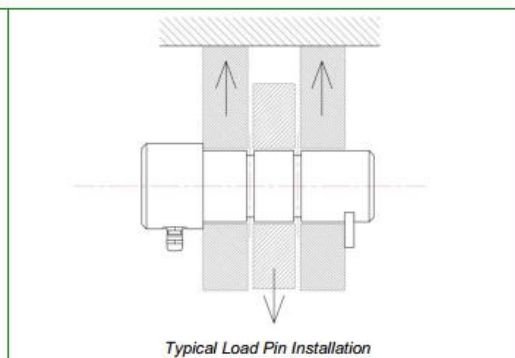
Load pins sense the force applied via strain gauges that are installed within a small bore along the neutral axis of the pin. The pin also has two grooves machined into the outer circumference to define its shear planes (located between where the forces are applied).

Load pins can be designed to fit many applications as direct replacements for clevis or pivot pins. They have an advantage over the use of any other load sensor as no change to the mechanical structure being monitored is usually required.

General Performance & Calibration

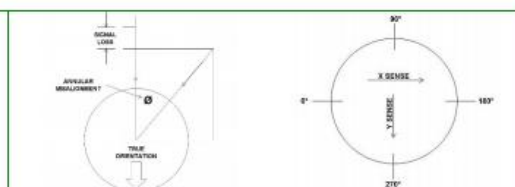
A load pin design is not as accurate as a load cell. This is due to a number of reasons:

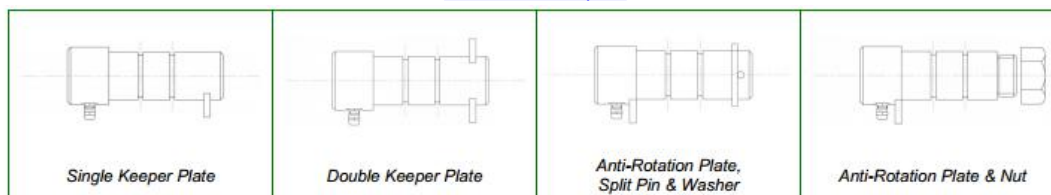
- An internally strain gauged bridge is bonded down the hole axially along the length of the pin. When the force is applied, the hole does not remain perfectly round and therefore produces a greater non-linearity than you would expect when using other load cell designs.
- The fittings that surround the load pin have a great bearing on the performance. If the fittings are worn (retro fit) or tight (friction) the output and repeatability are affected. It is for this reason we always recommend that load pin systems are calibrated in situ.



X/Y Load Pins

If you have an application where you expect to experience a high degree of angular variation, PCM can provide you with an X/Y load pin. Providing two outputs, which can be read simultaneously to calculate the true force applied to the pin, the direction of the force can also be calculated from the signal direction and magnitude of the X and Y signals.

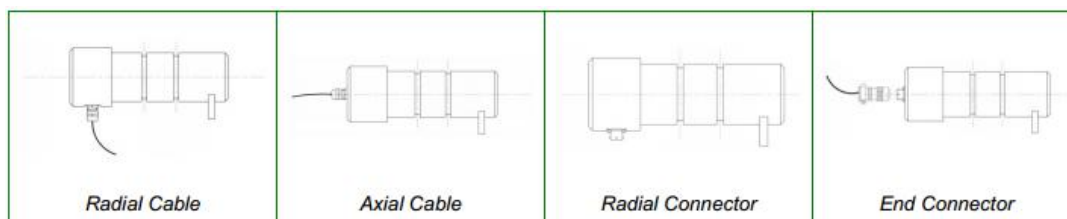




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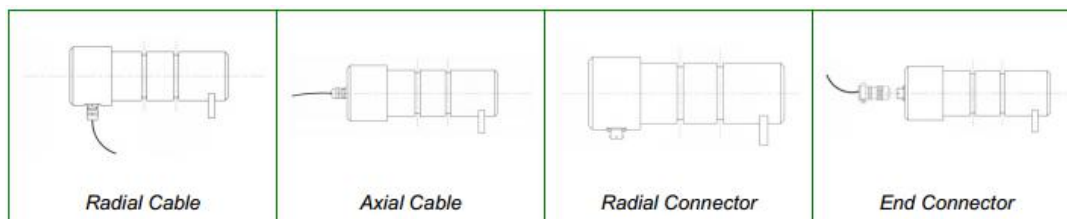
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Typical Specification

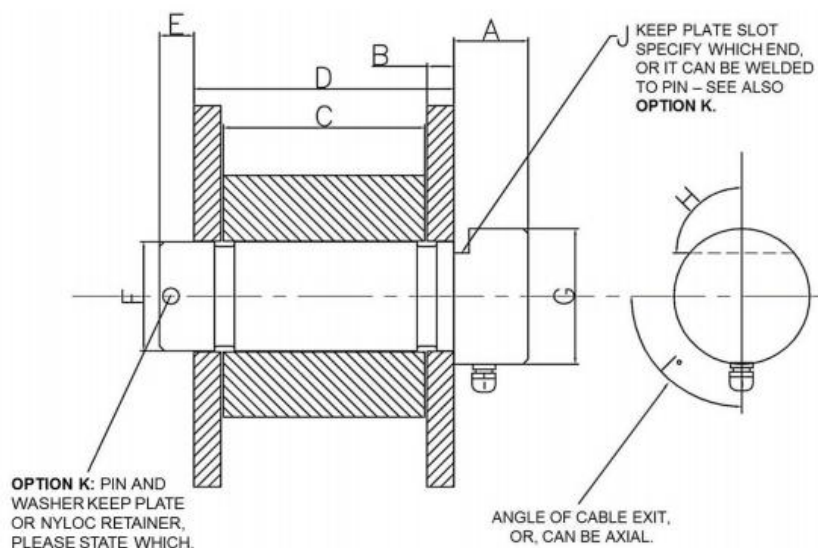
PARAMETER	VALUE	UNITS
Capacities Range	Custom/Range: 0.5 to 500	Te
Number of Bridges	Up to 2	-
Rated Output	0.5-1.5	mV/V
Linearity & Non-Repeatability	0.25-2	±% Rated Output
Zero Return after 30 minutes	0.2	±% of Applied Load
Zero Balance	1.5	±% of Rated Output
Temperature Range: Operating	-10 to +80	°C
Temperature Range: Compensated	Ambient to 70	°C
Temperature Effect: On Output	0.1	±% of Applied Load/°C
Temperature Effect: On Zero	0.02	±% of Applied Load/°C
Safe Overload	200	% of Rated Capacity
Ultimate Overload	500	% of Rated Capacity
Excitation: Recommended	10	Volts AC or DC
Excitation: Maximum	15	Volts AC or DC
Input Impedance	380	Ω
Output Impedance	350	Ω
Insulation Resistance	>2	GΩ at 50VDC
Construction	17-4pH Stainless Steel or Tool Steel	-
Environmental Protection	IP67 (Standard)	-
Cable	5m 7/0.2 4 core screened	-



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Customer Questionnaire - Custom Build Load Pins



Referring to the diagram above, please complete the outline dimensions **in millimeters** in the table below. When the questionnaire is complete either scan and email it to sales@pcm-uk.com or transfer the information to email if easier.

A		G	
B		H	
C		I	
D		J	
E		K	
F			

Loading Direction	Please mark this on the diagram above.
Load (Te)	
Cable Length/Exit or Plug and Socket	
Operational Temperature Range	
Material	Stainless Steel / Tool Steel
Bridges	Single Bridge / Dual Bridge
Environmental Protection	IP67 (Standard) / Other
Force Direction	Single Direction / X/Y Axis
Load Pin Retention	