VPG force sensors
Celtron • Revere • Sensortronics • Tedea-Huntleigh

Load Pin

FEATURES

- Capacity 45 kN
- Rugged design with zinc-plated, hardened alloy steel construction
- Embedded ratio metric voltage output converter



APPLICATIONS

- Agriculture equipment
- Force measurement devices

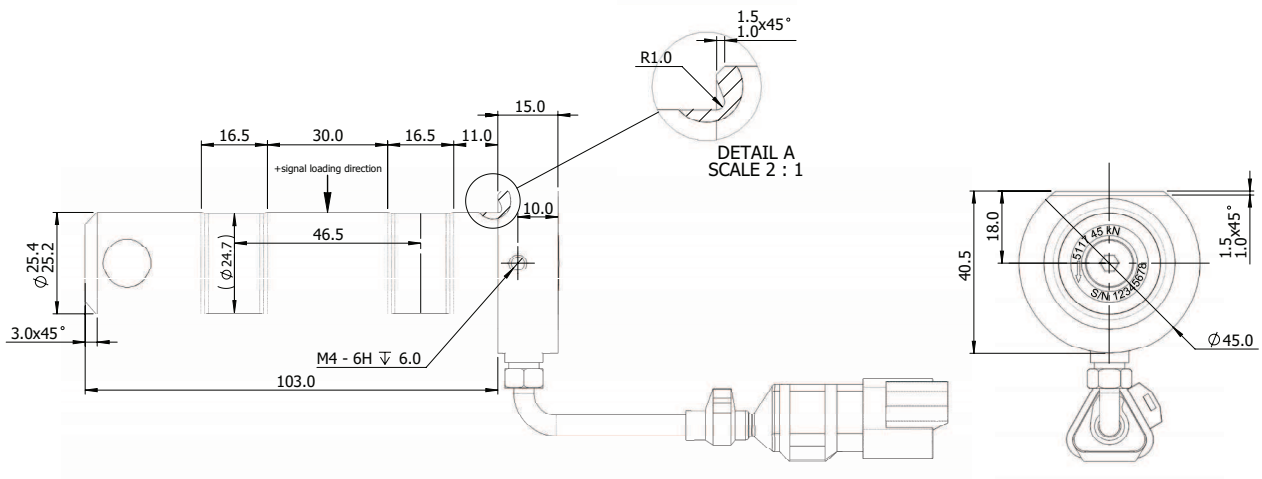
DESCRIPTION

The Model 5117 load pin is designed to provide force measurement on an applied load across it. It uses VPG's own internally manufactured, state-of-the-art foil-based strain gages, bonded onto a robust zinc-plated, hardened alloy steel body, making it an ideal sensor for any demanding environment application. The Model 5117 load pin is typically mounted on the top arm of a 3-position hitch. Its rugged design provides excellent long term stability and reliable operation, even under severe conditions.

This compact, 25 mm diameter load pin offers high repeatability and performance. This load pin may be used in lieu of hydraulic pressure or draft pin sensors.

The Model 5117 load pin is an ideal solution for a wide variety of applications, such as those found in tractor hitch systems, plowing vehicles, cranes or tensioning systems that employ rope, chain or brake anchors.

OUTLINE DIMENSIONS in millimeters



Drawing showing standard connector DT04-3P.

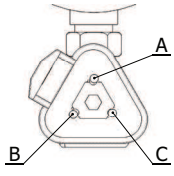
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Load Pin

SPECIFICATIONS		
PARAMETER	**VALUE**	**UNIT**
Rated load, positive	45	kN
Rated load, negative	45	kN
Safe overload, positive	110	kN
Safe overload, negative	110	kN
Excitation for built-in amplifying circuit, V_S	8.00 ±1%, (recommended)	VDC
Maximum current, all conditions	50	mA
Output at zero load (20°C)	50 (4.00 ±0.08)	%V_S (VDC)
Output at rated positive load (20°C)	75 (6.00 ±0.16)	%V_S (VDC)
Output at rated negative load (20°C)	25 (2.00 ±0.16)	%V_S (VDC)
Linearity, when loaded in positive direction	±2 (±0.16)	%V_S (VDC)
Hysteresis, when loaded in positive direction	±3 (±0.24)	%V_S (VDC)
Operating temperature range	–30 to +70	°C
Output at zero load, –30 to +70°C	50 (4.000 ±0.10)	%V_S (VDC)
Output at rated positive load, –30 to +70°C	75 (6.000 ±0.26)	%V_S (VDC)
Output at rated negative load, –30 to +70°C	25 (2.000 ±0.26)	%V_S (VDC)
EMC, effect at 20°C (per EEG-011)	0.05	±V
Environmental protection	IP66	—
Storage temperature range	–30 to +85	°C
Cable length	0.5	m
Cable type	4 x 24 AWG, PU jacket, PVC protective tube	—
Construction	Hardened alloy steel, zinc plated	—

All specifications are subject to change without notice.

WIRING SCHEMATIC DIAGRAM



Connector Pin Assignment		
Pin	**Color**	**Function**
A	Black	– Excitation
B	White	+ Signal
C	Red	+ Excitation

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