Novatech
Loadcell Design & Manufacture

F321 Gear Shift Loadcell

Standard Range 200N (20kgf)

- Gear lever actuation forces measured in 3 axes
- User friendly pure calibrated outputs for each axis
- Designed for hand or robotic actuation
- In car ergonomic replication
- Easily customised
- Traceable calibration with certificate included in the standard price

Specification

Parameter	Value	Unit
Non-linearity - Terminal	Â±0.5	% RL
Hysteresis	Â±0.5	% RL
Creep - 20 minutes	Â±0.1	% AL
Repeatability	Â±0.02	% RL
Maximum cross talk	3	% RL
Rated output - Nominal	1.0	mV/V
Zero load output	Â±4	% RL
Temperature effect on rated output per Â°C	Â±0.005	% AL
Temperature effect on zero load output per Â°C	Â±0.01	% RL
Temperature range - Compensated	-10 to +50	Â°C
Temperature range - Safe	-10 to +80	Â°C
Excitation voltage - Recommended	10	V
Excitation voltage - Maximum	10	V
Bridge resistance X & Y axis	350	Î©
Z axis	700	Î©

Insulation resistance - Minimum at 50Vdc	500	MÎ©
Structural stiffness - Nominal - X & Y axis	2.0 x 106	N/m
Z axis	1.3 x 106	N/m
Overload - Safe	50	% RL
Overload - Ultimate	100	% RL
Weight - Nominal (excluding cable)	150	g

The F321 gear shift loadcell measures gear lever forces required to achieve gear selection.

An ergonomically designed gear knob senses the force from a human hand or a mechanical actuator. The three axis force components are represented by three pure loadcell output signals. The gear shift loadcell is supplied calibrated and ready to use, no in-situ calibration or mathematical computation is required. Easy fitment is achieved with mechanical axis referencing and simple attachment to a male thread or adapter. The gear shift loadcell, like all our automotive products, can be produced for environmental test chamber temperature requirements of -40 to 80°C. We are happy to design variants of this loadcell to meet your specific requirements. Please consult our engineering department.

Order Codes

Code	Description
F321UF0000	Bi-directional, unrationalised

Notes

- AL = Applied load.
- RL = Rated load.
- Temperature coefficients apply over the compensated range.
- Values apply to all axes unless otherwise specified.

Connections

The F321 is fitted with 2 metres of PVC insulated 12 core screened cable type 7-1-12C. The screen is not connected to the loadcell body.

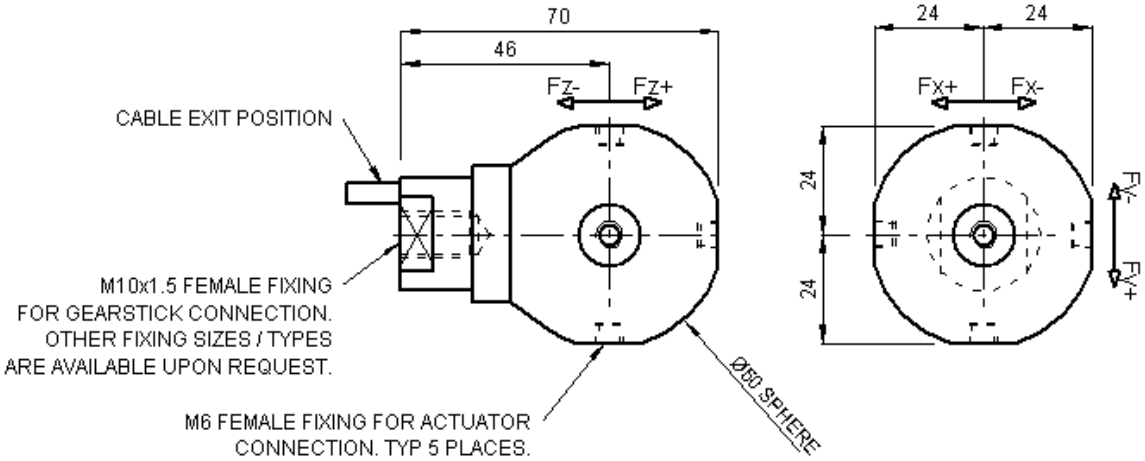
Function Wire Colour

	X axis	Y axis	Z axis
Excitation +	Red	Violet	Orange
Excitation -	Blue	Black	Turquoise
Signal +	Yellow	Brown	Pink
Signal -	Green	White	Grey
Screen	Orange (thick)		

Files

Type	Title	Download
STEP File	F321UF0000 200N (200kgf)	Download

Outline



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