



## GST SERIES SINGLE AXIS GEAR LEVER LOAD CELL

The GST Series of gear lever load cells are designed for the detection and measurement of tension and compression forces in gear shift application.

Construction is aluminum with a built-in amplifier, allowing for a very simple installation with only a 3 wire connection needed. Mechanical mounting is via various available threads, with custom designs also possible.

The output signal is proportional to the amount of force and is linear 0.5 to 4.5V output suitable for most common ECU's. Configuration is available for either Sequential or 'H' Pattern Gearboxes. The Load Cell can be supplied without a cover, or with any of the cover options detailed on page 2.

The typical application is for uses such as: Flat Shift, Quickshifter, Torque Cut, Ignition Cut and Clutch-free Gearshift on race vehicles.

The load cells are generally installed on top of the gear change lever and will detect the level of force applied by the driver to change gear.

## Sensors For Motorsport

### Features

- Sequential Pattern Gearboxes
- $\pm 35\text{lbsf}$  to  $\pm 220\text{lbsf}$
- Built-in Amplifier
- 5V or 8-16 Vdc Supply
- $\pm 0.5\%$  Accuracy

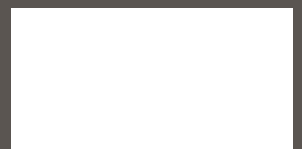
## TECHNICAL SPECIFICATIONS

<b>Range</b>	$\pm 35\text{lbsf}$ to $220\text{lbsf}$ ( $\pm 150\text{N}$ to $\pm 1000\text{N}$ )
<b>Safe Over Range</b>	$450\text{lbsf}$ ( $\pm 2000\text{N}$ )
<b>Accuracy</b>	$\pm 0.5\%$ FS Combined Linearity & Hysteresis (CNLH)
<b>Thermal Effects</b>	Zero $\pm 0.005\%$ FS/ $^{\circ}\text{F}$ (Sensitivity $\pm 0.005\%$ of Reading / $^{\circ}\text{F}$ )
<b>Output</b>	0.5V to 4.5V and 1mV/V (+V in Direction of Arrow)
<b>Operating Temperature Range</b>	$-5^{\circ}\text{F}$ to $185^{\circ}\text{F}$ ( $-20^{\circ}\text{C}$ to $+85\text{C}$ )
<b>Compensated Temperature Range</b>	$32^{\circ}\text{F}$ to $185^{\circ}\text{F}$ ( $0^{\circ}\text{C}$ to $+85\text{C}$ )
<b>Construction</b>	Aluminum
<b>Electrical Connection</b>	40", 55spec, 26AWG Cable + DR25 Sleeve
<b>Thread Sizes</b>	Please See Part Number Configurator - page 2
<b>Protection Class</b>	IP67
<b>EMC Protection</b>	EN 50082-1
<b>Vibration Protection</b>	Mil-Std-810C, Curve L, 20G
<b>Weight</b>	No Cover: 3.5oz (Excluding Cable) With Aluminum Cover: 5.6oz With Nylon Cover: 9.2oz
<b>Options</b>	Connector Fitted, Thread Size, Cover Fitted and Labelling

### Applications

- Gear Shift
- Steering
- General Testing

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Represented by:



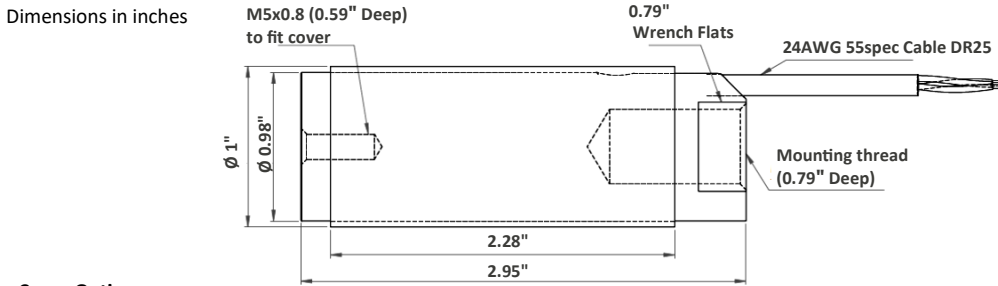
PMC/KA Sensors adopts a continuous development program which sometimes necessitates specification changes without notice

# PART NUMBER CONFIGURATOR

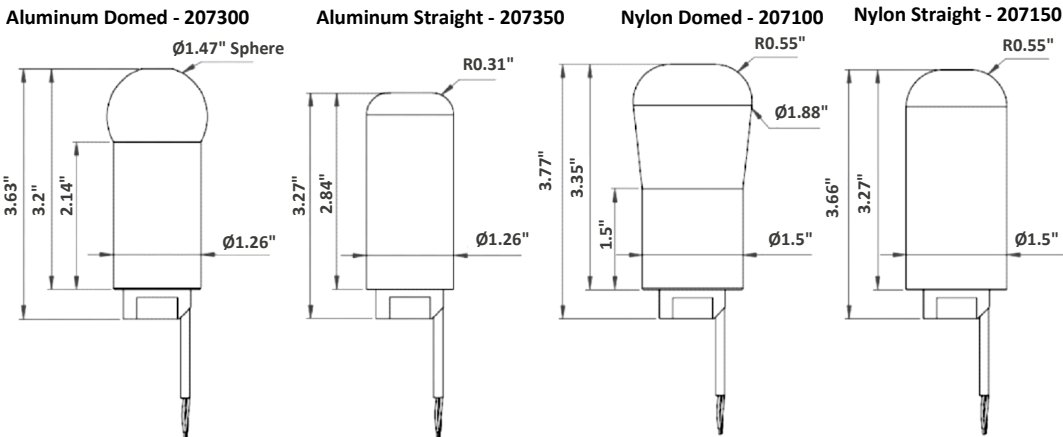
	<b>GST</b>	-	[ ]	-	[ ]	-	[ ]	-	[ ]	-	[ ]	-	[ ]	-	[ ]	-	[ ]
<b>Range</b>	0 - 35lbsf or ±35lbsf (±150N)		0150														
	0 - 55lbsf or ±55lbsf (±250N)		0250														
	0 - 110lbsf or ±110lbsf (±500N)		0500														
	0 - 220lbsf or ±220lbsf (±1000N)		1000														
<b>Supply</b>	5V Ratometric				4												
	8-16Vdc				5												
<b>Output</b>	0.5V to 4.5V (0.5V Offset)					2											
	0.5V to 4.5V (2.5V Offset) ± Ranges only						3										
	0.5 to 4.5V (0.5V Offset) - Reverse Output							5									
	0.5V to 4.5V (2.5V Offset) - Reverse Output ± Ranges only								6								
<b>Thread Size</b>	M10 x 1.5									1							
	M12 x 1.75										2						
	M12 x 1.25											3					
	9/16" 18 UNF												4				
	Quaife 12.7mm (1/2 Inch) Diameter Plain Shaft													6			
	M14 x 1.25														7		
	M12 x 1.5															8	
<b>Cable Length</b>	40 inches																A40
<b>Special Code: One</b>	No Cover																000
	Aluminum Domed - 207300																ADM
	Aluminum Straight - 207350																AST
	Nylon Domed - 207100																NDM
	Nylon Straight - 207150																NST
<b>Special Code: Two</b>	None																000

The KA configuration tool is used to specify a standard KA Sensor, other options are available.

## MECHANICAL DETAILS



### Cover Options:



All covers are fitted with an M5 countersunk screw, sub-flush from the top of the cover.

## ELECTRICAL DETAILS

+Ve Supply	0V Supply	Signal
Red	Black	White

*Sense  
Analyze  
Control*

### Sensors For:

- Temperature
- Acceleration
- Pressure
- Position
- Torque
- Speed
- Angle
- Force

### Services For:

- Data Logging
- Telemetry
- Controls
- Wiring

## Contact Us

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