

# PEGASEM PFS Series

## Pedal Force Sensors



### Features

- Measurement Range 0 -1000N
- Built in Signal Amplifier
- Error class: 1%
- Separate Switching Output
- Supply Voltage Range: 5 - 30VDC
- Velcro® Fasteners for easy and reliable attachment to the pedal
- Compact Design. Activation plate is only 25mm over top of pedal
- Robust
- Cost-effective

### Applications

- Brake Pedal Force Measurement
- Vehicle Brake Homologation
- High Precision Trigger for Brake Testing Equipment



PFS fitted to Brake Pedal

The PEGASEM PFS pedal force sensors have been developed for homologation tests of vehicle brakes. Many testing procedures demand the exact recording of the pedal force applied during a brake test, e.g. ECE R-13, ECE R-90, DIN70028, MVSS135 , MVSS121.



PFD - Pedal Force Display

To mount the sensor, a separate Velcro® "spider" is fitted around the pedal. The sensor is then easily attached to the top of the "spider". The Velcro® "spider" attaches the

sensor to any pedal size, making it suitable for passenger cars and commercial vehicles.

The sensor comes with a built in amplifier and has a digital output for triggering external measurement equipment. The trigger level is 5% of the full scale and can be programmed before delivery.

The optional display can be easily fitted to the windshild by means of a ball joint and a suction cup. It can be supplied together with the sensor directly from the DAQ-system or from a separate power input. PEGASEM PFS Sensors stand out from other brands because they are robust, compact and very cost-effective.

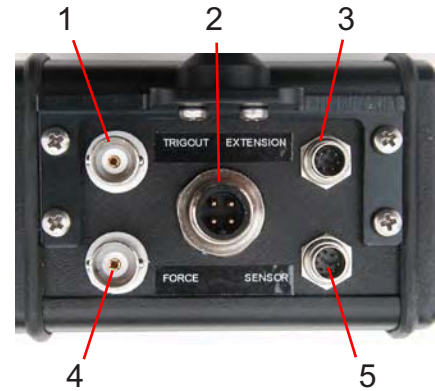
Mechanical Dimensions		
Sensor	46 x 45 x 25 mm	L x W x H
Cable Length	4	m
Velcro® Spider Leg Length	10 and 20	cm
Sensor Weight	200	grams
Cable Socket at DAQ Side	open ends, or 7 pole female Binder Series 712	
Cable at Sensor Side	fixed	
Sensor Display	80 x 33 x 58	L x W x H
Display Weight	250	grams

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### Electrical Data

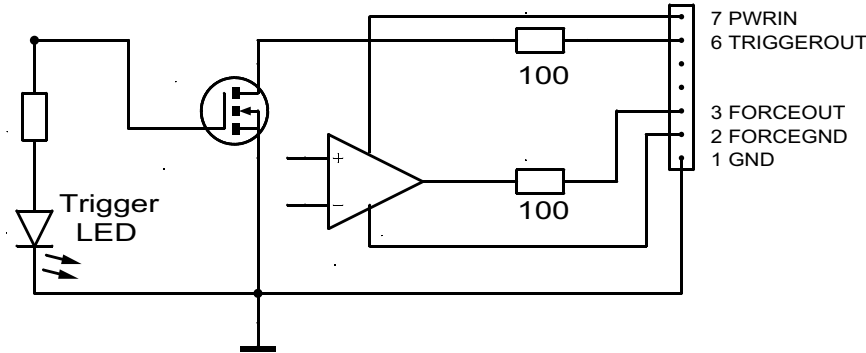
Characteristics	Min	Typ	Max	Unit
<b>PFS 1000</b>				
Measurement Range	0		1000	N
Output Voltage (PFS1000-1)	0		1.000	V
Output Voltage (PFS1000-5)	0		5.000	V
Force Signal Output Current			10	mA
Trigger Out Current Open Collector Output, active low			50	mA
Supply Voltage (-1 Versions)	5		30	VDC
Supply Voltage (-5 Versions)	6		30	VDC
Force Overload			150	% of FS
Hysteresis			0.5	%
Total Error			1	% of FS
Trigger Level	45	50	55	N
Supply Current		20	25	mA
Temperature Range	-20		60	°C
<b>PFD (Pedal Force Display)</b>				
Display Range	0		1000	N
Power Supply	6		30	V
Supply Current		15		mA



Pedal Force Display - rear panel

Display Rear Connectors	
Function	#
TRIGOUT (BNC)	1
BATT. POWER	2
EXTENSION (DAQ -System)	3
FORCE (BNC)	4
PFS SENSOR	5

### Output Stage Schematic



Function	#	Color
PWRGND	1	green
FORCEGND	2	grey
FORCEOUT	3	white
NC	4	
NC	5	
TRIGGEROUT	6	yellow
PWRIN	7	brown

Sensor pinout and wire colors

### Ordering Information

Type	Comments	Type	Comments
PFS1000-1-OE	Pedal Force Sensor, 1000N, 1V @ 1000N, 4m cable with open ends	PFD-5	Pedal Force Display, 5V @ 1000N
PFS1000-5-OE	Pedal Force Sensor, 1000N, 5V @ 1000N, 4m cable with open ends	CAB-490600-2	Battery Power Cable, 2m, with Cigarette Lighter Connector
PFS1000-1-B712	Pedal Force Sensor, 1000N, 1V @ 1000N, 4m cable with B712 connector	CAB-490601-2	Battery Power Cable, 2m, with Banana Plugs
PFS1000-5-B712	Pedal Force Sensor, 1000N, 5V @ 1000N, 4m cable with B712 connector	CAB-230790-4	PFD DAQ-Extension Cable, 4m with connector B712-7 (for Pegasem DAQ units)
PFD-1	Pedal Force Display, 1V @ 1000N	CAB-230791-4	PFD DAQ-Extension Cable, 4m with open ends (for user fitted connectors)



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