

FORCE SENSING RESISTORS

Product Sheet



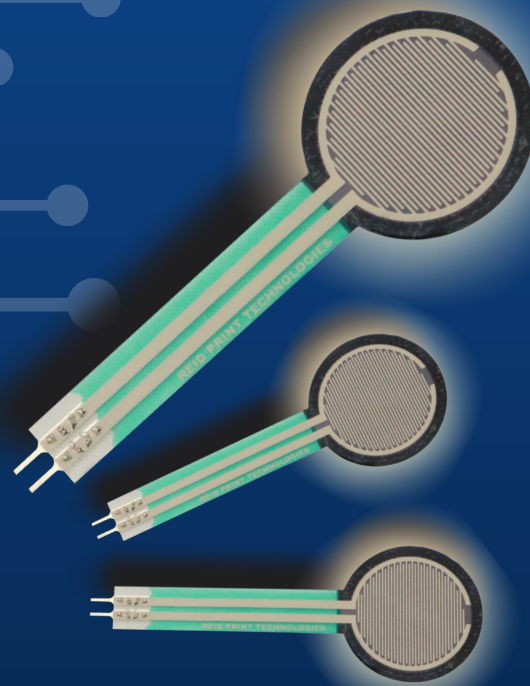
Reid Print Technologies manufactures force sensing resistors to order, with a multitude of resistances, sizes, shapes and configurations on offer.

FEATURES

- High sensing range capability from 0.3N to 50N
- Paper-thin
- Durability in extreme environments
- Simple uncomplicated integration
- Made to order offering full customization
- Low cost

APPLICATIONS

- Industrial
- Medical
- Automotive
- Mining
- Aerospace
- Computing
- IoT
- Robotics
- Wearable Technology

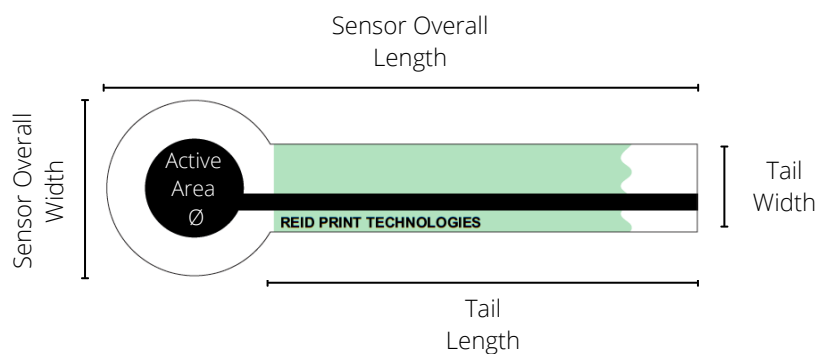


Force Sense Resistors also known as FSR are pressure sensors that can be custom made to a multitude of benchmarks and resistances. FSR are made by printing carbon-based specialised inks onto a flexible substrate. Enhancing the sensors ability to measure the pressure or force that has been applied to a specific area. It is also important to know that there are two main types of FSR, that being Shunt Mode Resistor or Thru Mode Resistor. Shunt Mode Resistors can detect a wide range of forces and Thru Mode Resistors are more receptive to lighter forces.

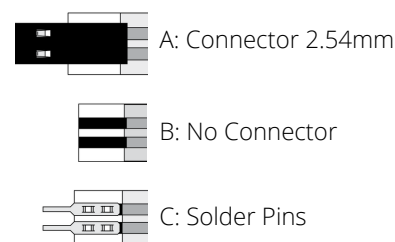
FSR are commonly used for industry purposes including podiatry, orthotics, hospital bed monitoring, inventory control, control systems and much more.

For further enquiry please contact Reid Print Technologies on 1300 765 533 or sales@reidprinttechnologies.com.au

FSR 2000 Series Technical Data



Connector Options



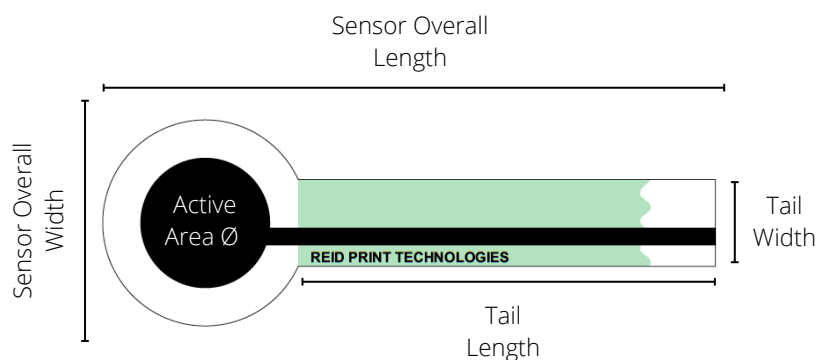
SERIES SPECIFICATIONS

Part Number	Description	Connector Type	Active Area	Sensor Overall Width	Sensor Overall Length	Tail Length	Tail Width
FSR 2000	FSR Shunt Sensor 16mm Round	A	Ø9.0mm	16.0mm	53.9mm	38.6mm	8.0mm
FSR 2001	FSR Shunt Sensor 16mm Round	B	Ø9.0mm	16.0mm	53.9mm	38.6mm	8.0mm
FSR 2002	FSR Shunt Sensor 16mm Round	C	Ø9.0mm	16.0mm	53.9mm	38.6mm	8.0mm

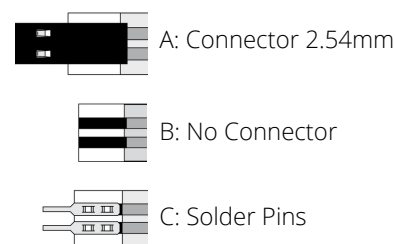
DEVICE CHARACTERISTICS

Feature	Condition	Value	Notes
Actuation force		0.1 Newtons	
Force sensitivity range		0.01 - 10.0 ² Newtons	
Force repeatability	(single part)	+/- 2%	
Force resolution		continuous	
Force repeatability	(part to part)	+6%	
Non-actuated resistance		10M W	
Thickness range		18.28mm diameter	
Stand-off resistance		0.2-1.25mm	unloaded, unbent
Switch travel	(typical)	>10M ohms	depends on design
Device rise time		<3 microseconds	measured w/ steel base
Temp operating range		-30°C - +70°C	

FSR 2010 Series Technical Data



Connector Options



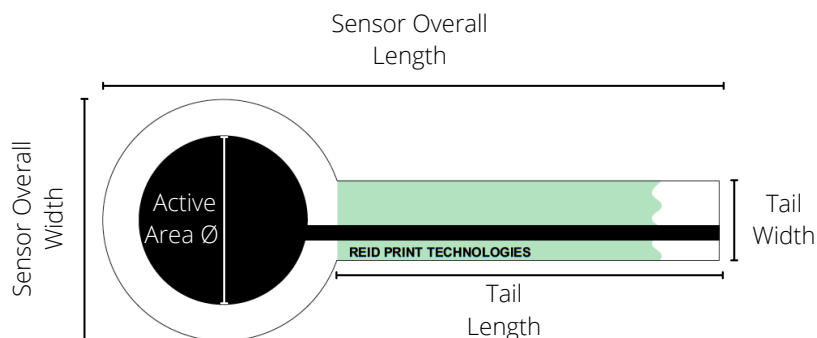
SERIES SPECIFICATIONS

Part Number	Description	Connector Type	Active Area	Sensor Overall Width	Sensor Overall Length	Tail Length	Tail Width
FSR 2010	FSR Shunt Sensor 19mm Round	A	Ø12.0mm	19.0mm	56.8mm	38.6mm	8.0mm
FSR 2011	FSR Shunt Sensor 19mm Round	B	Ø12.0mm	19.0mm	56.8mm	38.6mm	8.0mm
FSR 2012	FSR Shunt Sensor 19mm Round	C	Ø12.0mm	19.0mm	56.8mm	38.6mm	8.0mm

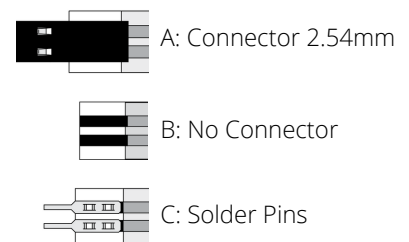
DEVICE CHARACTERISTICS

Feature	Condition	Value	Notes
Actuation force		0.1 Newtons	
Force sensitivity range		0.01 - 10.0 Newtons	
Force repeatability	(single part)	+/- 2%	
Force resolution		continuous	
Force repeatability	(part to part)	+/- 6%	
Non-actuated resistance		10M W	
Thickness range		18.28mm diameter	
Stand-off resistance		0.2-1.25mm	unloaded, unbent
Switch travel	(typical)	>10M ohms	depends on design
Device rise time		<3 microseconds	measured w/ steel base
Temp operating range		-30°C - +70°C	

FSR 2020 Series Technical Data



Connector Options



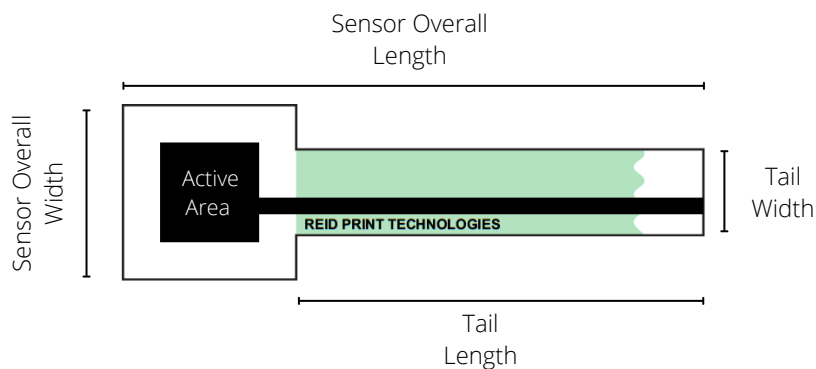
SERIES SPECIFICATIONS

Part Number	Description	Connector Type	Active Area	Sensor Overall Width	Sensor Overall Length	Tail Length	Tail Width
FSR 2020	FSR Shunt Sensor 24mm Round	A	Ø17.0mm	24.3mm	62.1mm	38.6mm	8.0mm
FSR 2021	FSR Shunt Sensor 24mm Round	B	Ø17.0mm	24.3mm	62.1mm	38.6mm	8.0mm
FSR 2022	FSR Shunt Sensor 24mm Round	C	Ø17.0mm	24.3mm	62.1mm	38.6mm	8.0mm

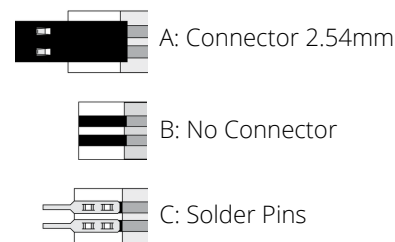
DEVICE CHARACTERISTICS

Feature	Condition	Value	Notes
Actuation force		0.1 Newtons	
Force sensitivity range		0.01 - 10.0 Newtons	
Force repeatability	(single part)	+/- 2%	
Force resolution		continuous	
Force repeatability	(part to part)	+/- 6%	
Non-actuated resistance		10M W	
Thickness range		18.28mm diameter	
Stand-off resistance		0.2-1.25mm	unloaded, unbent
Switch travel	(typical)	>10M ohms	depends on design
Device rise time		<3 microseconds	measured w/ steel base
Temp operating range		-30°C - +70°C	

FSR 2030 Series Technical Data



Connector Options



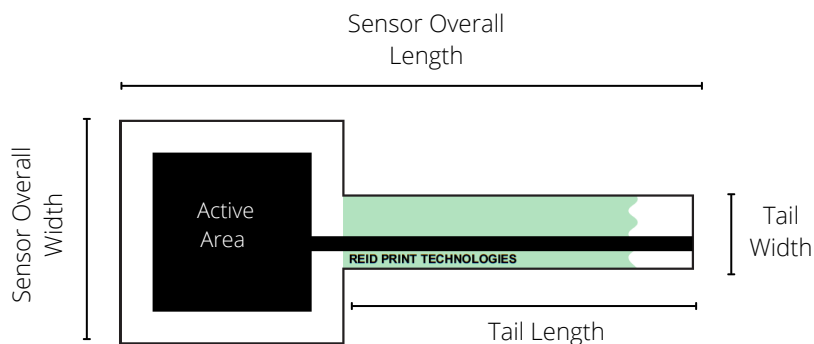
SERIES SPECIFICATIONS

Part Number	Description	Connector Type	Active Area	Sensor Overall Width	Sensor Overall Length	Tail Length	Tail Width
FSR 2030	FSR Shunt Sensor 16mm Square	A	9.2x9.2mm	16.2mm	54.4mm	38.2mm	8.0mm
FSR 2031	FSR Shunt Sensor 16mm Square	B	9.2x9.2mm	16.2mm	54.4mm	38.2mm	8.0mm
FSR 2032	FSR Shunt Sensor 16mm Square	C	9.2x9.2mm	16.2mm	54.4mm	38.2mm	8.0mm

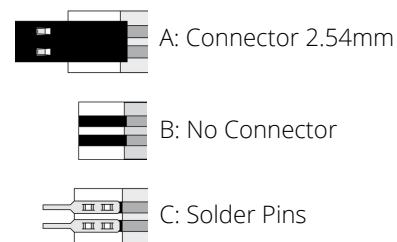
DEVICE CHARACTERISTICS

Feature	Condition	Value	Notes
Actuation force		0.1 Newtons	
Force sensitivity range		0.01 - 10.0 ² Newtons	
Force repeatability	(single part)	+/- 2%	
Force resolution		continuous	
Force repeatability	(part to part)	+6%	
Non-actuated resistance		10M W	
Thickness range		18.28mm diameter	
Stand-off resistance		0.2-1.25mm	unloaded, unbent
Switch travel	(typical)	>10M ohms	depends on design
Device rise time		<3 microseconds	measured w/ steel base
Temp operating range		-30°C - +70°C	

FSR 2040 Series Technical Data



Connector Options



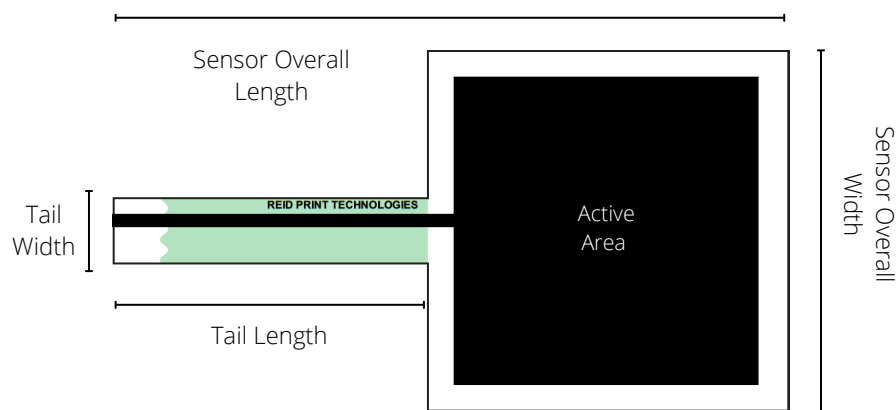
SERIES SPECIFICATIONS

Part Number	Description	Connector Type	Active Area	Sensor Overall Width	Sensor Overall Length	Tail Length	Tail Width
FSR 2040	FSR Shunt Sensor 24mm Square	A	17.3x17.3mm	24.3mm	62.5mm	38.2mm	8.0mm
FSR 2041	FSR Shunt Sensor 24mm Square	B	17.3x17.3mm	24.3mm	62.5mm	38.2mm	8.0mm
FSR 2042	FSR Shunt Sensor 24mm Square	C	17.3x17.3mm	24.3mm	62.5mm	38.2mm	8.0mm

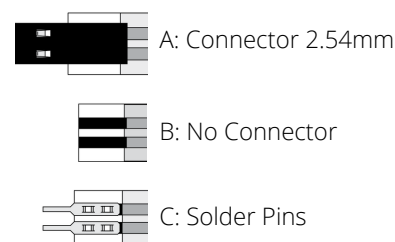
DEVICE CHARACTERISTICS

Feature	Condition	Value	Notes
Actuation force		0.1 Newtons	
Force sensitivity range		0.01 - 10.0 ² Newtons	
Force repeatability	(single part)	+/- 2%	
Force resolution		continuous	
Force repeatability	(part to part)	+/- 6%	
Non-actuated resistance		10M W	
Thickness range		18.28mm diameter	
Stand-off resistance		0.2-1.25mm	unloaded, unbent
Switch travel	(typical)	>10M ohms	depends on design
Device rise time		<3 microseconds	measured w/ steel base
Temp operating range		-30°C - +70°C	

FSR 2050 Series Technical Data



Connector Options



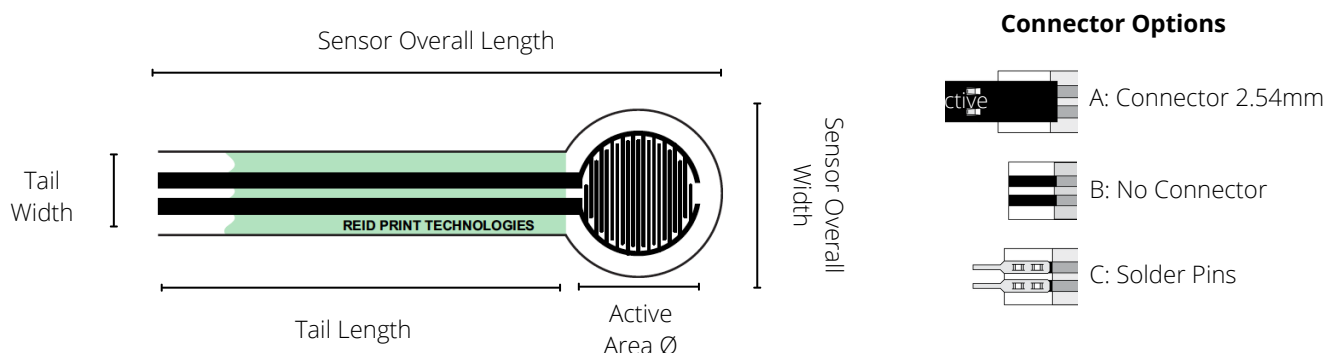
SERIES SPECIFICATIONS

Part Number	Description	Connector Type	Active Area	Sensor Overall Width	Sensor Overall Length	Tail Length	Tail Width
FSR 2050	FSR Shunt Sensor 44mm Square	A	37.1x37.1mm	44.0mm	82.3mm	38.2mm	8.0mm
FSR 2051	FSR Shunt Sensor 44mm Square	B	37.1x37.1mm	44.0mm	82.3mm	38.2mm	8.0mm
FSR 2052	FSR Shunt Sensor 44mm Square	C	37.1x37.1mm	44.0mm	82.3mm	38.2mm	8.0mm

DEVICE CHARACTERISTICS

Feature	Condition	Value	Notes
Actuation force		0.1 Newtons	
Force sensitivity range		0.01 - 10.0 ² Newtons	
Force repeatability	(single part)	+/- 2%	
Force resolution		continuous	
Force repeatability	(part to part)	+6%	
Non-actuated resistance		10M W	
Thickness range		18.28mm diameter	
Stand-off resistance		0.2-1.25mm	unloaded, unbent
Switch travel	(typical)	>10M ohms	depends on design
Device rise time		<3 microseconds	measured w/ steel base
Temp operating range		-30°C - +70°C	

FSR 2060 Series Technical Data



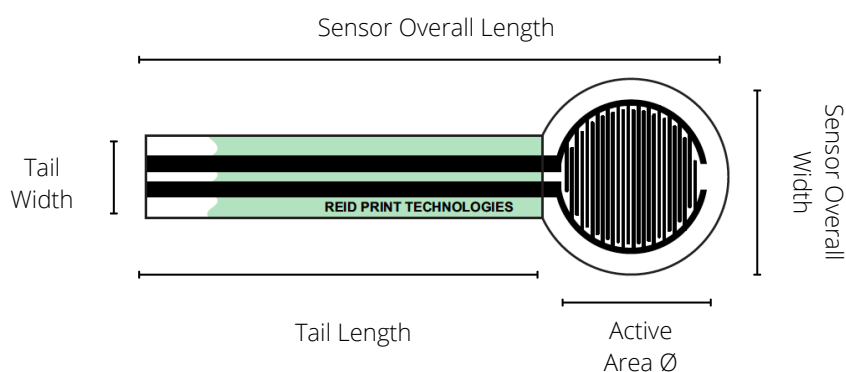
SERIES SPECIFICATIONS

Part Number	Description	Connector Type	Active Area	Sensor Overall Width	Sensor Overall Length	Tail Length	Tail Width
FSR 2060	FSR Thru Sensor 16mm Round	A	Ø12.0mm	16.0mm	53.9mm	39.0mm	8.0mm
FSR 2061	FSR Thru Sensor 16mm Round	B	Ø12.0mm	16.0mm	53.9mm	39.0mm	8.0mm
FSR 2062	FSR Thru Sensor 16mm Round	C	Ø12.0mm	16.0mm	53.9mm	39.0mm	8.0mm

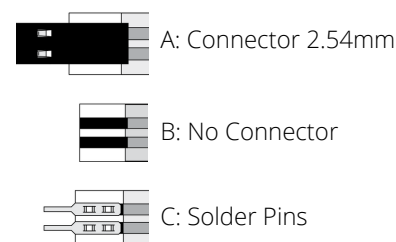
DEVICE CHARACTERISTICS

Feature	Condition	Value	Notes
Actuation force		0.1 Newtons	
Force sensitivity range		0.01 - 10.0 ² Newtons	
Force repeatability	(single part)	+/- 2%	
Force resolution		continuous	
Force repeatability	(part to part)	+/- 6%	
Non-actuated resistance		10M W	
Thickness range		18.28mm diameter	
Stand-off resistance		0.2-1.25mm	unloaded, unbent
Switch travel	(typical)	>10M ohms	depends on design
Device rise time		<3 microseconds	measured w/ steel base
Temp operating range		-30°C - +70°C	

FSR 2070 Series Technical Data



Connector Options



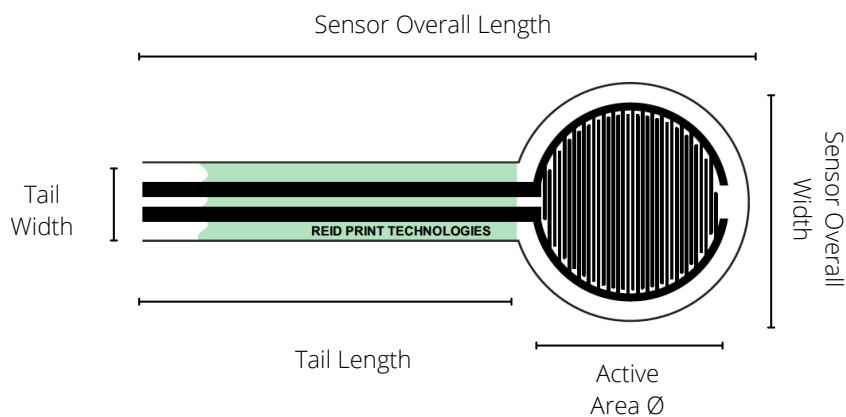
SERIES SPECIFICATIONS

Part Number	Description	Connector Type	Active Area	Sensor Overall Width	Sensor Overall Length	Tail Length	Tail Width
FSR 2070	FSR Thru Sensor 19mm Round	A	Ø15.0mm	19.0mm	58.6mm	38.6mm	8.0mm
FSR 2071	FSR Thru Sensor 19mm Round	B	Ø15.0mm	19.0mm	58.6mm	38.6mm	8.0mm
FSR 2072	FSR Thru Sensor 19mm Round	C	Ø15.0mm	19.0mm	58.6mm	38.6mm	8.0mm

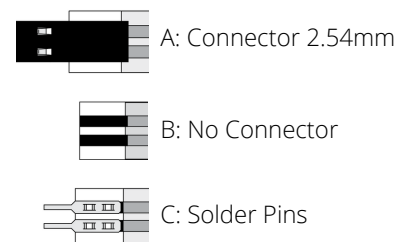
DEVICE CHARACTERISTICS

Feature	Condition	Value	Notes
Actuation force		0.1 Newtons	
Force sensitivity range		0.01 - 10.0 ² Newtons	
Force repeatability	(single part)	+/- 2%	
Force resolution		continuous	
Force repeatability	(part to part)	+/- 6%	
Non-actuated resistance		10M W	
Thickness range		18.28mm diameter	
Stand-off resistance		0.2-1.25mm	unloaded, unbent
Switch travel	(typical)	>10M ohms	depends on design
Device rise time		<3 microseconds	measured w/ steel base
Temp operating range		-30°C - +70°C	

FSR 2080 Series Technical Data



Connector Options



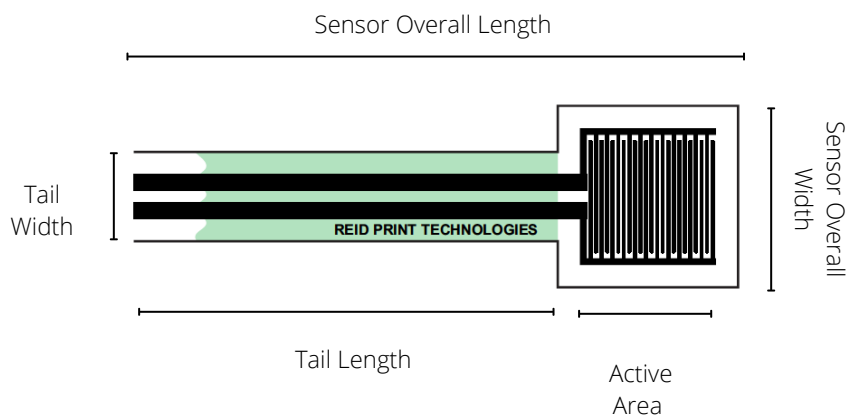
SERIES SPECIFICATIONS

Part Number	Description	Connector Type	Active Area	Sensor Overall Width	Sensor Overall Length	Tail Length	Tail Width
FSR 2080	FSR Thru Sensor 24mm Round	A	Ø20.3mm	24.2mm	62.1mm	38.6mm	8.0mm
FSR 2081	FSR Thru Sensor 24mm Round	B	Ø20.3mm	24.2mm	62.1mm	38.6mm	8.0mm
FSR 2082	FSR Thru Sensor 24mm Round	C	Ø20.3mm	24.2mm	62.1mm	38.6mm	8.0mm

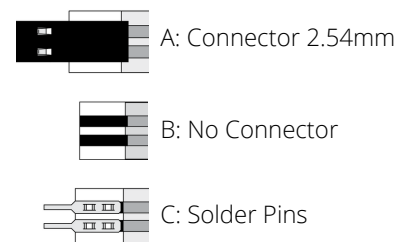
DEVICE CHARACTERISTICS

Feature	Condition	Value	Notes
Actuation force		0.1 Newtons	
Force sensitivity range		0.01 - 10.0 ² Newtons	
Force repeatability	(single part)	+/- 2%	
Force resolution		continuous	
Force repeatability	(part to part)	+6%	
Non-actuated resistance		10M W	
Thickness range		18.28mm diameter	
Stand-off resistance		0.2-1.25mm	unloaded, unbent
Switch travel	(typical)	>10M ohms	depends on design
Device rise time		<3 microseconds	measured w/ steel base
Temp operating range		-30°C - +70°C	

FSR 2090 Series Technical Data



Connector Options



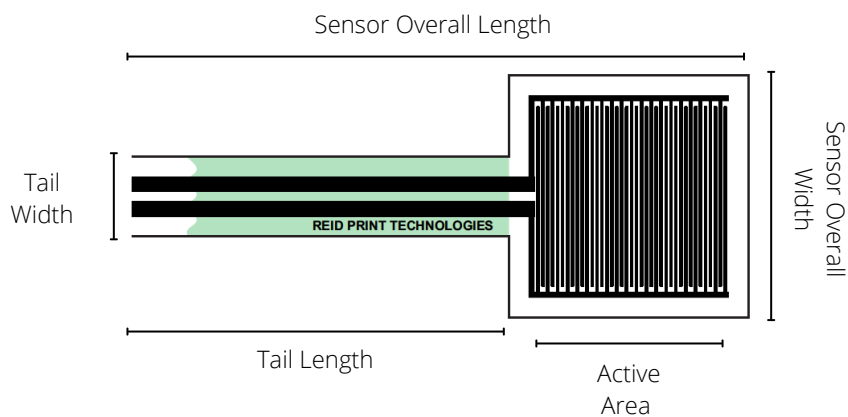
SERIES SPECIFICATIONS

Part Number	Description	Connector Type	Active Area	Sensor Overall Width	Sensor Overall Length	Tail Length	Tail Width
FSR 2090	FSR Thru Sensor 16mm Square	A	12.2x12.2mm	16.2mm	54.4mm	38.2mm	8.0mm
FSR 2091	FSR Thru Sensor 16mm Square	B	12.2x12.2mm	16.2mm	54.4mm	38.2mm	8.0mm
FSR 2092	FSR Thru Sensor 16mm Square	C	12.2x12.2mm	16.2mm	54.4mm	38.2mm	8.0mm

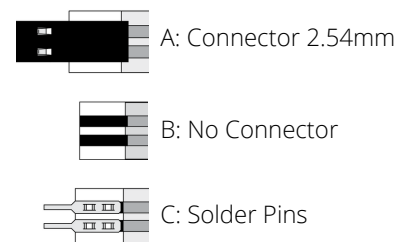
DEVICE CHARACTERISTICS

Feature	Condition	Value	Notes
Actuation force		0.1 Newtons	
Force sensitivity range		0.01 - 10.0 ² Newtons	
Force repeatability	(single part)	+/- 2%	
Force resolution		continuous	
Force repeatability	(part to part)	+/- 6%	
Non-actuated resistance		10M W	
Thickness range		18.28mm diameter	
Stand-off resistance		0.2-1.25mm	unloaded, unbent
Switch travel	(typical)	>10M ohms	depends on design
Device rise time		<3 microseconds	measured w/ steel base
Temp operating range		-30°C - +70°C	

FSR 2100 Series Technical Data



Connector Options



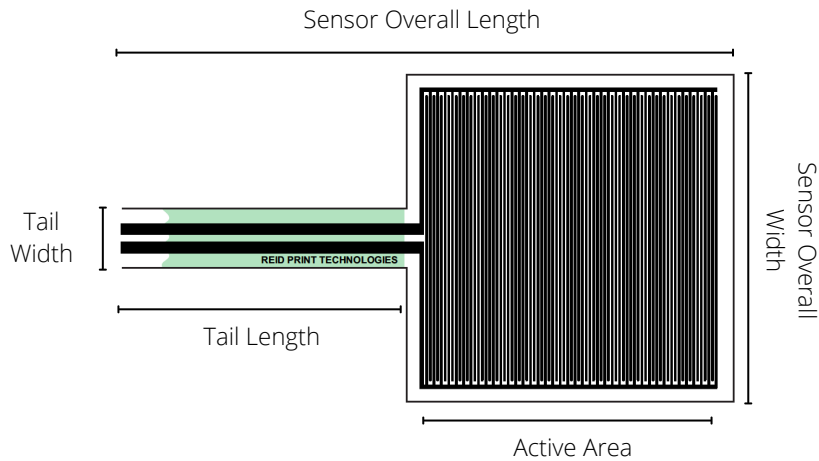
SERIES SPECIFICATIONS

Part Number	Description	Connector Type	Active Area	Sensor Overall Width	Sensor Overall Length	Tail Length	Tail Width
FSR 2100	FSR Thru Sensor 24mm Square	A	20.3x20.3mm	24.3mm	62.5mm	38.2mm	8.0mm
FSR 2101	FSR Thru Sensor 24mm Square	B	20.3x20.3mm	24.3mm	62.5mm	38.2mm	8.0mm
FSR 2102	FSR Thru Sensor 24mm Square	C	20.3x20.3mm	24.3mm	62.5mm	38.2mm	8.0mm

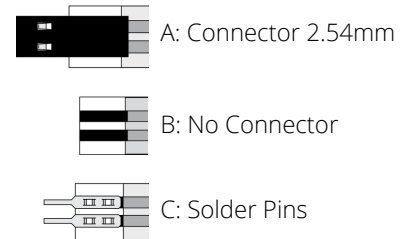
DEVICE CHARACTERISTICS

Feature	Condition	Value	Notes
Actuation force		0.1 Newtons	
Force sensitivity range		0.01 - 10.0 ² Newtons	
Force repeatability	(single part)	+/- 2%	
Force resolution		continuous	
Force repeatability	(part to part)	+/- 6%	
Non-actuated resistance		10M W	
Thickness range		18.28mm diameter	
Stand-off resistance		0.2-1.25mm	unloaded, unbent
Switch travel	(typical)	>10M ohms	depends on design
Device rise time		<3 microseconds	measured w/ steel base
Temp operating range		-30°C - +70°C	

FSR 2110 Series Technical Data



Connector Options



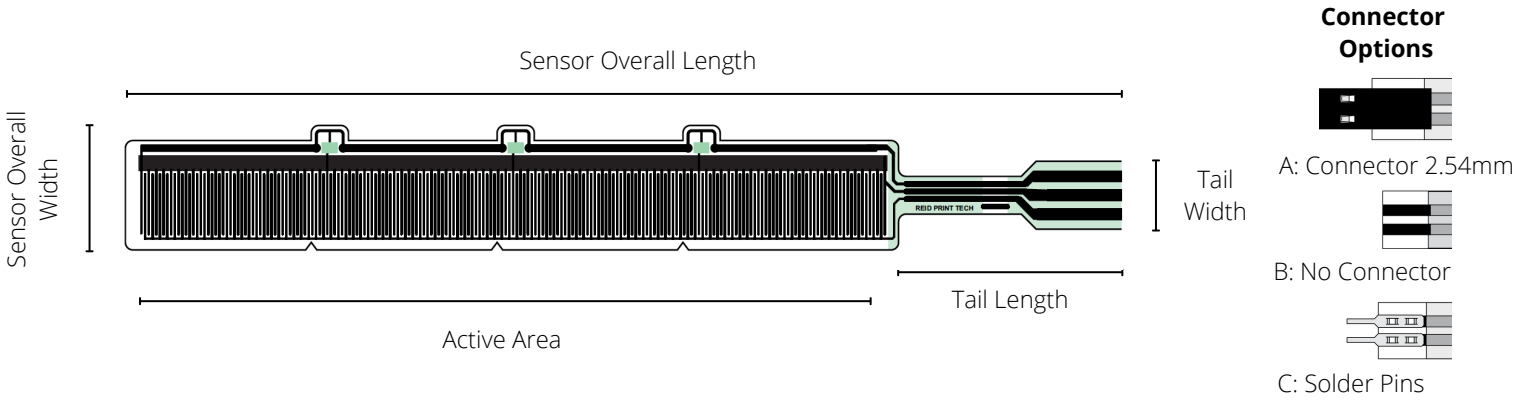
SERIES SPECIFICATIONS

Part Number	Description	Connector Type	Active Area	Sensor Overall Width	Sensor Overall Length	Tail Length	Tail Width
FSR 2110	FSR Thru Sensor 44mm Square	A	40.6x40.6mm	44.0mm	82.3mm	38.3mm	8.0mm
FSR 2111	FSR Thru Sensor 44mm Square	B	40.6x40.6mm	44.0mm	82.3mm	38.3mm	8.0mm
FSR 2112	FSR Thru Sensor 44mm Square	C	40.6x40.6mm	44.0mm	82.3mm	38.3mm	8.0mm

DEVICE CHARACTERISTICS

Feature	Condition	Value	Notes
Actuation force		0.1 Newtons	
Force sensitivity range		0.01 - 10.0 ² Newtons	
Force repeatability	(single part)	+/- 2%	
Force resolution		continuous	
Force repeatability	(part to part)	+6%	
Non-actuated resistance		10M W	
Thickness range		18.28mm diameter	
Stand-off resistance		0.2-1.25mm	unloaded, unbent
Switch travel	(typical)	>10M ohms	depends on design
Device rise time		<3 microseconds	measured w/ steel base
Temp operating range		-30°C - +70°C	

FSR 2240 Series Technical Data



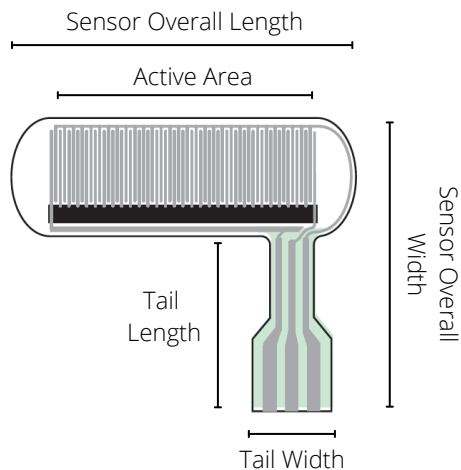
SERIES SPECIFICATIONS

Part Number	Description	Connector Type	Active Area	Sensor Overall Width	Sensor Overall Length	Tail Length	Tail Width
FSR 2240	FSR Shunt Sensor 104mm Bar	A	101.3mm	104.0mm	134.0mm	30.0mm	9.0mm
FSR 2241	FSR Shunt Sensor 104mm Bar	B	101.3mm	104.0mm	134.0mm	30.0mm	9.0mm
FSR 2242	FSR Shunt Sensor 104mm Bar	C	101.3mm	104.0mm	134.0mm	30.0mm	9.0mm

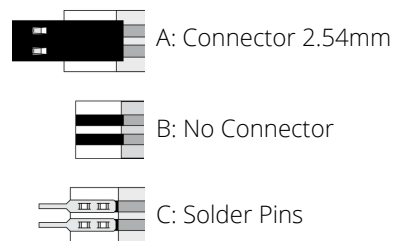
DEVICE CHARACTERISTICS

Feature	Condition	Value	Notes
Actuation force		0.1 Newtons	
Force sensitivity range		0.01 - 10.0 ² Newtons	
Force repeatability	(single part)	+/- 2%	
Force resolution		continuous	
Force repeatability	(part to part)	+6%	
Non-actuated resistance		10M W	
Thickness range		18.28mm diameter	
Stand-off resistance		0.2-1.25mm	unloaded, unbent
Switch travel	(typical)	>10M ohms	depends on design
Device rise time		<3 microseconds	measured w/ steel base
Temp operating range		-30°C - +70°C	

FSR 2260 Series Technical Data



Connector Options



SERIES SPECIFICATIONS

Part Number	Description	Connector Type	Active Area	Sensor Overall Width	Sensor Overall Length	Tail Length	Tail Width
FSR 2260	FSR Left-Right Sensor 39mm	A	30.0mm	39.3mm	33.5mm	19.9mm	9.0mm
FSR 2261	FSR Left-Right Sensor 39mm	B	30.0mm	39.3mm	33.5mm	19.9mm	9.0mm
FSR 2262	FSR Left-Right Sensor 39mm	C	30.0mm	39.3mm	33.5mm	19.9mm	9.0mm

DEVICE CHARACTERISTICS

Feature	Condition	Value	Notes
Actuation force		0.1 Newtons	
Force sensitivity range		0.01 - 10.0 ² Newtons	
Force repeatability	(single part)	+/- 2%	
Force resolution		continuous	
Force repeatability	(part to part)	+6%	
Non-actuated resistance		10M W	
Thickness range		18.28mm diameter	
Stand-off resistance		0.2-1.25mm	unloaded, unbent
Switch travel	(typical)	>10M ohms	depends on design
Device rise time		<3 microseconds	measured w/ steel base
Temp operating range		-30°C - +70°C	