# XSENSOR® Technology Corporation

Innovators in Pressure Imaging







# TESTING & MEASUREMENT PRODUCT CATALOGUE

# PRODUCT INDEX



#### XSENSOR Technology Corporation

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# SENSORS



The X3 PX100 series of sensors are designed as a conformable and durable sensor for measuring interface pressures. These capacitive sensors were initially designed for medical applications in rehabilitation seating and have since been more widely used in automotive seating, aerospace, research, and product design. The PX100 series of sensors are known for accuracy, durability, and repeatable.

### SENSING

Sensor Technology	Capacitive Pressure Imaging		
Pressure Range	0.2-3.87psi		
	0.14-2.7N/cm2		
Spatial Resolution	0.5" 12.7mm		
Accuracy	± 10% full scale*		
Sampling Frame Rate	45 frames/s**		

PHYSICAL CHARACTERISTICS			
Total Area	26"x26"		
Sensing Area	18"x18"		
Thickness (Sensing Area, uncompressed)	0.024"		

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Thickness (Border – cabling side)	0.04"	0.1cm
Border Width (cabling side)	5"	12.7cm
Border Width (non-cabling side)	3"	7.6cm
Cable	42"x2"	106.7cmx5.1cm
	x0.18"	x0.5cm
Oomaastan	4.76"x2.76"	12.1cmx7cm
Connector	x0.09"	x0.2cm

ENVIRONMENT	
Ambient Temperature	10°C - 40°C
Ambient Humidity	5% to 90% RH

#### PX100:36.36.02



#### **KEY FEATURES**

66cmx66cm

45.7cmx45.7cm

0.06cm

- High-resolution sensors with a 12.7 mm pitch (Resolution) and 1,296 sensing points
- Very good repeatability
- Low hysteresis and consistent data
- Designed for comfort and healthcare pressure seating applications
- Durable sensor that conforms well to surfaces with a proven track record

#### **REQUIREMENTS FOR OPERATION**

- Each PX100:36.36.02 sensor must be connected to one X3 PRO SENSOR PACK.
- The X3 PRO SENSOR PACK needs to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR software to function.

\* When verified using the standard XSENSOR calibration process.

\*\*Sampling rate based on using X3 PRO Electronic. Frame rate may vary based on computer configuration.

The X3 PX100 series of sensors are designed as a conformable and durable sensor for measuring interface pressures. These capacitive sensors were initially designed for medical applications in rehabilitation seating and have since been more widely used in automotive seating, aerospace, research, and product design. The PX100 series of sensors are known for accuracy, durability, and repeatable.

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Sensor Technology	Capacitive Pressure Imaging		
Pressure Range	0.2-3.87psi		
	0.14-2.7N/cm2		
Spatial Resolution	0.5" 12.7mm		
Accuracy	± 10% full scale*		
Sampling Frame Rate	39 frames/s**		

PHYSICAL CHARACTERISTICS				
Total Area	28"x28"	71.1cmx71.1cm		
Sensing Area	20"x20"	50.8cmx50.8cm		
Thickness (Sensing Area, uncompressed)	0.024"	0.06cm		
Thickness (Border – cabling side)	0.04"	0.1cm		
Border Width (cabling side)	5"	12.7cm		
Border Width (non-cabling side)	3"	7.6cm		
Cable	42"x2" x0.18"	106.7cmx5.1cm x0.5cm		
Connector	4.76"x2.76" x0.09"	12.1cmx7cm x0.2cm		

ENVIRONMENT	
Ambient Temperature	10°C - 40°C
Ambient Humidity	5% to 90% RH

#### PX100:40.40.02



#### **KEY FEATURES**

- High-resolution sensors with a 12.7 mm pitch (Resolution) and 1,600 sensing points
- Very good repeatability
- Low hysteresis and consistent data
- Designed for comfort and healthcare pressure seating applications
- Durable sensor that conforms well to surfaces with a proven track record

#### **REQUIREMENTS FOR OPERATION**

- Each PX100:40.40.02 sensor must be connected to one X3 PRO SENSOR PACK.
- The X3 PRO SENSOR PACK needs to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR software to function.

\* When verified using the standard XSENSOR calibration process.

\*\*Sampling rate based on using X3 PRO Electronic. Frame rate may vary based on computer configuration.

The X3 PX100 series of sensors are designed as a conformable and durable sensor for measuring interface pressures. These capacitive sensors were initially designed for medical applications in rehabilitation seating and have since been more widely used in automotive seating, aerospace, research, and product design. The PX100 series of sensors are known for accuracy, durability, and repeatable.

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Sensor Technology	Capacitive Pressure Imaging		
Pressure Range	0.2-3.87psi		
	0.14-2.7N/cm2		
Spatial Resolution	0.5" 12.7mm		
Accuracy	± 10% full scale*		
Sampling Frame Rate	33 frames/s**		

Total Area	32"x32"	81.2cmx81.2cm
Sensing Area	20"x20"	50.8cmx50.8cm
Thickness (Sensing Area, uncompressed)	0.024"	0.06cm
Thickness (Border – cabling side)	0.04"	0.1cm
Border Width (cabling side)	5"	12.7cm
Border Width (non-cabling side)	3"	7.6cm
Cable	42"x2"	106.7cmx5.1cm
Cabio	x0.18"	x0.5cm
Connector	4.76"x2.76"	12.1cmx7cm
Connector	x0.09"	x0.2cm

ENVIRONMENT	
Ambient Temperature	10°C - 40°C
Ambient Humidity	5% to 90% RH

#### PX100:48.48.02



#### **KEY FEATURES**

- High-resolution sensors with a 12.7 mm pitch (Resolution) and 1,600 sensing points
- Very good repeatability
- Low hysteresis and consistent data
- Designed for comfort and healthcare pressure seating applications
- Durable sensor that conforms well to surfaces with a proven track record

#### **REQUIREMENTS FOR OPERATION**

- Each PX100:48.48.02 sensor must be connected to one X3 PRO SENSOR PACK.
- The X3 PRO SENSOR PACK needs to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR software to function.

\* When verified using the standard XSENSOR calibration process.

\*\*Sampling rate based on using X3 PRO Electronic. Frame rate may vary based on computer configuration.

The X3 PX100 series of sensors are designed as a conformable and durable sensor for measuring interface pressures. These capacitive sensors were initially designed for medical applications in rehabilitation seating and have since been more widely used in automotive seating, aerospace, research, and product design. The PX100 series of sensors are known for accuracy, durability, and repeatable. The PX100:40.64.02 sensor is primarily used for measuring pressures on the back of a seat.

SENSING		
Sensor Technology	Capacitive	Pressure Imaging
Pressure Range	0.2-3.87psi	
	0.14	-2.7N/cm2
Spatial Resolution	0.5"	12.7mm
Accuracy	± 109	% full scale*
Sampling Frame Rate	39	frames/s**

PHYSICAL CHARACTERISTICS				
Total Area	28"x40"	71.1cmx111.7cm		
Sensing Area	20"x32"	50.8cmx81.2cm		
Thickness	0.024"	0.06cm		
(Sensing Area, uncompressed)				
Thickness	0.04"	0.1cm		
(Border – cabling side)				
Border Width	5"	12.7cm		
(cabling side)				
Border Width	3"	7.6cm		
(non-cabling side)				
Cable	42"x2"	106.7cmx5.1cm		
	x0.18"	x0.5cm		
Connector	4.76"x2.76"	12.1cmx7cm		
	x0.09"	x0.2cm		

ENVIRONMENT	
Ambient Temperature	10°C - 40°C
Ambient Humidity	5% to 90% RH

#### PX100:40.64.02



#### **KEY FEATURES**

- High-resolution sensors with a 12.7mm pitch (Resolution) and 2,560sensing points
- Very good repeatability
- Low hysteresis and consistent data
- Designed for comfort and healthcare pressure seating applications
- Durable sensor that conforms well to surfaces with a proven track record

#### **REQUIREMENTS FOR OPERATION**

- Each PX100:40.64.02 sensor must be connected to one X3 PRO SENSOR PACK.
- The X3 PRO SENSOR PACK needs to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR software to function.

\* When verified using the standard XSENSOR calibration process. \*\*Sampling rate based on using X3 PRO Electronic. Frame rate may vary based on computer configuration.

The X3 PX100 series of sensors are designed as a conformable and durable sensor for measuring interface pressures. These capacitive sensors were initially designed for medical applications in rehabilitation seating and have since been more widely used in automotive seating, aerospace, research, and product design. The PX100 series of sensors are known for accuracy, durability, and repeatable.

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Sensor Technology	Capacitive Pressure Imaging		
Pressure Range	0.2-3.87psi		
	0.14-2.7N/cm2		
Spatial Resolution	1.0" 25.4mm		
Accuracy	± 10% full scale*		
Sampling Frame Rate	61 frames/s**		

PHYSICAL CHARACTERISTICS			
Total Area	25"x25"	63.5cmx63.5cm	
Sensing Area	18"x18"	45.7cmx45.7cm	
Thickness (Sensing Area, uncompressed)	0.024"	0.06cm	
Thickness (Border – cabling side)	0.04"	0.1cm	
Border Width (cabling side)	5"	12.7cm	
Border Width (non-cabling side)	3"	7.6cm	
Cable	42"x2"	106.7cmx5.1cm	
	x0.18"	x0.5cm	
Connector	4.76"x2.76"	12.1cmx7cm	
	x0.09"	x0.2cm	

ENVIRONMENT	
Ambient Temperature	10°C - 40°C
Ambient Humidity	5% to 90% RH

PX100:18.18.01



#### **KEY FEATURES**

- High-resolution sensors with a 25.4 mm pitch (Resolution) and 324 sensing points
- Very good repeatability
- Low hysteresis and consistent data
- Designed for comfort and healthcare pressure seating applications
- Durable sensor that conforms well to surfaces with a proven track record

#### **REQUIREMENTS FOR OPERATION**

- Each sensor must be connected to one X3 PRO SENSOR PACK.
- The X3 PRO SENSOR PACK needs to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR software to function.
- \* When verified using the standard XSENSOR calibration process.

\*\*Sampling rate based on using X3 PRO Electronic. Frame rate may vary based on computer configuration.

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The X3 PX100 series of sensors are designed as a conformable and durable sensor for measuring interface pressures. These capacitive sensors were initially designed for medical applications in rehabilitation seating and have since been more widely used in automotive seating, aerospace, research, and product design. The PX100 series of sensors are known for accuracy, durability, and repeatable.

The PX100:100.100.05 is a high resolution sensor which some automotive companies have used for specific seating tests.

SENSING			
Sensor Technology	Capacitive	Pressure Imaging	
Pressure Range	0.2-3.87psi		
	0.14-2.7N/cm2		
Spatial Resolution	0.2" 5.08mm		
Accuracy	± 10% full scale*		
Sampling Frame Rate	14.4 frames/s**		

PHYSICAL CHARACTERISTICS			
Total Area	27"x27"	68.5cmx68.5cm	
Sensing Area	20"x20"	50.8cmx50.8cm	
Thickness (Sensing Area, uncompressed)	0.024"	0.06cm	
Thickness (Border – cabling side)	0.04"	0.1cm	
Border Width (cabling side)	4"	10.1cm	
Border Width (non-cabling side)	3"	7.6cm	
Cable	42"x2" x0.18"	106.7cmx5.1cm x0.5cm	
Connector	4.76"x2.76" x0.09"	12.1cmx7cm x0.2cm	

ENVIRONMENT	
Ambient Temperature	10°C - 40°C
Ambient Humidity	5% to 90% RH

PX100:100.100.05



#### **KEY FEATURES**

- High-resolution sensors with a 5.08 mm pitch (Resolution) and 10,000 sensing points
- Very good repeatability
- High accuracy
- Designed for high resolution seat testing.
- Durable sensor that conforms well to surfaces with a proven track record

#### **REQUIREMENTS FOR OPERATION**

- Each PX100.100.100.05 sensor must be connected to two X3 PRO SENSOR PACKs.
- The X3 PRO SENSOR PACKs need to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR software to function.

\* When verified using the standard XSENSOR calibration process.



The X3 PX100 series of sensors are designed as a conformable and durable sensor for measuring interface pressures. These capacitive sensors were initially designed for medical applications in rehabilitation seating and have since been more widely used in automotive seating, aerospace, research, and product design. The PX100 series of sensors are known for accuracy, durability, and repeatable.

The PX100:100.160.05 is a high resolution sensor which some automotive companies have used for specific seating tests.

SENSING			
Sensor Technology	Capacitive	Pressure Imaging	
Durana Danas	0.2-3.87psi		
Fressure hange	0.14-2.7N/cm2		
Spatial Resolution	0.2" 5.08mm		
Accuracy	± 10% full scale*		
Sampling Frame Rate	8 f	rames/s**	

PHYSICAL CHARACTERISTICS		
Total Area	27" X 39"	63.5cm X 53.3cm
Sensing Area	20" x 32"	50.8cm X 81.2cm
Thickness (Sensing Area, uncompressed)	0.024"	0.06cm
Thickness (Border – cabling side)	0.04"	0.1cm
Border Width (cabling side)	4"	10.1cm
Border Width (non-cabling side)	3"	7.6cm
Cable	42"x2" x0.18"	106.7cmx5.1cm x0.5cm
Connector	4.76"x2.76" x0.09"	12.1cmx7cm x0.2cm
Ambient Temperature	10°C - 40°C	
Ambient Humidity	5% to 90% RH	

#### PX100:100.160.05



#### **KEY FEATURES**

- High-resolution sensors with a 5.08 mm pitch (Resolution) and 16,000 sensing points
- Very good repeatability
- High accuracy
- Designed for high resolution seat testing.
- Durable sensor that conforms well to surfaces with a proven track record

#### **REQUIREMENTS FOR OPERATION**

- Each PX100:100.160.05 sensor must be connected to three X3 PRO SENSOR PACKs.
- The X3 PRO SENSOR PACKs need to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR software to function.

\* When verified using the standard XSENSOR calibration process.

\*\*Sampling rate based on using X3 PRO Electronic. Frame rate may vary based on computer configuration.

The X3 PX100 series of sensors are designed as a conformable and durable sensor for measuring interface pressures. These capacitive sensors were initially designed for medical applications in rehabilitation seating and have since been more widely used in automotive seating, aerospace, research, and product design. The PX100 series of sensors are known for accuracy, durability, and repeatable. The PX100:48.144.02 sensor is primarily used for pressure mapping hospital beds and mattresses.

#### SENSING

Sensor Technology	Capacitive Pressure Imaging	
Processo Bongo	0.1-1.0psi 0.1-2.0psi	
Pressure Range	0.07-2.7N/cm2, 0.07-1.33N/cm2	
Spatial Resolution	0.5" 12.7mm	
Accuracy	± 10% full scale*	
Sampling Frame Rate	23 frames/s**	

### PHYSICAL CHARACTERISTICS

Total Area	33"x81"	83.8cmx205.7cm
Sensing Area	24"x72"	60.9cmx182.9cm
Thickness (Sensing Area, uncompressed)	0.024"	0.06cm
Thickness (Border – cabling side)	0.04"	0.1cm
Border Width (cabling side)	6"	15.2cm
Border Width (non-cabling side)	3"	7.6cm
Cable	42" x 2"	106cm x 5.08cm
Connector	4.76"x 2.76" x 0.9"	12.1cm x 7.0cm x 2.3cm

ENVIRONMENT	
Ambient Temperature	10°C - 40°C
Ambient Humidity	5% to 90% RH

PX100:48.144.02



#### **KEY FEATURES**

- High-resolution sensors with a 12.7 mm pitch (Resolution) and 6,912 sensing points
- Very good repeatability
- Low hysteresis and consistent data
- Designed for hospital bed applications
- Durable sensor that conforms well to surfaces with a proven track record

#### **REQUIREMENTS FOR OPERATION**

- Each PX100:48.144.02 sensor must be connected to three X3 PRO SENSOR PACKs.
- The X3 PRO SENSOR PACKs need to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR software to function.



 $<sup>\</sup>ast$  When verified using the standard XSENSOR calibration process.

The X3 PX100 series of sensors are designed as a conformable and durable sensor for measuring interface pressures. These capacitive sensors were initially designed for medical applications in rehabilitation seating and have since been more widely used in automotive seating, aerospace, research, and product design. The PX100 series of sensors are known for accuracy, durability, and repeatable.

The PX100:64.160.02 sensor is primarily used for pressure mapping hospital beds and mattresses.

SENSING		
Sensor Technology	Capacitive	Pressure Imaging
Pressure Range	0.1-1.0psi 0.1-2.0psi	
	0.07-2.7N/cm2, 0.07-1.33N/cm2	
Spatial Resolution	0.5" 12.7mm	
Accuracy	± 10% full scale*	
Sampling Frame Rate	17 frames/s**	

PHYSICAL CHARACTERISTICS		
Total Area	41"x 96"	104.1cmx243.8cm
Sensing Area	32" x 80"	81.3cm X 203.2cm
Thickness (Sensing Area, uncompressed)	0.024"	0.06cm
Thickness (Border – cabling side)	0.04"	0.1cm
Border Width (cabling side)	6"	15.2cm
Border Width (non-cabling side)	3"	7.6cm
Cable	42"x2" x0.18"	106.7cmx5.1cm x0.5cm
Connector	4.76"x 2.76"x 0.9"	12.1cm x 7.0cm x 2.3cm

ENVIRONMENT		
Ambient Temperature	10°C - 40°C	
Ambient Humidity	5% to 90% RH	

#### PX100:64.160.02



#### **KEY FEATURES**

- High-resolution sensors with a 12.7 mm pitch (Resolution) and 10,240 sensing points
- Very good repeatability
- Low hysteresis and consistent data
- Designed for hospital bed applications
- Durable sensor that conforms well to surfaces with a proven track record

#### **REQUIREMENTS FOR OPERATION**

- Each PX100:64.160.02 sensor must be connected to three X3 PRO SENSOR PACKs.
- The X3 PRO SENSOR PACKs need to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR software to function.

\* When verified using the standard XSENSOR calibration process. \*\*Sampling rate based on using X3 PRO Electronic. Frame rate may vary based on computer configuration.

> XSENSOR<sup>®</sup>Technology Innovators in Pressure Imaging

The X3 PX100:26.64.01 sensor is a mattress sensor used for medical and consumer mattress research and product testing. The sensor has a 1  $\frac{1}{4}$ " resolution providing a good image of the mattress surface. The sensor conforms well to surfaces and has the durability and consistency for hospital and consumer testing environments.

#### SENSING

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Sensor Technology	Capacitive Pressure Imaging	
Processo Rongo	0.1-1.0 psi 0.1-2.0 psi	
Fressure hange	0.07-2.7N/cm2, 0.07-1.33N/cm2	
Spatial Resolution	1 ¼" 31.75mm	
Accuracy	± 10% full scale*	
Sampling Frame Rate	53 frames/s**	

#### PHYSICAL CHARACTERISTICS

Total Area	40.5" x 88"	102.8cm x 223.5cm
Sensing Area	32" x 80"	81.2cm x 203.2cm
Thickness (Sensing Area, uncompressed)	0.024"	0.06cm
Thickness (Border – cabling side)	0.04"	0.1cm
Border Width (cabling side)	5"	12.7cm
Border Width (non-cabling side)	3"	.67cm
Cable	42"x2"	106.7cmx5.1cm
	1 76"v2 76"	12 1cmx7cm
Connector	x0.09"	x0.2cm

ENVIRONMENT	
Ambient Temperature	10°C - 40°C
Ambient Humidity	5% to 90% RH

PX100:26.64.01



#### **KEY FEATURES**

- High-resolution sensors with a 31.75 mm pitch (Resolution) and 1,664 sensing points
- Designed for hospital and consumer mattress product testing and research.
- Excellent for both lab and environmental testing
- Durable sensors that performs well in hospital settings.

#### **REQUIREMENTS FOR OPERATION**

- Each PX100:26.64.01 sensor must be connected to one X3 PRO SENSOR PACK.
- The X3 PRO SENSOR PACK needs to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR software to function.

\* When verified using the standard XSENSOR calibration process.



The X3 PX100:1.64.02 is a wiper blade sensor. This sensor has been specifically made to test the profiles of wiper blades and the wiper blade arms. The sensor design is based on industry needs for assessing and comparing different wiper blade profiles and different wiper blade designs. The sensor can be mounted onto a test bench or taped onto a windshield. Wiper blades are then moved onto the sensor area and a repeatable and consistent pressure profile can be viewed and compared using the X3 PRO Software.

### SENSING

Sensor Technology	Capacitive Pressure Imaging	
Prossure Pango	0.1-0.58psi 0.1 – 0.97psi	
Fressure hange	0.007 kg/cm2 – 0.4 kg/cm2, 0.007 kg/cm2 – 0.068 kg/cm2	
Spatial Resolution	0.5" 12.7mm	
Accuracy	± 10% full scale*	
Sampling Frame Rate	85 frames/s**	

#### PHYSICAL CHARACTERISTICS

Total Area	8"x37"	20.3cmx94cm
Sensing Area	0.5" x 32"	1.27cm X 81.2cm
Thickness (Sensing Area, uncompressed)	0.024"	0.06cm
Thickness (Border – cabling side)	0.04"	0.1cm
Border Width (cabling side)	6"	15.2cm
Border Width (non-cabling side)	1 1⁄2"	3.8cm
Cable	42"x0.45"	106cmx1.14cm
Connector	4.76"x 2.76"x 0.9"	12.1cm x 7.0cm x 2.3cm

ENVIRONMENT	
Ambient Temperature	10°C - 40°C
Ambient Humidity	5% to 90% RH

#### PX100:1.64.02



#### **KEY FEATURES**

- Designed for testing wiper blade profiles
- Single line array provides pressure profile of wiper blade on wind shield
- Static tests
- Provides consistent and repeatable data
- Sensor conforms to bend radius of windshield
- Wiper blades profiles can be compared

#### **REQUIREMENTS FOR OPERATION**

- Each sensor must be connected to one X3 PRO SENSOR PACK.
- The X3 PRO SENSOR PACK needs to be connected to an X3 PRO.
- The X3 PRO configurations need to be subsequently connected to a power supply and a computer running XSENSOR software to function.
- \* When verified using the standard XSENSOR calibration process.

The X3 PX100:1.160.05 is a high resolution wiper blade sensor. This sensor has been specifically made to test the profiles of wiper blades and the wiper blade arms. The sensor design is based on industry needs for assessing and comparing different wiper blade profiles and different wiper blade designs. The sensor can be mounted onto a test bench or taped onto a windshield. Wiper blades are then moved onto the sensor area and a repeatable and consistent pressure profile can be viewed and compared using the X3 PRO Software.

#### SENSING

Sensor Technology	Capacitive Pressure Imaging		
Processo Bongo	0.1 - 0.58 psi, 0.1 - 1.0 psi		
Pressure nange	0.07 - 0.07 -	– 0.4 N/cm2 - 0.67 N/cm2	
Spatial Resolution	0.2" 5.08mm		
Accuracy	± 10% full scale*		
Sampling Frame Rate	40 frames/s**		

### PHYSICAL CHARACTERISTICS

Total Area	8"x37"	20.3cmx94cm
Sensing Area	32" x 0.5"	81.3cm x 1.27cm
Thickness (Sensing Area, uncompressed)	0.024"	0.06cm
Thickness (Border – cabling side)	0.04"	0.1cm
Border Width (cabling side)	5"	12.7cm
Border Width (non-cabling side)	2.5"	6.3cm
Cable	42" x 2" x 0.5"	106cm x 5.08cm x 1.27cm
Connector	4.76"x 2.76"x 0.9"	12.1cm x 7.0cm x 2.3cm

ENVIRONMENT	
Ambient Temperature	10°C - 40°C
Ambient Humidity	5% to 90% RH

#### PX100:1.160.05



#### **KEY FEATURES**

- High-resolution sensors with a 5.08 mm pitch (Resolution) and 160 sensing points
- Designed for viewing the pressure profile of a wiper blade on a windshield or test bench
- Provides consistent and repeatable profiles
- Very stable images with little variance
- Maintains calibration, limited recalibration required

#### **REQUIREMENTS FOR OPERATION**

- Each PX100:1.160.05 sensor must be connected to three X3 PRO SENSOR PACKs.
- The X3 PRO SENSOR PACKs need to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR software to function.

\* When verified using the standard XSENSOR calibration process.

\*\*Sampling rate based on using X3 PRO Electronic. Frame rate may vary based on computer configuration.

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The PX100:10.64.05 sensor has been designed for measuring pressures underneath compression wraps and air casts. The sensor has been used for research and design purposes to understand compression on an arm or a leg using an air cast to alternate pressure. The sensor is also used by nurses and compression wrap designers to understand the applied pressures using different wraps and different wrapping techniques. The sensor is narrow enough to place on an ankle bone and measure the pressure distribution up the leg.

#### SENSING

Sensor Technology	Capacitive Pressure Imaging	
Pressure Range	0.1-1.0psi 0.2-3.87psi	
	0.07-0.67N/cm2 0.14-2.7N/cm2	
Spatial Resolution	0.2" 5.08mm	
Accuracy	± 10% full scale*	
Sampling Frame Rate	60 frames/s**	

#### PHYSICAL CHARACTERISTICS

Total Area	7.5"x17.3"	19cmx43.9cm
Sensing Area	2"x12.8"	5.08cmx32.5cm
Thickness (Sensing Area, uncompressed)	0.024"	0.06cm
Thickness (Border – cabling side)	0.04"	0.1cm
Border Width (cabling side)	4"	10.1cm
Border Width (non-cabling side)	1.5"	3.8cm
Cable	-	-
Connector	4.76"x2.76" x0.09"	12.1cmx7cm x0.2cm

ENVIRONMENT	
Ambient Temperature	10°C - 40°C
Ambient Humidity	5% to 90% RH

#### PX100:10.64.05



#### **KEY FEATURES**

- A narrow sensor with a 5.08mm mm pitch (Resolution) and 640 sensing points.
- Can measure the applied compression wrap pressure from ankle to knee.
- Dynamically shows differences in wrap pressures when subject seating, standing, or walking.
- See changes in air cast pressures in real time.
- Evaluate and compare compression wraps and air casts.
- Educate nurses on how to effectively apply compression wraps to recommend mmHg level.

#### **REQUIREMENTS FOR OPERATION**

- Each PX100:10.64.05 sensor must be connected to one X3 PRO SENSOR PACK.
- The X3 PRO SENSOR PACK needs to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR software to function.

\* When verified using the standard XSENSOR calibration process. \*\*Sampling rate based on using X3 PRO Electronic. Frame rate may vary based on computer configuration.

The X3 PX100:15.30.05 is a small low pressure sensor designed for various applications. The sensor is often used by clinical specialists to assess body pressures in confined spaces. The sensor is also used by product designers and researchers to assess pressure points on small confined areas. The high sensor resolution provides a very clear image of a small surface area.

SENSING		
Sensor Technology	Capacitive	Pressure Imaging
Pressure Range	0.1-1.0 psi 0.2-3.87psi	
	0.07 – 0.67N/cm2 0.14 – 2.7 N/cm2	
Spatial Resolution	0.2" 5.08mm	
Accuracy	± 10% full scale*	
Sampling Frame Rate	95 frames/s**	

PHYSICAL CHARACTERISTICS		
Total Area	8"x11"	20.3cmx27.9cm
Sensing Area	3"x6"	7.6cmx15.2cm
Thickness (Sensing Area, uncompressed)	0.024"	0.06cm
Thickness (Border – cabling side)	0.12"	0.3cm
Border Width (cabling side)	3.2"	8.1cm
Border Width (non-cabling side)	1.5"	3.8cm
Cable	42"x2" x0.18"	106.7cmx5.1cm x0.5cm
Connector	4.76"x2.76" x0.09"	12.1cmx7cm x0.2cm

ENVIRONMENT	
Ambient Temperature	10°C - 40°C
Ambient Humidity	5% to 90% RH

#### PX100:15.30.05



#### **KEY FEATURES**

- High-resolution sensors with a 5.08 mm pitch (Resolution) and 450 sensing points
- Very good repeatability
- Linear calibration and consistent data
- Designed for comfort and healthcare pressure seating applications
- Durable sensor that conforms well to surfaces with a proven track record

#### **REQUIREMENTS FOR OPERATION**

- Each PX100:15:30.05 sensor must be connected to one X3 PRO SENSOR PACK.
- The X3 PRO SENSOR PACK needs to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR software to function.

\* When verified using the standard XSENSOR calibration process.



The X3 PX100:25.100.10 sensor is small, narrow, high resolution sensor. The sensor has been used for assessing applied pressures from fingers, robotic hands, and other low pressure applications. Due to the resolution and the pressure range, the sensor can detect small changes in pressures and provides very clear images.

### SENSING

Sensor Technology	Capacitive Pressure Imaging	
	0.2-3.87 psi	
Pressure Range	0.14 – 2.7 N/cm2,	
Spatial Resolution	0.1" 2.54mm	
Accuracy	± 10% full scale*	
Sampling Frame Rate	73 frames/s**	

PHYSICAL CHARACTERISTICS		
Total Area	8" X 14.5"	20.3cm X 36.8cm
Sensing Area	2.5" x 10"	6.35cm X 25.4cm
Thickness (Sensing Area, uncompressed)	0.024"	0.06cm
Thickness (Border – cabling side)	0.04"	0.1cm
Border Width (cabling side)	3"	7.6cm
Border Width (non-cabling side)	1.5"	3.81cm
Cable	42"x2" x0.18"	106cmx5.1cm x0.5cm
Connector	4.76"x 2.76"x 0.9"	12.1cm x 7.0cm x 2.3cm
ENVIRONMENT		
Ambient Temperature	10°C - 40°C	
Ambient Humidity	5% to 90% RH	

#### PX100:25.100.10



#### **KEY FEATURES**

- High-resolution sensors with a 2.54 mm pitch (Resolution) and 2,500 sensing points
- Designed for high-quality pressure images with exceptional detail
- Excellent for both lab and environmental testing
- Has been used to measure finger pressures

#### REQUIREMENTS FOR OPERATION

- Each PX100:25.100.10sensor must be connected to two X3 PRO SENSOR PACKs.
- The X3 PRO SENSOR PACKs need to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR software to function.

 $\ast$  When verified using the standard XSENSOR calibration process.



The X3 PX100:50.100.10 sensor is a medium sized high resolution sensor. The sensor has been used for assessing applied pressures from fingers, robotic hands, and other low pressure applications. Due to the resolution and the pressure range, the sensor can detect small changes in pressures and provides very clear images.

### SENSING

Sensor Technology	Capacitive Pressure Imaging	
Dressure Denne	0.2-3.87psi	
riessure nange	0.14-2.3N/cm2	
Spatial Resolution	0.1" 2.54mm	
Accuracy	± 10% full scale*	
Sampling Frame Rate	36 frames/s**	

PHYSICAL CHARACTERISTICS		
Total Area	10.5"x15.5"	26.6cmx39.3cm
Sensing Area	5"x10"	12.7cmx25.4cm
Thickness (Sensing Area, uncompressed)	0.024"	0.06cm
Thickness (Border – cabling side)	0.04"	0.1cm
Border Width (cabling side)	4"	10.1cm
Border Width (non-cabling side)	1.5"	3.81cm
Cable	42"x2" x0.18"	106cmx5.1cm x0.5cm
Connector	4.76"x 2.76"x 0.9"	12.1cm x 7.0cm x 2.3cm

ENVIRONMENT		
Ambient Temperature	10°C - 40°C	
Ambient Humidity	5% to 90% RH	

PX100:50.100.10



#### **KEY FEATURES**

- High-resolution sensors with a 2.54 mm pitch (resolution) and 5,000 sensing points
- Designed for high-quality pressure images with exceptional detail
- Excellent for both lab and environmental testing
- Durable sensors that performs well in subsurface(soil/ sand) testing

#### **REQUIREMENTS FOR OPERATION**

- Each PX100:50.100.10 sensor must be connected to two X3 PRO SENSOR PACKs.
- The X3 SENSOR PACK PROs need to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR software to function.

\* When verified using the standard XSENSOR calibration process.



The X3 PX100:50.100.10 sensor is a medium sized high resolution sensor. The sensor has been used for assessing applied pressures from fingers, robotic hands, and other low pressure applications. Due to the resolution and the pressure range, the sensor can detect small changes in pressures and provides very clear images.

#### SENSING

Sensor Technology	Capacitive Pressure Imaging	
Dressource Deserve	0.2-3.87psi	
riessure nange	0.14-2.3N/cm2	
Spatial Resolution	0.1" 2.54mm	
Accuracy	± 10% full scale*	
Sampling Frame Rate	14.4 frames/s**	

#### PHYSICAL CHARACTERISTICS

Total Area	15.75"x15.75"	40cmx40cm
Sensing Area	10"x10"	25.4cmx25.4cm
Thickness (Sensing Area, uncompressed)	0.024"	0.06cm
Thickness (Border – cabling side)	0.04"	0.1cm
Border Width (cabling side)	4"	12.7cm
Border Width (non-cabling side)	1.5"	3.8cm
Cable	42"x2"	106cmx5.1cm
	x0.18"	x0.5cm
Connector	4.76"x 2.76"x	12.1cm x 7.0cm
Connector	0.9"	x 2.3cm

ENVIRONMENT	
Ambient Temperature	10°C - 40°C
Ambient Humidity	5% to 90% RH

#### PX100:100.100.10



#### **KEY FEATURES**

- High-resolution sensors with a 2.54 mm pitch (Resolution) and 10,000 sensing points
- Designed for high-quality pressure images with exceptional detail
- Excellent for both lab and environmental testing

#### **REQUIREMENTS FOR OPERATION**

- Each PX100:100.100.10 sensor must be connected to two X3 PRO SENSOR PACKs.
- The X3 SENSOR PACK PROs need to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR software to function.

\* When verified using the standard XSENSOR calibration process.



The X3 PX100 series of sensors are designed as a conformable and durable sensor for measuring interface pressures. These capacitive sensors were initially designed for medical applications in rehabilitation seating and have since been more widely used in automotive seating, aerospace, research, and product design. The PX100 series of sensors are known for accuracy, durability, and repeatable.

### SENSING

Sensor Technology	Capacitive Pressure Imaging	
Duran Dana	0.2-3.87psi	
Pressure Range	0.14-2.7N/cm2	
Spatial Resolution	0.5" 12.7mm	
Accuracy	± 10% full scale*	
Sampling Frame Rate	45 frames/s**	

PHYSICAL CHARACTERISTICS			
Total Area 26"x26"			
Sensing Area 18"x18"			
Thickness (Sensing Area, uncompressed)	0.024"		

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Thickness (Border – cabling side)	0.04"	0.1cm
Border Width (cabling side)	5"	12.7cm
Border Width (non-cabling side)	3"	7.6cm
Cable	42"x2"	106.7cmx5.1cm
Cable	x0.18"	x0.5cm
Connector	4.76"x2.76"	12.1cmx7cm
Connector	x0.09"	x0.2cm

ENVIRONMENT	
Ambient Temperature	10°C - 40°C
Ambient Humidity	5% to 90% RH

#### PX100:36.36.02



#### **KEY FEATURES**

66cmx66cm

45.7cmx45.7cm

0.06cm

- High-resolution sensors with a 12.7 mm pitch (Resolution) and 1,296 sensing points
- Very good repeatability
- Low hysteresis and consistent data
- Designed for comfort and healthcare pressure seating applications
- Durable sensor that conforms well to surfaces with a proven track record

#### **REQUIREMENTS FOR OPERATION**

- Each PX100:36.36.02 sensor must be connected to one X3 PRO SENSOR PACK.
- The X3 PRO SENSOR PACK needs to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR software to function.

\* When verified using the standard XSENSOR calibration process.

\*\*Sampling rate based on using X3 PRO Electronic. Frame rate may vary based on computer configuration.

The X3 LX100 series of sensors are designed as a conformable and durable sensor for measuring interface pressures. These capacitive sensors are ideal for assessing automotive and aerospace seat designs and manufacturing quality. The LX100 series of sensors are highly accurate due to high repeatability, low hysteresis, and low creep characteristics. Due to the accuracy, repeatability, and durability they are also being used for automated quality control processes.

#### SENSING

Sensor Technology	Capacitive Pressure Imaging	
Dranoura Donna	0.1-3.87psi	
riessure nange	0.07-2.7N/cm2	
Spatial Resolution	0.5" 12.7mm	
Accuracy	± 5% full scale*	
Sampling Frame Rate	39 frames/s**	

#### PHYSICAL CHARACTERISTICS

Total Area	28" X 28"	71.1cm X 71.1cm
Sensing Area	20" x 20"	50.8cm X 50.8cm
Thickness (Sensing Area, uncompressed)	0.024"	0.06cm
Thickness (Border – cabling side)	0.04"	0.1cm
Border Width (cabling side)	5"	12.7cm
Border Width (non-cabling side)	3"	7.6cm
Cable	42"x2"x0.18"	106.7cmx5.1cm X0.5cm
Connector	4.76"x 2.76"x 0.9"	12.1cm x 7.0cm x 2.3cm
ENVIRONMENT		
Ambient Temperature	10°C - 40°C	
Ambient Humidity	5% to 90% RH	

LX100:40.40.02



#### **KEY FEATURES**

- High-resolution sensors with a 12.7 mm pitch (Resolution) and 1,600 sensing points
- Very good repeatability
- Low hysteresis and consistent data throughout long trials
- Designed for higher pressure seating applications such as ingress-egress testing
- Durable sensor that conforms well to surfaces

#### **REQUIREMENTS FOR OPERATION**

- Each LX100:40.40.02 sensor must be connected to one X3 PRO SENSOR PACK.
- The X3 PRO SENSOR PACK needs to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR software to function.

 $\ast$  When verified using the standard XSENSOR calibration process.

\*\*Sampling rate based on using X3 PRO Electronic. Frame rate may vary based on computer configuration.

The X3 LX100 series of sensors are designed as a conformable and durable sensor for measuring interface pressures. These capacitive sensors are ideal for assessing automotive and aerospace seat designs and manufacturing quality. The LX100 series of sensors are highly accurate due to high repeatability, low hysteresis, and low creep characteristics.

The LX100 series of sensors are often used for automotive and aerospace seating design and comfort analysis. Due to the accuracy, repeatability, and durability they are also being used for automated quality control processes.

SENSING		
Sensor Technology	Capacitive	Pressure Imaging
Pressure Range	0.1-3.87psi	
	0.07-2.7N/cm2	
Spatial Resolution	0.5"	12.7mm
Accuracy	± 5% full scale*	
Sampling Frame Rate	33	frames/s**

PHYSICAL CHARACTERISTICS		
Total Area	32" X 32"	81.2cm X 81.2cm
Sensing Area	24"x24"	60.9cm X 60.9cm
Thickness (Sensing Area, uncompressed)	0.024"	0.06cm
Thickness (Border – cabling side)	0.04"	0.1cm
Border Width (cabling side)	5"	12.7cm
Border Width (non-cabling side)	3"	7.62cm
Cable	42"x2"x0.18"	106.7cmx5.1cm X0.5cm
Connector	4.76"x 2.76"x 0.9"	12.1cm x 7.0cm x 2.3cm
Ambient Temperature	10°C - 40°C	
Ambient Humidity	5% to 90% RH	

#### LX100:48.48.02



#### **KEY FEATURES**

- High-resolution sensors with a 12.7 mm pitch (Resolution) and 2,304 sensing points
- Very good repeatability
- Low hysteresis and consistent data throughout long trials
- Designed for higher pressure seating applications such as ingress-egress testing
- Durable sensor that conforms well to surfaces

#### **REQUIREMENTS FOR OPERATION**

- Each LX100:48.48.02 sensor must be connected to one X3 PRO SENSOR PACK.
- The X3 PRO SENSOR PACK needs to be connected to an X3 PRO.
- The X3 PRO configurations need to be subsequently connected to a power supply and a computer running XSENSOR software to function.

\* When verified using the standard XSENSOR calibration process.



The X3 LX200 series of sensors are designed as a conformable and durable sensor for measuring interface pressures. These capacitive sensors are ideal for assessing automotive and aerospace ingressegress, seat design, and manufacturing quality. The LX200 series of sensors are highly accurate due to high repeatability, low hysteresis, and low creep characteristics. Due to the pressure range they have also been used in a variety of research and product testing environments.

#### SENSING

Sensor Technology	Capacitive Pressure Imaging	
Pressure Pange	0.1-15psi	
riessure nange	0.07-10.3N/cm2	-10.3N/cm2
Spatial Resolution	0.5"	12.7mm
Accuracy	± 5% full scale*	
Sampling Frame Rate	45 frames/s**	

#### PHYSICAL CHARACTERISTICS

Total Area	26"x26"	66cmx66cm
Sensing Area	18"x18"	45.7cmx45.7cm
Thickness (Sensing Area, uncompressed)	0.08"	0.2cm
Thickness (Border – cabling side)	0.04"	0.1cm
Border Width (cabling side)	5"	12.7cm
Border Width (non-cabling side)	3"	7.6cm
Cable	42"x2" x0.18"	106.7cmx5.1cm x0.5cm
Connector	4.76"x2.76" x0.09"	12.1cmx7cm x0.2cm

ENVIRONMENT	
Ambient Temperature	10°C - 40°C
Ambient Humidity	5% to 90% RH

#### LX200:36.36.02



#### **KEY FEATURES**

- High-resolution sensors with a 12.7 mm pitch (Resolution) and 1,296 sensing points
- Very good repeatability
- Low hysteresis and consistent data throughout long trials
- Designed for higher pressure seating applications such as ingress-egress testing
- Durable sensor that conforms well to surfaces

#### **REQUIREMENTS FOR OPERATION**

- Each LX200:36.36.02 sensor must be connected to one X3 PRO SENSOR PACK.
- The X3 PRO SENSOR PACK needs to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR software to function.
- \* When verified using the standard XSENSOR calibration process.

\*\*Sampling rate based on using X3 PRO Electronic. Frame rate may vary based on computer configuration.

The X3 LX200 series of sensors are designed as a conformable and durable sensor for measuring interface pressures. These capacitive sensors are ideal for assessing automotive and aerospace ingressegress, seat design, and manufacturing quality. The LX200 series of sensors are highly accurate due to high repeatability, low hysteresis, and low creep characteristics. Due to the pressure range they have also been used in a variety of research and product testing environments.

#### SENSING

Sensor Technology	Capacitive Pressure Imaging	
Pressure Pange	0.1-15psi	
riessure nalige	0.07-10.3N/cm2	-10.3N/cm2
Spatial Resolution	0.5"	12.7mm
Accuracy	± 10% full scale*	
Sampling Frame Rate	39 frames/s**	

#### PHYSICAL CHARACTERISTICS

Total Area	28" X 28"	71.1cm X 71.1cm
Sensing Area	20" x 20"	50.8cm X 50.8cm
Thickness (Sensing Area, uncompressed)	0.08"	0.2cm
Thickness (Border – cabling side)	0.04"	0.1cm
Border Width (cabling side)	5"	12.7cm
Border Width (non-cabling side)	3"	7.6cm
Cable	42"x2"x0.18"	106.7cmx5.1cm X0.5cm
Connector	4.76"x 2.76"x 0.9"	12.1cm x 7.0cm x 2.3cm
ENVIRONMENT		
Ambient Temperature	10°C - 40°C	
Ambient Humidity	5% to	90% RH

#### LX200:40.40.02



#### **KEY FEATURES**

- High-resolution sensors with a 12.7 mm pitch (Resolution) and 1,600 sensing points
- Very good repeatability
- Low hysteresis and consistent data throughout long trials
- Designed for higher pressure seating applications such as ingress-egress testing
- Durable sensor that conforms well to surfaces

#### **REQUIREMENTS FOR OPERATION**

- Each LX200:40.40.02 sensor must be connected to one X3 PRO SENSOR PACK.
- The X3 PRO SENSOR PACK needs to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR software to function.

\* When verified using the standard XSENSOR calibration process.

\*\*Sampling rate based on using X3 PRO Electronic. Frame rate may vary based on computer configuration.

The X3 LX200 series of sensors are designed as a conformable and durable sensor for measuring interface pressures. These capacitive sensors are ideal for assessing automotive and aerospace ingressegress, seat design, and manufacturing quality. The LX200 series of sensors are highly accurate due to high repeatability, low hysteresis, and low creep characteristics. Due to the pressure range they have also been used in a variety of research and product testing environments.

#### SENSING

Sensor Technology	Capacitive Pressure Imaging	
Pressure Pange	0.1-15psi	
riessure nalige	0.07-10.3N/cm2	-10.3N/cm2
Spatial Resolution	0.5"	12.7mm
Accuracy	± 10% full scale*	
Sampling Frame Rate	33 frames/s**	

#### PHYSICAL CHARACTERISTICS

Total Area	32" X 32"	81.2cm X 81.2cm
Sensing Area	24"x24"	60.9cm X 60.9cm
Thickness (Sensing Area, uncompressed)	0.08"	0.2cm
Thickness (Border – cabling side)	0.04"	0.1cm
Border Width (cabling side)	5"	12.7cm
Border Width (non-cabling side)	3"	7.6cm
Cable	42"x2"x0.18"	106.7cmx5.1cm X0.5cm
Connector	4.76"x 2.76"x 0.9"	12.1cm x 7.0cm x 2.3cm
ENVIRONMENT		
Ambient Temperature	10°C - 40°C	
Ambient Humidity	5% to	90% RH

#### LX200:48.48.02



#### **KEY FEATURES**

- High-resolution sensors with a 12.7 mm pitch (Resolution) and 2,304 sensing points
- Very good repeatability
- Low hysteresis and consistent data throughout long trials
- Designed for higher pressure seating applications such as ingress-egress testing
- Durable sensor that conforms well to surfaces

#### REQUIREMENTS FOR OPERATION

- Each LX200:48.48.02 sensor must be connected to one X3 PRO SENSOR PACK.
- The X3 PRO SENSOR PACK needs to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR software to function.

\* When verified using the standard XSENSOR calibration process.

\*\*Sampling rate based on using X3 PRO Electronic. Frame rate may vary based on computer configuration.

The X3 PX200 series of sensors are designed as a conformable and durable sensor for measuring interface pressures. These capacitive sensors were initially designed for medical applications in rehabilitation seating and have since been more widely used in automotive seating, aerospace, research, and product design. The PX200 series of sensors are known for accuracy, durability, and repeatable.

#### SENSING

Sensor Technology	Capacitive Pressure Imaging	
Pressure Pange	0	.2-15psi
Fressure hange	0.014–10.3 N/cm2	–10.3 N/cm2
Spatial Resolution	0.2"	5.08mm
Accuracy	± 10% full scale*	
Sampling Frame Rate	95 frames/s**	

PHYSICAL CHARACTERISTICS		
Total Area	6.32"x6.32"	16.05cmx16.05cm
Sensing Area	2.4"x2.4"	6.1cmx6.1cm
Thickness (Sensing Area, uncompressed)	0.024"	0.06cm
Thickness (Border – cabling side)	0.12"	0.3cm
Border Width (cabling side)	2.7"	6.8cm
Border Width (non-cabling side)	1.5"	3.8cm
Cable	42"x2" x0.18"	106.7cmx5.1cm x0.5cm
Connector	4.76"x2.76" x0.09"	12.1cmx7cm x0.2cm

ENVIRONMENT	
Ambient Temperature	10°C - 40°C
Ambient Humidity	5% to 90% RH

#### PX200:12.12.05



#### **KEY FEATURES**

- High-resolution sensors with a 5.08 mm pitch (Resolution) and 144 sensing points
- Very good repeatability
- Designed for comfort and healthcare pressure seating applications
- Durable sensor that conforms well to surfaces with a proven track record

#### **REQUIREMENTS FOR OPERATION**

- Each PX200:12.12.05 sensor must be connected to one X3 PRO SENSOR PACK.
- The X3 PRO SENSOR PACK needs to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR software to function.

 $\ast$  When verified using the standard XSENSOR calibration process.



The X3 PX200 series of sensors are designed as a conformable and durable sensor for measuring interface pressures. These capacitive sensors were initially designed for medical applications in rehabilitation seating and have since been more widely used in automotive seating, aerospace, research, and product design. The PX200 series of sensors are known for accuracy, durability, and repeatable.

#### SENSING

Sensor Technology	Capacitive Pressure Imaging	
Dressure Dense	0.2-15psi	
Fressure hange	0.14-10.3N/cm2	
Spatial Resolution	0.2" 5.08mm	
Accuracy	± 10% full scale*	
Sampling Frame Rate	95 frames/s**	

PHYSICAL CHARACTERISTICS		
Total Area	10.7"x7.7"	27.1cmx.19.5cm
Sensing Area	3"x6"	7.6cmx15.2cm
Thickness (Sensing Area, uncompressed)	0.024"	0.06cm
Thickness (Border – cabling side)	0.12"	0.3cm
Border Width (cabling side)	3.2"	8.1cm
Border Width (non-cabling side)	1.5"	3.8cm
Cable	42"x2" x0.18"	106.7cmx5.1cm x0.5cm
Connector	4.76"x2.76" x0.09"	12.1cmx7cm x0.2cm

ENVIRONMENT	
Ambient Temperature	10°C - 40°C
Ambient Humidity	5% to 90% RH

#### PX200:15.30.05



#### KEY FEATURES

- High-resolution sensors with a 5.08 mm pitch (Resolution) and 450 sensing points
- Very good repeatability
- Designed for comfort and healthcare pressure seating applications
- Durable sensor that conforms well to surfaces with a proven track record

#### **REQUIREMENTS FOR OPERATION**

- Each PX200:15.30.05 sensor must be connected to one X3 PRO SENSOR PACK.
- The X3 PRO SENSOR PACK needs to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR software to function.

\* When verified using the standard XSENSOR calibration process.



The X3 PX200:25.100.10 sensor is small, narrow, high resolution sensor. The sensor has been used for assessing applied pressures from fingers, robotic hands, and other low pressure applications. Due to the resolution and the pressure range, the sensor can detect small changes in pressures and provides very clear images.

### SENSING

Sensor Technology	Capacitive Pressure Imaging	
	0.2-15 psi	
Pressure Range	0.14-10.3N/cm2	
Spatial Resolution	0.1"	2.54mm
Accuracy	± 10% full scale*	
Sampling Frame Rate	73 frames/s**	

#### PHYSICAL CHARACTERISTICS

Total Area	8" X 14.5"	20.3cm X 36.8cm
Sensing Area	2.5" x 10"	6.35cm X 25.4cm
Thickness (Sensing Area, uncompressed)	0.024"	0.06cm
Thickness (Border – cabling side)	0.12"	0.3cm
Border Width (cabling side)	3"	7.6cm
Border Width (non-cabling side)	1.25"	3.1cm
Cable	42"x2" x0.18"	106cmx5.1cm x0.5cm
Connector	4.76"x 2.76"x 0.9"	12.1cm x 7.0cm x 2.3cm
ENVIRONMENT		
Ambient Temperature	10°C - 40°C	
Ambient Humidity	5% to 90% RH	

#### PX200:25.100.10



#### **KEY FEATURES**

- High-resolution sensors with a 2.54 mm pitch
- (Resolution) and 2,500 sensing points
- Designed for high-quality pressure images
- with exceptional detail
- Excellent for both lab and environmental testing
- Has been used to measure finger pressures

#### **REQUIREMENTS FOR OPERATION**

- Each PX200:25.100.10 sensor must be connected to two X3 PRO SENSOR PACKs.
- The X3 PRO SENSOR PACKs need to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR software to function.

\* When verified using the standard XSENSOR calibration process.



The X3 PX200 series of sensors are designed as a conformable and durable sensor for measuring interface pressures. These capacitive sensors were initially designed for medical applications in rehabilitation seating and have since been more widely used in automotive seating, aerospace, research, and product design. The PX200 series of sensors are known for accuracy, durability, and repeatable.

#### SENSING

Sensor Technology	Capacitive Pressure Imaging	
Pressure Range	0.2-15psi	
	0.14-10.3N/cm2	
Spatial Resolution	0.1" 2.54mm	
Accuracy	± 10% full scale*	
Sampling Frame Rate	36 frames/s**	

PHYSICAL CHARACTERISTICS		
Total Area	10.5"x15.5"	26.7cmx39.4cm
Sensing Area	5"x10"	12.7cmx25.4cm
Thickness (Sensing Area, uncompressed)	0.024"	0.06cm
Thickness (Border – cabling side)	0.12"	0.3cm
Border Width (cabling side)	4"	10.1cm
Border Width (non-cabling side)	1.5"	3.8cm
Cable	42"x2" x0.18"	106cmx5.1cm x0.5cm
Connector	4.76"x 2.76"x 0.9"	12.1cm x 7.0cm x 2.3cm

ENVIRONMENT	
Ambient Temperature	10°C - 40°C
Ambient Humidity	5% to 90% RH

#### PX200:50.100.10



#### **KEY FEATURES**

- High-resolution sensors with a 2.54 mm pitch (Resolution) and 5,000 sensing points
- Designed for high-quality pressure images with exceptional detail
- Excellent for both lab and environmental testing

#### **REQUIREMENTS FOR OPERATION**

- Each PX200:50.100.10 sensor must be connected to two X3 PRO SENSOR PACKs.
- The X3 SENSOR PACK PROs need to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR software to function.

\* When verified using the standard XSENSOR calibration process.



The X3 PX200 series of sensors are designed as a conformable and durable sensor for measuring interface pressures. These capacitive sensors were initially designed for medical applications in rehabilitation seating and have since been more widely used in automotive seating, aerospace, research, and product design. The PX200 series of sensors are known for accuracy, durability, and repeatable.

### SENSING

Sensor Technology	Capacitive Pressure Imaging	
	0.2-15psi	
Pressure Range	0.14–10.3N/cm2	
Spatial Resolution	0.1"	2.54mm
Accuracy	± 10% full scale*	
Sampling Frame Rate	14.4 frames/s**	

#### PHYSICAL CHARACTERISTICS

Total Area	15.75"x15.75"	40cmx40cm
Sensing Area	10"x10"	25.4cmx25.4cm
Thickness (Sensing Area, uncompressed)	0.024"	0.06cm
Thickness (Border – cabling side)	0.12"	0.3cm
Border Width (cabling side)	4"	10.1cm
Border Width (non-cabling side)	1.5"	3.8cm
Cable	42"x2" x0.18"	106cmx5.1cm x0.5cm
Connector	4.76"x 2.76"x 0.9"	12.1cm x 7.0cm x 2.3cm

ENVIRONMENT	
Ambient Temperature	10°C - 40°C
Ambient Humidity	5% to 90% RH

#### PX200:100.100.10



#### **KEY FEATURES**

- High-resolution sensors with a 2.54 mm pitch
- (Resolution) and 10,000 sensing points
- Designed for high-quality pressure images
- with exceptional detail
- Excellent for both lab and environmental testing

#### **REQUIREMENTS FOR OPERATION**

- Each PX200:100.100.10 sensor must be connected to two X3 PRO SENSOR PACKs.
- The X3 PRO SENSOR PACKs need to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR software to function.

\* When verified using the standard XSENSOR calibration process.



# SENSORS - IX500:256.256.22

### **PRODUCT DESCRIPTION**

The X3 IX500:256.256.22 is a high pressure sensor that has been designed for automotive tire testing. The sensor has a 1.15mm pitch with 65,536 sensing points and is unsurpassed in terms of accuracy and durability. The high resolution provides very clear image quality for tire tread viewing and analysis. The sensor is mounted on a lexan backing to provide additional durability. The IX500:256.256.22 has been used for lab and environmental testing.

#### SENSING

Sensor Technology	Capacitive Pressure Imaging	
Duran Dana	5-100psi 10-200psi	
Pressure Range	3.4-69N/cm2 7-138N/cm2	
Spatial Resolution	0.05" 1.15mm	
Accuracy	± 10% full scale*	
Sampling Frame Rate	6.2 frames/s**	

#### PHYSICAL CHARACTERISTICS

Total Area	25" X 21"	63.5cm X 53.3cm	
Sensing Area	11.6" x 11.6"	29.5cm X 29.5cm	
Thickness (Sensing Area, uncompressed)	0.06"	0.23cm	
Thickness (Border – cabling side)	10.5"	26.7cm	
Border Width (cabling side)	4.75"	12.1cm	
Border Width (non-cabling side)	2.63"	6.7cm	
Cable	-	-	
Connector	4.76"x 2.76"x 0.9"	12.1cm x 7.0cm x 2.3cm	
ENVIRONMENT			
Ambient Temperature	10°C - 40°C		
Ambient Humidity	5% to 90% RH		

#### IX500:256.256.22



#### **KEY FEATURES**

- High-resolution sensors with a 1.15 mm pitch (Resolution) and 65,536 sensing points
- Designed for high-quality pressure images with exceptional detail
- Excellent for both lab and environmental testing
- Durable sensors that perform well in subsurface(soil/ sand) testing

#### **REQUIREMENTS FOR OPERATION**

- Each IX500:256.256.22 sensor must be connected to four X3 PRO SENSOR PACKs.
- The X3 PRO SENSOR PACKs need to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR X3 PRO software to function.

\* When verified using the standard XSENSOR calibration process.



# SENSORS - IX500:256.256.16

#### **PRODUCT DESCRIPTION**

The X3 IX500:256.16 is a truck tire sensor with 65,536 sensing points and unsurpassed accuracy and durability. The sensor has a 1.6mm pitch with 65,536 sensing points and is unrivaled in terms of accuracy and durability. The high resolution provides very clear image quality for tire tread viewing and analysis. The sensor is mounted on a lexan backing to provide additional durability.

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Sensor Technology	Capacitive Pressure Imaging		
	5-100psi 10-200psi		
Pressure Range	3.4-69N/cm2 7-138N/cm2		
Spatial Resolution	0.063" 1.6mm		
Accuracy	± 10% full scale*		
Sampling Frame Rate	6.2 frames/s**		

Total Area	25.5" X 31" 64.8cm X 78.7cm		
Sensing Area	16" x 16"	40.6cm X 40.6cm	
Thickness (Sensing Area, uncompressed)	0.024"	0.06cm	
Thickness (Border – cabling side)	0.024"	0.06cm	
Border Width (cabling side)	2.85"	7.24cm	
Border Width (non-cabling side)	0.4" 1cm		
Cable			
Connector	4.76"x 2.76"x 12.1cm x 7.0cm 0.9" x 2.3cm		
ENVIRONMENT			
Ambient Temperature	10°C - 40°C		
Ambient Humidity	5% to 90% RH		

#### IX500:256.256.16



#### **KEY FEATURES**

- High-resolution sensors with a 1.6 mm pitch (Resolution) and 65,536 sensing points
- Designed for high-quality pressure images with exceptional detail
- Excellent for both lab and environmental testing
- Durable sensors that perform well in subsurface(soil/ sand) testing

#### **REQUIREMENTS FOR OPERATION**

- Each IX500:256.256.16 sensor must be connected to four X3 PRO SENSOR PACKs.
- The X3 PRO SENSOR PACKs need to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR software to function.

\* When verified using the standard XSENSOR calibration process.



The X3 IX500:192.192.05 is the newest addition to the tire sensor family. The sensor has been designed to test large agriculture and mining tires with very large tread patterns.

The sensor in mounted onto a supporting sheet of lexan for additional durability and has a durable urethane cover material for protection from sands and soils. The sensor is supplied with sheer reducing layers which are laid over the sensor to reduce or eliminate sheer forces. The IX500:192.192.05 is used in lab and outdoor settings including subsoil test for tread impact.

SENSING			
Sensor Technology	Capacitive Pressure Imaging		
Pressure Range	10-200psi		
	7–138N/cm2		
Spatial Resolution	0.2"	5.08mm	
Accuracy	± 10% full scale*		
Sampling Frame Rate	10 frames/s**		

PHYSICAL CHARACTERISTICS			
Total Area	51"x51"	129.5cmx129.5cm	
Sensing Area	38.4"x38.4"	97.5cmx97.5cm	
Thickness (Sensing Area, uncompressed)	0.07"	0.2cm	
Thickness (Border – cabling side)	0.12"	0.3cm	
Border Width (cabling side)	7.4"	18.8cm	
Border Width (non-cabling side)	5.2"	13.3cm	
Cable	42"	106.7cm	
Connector	4.76"x 2.76"x 0.9"	12.1cm x 7.0cm x 2.3cm	

ENVIRONMENT	
Ambient Temperature	10°C - 40°C
Ambient Humidity	5% to 90% RH

#### IX500:192.192.05



#### **KEY FEATURES**

- High-resolution sensors with a 5.08 mm pitch (Resolution) and 36,864 sensing points
- Designed for large industrial tire testing
- Excellent for both lab and environmental testing
- Durable sensors that performs well in subsurface(soil/ sand) testing
- Sensor is mounted on a lexan backing for added durability.

#### **REQUIREMENTS FOR OPERATION**

- Each IX500:192.192.05 sensor must be connected to three X3 PRO SENSOR PACKs.
- The X3 PRO SENSOR PACKs need to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR software to function.

\* When verified using the standard XSENSOR calibration process.



# SENSORS - IX500:128.128.10

#### **PRODUCT DESCRIPTION**

The X3 IX500:128.128.10 is a high pressure sensor with 16,384 sensing points. The sensor has been designed with a tough urethane cover that can withstand outdoor testing for tire applications. The sensor is bendable and can conform to different surfaces. The IX500:128.128.10 provides a combination of higher resolution and faster data acquisition rates so that it can be used in low speed dynamic tire testing.

#### SENSING

Sensor Technology	Capacitive Pressure Imaging		
Processo Bongo	5-100psi 10-200psi		
Pressure Range	3.4-69N/cm2 7-138N/cm2		
Spatial Resolution	0.1" 2.54mm		
Accuracy	± 10% full scale*		
Sampling Frame Rate	16 frames/s*		

#### PHYSICAL CHARACTERISTICS

Total Area	19.8" X19.8"	50.2cm X 50.2cm	
Sensing Area	12.8" x 12.8"	32.5cm X 32.5cm	
Thickness (Sensing Area, uncompressed)	0.045"	0.11cm	
Thickness (Border – cabling side)	0.12"	0.31cm	
Border Width (cabling side)	4"	10.16cm	
Border Width (non-cabling side)	3"	7.62cm	
Cable	24"x2"x0.36"	60.96cmx5.08cm x0.91cm	
Connector	4.76"x 2.76"x 0.9"	12.1cm x 7.0cm x 2.3cm	
ENVIRONMENT			
Ambient Temperature	10°C - 40°C		
Ambient Humidity	5% to 90% RH		

#### IX500:128.128.10



#### **KEY FEATURES**

- High-resolution sensors with a 2.54 mm pitch (Resolution) and 16,384 sensing points
- Designed for high-quality pressure images with fast data acquisition
- Excellent for both lab and environmental testing
- Durable sensors that performs well in subsurface(soil/ sand) testing

#### **REQUIREMENTS FOR OPERATION**

- Each IX500:128.128.10 sensor must be connected to two X3 PRO SENSOR PACKs.
- The X3 PRO SENSOR PACKs need to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR X3 PRO Software to function.

\* When verified using the standard XSENSOR calibration process.



# SENSORS - IX500:64.64.04

### **PRODUCT DESCRIPTION**

The X3 IX500:64.64.04 is a stance pad sensor. The sensor has been designed to measure standing and striding foot pressures. A durable urethane cover provides extra protection and durability for heel strike and running movements. Additionally, the sensor provides a high frame rate for recording foot movements. Generate foot profiles and analyze foot movements from standing, to walking, to running.

#### SENSING

Sensor Technology	Capacitive Pressure Imaging		
	1-80psi		
Pressure Range	0.7–55 N/cm2		
Spatial Resolution	0.25"	6.35mm	
Accuracy	± 10% full scale*		
Sampling Frame Rate	24.6 frames/s**		

#### PHYSICAL CHARACTERISTICS

Total Area	23"x23"	58.4cm X 58.4cm
Sensing Area	16"x16"	40.6cmx40.6cm
Thickness (Sensing Area, uncompressed)	0.02"	0.06cm
Thickness (Border – cabling side)	0.02"	0.06cm
Border Width (cabling side)	4"	10.16cm
Border Width (non-cabling side)	3"	7.62cm
Cable	24"	60.9cm
Connector	4.76"x 2.76"x 0.9"	12.1cm x 7.0cm x 2.3cm

# ENVIRONMENT Ambient Temperature 10°C - 40°C Ambient Humidity 5% to 90% RH

IX500:64.64.04



#### **KEY FEATURES**

- High-resolution sensors with a 6.35mm pitch (Resolution) and 4.096 sensing points
- Designed for high-quality pressure images with exceptional detail
- Excellent for both clinical and dynamic testing
- Durable sensor that is portable with plug and play functionality

#### **REQUIREMENTS FOR OPERATION**

- Each IX500:64.64.04 sensor must be connected to one X3 PRO SENSOR PACK.
- The X3 PRO SENSOR PACK needs to be connected to an X3 PRO.
- The X3 PRO need to be connected to a power supply and a computer running XSENSOR software to function.

\* When verified using the standard XSENSOR calibration process.



# SENSORS - IX500:60.60.10

### **PRODUCT DESCRIPTION**

The X3 IX500:60.60.10 is a high pressure sensor with 3,600 sensing points. The sensor can be used for measuring hand pressures on surfaces, automated clamping pressures, seal pressures, and higher pressure research or design testing. The IX500:60.60.10 is a thin and conformable sensor that can fit into tight spaces or used on uneven surfaces. Additionally, the sensor provides a very fast data acquisition rate for capturing rapid movements.

SENSING		
Sensor Technology	Capacitive	Pressure Imaging
Pressure Range	5-100psi 10-200psi	
	3.4-69N/cm2 7-138N/cm2	
Spatial Resolution	0.1"	2.54mm
Accuracy	± 10% full scale*	
Sampling Frame Rate	30	frames/s**

PHYSICAL CHARACTERISTICS		
Total Area	11.4"x11.4"	28.9cmx28.9cm
Sensing Area	6"x6"	15.2cmx15.2cm
Thickness (Sensing Area, uncompressed)	0.045"	0.11cm
Thickness (Border – cabling side)	0.12"	0.31cm
Border Width (cabling side)	4"	10.16cm
Border Width (non-cabling side)	1.5"	3.81cm
Cable	42"x2" x0.36"	106.68cmx5.08cm x0.91cm
Connector	4.76"x 2.76"x 0.9"	12.1cm x 7.0cm x 2.3cm

ENVIRONMENT	
Ambient Temperature	10°C - 40°C
Ambient Humidity	5% to 90% RH

#### IX500:60.60.10



#### **KEY FEATURES**

- High-resolution sensors with a 2.54 mm pitch (Resolution) and 3,600 sensing points
- Designed for high-quality pressure images with fast data acquisition
- Excellent for both lab and environmental testing
- Conformable sensor that can measure pressures on uneven surfaces.

#### **REQUIREMENTS FOR OPERATION**

- Each IX500:60.60.10 sensor must be connected to one X3 PRO SENSOR PACK.
- The X3 PRO SENSOR PACK needs to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR X3 PRO Software to function.
- $\ast$  When verified using the standard XSENSOR calibration process.



# SENSORS - IX500:40.40.10

### **PRODUCT DESCRIPTION**

The X3 IX500:40.40.10 is a high pressure sensor with 1,600 sensing points. The sensor can be used for measuring hand pressures on surfaces, automated clamping pressures, seal pressures, and higher pressure research or design testing. The IX500:40.40.10 is a thin and conformable sensor that can fit into tight spaces or used on uneven surfaces. Additionally, the sensor provides a very fast data acquisition rate for capturing rapid movements.

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Sensor Technology	Capacitive Pressure Imaging	
	5-100psi 10-200psi	
Pressure Range	3.4-69N/cm2 7-138N/cm2	
Spatial Resolution	0.1" 2.54mm	
Accuracy	± 10% full scale*	
Sampling Frame Rate	39 frames/s**	

PHYSICAL CHARACTERISTICS		
Total Area	8.9"x8.9"	22.6cmx22.6cm
Sensing Area	4"x4"	10.2cmx10.2cm
Thickness (Sensing Area, uncompressed)	0.045"	0.11cm
Thickness (Border – cabling side)	0.12"	0.31cm
Border Width (cabling side)	3.4"	8.63cm
Border Width (non-cabling side)	1.5"	3.81cm
Cable	42"x2"	106.6cmx5.08cm
Connector	4.76"x 2.76"x 0.9"	12.1cm x 7.0cm x 2.3cm

ENVIRONMENT	
Ambient Temperature	10°C - 40°C
Ambient Humidity	5% to 90% RH

#### IX500:40.40.10



#### **KEY FEATURES**

- High-resolution sensors with a 2.54 mm pitch (Resolution) and 16,384 sensing points
- Designed for high-quality pressure images with fast data acquisition
- Excellent for both lab and environmental testing
- Conformable sensor that can measure pressures on uneven surfaces.

#### **REQUIREMENTS FOR OPERATION**

- Each IX500:40.40.10 sensor must be connected to one X3 PRO SENSOR PACK.
- The X3 PRO SENSOR PACK needs to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR X3 PRO Software to function.

 $\ast$  When verified using the standard XSENSOR calibration process.



# SENSORS - IX500:15.30.05

### **PRODUCT DESCRIPTION**

The X3 IX500:15.30.05 is a high pressure sensor with 450 sensing points. The sensor can be used for measuring tactile pressures on surfaces, automated clamping pressures, seal pressures, and higher pressure research or design testing. The IX500:15.30.05 is a thin and conformable sensor that can fit into tight spaces or used on uneven surfaces. Additionally, the sensor provides a very fast data acquisition rate for capturing rapid movements.

#### SENSING

Sensor Technology	Capacitive Pressure Imaging	
Processo Bongo	5-100psi, 10-200psi	
Pressure Range	3.4-69N/cm2 7-138N/cm2	
Spatial Resolution	0.2" 5.08mm	
Accuracy	± 10% full scale*	
Sampling Frame Rate	95 frames/s**	

### PHYSICAL CHARACTERISTICS

Total Area	7.4"x10"	18.8 X 25.4cm
Sensing Area	3" x 6"	7.6cm X 15.2cm
Thickness (Sensing Area, uncompressed)	0.045"	0.11cm
Thickness (Border – cabling side)	0.12"	0.31cm
Border Width (cabling side)	3.15"	8cm
Border Width (non-cabling side)	1.5"	3.8cm
Cable	42"x2"x0.36"	106.6cmx5.08cm x0.91cm
Connector	4.76"x 2.76"x 0.9"	12.1cm x 7.0cm x 2.3cm

ENVIRONMENT	
Ambient Temperature	10°C - 40°C
Ambient Humidity	5% to 90% RH

#### IX500:15.30.05



#### **KEY FEATURES**

- High-resolution sensors with a 2.54 mm pitch (Resolution) and 450 sensing points
- Designed for high-quality pressure images with fast data acquisition
- Excellent for both lab and environmental testing
- Conformable sensor that can measure pressures on uneven surfaces.

#### **REQUIREMENTS FOR OPERATION**

- Each IX500:15.30.10 sensor must be connected to one X3 PRO SENSOR PACK.
- The X3 PRO SENSOR PACK needs to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR X3 PRO Software to function.

\* When verified using the standard XSENSOR calibration process.



# SENSORS - IX500:12.12.05

### **PRODUCT DESCRIPTION**

The X3 IX500:12.12.05 is a high pressure sensor with 144 sensing points. The sensor can be used for measuring tactile pressures on surfaces and higher pressure research or design testing. The IX500:12.12.05 is a thin and conformable sensor that can fit into tight spaces or used on uneven surfaces. Additionally, the sensor provides a very fast data acquisition rate for capturing rapid movements.

#### SENSING

Sensor Technology	Capacitive Pressure Imaging	
Processo Bongo	5-100psi 10-200psi	
Pressure Range	3.4-69N/cm2 7–138N/cm2	
Spatial Resolution	0.2" 5.08mm	
Accuracy	± 10% full scale*	
Sampling Frame Rate	95 frames/s**	

PHYSICAL CHARACTERISTICS		
Total Area	6.6"x6.6"	16.7cmx16.7cm
Sensing Area	2.4"x2.4"	6.1cmx6.1cm
Thickness (Sensing Area, uncompressed)	0.024"	0.06cm
Thickness (Border – cabling side)	0.12"	0.3cm
Border Width (cabling side)	2.7"	6.8cm
Border Width (non-cabling side)	1.5"	3.8cm
Cable	48"x2" x0.18"	121cmx5.1cm x0.5cm
Connector	4.76"x2.76" x0.09"	12.1cmx7cm x0.2cm

ENVIRONMENT	
Ambient Temperature	10°C - 40°C
Ambient Humidity	5% to 90% RH

#### IX500:12.12.05



#### **KEY FEATURES**

- High-resolution sensors with a 2.54 mm pitch (Resolution) and 450 sensing points
- Designed for high-quality pressure images with fast data acquisition
- Excellent for both lab and environmental testing
- Conformable sensor that can measure pressures on uneven surfaces.

#### **REQUIREMENTS FOR OPERATION**

- Each IX500:12.12.05 sensor must be connected to one X3 PRO SENSOR PACK.
- The X3 PRO SENSOR PACK needs to be connected to an X3 PRO.
- The X3 PRO needs to be connected to a power supply and a computer running XSENSOR software to function.

\* When verified using the standard XSENSOR calibration process.





### SOFTWARE - X3 PRO V6.0

#### **PRO V6.0**

#### PRODUCT DESCRIPTION

X3 PRO Software is an essential part of the X3 PRO product series. Developed with the power user in mind, the X3 PRO Software features a faster, more powerful engine with enhanced analytical tools. The software package offers 2D, 3D, and graphing view options. The data is viewed dynamically and recorded as a XSENSOR file format. Recorded data can be exported for further analysis or imported into other applications such as Matlab.

The X3 PRO software has many analytical tools for general research purposes as well as specific functions and tools for automotive and tire designers. Easily stream video along pressure images, creates sensor groupings, make measurements, and compare multiple files.

#### PRO V6.0 – NEW FEATURE HIGHLIGHTS **Engine Performance Improvements**

- Collected data is saved immediately to the disk reducing the risk of data loss
- Over 100% faster frame rate for 4 sensor pack system with 65,536 sensing points
- Load or save up to 500GB files in under 1 second
- Allows for sessions with up to 100 million frames or 500GB of data

#### **File Comparison Tools**

- Simultaneous playback of up to 4 files •
- Multiple frame and file comparisons
- Windshield wiper sensor users can graph multiple files for product and
- data comparisons

#### **Measurement Tools**

- Line measurement allows users to measure pressure image dimensions
- Area measurement allows users to calculate areas within a pressure image

#### **Imaging Tools**

- Thumbnail preview strip displays each frame in filmstrip format
- Thumbnail view includes preview of attached videos, photos, and notes
- Improved overall frame navigation
- Improved 2D zoom functionality

#### **Export/Analysis Tools**

- Copy, paste and select pressure values from 2D image directly into spreadsheet
- Export a sensor group in its original shape directly into a spreadsheet
- Copy and paste cross-section values into spreadsheets (cross-hair or average)
- Export files into html viewable format

\* Dual core processor computer required. Also dependent on sensor configuration



(IX500:256.256.22)



3D Car Seat (LX100:48.48.02)



Video Streaming Car Seat (PX100:40.40.02 & PX100:36.36.02)



### SOFTWARE - X3 PRO V6.0

#### **PRO V6.0**

FEATURES	
X3 Connection Status	View the connection status of all sensors, sensor packs, and electronics* connected to your computer. Toggle the view mode to see sensor usage statistics, such as when the sensor was last calibrated and the length of time the sensor has recorded data.
Dynamic Preview Mode	View live, dynamic data before recording to ensure relevant information is captured.
Record Live Pressure Imaging Sessions	Capture and record pressure imaging data for analysis and review.
Time and Recording Triggers	Set recording session delays and triggers to capture specific data.
Pressure Movie creation	Generate movie files in XSENSOR software to share dynamic sessions with those who do not have XSENSOR software.
Video Synch	Record and synchronize digital video (DV) cameras, using IEEE 1394 FireWire or USB webcams to XSENSOR pressure imaging files.

#### VIEWS

Each XSENSOR view mode has multiple settings and options to control sensor data viewing:		
2D	Top view of the sensor shows pressure levels in different colours defined by the pressure isobar legend; view can be rotated or flipped to match positioning.	
3D	Perspective view of the sensor shows pressure levels in different colours and height contours; rotate view in any direction to maximize visual clarity.	
Frame Compare	Show up to 4 snapshots side-by-side for easy comparison.	
Pressure vs. Time	Graph pressure readings over time; pressure reading can be either peak or average for the sensor.	
Numeric Mode	2D mode shows numerical pressure readings in each sensing cell and dynamic full-colour display.	

ANALYSIS AND STATISTICS		
X3 PRO v6.0's features help support the dynamic analysis of pressure readings within a user-defined group or the entire sensor pad:		
Peak Pressure	Monitor the highest pressure on one or more cells of a given pressure imaging data frame.	
Average Pressure	Calculate an average pressure over the entire sensor surface.	
Contact Area	Calculate area of the sensor loaded by a subject.	
Sensor Cell-Group Analysis	Define groups of sensing cells for separate analysis from the rest of the pressure image; same statistical analysis tools for entire system can also be applied to sensor cell groups, define group templates to facilitate sensor cell-group analysis, and measure the statistical variance of the sensor output in your defined sensor groups.	
File Compare	Examine up to four pressure imaging sessions simultaneously to compare and analyze data.	



2D Wiper Blade Comparison (PX100:1.64.02)



#### Air Pressure on Sensor (PX100:36.36.02)



Clutch Disc Pressure on Sensor (IX500:256.256.22)



Sensor Groups & Statistics (PX100:100.100.05)

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# ELECTRONICS



# ELECTRONICS - X3 PRO Platform | X3 PRO Sensor Pack

#### X3 PRO Platform



X3 PRO Sensor Pack



#### PRODUCT DESCRIPTION

The **X3 PRO** Platform provides four data ports, control signals, communication relay functionality, electrical isolation and power for the sensor system.

FEATURES			
Display Functionality	LED: green-power on, amber- malfunction		
Sensor Cell Capacity	256	Sx256	
Sensor Ports		4	
POWER			
External Power Supply	Input: 100-240 VAC, 47-63Hz, 1.35 A Output: 12 VDC, 3.75 A		
Power Consumption	1 W		
PHYSICAL CHARACTERISTICS			
Length	4.5"	11.4cm	
Width	3.5"	8.9cm	
Height	0.9"	2.3cm	
Weight	4.8oz	135g	
ENVIRONMENT			
Operating Range (Temp.)	10°C to 40°C		
Ambient Humidity	80% for temperatures up to 31°C and decreasing linearly to 50% at 40°C		
USB Port			
USB Input	USB 2.0, Full Speed		
USB Cable (sold separate)	185cm length		
X3EMAY2011v1			

#### **PRODUCT DESCRIPTION**

The **X3 PRO** Sensor Pack contains the sensing electronics of the system including one communication port.

#### FEATURES

Display Functionality	LED: green-power on, amber-		
	malfunction		
Sensor Cell Capacity	64x64		
Sampling Rate	112,000 se	ensels/sec	
Sampling Resolution	16 bit		
Min Cell Measurement Time	35 µsec		
POWER			
Power Consumption	2 W		
PHYSICAL CHARACTERISTICS			
Length	3.9"	9.8cm	
Width	2.5"	6.4cm	
Height	0.7" 1.8cm		
Weight	6.3oz 180g		
Cable Length	78" 198.1cm		
ENVIRONMENT			
Operating Range (Temp.)	10°C to 40°C		
Ambient Humidity	80% for temperatures up to 31°C and decreasing linearly to 50% at 40°C		

XSENSOR<sup>®</sup>Technology Innovators in Pressure Imaging

# ELECTRONICS – X3 DISPLAY

#### X3 DISPLAY





#### PRODUCT DESCRIPTION

The X3 DISPLAY platform is a medically certified device which provides full system functionality for portable sensor operation including recording, display, and power as well as desktop synchronization.

FEATURES

	Touchscreen Colour LCD	
Display Functionality	LED: green-power on,	
	amber-malfunction	
Sonsor Coll Consoity	64x64 or 192x192 using an X3	
Sensor Cell Capacity	Node	
Sensor Ports	1	
Sync Ports	3.3 or 5.0 VDC TTL signal	
	Compact Flash Port	
	Secure Digital Port	
Other Features	Auxilliary Port – VGA output	
	Communication Port – Active Sync	
	via USB	

Power		
External Power Supply	Input: 100-240 VAC, 47-63Hz, 1.35 A Output: 12 VDC, 3.75 A	
Power Consumption	30 W (batteries charing)	
Battery Life *	Approximately 3 hours	
Record Time **	23 Hours	
PHYSICAL CHARACTERISTICS		
Length	13.5cm	5.3"
Width	24.1cm	9.5"
Height	4.8cm 1.9"	
Weight	820g 28.9oz	
ENVIRONMENT		
Operating Range (Temp.)	0°C to 40°C	
Ambient Humidity	80% for temperatures up to 31°C and decreasing linearly to 50% at 40°C	

\*depending on state of battery charge, exact system usage, and specific system configuration.

\*\*recording time measured with X3 Sensor Pack and 1GB compact flash card.

## ELECTRON|CS - X3 Node | X3 Accessories Cable



X3 Accessories Cable



#### PRODUCT DESCRIPTION

The **X3 NODE** provides three additional data ports, control signals, communication relay functionality, electrical isolation and power for the sensor system. An X3 NODE is connected to a port on the X3 PRO Electronics Platform to expand the number of sensor connections.

**FFATURES** 

TLATURLO				
Sensor Cell Capacity	192x192			
Sensor Ports	3			
POWER				
Power Consumption	100 mW			
PHYSICAL CHARACTERISTICS				
Length	2.3"	5.7cm		
Width	3.5"	6.4cm		
Height	0.7" 1.8cm			
Weight	3.0oz 85g			
Cable Length	9.4" 24cm			
ENVIRONMENT				
Operating Range (Temp.)	10°C to 40°C			
Ambient Humidity	80% for temperatures up to 31C and decreasing linearly to 50% at 40°C			

#### PRODUCT DESCRIPTION

The **X3 ACCESSORIES Cable** is designed to be connected to the X3 DISPLAY and allows for 2 USB device connections and one VGA device connection. External keyboards, mice, or projectors can be connected to the X3 DISPLAY using this accessory.

#### FEATURES

USB Ports	2 USB ports		
VGA Port	1 VGA Port		
PHYSICAL CHARACTERISTICS			
Cable Length	7.1"	18cm	



# ELECTRONICS — X3 Power Supply | X3 Battery Pack

#### X3 Power Supply

#### X3 Battery Pack





#### PRODUCT DESCRIPTION

The X3 Power Supply is a certified power supply that is sold with country specific power cords.

POWER				
External Power Supply	Input: 100-240 VAC, 47-63 Hz, 1.35 A Output: 12 VDC, 3.75 A			
Maximum Output Power	45 W			
PHYSICAL CHARACTERISTICS				
Length	5.7" 14.5cm			
Width	3.0" 7.6cm			
Height	1.7" 4.3cm			
Weight	16.6oz 470g			
Cable Length – Power Supply	78.7" 200cm			
Cable Length – Power Cord	82.7" 210cm			
ENVIRONMENT				
Operating Range (Temp.)	10°C to 40°C			
Ambient Humidity	80% for temperatures up to 31°C and decreasing linearly to 50% at 40°C			

#### PRODUCT DESCRIPTION

The **X3 Battery Pack** contains a Lithium-ion Battery and a carry case. The battery is connected from the carry case into the X3 PRO Platform Electronics.

IFEATURES				
Battery	Lithium-ion Battery			
Recharger	External Lithium-ion Recharger			
Charge Time	3.5 hours			
BATTERY POWER				
Power Consumption	2,400 mAh			
PHYSICAL CHARACTERISTICS OF BATTERY CASE				
Length	2.8"	7.1cm		
Width	1.5"	3.9cm		
Height	0.8"	2.0cm		
Weight	6oz 170g			
Cable Length	12.2"	31cm		
Electrical Characteristics				
Operating Voltage	8.4 to 6V			
Charge Voltage	8.4V +/- 50mV			
Cutoff Voltage	5V			
Maximum Discharge Current	2.4A			

# ACCESSORIES - X3 Carry Case

#### X3 Carry Case – Soft shell



X3 Carry Case – Hard shell



#### PRODUCT DESCRIPTION

The **X3Carry Case - Soft** is the standard carry case which comes with most systems. The case is designed to carry a rolled sensor and all the corresponding X3 PRO Electronics, X3 PRO Software CD, and User Guide.

PHYSICAL CHARACTERISTICS				
Length	33"	83.8cm		
Width	6"	15.2cm		
Height	8"	20.3cm		
Weight	24oz	680g		

#### PRODUCT DESCRIPTION

The **X3 Carry Case - Hard** is an optional carry case designed for durability. It is primarily used by engineers who require a portable and durable carry case for travel purposes.

PHYSICAL CHARACTERISTICS				
Length	33 1/2"	85cm		
Width	6 1/2"	16.5cm		
Height	8"	20.3cm		
Weight	120oz	3,400g		



### ACCESSORIES - X3 Carry Case - Tire Sensor

#### X3 Carry Case – IX500:256:256:22



X3 Carry Case - IX500:256:256:16



#### PRODUCT DESCRIPTION

The X3 Carry Case – Tire Sensors (IX500:256.256.22) The IX500:256.256.22 Tire Sensor Carry Case is fitted to the dimensions of this specific sensor. The case also has compartments for each of the X3 PRO Electronic components and software CD.

#### PHYSICAL CHARACTERISTICS

Length	27"	68.6cm
Width	3"	7.6cm
Height	23"	58.4cm
Weight	48oz	1,360g

#### PRODUCT DESCRIPTION

The X3 Carry Case – Tire Sensors (IX500:256.256.16) The IX500:256.256.16 Tire Sensor Carry Case is fitted to the dimensions of this specific sensor. The case also has compartments for each of the X3 PRO Electronic components and software CD.

#### PHYSICAL CHARACTERISTICS

Length	33"	83.8cm
Width	3"	7.6cm
Height	27"	68.6cm
Weight	56oz	1,587g



#### XSENSOR Technology Corporation

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