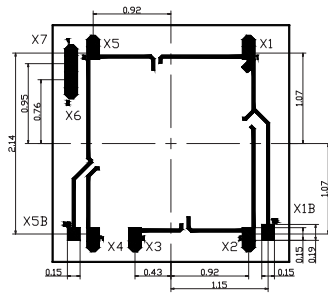
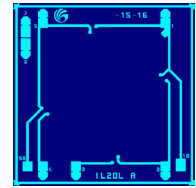


M-Layout  
Die size: 2.15 x 2.15 mm



L-Layout  
Die size: 2.75 x 2.75 mm



**Overview**

The Industrial Line STARe is a piezo-resistive silicon pressure sensor dies line with pressureproportional output signal. The dies have side layouts as well as round layouts with electrical shield. Our optimised designs and technologies allow highest accuracy measurements of absolute, gauge or differential pressure for required applications. Central features of our STARe Technology (Sensor Technology for Advanced Resistors) are the highest stabilities, lowest temperature hyste-

resis and extremely high overpressure Customised solutions are also possible.

**Applications**

- Industrial controls
- Automotive applications
- Home appliances
- Medical instrumentations

**Features**

- For current and voltage supply
- Cost efficient
- High sensitivity, reliability and stability
- Additional on-chip diode
- Pressure ranges  
L-Layout: 0.10 kPa to 0.35 kPa  
M-Layout: 0.100 kPa to 0.60 MPa

**Note:** The qualification of the packaged sensors is the responsibility of the customer, as the packaging will have an impact to the overall performance of the sensor.

**Order No.**



- 1 **Product Code**  
Industrial Line STARe
- 2 **Outside Dimension**  
L: 2.75 X 2.75 mm (10kPa...35kPa)  
M: 2.15 X 2.15 mm (100kPa...60MPa)
- 3 **Wafer size**  
6A: 6 inch wafer
- 4 **Pressure Range [Pa]**  
10k0: 10 kPa = 100mbar  
60M0: 60 MPa = 600bar
- 5 **Type (X)**  
A: Absolute  
G: Gauge (Glass)
- 6 **Thickness BackPlate**  
YY: Back Plate Thicness in 100µm

**Common Characteristics**

Type	Pressure range	Parameter	min.	typ.	max.	Unit
IL20L6A-10k0-GXX	10 kPa	Span voltage	30	60	120	mV@5V
IL20L6A-35k0-A/GXX	35 kPa	Span voltage	40	100	160	mV@5V
IL20M6A-100k-A/GXX	100 kPa	Span voltage	60	100	140	mV@5V
IL20M6A-250k-A/GXX	250 kPa	Span voltage	60	110	140	mV@5V
IL20M6A-500k-A/GXX	500 kPa	Span voltage	60	110	140	mV@5V
IL20M6A-01M0-A/GXX	1,0 MPa	Span voltage	60	110	140	mV@5V
IL20M6A-03M0-A/GXX	3,0 MPa	Span voltage	60	110	140	mV@5V
IL20M6A-10M0-A/GXX	10,0 MPa	Span voltage	200	250	300	mV@5V
IL20M6A-40M0-AXX	40,0 MPa	Span voltage	230	290	350	mV@5V
IL20M6A-60M0-AXX	60,0 MPa	Span voltage	100	110	120	mV@5V

Gauge types can also be used for differential measurements.

**Certificate**

ISO/TS 16949

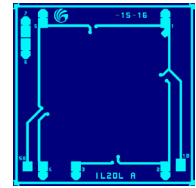
**Contact**

First Sensor AG  
www.first-sensor.com

Electrical Characteristics (measured at 5 V supply and 25 °C, unless otherwise specified)

Parameter	min.	typ.	max.	Unit
Bridge resistance	3.200	3600	4.200	Ω
Offset voltage p-range: 10 kPa	-25 -35	0 0	+25 +35	mV
Temperature coefficient of bridge resistance <sup>1</sup>	+0.24	+0.28	+0.31	% /K
Temperature coefficient of offset <sup>1</sup> 10 kPa 35 kPa 100 kPa ... 60 MPa	0.00 0.00 -0.05	+0.15 +0.07 ±0.02	+0.30 +0.16 +0.05	%F.S.S./K
Temperature coefficient of span <sup>1</sup> p-range: 10 kPa	-0.20 -0.23	-0.18 -0.21	-0.16 -0.18	%F.S.S./K
Temperature coefficient of $U_{diode}^{-1}$	-2.30	-2.15	-2.00	mV/K
Temperature hysteresis <sup>1A</sup>		<0.10	0.40	±%F.S.S.
Pressure hysteresis		<0.05	0.20	±%F.S.S.
Linearity error <sup>2,3</sup> p-range: higher than 10 MPa		<0.30 <0.50	0.50 1.00	±%F.S.S.

1) Measured from 25°C to 85°C; 1A) Measured from 25°C to 125°C;  
2) End point straight line setting; 3) Pressure applied onto the front side of the die



Order No.

IL	20	X	6A	-	XXXX	-	X	YY
1	2	3	4	5	6	7	8	9

- 1 **Product Code**  
Industrial Line STARe
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10k0: 10 kPa = 100mbar  
60M0: 60 MPa = 600bar
- 5 **Type (X)**  
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G: Gauge (Glass)
- 6 **Thickness BackPlate**  
YY: Back Plate Thickness in 100µm

Certificate

ISO/TS 16949

Maximum Ratings

Type	Over Pressure (100kPa)		Burst Pressure (100kPa)	
	FS min.	RS min.	FS min.	RS min.
IL20L6A-10k0-GXX	6	3	>6	>3
IL20L6A-35k0-A/GXX	10	5	>10	>5
IL20M6A-100k-A/GXX	20	10	>20	>10
IL20M6A-250k-A/GXX	40	20	>40	>20
IL20M6A-500k-A/GXX	50	25	>50	>25
IL20M6A-01M0-A/GXX	60	30	>60	>30
IL20M6A-03M0-A/GXX	150	75	>150	>75
IL20M6A-10M0-A/GXX	200	75	>200	>75
IL20M6A-40M0-AXX	800	-	>800	-
IL20M6A-60M0-AXX	1200	-	>1200	-

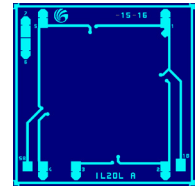
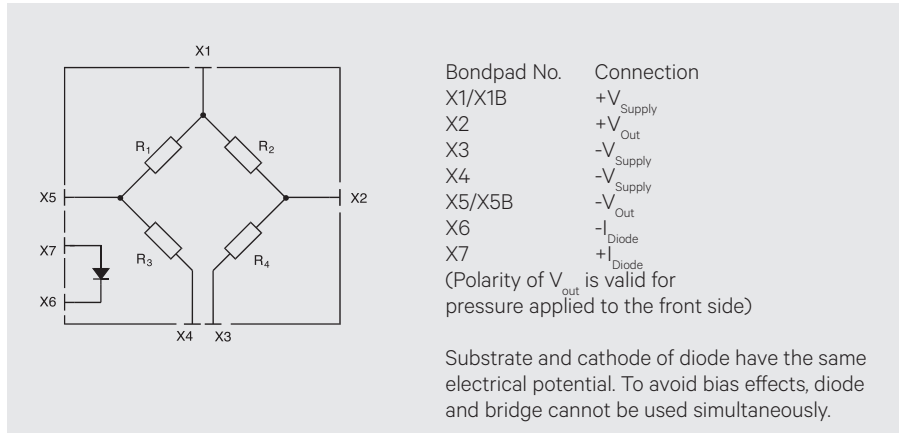
FS: Front side; RS: Rear side

Parameter	Limit Values			Unit
	min.	typ.	max.	
Operating temperature range (Higher temperature on demand)	-40		+150	°C
Storage temperature range	-50		150	°C
Supply voltage		5	12	V

Contact

First Sensor AG  
www.first-sensor.com

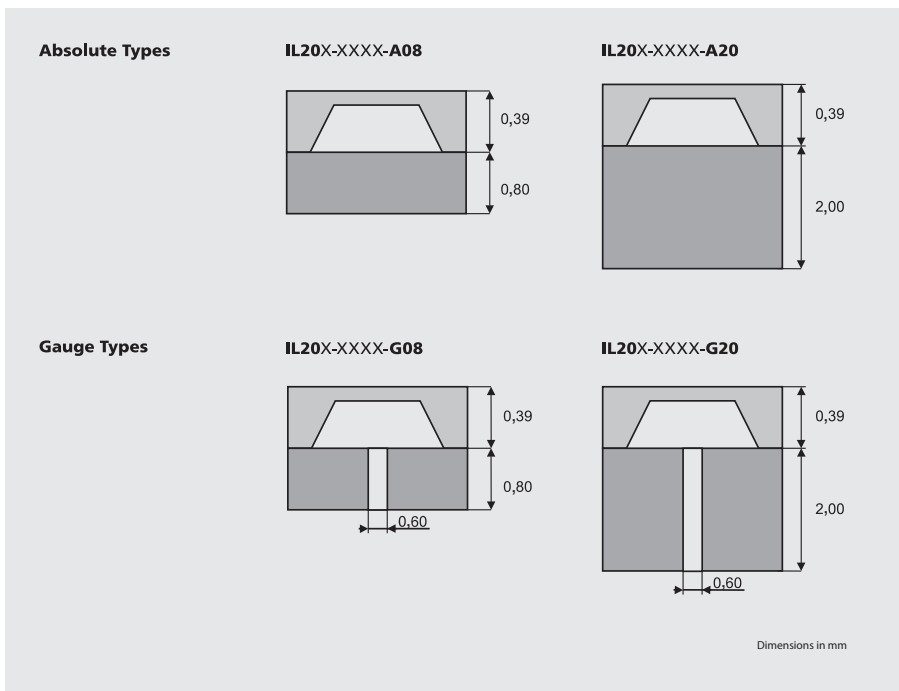
Bondpad Configuration



Order No.



Technical Options



- 1 **Product Code**  
Industrial Line STARe
- 2 **Outside Dimension**  
L: 2.75 X 2.75 mm (10kPa...35kPa)  
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6A: 6 inch wafer
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10k0: 10 kPa = 100mbar  
60M0: 60 MPa = 600bar
- 5 **Type (X)**  
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G: Gauge (Glass)
- 6 **Thickness BackPlate**  
YY: Back Plate Thickness in 100µm

Certificate

ISO/TS 16949

Contact

First Sensor AG  
www.first-sensor.com