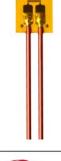
Foil Strain Sensor for Stress Analysis

### C2A-06-015LW-120

#### **Customer Requirements**

- Temperature range: -60°F to +180°F (-50°C to +80°C)
- Miniature Uniaxial strain pattern with a 0.015 inch active grid length and fully encapsulated
- Temperature compensated for Concrete, Steel, Stainless (17-4 and 17-7)
- Resistance: 120  $\Omega$
- Leadwire: 10 ft of 326-DFV, preattached
- Elongation: ±3% (30,000 με) one time elongation; ±1500 με for 10<sup>6</sup> cycles
- Pre-attached vinyl insulated cables makes installation fast and much easier



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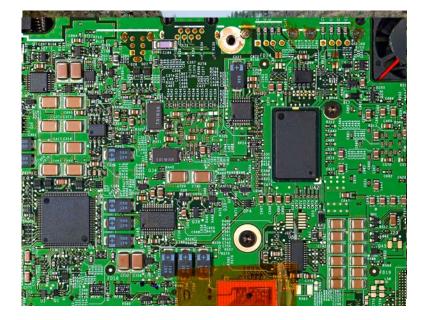
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## **Applications**

- Circuit Board Testing
- Automotive
- Aircraft
- Any application requiring measurement at a strain concentration or in a small area

Datasheet: http://www.vishaypg.com/doc?11200



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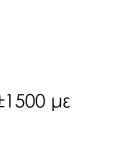
Foil Strain Sensor for Stress Analysis

#### C2A-06-125LW-350

#### **Customer Requirements**

- Temperature range: -60°F to +180°F (-50°C to +80°C)
- Uniaxial strain pattern with a 0.125 inch active grid length and fully encapsulated
- Temperature compensated for Concrete, Steel, Stainless (17-4 and 17-7)
- Resistance: 350 Ω
- Leadwire: 10 ft of 326-DFV, preattached
- Elongation: ±3% (30,000 με) one time elongation; ±1500 με for 10<sup>6</sup> cycles
- Pre-attached vinyl insulated cables makes installation fast and much easier









**Applications** 

- Automotive
- Oilfield
- Composites testing
- Rail
- Crane
- Other applications on steel alloys

Datasheet: http://www.vishaypg.com/doc?11200

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Foil Strain Sensor for Stress Analysis

#### C2A-06-250LW-350

#### **Customer Requirements**

- Temperature range: -60°F to +180°F (-50°C to +80°C)
- Uniaxial strain pattern with a 0.250 inch active grid length and fully encapsulated
- Temperature compensated for Concrete, Steel, Stainless (17-4 and 17-7)
- Resistance: 350 Ω
- Leadwire: 10 ft of 326-DFV, preattached
- Elongation: ±3% (30,000 με) one time elongation; ±1500 με for 10<sup>6</sup> cycles
- Pre-attached vinyl insulated cables makes installation fast and much easier



## Applications

- Automotive
- Oilfield
- Composites testing
- Rail
- Crane
- Other applications on steel alloys

Datasheet: http://www.vishaypg.com/doc?11297



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Foil Strain Sensor for Stress Analysis

## C2A-06-125LT-350

### **Customer Requirements**

- Temperature range: -60°F to +180°F (-50°C to +80°C)
- Biaxial strain pattern (T-rosette) with a 0.125 inch active grid length and fully encapsulated
- Temperature compensated for Concrete, Steel, Stainless (17-4 and 17-7)
- Resistance: 350 Ω
- Leadwire: 10 ft of 326-DFV, preattached
- Elongation: ±3% (30,000 με) one time elongation; ±1500 με for 10<sup>6</sup> cycles
- Pre-attached vinyl insulated cables makes installation fast and much easier

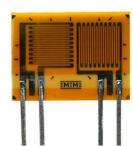
## Applications

- Automotive
- Oilfield
- Composites testing
- Rail
- Crane
- Other applications on steel alloys including structural health monitoring (SHM), pressure vessel and tank applications where maximum and minimum, or longitudinal and hoop, strain measurements are required

Datasheet: http://www.vishaypg.com/doc?11199



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Foil Strain Sensor for Stress Analysis

## C2A-06-125LR-350

#### **Customer Requirements**

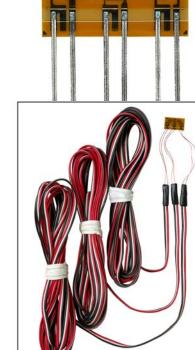
- Temperature range:  $-60^{\circ}$  to  $+180^{\circ}$ F ( $-50^{\circ}$  to  $+80^{\circ}$ C)
- Three-element rectangular rosette pattern with a 0.125 inch active grid length and fully encapsulated
- Temperature compensated for Concrete, Steel, Stainless (17-4 and 17-7)
- Resistance: 350  $\Omega$
- Large copper tabs allow for direct lead attachment
- Elongation:  $\pm 3\%$  (30,000 µ $\epsilon$ ) one time elongation;  $\pm 1500$ με for 10<sup>6</sup> cycles
- Ideal for stress states where the magnitude and direction need to be determined
- Pre-attached vinyl insulated cables makes installation fast and much easier
- Three discrete measurements allow for calculation of maximum and minimum principal strains, direction, shear strains as well as tension/compression measurements

## **Applications**

- Automotive
- Oilfield
- Composites testing
- Rail
- Crane
- Other applications on steel alloys including structural health monitoring (SHM)

Datasheet: http://www.vishaypg.com/doc?11198







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Example of cable bundle

Foil Strain Sensor for Stress Analysis

#### C2A-06-031WW-120

#### **Customer Requirements**

- Temperature range: -60° to +150°F (-50° to +66°C)
- Miniature three-element stacked rosette pattern with a 0.031 inch active grid length
- Temperature compensated for Steel, Stainless (17-4)
- Resistance: 120 Ω
- Leadwire: 10 ft of 326-DFV, preattached
- Elongation: ±3% (30,000  $\mu\epsilon$ ) one time elongation; ±1500  $\mu\epsilon$  for 10<sup>6</sup> cycles
- Ideal for placement with limited space
- Pre-attached vinyl insulated cables makes installation fast and much easier
- The three discrete measurements allow for calculation of maximum and minimum principal strains, direction, shear strains as well as tension/compression measurements



Example of cable bundle

## Applications

- Automotive
- Aerospace
- Oilfield
- Other applications of steel alloys where a small footprint with less averaging is required

Datasheet: http://www.vishaypg.com/doc?11250



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Foil Strain Sensor for Stress Analysis

#### C2A-06-G1350-120/SP70

#### **Customer Requirements**

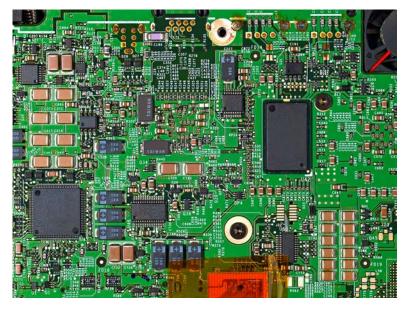
- Temperature range: -60° to +150°F (-50° to +66°C)
- Miniature (5mm diameter matrix) three-element stacked rosette
- Temperature compensated for FR4 Circuit Board, Steel
- Resistance: 120 Ω
- Leadwire: 10 ft of 326-DFV, preattached
- Elongation: ±3% (30,000 με) one time elongation; ±1500 με for 10<sup>6</sup> cycles
- Ideal for placement with limited space such as the corners of BGA's for testing per IPC/JEDEC publications
- The three discrete measurements allow for calculation of maximum and minimum principal strains, direction, shear strains as well as tension/compression measurements



## **Applications**

- Circuit Board Testing
- Automotive
- Aircraft
- Where small footprint with less averaging is required

Datasheet: http://www.vishaypg.com/doc?11377



Example of cable bundle



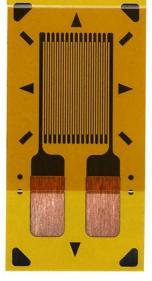
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Foil Strain Sensor for Stress Analysis

### CEA-06-125UN-350

#### **Customer Requirements**

- Temperature range: -100°F to +350°F (-75°C to +175°C)
- Uniaxial strain pattern with a 0.125 inch active grid length and fully encapsulated
- Temperature compensated for Concrete, Steel, Stainless (17-4 and 17-7)
- Resistance:  $350 \Omega$
- Large copper tabs allow for direct lead attachment
- Elongation: ±3% (30,000 με) one time elongation; ±1500 με for 10<sup>6</sup> cycles



## Applications

- Automotive
- Oilfield
- Composites testing
- Rail
- Crane
- Other applications on steel alloys

Datasheet: http://www.vishaypg.com/doc?11224





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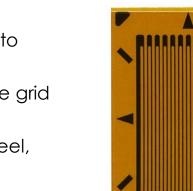
Foil Strain Sensor for Stress Analysis

#### CEA-06-250UW-350

#### **Customer Requirements**

- Temperature range: -100°F to +350°F (-75°C to +175°C)
- Uniaxial strain pattern with a 0.250 inch active grid length and fully encapsulated
- Temperature compensated for Concrete, Steel, Stainless (17-4 and 17-7)
- Resistance:  $350 \Omega$
- Large copper tabs allow for direct lead attachment
- Elongation: ±3% (30,000 με) one time elongation; ±1500 με for 10<sup>6</sup> cycles







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Applications

- Automotive
- Oilfield
- Composites testing
- Rail
- Crane
- Other applications on steel alloy

Datasheet: http://www.vishaypg.com/doc?11312

Foil Strain Sensor for Stress Analysis

#### CEA-06-125UT-350

http://www.vishaypg.com/doc?11230

## **Customer Requirements**

- Temperature range: -100°F to +350°F (-75°C to +175°C)
- Biaxial strain pattern (T-rosette) with a 0.125 inch active grid length and fully encapsulated
- Temperature compensated for Concrete, Steel, Stainless (17-4 and 17-7)
- Resistance: 350  $\Omega$

**Applications** 

Oilfield

Rail

Datasheet:

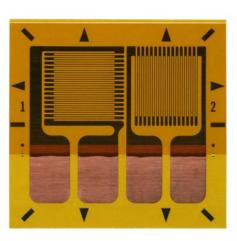
Crane

**Automotive** 

Composites testing

- Large copper tabs allow for direct lead attachment
- Elongation: ±3% (30,000 με) one time elongation;
  ±1500 με for 10<sup>6</sup> cycles
- Ideal for biaxial stress states where direction is known







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Other applications on steel alloys

Foil Strain Sensor for Stress Analysis

#### CEA-06-125UR-350

#### **Customer Requirements**

- Temperature range: -100°F to +350°F (-75°C to +175°C)
- Three-element rectangular rosette pattern with a 0.125 inch active grid length and fully encapsulated
- Temperature compensated for Concrete, Steel, Stainless (17-4 and 17-7)
- Resistance: 350 Ω
- Large copper tabs allow for direct lead attachment
- Elongation: ±3% (30,000 με) one time elongation; ±1500 με for 10<sup>6</sup> cycles
- The three discrete measurements allow for calculation of maximum and minimum principal strains, direction, shear strains as well as tension/compression measurements

## **Applications**

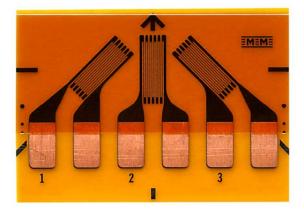
- Automotive
- Oilfield
- Composites testing
- Rail
- Crane
- Other applications on steel alloys

Datasheet: http://www.vishaypg.com/doc?11225











Foil Strain Sensor for Stress Analysis

#### CEA-06-W250A-350

#### **Customer Requirements**

- Weldable strain gage
- Temperature range: -100°F to +200°F
- Linear
- Temperature compensated for Steel, Stainless (17-4)
- Resistance: 350 Ω
- Elongation:  $\pm 0.5\%$  (5,000  $\mu\epsilon$ ) one time elongation
- Ideal when bonding condition due not allow adhesives to be used to bond the gage



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## **Applications**

- Civil engineering
- Rebar
- Bridges
- Structural health monitoring
- Other applications on steel alloys



Datasheet: http://www.vishaypg.com/doc?11519

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