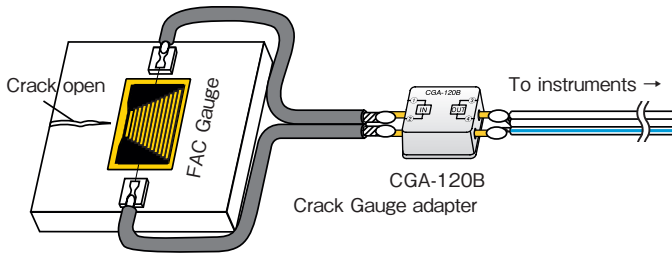




# Crack Detection Gauges FAC series

These gauges are designed to measure the propagation speed of fatigue crack in a metal specimen. The gauges are bonded with an adhesive on the position where the crack is initiated or the crack initiation is expected. The grids of the gauges, which are aligned at interval of 0.1mm or 0.5mm, are disconnected one by one with the propagation of the crack. The gauges are used together with the crack gauge adapter CGA-120B, and the disconnection of one grid is measured as the change of approx. 45 or 40×10<sup>-6</sup> strain by a strainmeter.

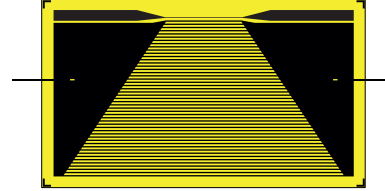
|                             |           |                      |              |                |
|-----------------------------|-----------|----------------------|--------------|----------------|
| Operating temperature range | -30~+80°C | Applicable adhesives | CN -30~+80°C | RP-2 -30~+80°C |
|-----------------------------|-----------|----------------------|--------------|----------------|



●Crack Gauges



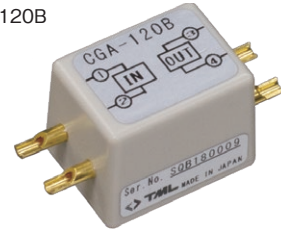
FAC-5



FAC-20

Minimum order quantity is 10 crack gauges.

●Crack Gauge adapter CGA-120B



Minimum order quantity is 1 crack gauge adapter.

Crack Gauge adapter CGA-120B

|                       |                                                    |
|-----------------------|----------------------------------------------------|
| Measuring point       | 1 point                                            |
| Allowable temperature | -30~+80°C                                          |
| Bridge connection     | Quarter bridge 3-wire method 120Ω                  |
| Dimensions            | 20(W) x 15(H) x 15(D) mm (except projection parts) |
| Weight                | 5g                                                 |

- Option F: LEAD-free soldering
- Example) Crack gauge adapter: FAC-5-F / FAC-20-F CGA-120B-F

CRACK GAUGES

| Gauge type            | FAC-5                              | FAC-20                             |
|-----------------------|------------------------------------|------------------------------------|
| Measuring range       | 4.5mm                              | 20mm                               |
| Gauge resistance      | approx. 1Ω                         |                                    |
| Grid interval         | 0.1mm                              | 0.5mm                              |
| Number of grids       | 46                                 | 41                                 |
| Output per grid       | approx. 45×10 <sup>-6</sup> strain | approx. 40×10 <sup>-6</sup> strain |
| Operating temperature | -30~+80°C                          |                                    |
| Backing size          | 28 x 5mm                           | 43 x 25mm                          |



# Stress Gauges SF series

These gauges are intended to measure the stress in an optional direction of the specimen in plane stress field. The gauges are sensitive not only in these axial direction but also in the transverse direction, and the sensitivity ratio of the transverse direction to the axial direction is equal to the Poisson's ratio of the specimen material. In addition, the gauges are not sensitive to the shearing strain. Accordingly, the output of the gauges is proportional to the stress in the axial direction. The gauges are available in three types depending on the Poisson's ratio of the specimen material.

|                                |            |                      |                   |                |               |
|--------------------------------|------------|----------------------|-------------------|----------------|---------------|
| Operating temperature range    | -20~+200°C | Applicable adhesives | NP-50B -20~+200°C | C-1 -20~+200°C | CN -20~+120°C |
| Temperature compensation range | +10~+100°C |                      |                   |                |               |

Please specify the type number as shown in the example below.

**SFA -285 -11 -3LJC-F**

- Gauge series name
- Poisson's ratio of specimen
- Objective material for temperature compensation
- Length in meter and type of integral leadwire CE compliant leadwire

Objective material for temperature compensation (coefficient of linear thermal expansion ×10<sup>-6</sup>/°C)  
 -11: Mild steel -17:Stainless steel -23:Aluminium

Note: The backing color of SF series gauges are the same for every material for temperature compensation.

| Gauge pattern                                    | Poisson's ratio of specimen | Type                                   | Gauge size(mm) |       | Backing size(mm) |       | Resistance Ω |
|--------------------------------------------------|-----------------------------|----------------------------------------|----------------|-------|------------------|-------|--------------|
|                                                  |                             |                                        | Length         | Width | Length           | Width |              |
| <p>●Single axis</p> <p>SFA-285</p> <p>Q (×3)</p> | 0.285<br>0.305<br>0.330     | SFA-285-11<br>SFA-305-17<br>SFA-330-23 | 4              | 3     | 9                | 6     | 120          |

Minimum order quantity is 10 strain gauges. These strain gauges are available with integral leadwires attached. (made to order)