



Number **TC6746** revision 0
Project number 503571
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Issued by NMI Certin B.V.
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The Netherlands

Notified Body Number 0122

In accordance with Paragraph 8.1 of the European Standard on Metrological aspects of non-automatic weighing instruments EN 45501:1992/AC:1993 and by application of the OIML International Recommendation R 60 (Edition 1991). The applied error fraction p_i , meant in the paragraph 3.5.4. of the standard is 0.7.

Applicant Laumas Elettronica s.r.l.
Via 1° Maggio, 6
43030 Basilicanova (PR)
Italy

In respect of An **universal S-shape bending beam load cell**, with strain gauges, tested as a part of a weighing instrument.
Manufacturer : Laumas Elettronica s.r.l.
Type : SA

Characteristics

| | |
|--|----------------------------------|
| Maximum capacity (E_{max}) | 15 kg up to and including 600 kg |
| Accuracy class | C |
| Maximum number of load cell verification intervals (n_{max}) | 3000 |
| Ratio of minimum LC verification interval $Y = E_{max} / V_{min}$ | 8000 |

In the description number TC6746 revision 0 further characteristics are described.



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Test certificate

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Description and documentation The load cell is described in the description number TC6746 revision 0 and documented in the documentation folder TC6746-1, appertaining to this test certificate.

Remarks Summary of the test involved: see Appendix number TC6746 revision 0.

Dordrecht, 6 May 2005
NMI Certin B.V.



Ing. C. Oosterman
Manager Product Certification

1 General information about the load cell

All properties of the load cell, whether mentioned or not, may not be in conflict with the standard mentioned in the test certificate.

1.1 Essential parts

| Description | Drawing number | Rev. | Remarks |
|-----------------------|----------------|------|------------|
| Dimensions SA | H-2566 | - | Mechanical |
| Connection diagram SA | H-2567 | - | Electrical |

Cable:

The load cell is provided with a 4-wire or a 6-wire system.

The cable length for the 4-wire system has to be approximately 3 meters.

The cable should be a shielded cable, the shield is not connected to the load cell.

1.2 Essential characteristics

| | |
|------------------------|--------------------------|
| Minimum dead load | : 0 kg |
| Safe overload | : 120 % of E_{max} |
| Rated Output | : 2 mV/V \pm 10% |
| Input impedance | : 381 Ω \pm 10% |
| Output impedance | : 350 Ω \pm 10% |
| Recommended excitation | : 5 V DC/AC |
| Excitation maximum | : 15 V DC/AC |
| Transducer material | : DIN 1.2344 |
| Atmospheric protection | : Potting |

1.3 Essential shapes

The load cell is built according to the drawing:

- Dimensions SA, drawing number H-2566.

The data plate is secured against removal by sealing or will be destroyed when removed. The data plate mentions at least the information and markings as described in the OIML R60 document. In the countries where it is mandatory the load cell should bear this test certificate number: TC6746.

Securing:

The connecting cable of the load cell or the junction box is provided with possibility to seal.

Tests performed for this test certificate (see test reports R60/1991-NL-97.09 and R60/1991-NL-97.09A):

| Test | Institute | type, version, remarks |
|---|-----------------|------------------------|
| Temperature test and repeatability (20, 40, -10 and 20 °C) | NMi Certin B.V. | SA, C3, 15 & 150 kg |
| Temperature effect on minimum dead load output (20, 40, -10 and 20 °C) | NMi Certin B.V. | SA, C3, 15 & 150 kg |
| Creep (20, 40 and -10 °C) | NMi Certin B.V. | SA, C3, 15 & 150 kg |
| Minimum dead load output return (20, 40 and -10 °C) | NMi Certin B.V. | SA, C3, 15 & 150 kg |
| Barometric pressure effects at room temperature | NMi Certin B.V. | Not applicable |
| Humidity test | NMi Certin B.V. | SA, C3, 15 kg |

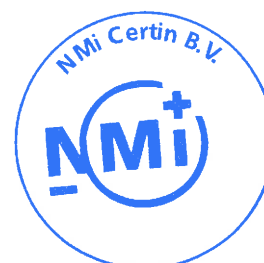


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Documentation folder

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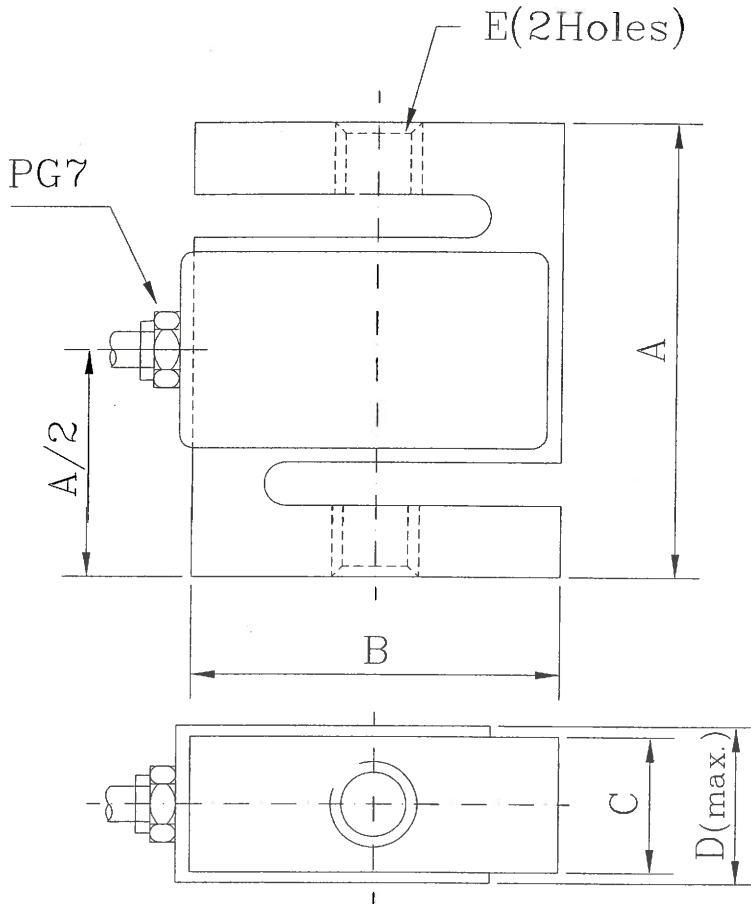
| Description | Drawing number | Rev. | Remarks |
|-----------------------|----------------|------|------------|
| Dimensions SA | H-2566 | - | Mechanical |
| Connection diagram SA | H-2567 | - | Electrical |



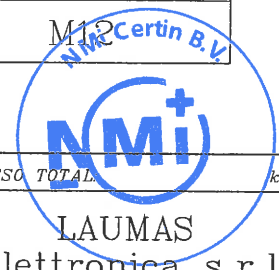
SA * 15/30/60/90 kg

SA ** 150/225/300/450 kg

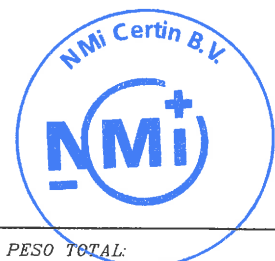
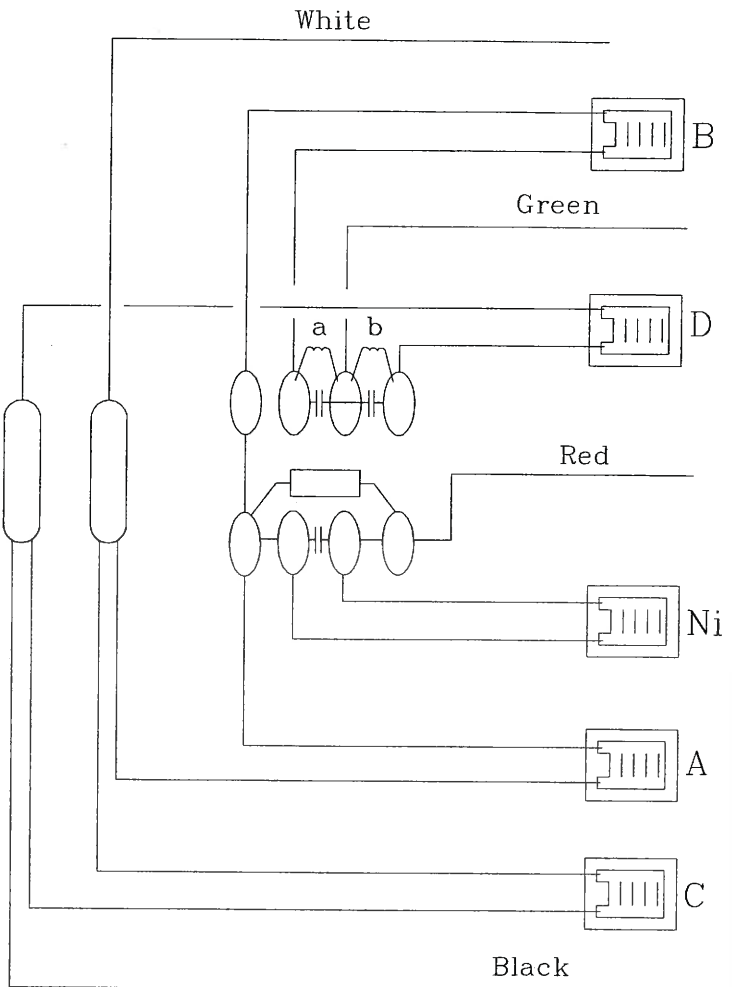
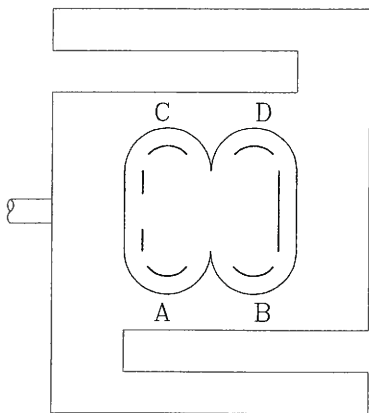
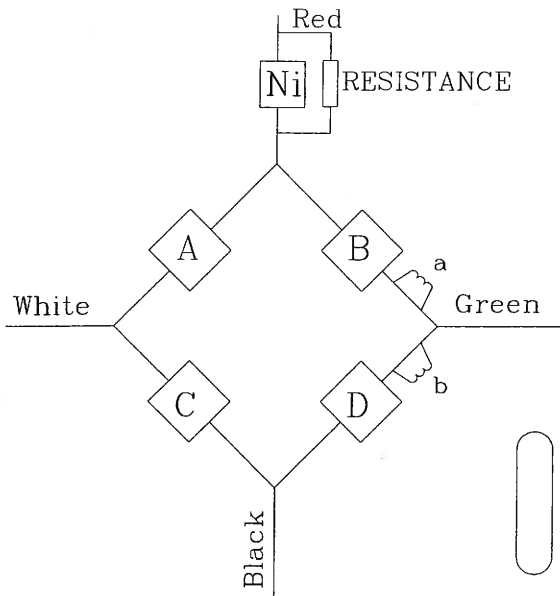
SA *** 600 kg



| Capacity (kg) | A | B | C | D (mm) | E |
|-----------------------|------|----|------|--------|-----|
| SA * 15/30/60/90 | 63.5 | 51 | 12.7 | 17 | M6 |
| SA ** 150/225/300/450 | 63.5 | 51 | 19 | 23 | M12 |
| SA *** 600 | 63.5 | 51 | 25.4 | 30 | M12 |



| | | | | | |
|---------------|--------|---------------------|-----------|------------------------------|-------------|
| | | MATERIAL: | | PESO TOTAL: kg | |
| | | TOLERANCIA GRAL.: | | LAUMAS Electronica s.r.l. | |
| | | PROTECCION SUPERF.: | | | |
| | | CALIDAD SUPERF.: | | | |
| | | DENOMINACION: | | | |
| DIMENSIONS SA | | | | | |
| | | FECHA: | NOMBRE: | ESCALA: | REF.: |
| | | DIBUJADO: 4.04.05 | M.C. | 1:1 | H-2566 |
| MODIFICACION | FECHA: | NOMBRE | REVISADO: | HOJA N. | N. DE HOJAS |



| | | | | | | |
|-----------------------|--------|--------|---------------------|---------|------------------------------|-------------|
| | | | MATERIAL: | | PESO TOTAL: kg | |
| | | | TOLERANCIA GRAL.: | | LAUMAS Electronica s.r.l. | |
| | | | PROTECCION SUPERF.: | | | |
| | | | CALIDAD SUPERF.: | | | |
| | | | DENOMINACION: | | | |
| CONNECTION DIAGRAM SA | | | | | | |
| | | | FECHA: | NOMBRE: | ESCALA | REF.: |
| | | | DIBUJADO: 4.04.05 | M.C. | 1:1 | H-2567 |
| MODIFICACION | FECHA: | NOMBRE | REVISADO: | | HOJA N. | N. DE HOJAS |