# TEST CERTIFICATE

DELTA

## No. DK 0199.R60-2000.1

Issued by DELTA Danish Electronics, Light & Acoustics,

EU - Notified Body No. 0199

In accordance with EN 45501 (1992), paragraph 8.1 and 3.5.4

> with fraction  $p_{LC} = 0.8$ . OIML R60 (Edition 2000)

Eilersen Electric A/S **Issued to** 

> Kokkedal Industripark 4 DK-2980 Kokkedal

Denmark

In respect of A digital load cell made from stainless steel,

hermetically sealed

**Type** Type SD

Manufacturer Eilersen Electric A/S

Kokkedal Industripark 4 DK-2980 Kokkedal

Denmark

**Description** The load cell is described and documented - including

and documentation a summary of the tests - in the Annex which forms part

of this test certificate

## Characteristics

Issued on

Accuracy classes		C1	C2	C3	C4	C5	C6
Maximum number of LC intervals	nmax	1000	2000	3000	4000	5000	6000
Type		SD					
Rated capacity	Emax	50 kg					
Ratio of min LC verification interval	Y	50000					
Ratio of min dead load output return	Z	10000					
Safe overload		400 % Emax					
Temperature limits		+ 40 °C / - 10 °C					

The ANNEX comprises 2 pages.

2000-03-18

**Signatory:** P. Bengtsen

9. Lengten

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#### ANNEX to Test Certificate No. DK 0199.R60-2000.1

## NAME AND TYPE OF THE LOAD CELL

The load cell is designated SD.

#### 1. Technical data

Table 1: Further essential technical data

Minimum dead load, relative	Emin / Emax	0	
Excitation voltage		24 +/- 20%	Vdc
Rated output (number of counts for Emax)		50000.1	
vmin		0.002	%Emax
DR		0.005	%Emax
Humidity rating	СН	93	%RH

#### 2. Tests

The tests listed in table 2 below have been carried out in accordance with OIML R60, edition 2000 by DELTA.

Report no. DANAK-194830 (EMC tests) and DANAK-194987.

Table 2. Tests carried out on two load cells as follows:

Type: SD

Serial no.: 0049 and 0051

 $\begin{array}{ll} \text{Class:} & \text{C6} \\ \text{Emax:} & \text{50 kg} \\ \text{n}_{\text{LC}} : & \text{6000} \end{array}$ 

Tests	Ref: R 60-2000	Passed / Failed
Temperature test and repeatability	5.1.11 & 5.4 &	Passed
(at 20, 40, -10 and 20 °C)	A.4.1.4-15 &	
	A.4.1.2	
Temperature effect on minimum load output	5.5.1.3 & A.4.1.4,	Passed
(at 20, 40, -10 and 20 °C)	A.4.1.5-10,	
	A.4.1.15	
Creep during 30 minutes	5.3.1 & A.4.2	Passed
(at 20, 40, -10 °C)		
Minimum dead load output return	5.3.1 & A.4.3 and 5	Passed
(at 20, 40, -10 °C)		
Barometric pressure effects at room temp.	5.5.2 & A.4.4	Test waived because of the
		hermetic sealed principle
Humidity test (CH)	5.5.3.1 & A.4.5	Passed
Warm-up test	A.4.7.2	Passed
Power voltage variation	A.4.7.3	Passed
EMC tests	A.4.7.5-8	Passed
Span stability test	6.3.2 & A.4.7.8	Passed

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## ANNEX to Test Certificate No. DK 0199.R60.1/2

## 3. Description of the load cell

### **Construction principle**

The load cell is fabricated from stainless steel and constructed on the principle of a beam. It is provided with a capacity measuring circuit into a welded housing. It is designed for mounting horisontally between two parallel surfaces.

The load cell is provided with a screened cable, 4 m long (standard).

The load cell is hermetically sealed.

#### **Markings**

The rating plate of the load cell contains the manufacturer's name, type,  $E_{max}$ , serial number, and classification symbol. The markings shall satisfy OIML R60.

Additional information according to R60 point 4.7 will be supplied in an accompanying document (Data sheet).

#### **Drawings and descriptions**

Drawing / description SD Drawing /specification MCE9610 Drawing / specification MCE9640

#### 4. Documentation

The test reports, test results and documentation are held by the Notified Body.

## 5. Validity of this Test Certificate

Manufacturing process, material and sealings of the produced load cells have to be in accordance with that of the tested pattern; essential changings are only allowed with the permission of the Notified Body.