Australian Government
Department of Industry, Science and Resources

National Measurement Institute

36 Bradfield Road, West Lindfield NSW 2070

Supplementary Certificate of Approval
No S490

Issued by the Chief Metrologist under Regulation 60
of the
National Measurement Regulations 1999

This is to certify that an approval for use for trade has been granted in respect of the instruments herein described.

Eurocell Model CPD-M Load Cell

submitted by National Weighing & Instruments Pty. Limited
1/88 Magowar Road
Girraween NSW 2145

NOTE: This Certificate relates to the suitability of the pattern of the instrument for use for trade only in respect of its metrological characteristics. This Certificate does not constitute or imply any guarantee of compliance by the manufacturer or any other person with any requirements regarding safety.

This approval has been granted with reference to document NMI R 60, *Metrological Regulation for Load Cells*, dated July 2004.

This approval is subject to review at the decision of the Chief Metrologist in accordance with the conditions specified in the document NMI P 106.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variant 1 approved – certificate issued	23/02/07
1	Pattern & variant 1 reviewed & updated – certificate issued	31/01/13
2	Review date removed & variant 2 approved – certificate issued	09/06/26

CONDITIONS OF APPROVAL

General

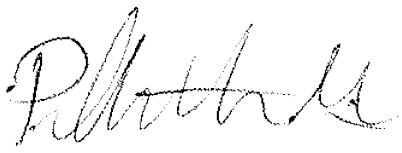
Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI S490' and only by persons authorised by the submittor.

Instruments incorporating a component purporting to comply with this approval shall be marked 'NMI S490' in addition to the approval number of the instrument, and only by persons authorised by the submittor.

It is the submittor's responsibility to ensure that all instruments marked with this approval number are constructed as described in the documentation lodged with the National Measurement Institute (NMI) and with the relevant Certificate of Approval and Technical Schedule. Failure to comply with this Condition may attract penalties under Section 19B of the National Measurement Act and may result in cancellation or withdrawal of the approval, in accordance with document NMI P 106.

The values of the performance criteria (maximum number of scale intervals etc.) applicable to an instrument incorporating the pattern approved herein shall be within the limits specified herein and in any approval documentation for the other components.

Signed by a person authorised by the Chief Metrologist to exercise their powers under Regulation 60 of the *National Measurement Regulations 1999*.



Phillip Mitchell
A/g Manager
Policy and Regulatory Services

TECHNICAL SCHEDULE No S490

1. Description of Pattern approved on 23/02/07

A Eurocell model CPD-M digital load cell of 20 000 kg maximum capacity (Figure 1 and Tables 1 & 2).

These load cells shall only be used with indicators which are approved for use with compatible Eurocell digital load cells.

Note: The load cell may also be known as a Bilanciai model CPD-M (it is manufactured by Societa' Cooperativa Bilanciai).

1.1 Method of Mounting

Mounting is to be in accordance with the manufacturer's instructions and as shown in Figure 2.

1.2 Markings

Each load cell is marked with the following:

Manufacturer's mark, or name written in full	Eurocell (or Bilanciai)
Model number	CPD-M ##
(where ## is the additional marking as shown in Table 2)	
Maximum capacity	..…... kg (or t)
Serial number	..…...
Pattern approval mark	S490

1.3 Table of Specifications

Specifications for the pattern are given in Tables 1 and 2.

2. Description of Variant 1 approved on 23/02/07

Load cells of other capacities and characteristics as shown in Tables 1 and 2.

TABLE 1

Common characteristics (see additional Table below for specific models)	
Type: Eurocell model CPD-M	
Class	C
Output rating (resolution)	200 000 counts at Emax (approx)
Supply voltage (DC)	18 V maximum
Communication	RS485
Cable length	1200 m (*)
Junction box	Eurocell/Bilanciai part numbers OC0235 or OC0236 (The submittor should be consulted regarding the acceptability of alternative junction box arrangements.)
Digital indicator	Indicators approved as suitable for use with compatible Eurocell digital load cells
Apportionment factor, pLC	0.8

(*) The load cell is provided with a 6 pin socket to which a cable up to 1200 m in length may be fitted to connect to the junction box or indicator.

TABLE 2

Type: Eurocell Europe CPD-M ## (where ## is additional marking)						
Additional marking nLC	C1 1000	C2 2000	C3 3000	C4 4000	C5 5000	C6 6000
E_{max} (kg) v_{min} (kg) DR (kg)	20000 4.00 3.33	20000 2.86 3.33	20000 1.11 3.33	20000 1.11 3.33	20000 1.00 3.33	20000 1.00 3.33
E_{max} (kg) v_{min} (kg) DR (kg)	35000 7.00 5.83	35000 5.00 5.83	35000 1.94 5.83	35000 1.94 5.83	35000 1.75 5.83	35000 1.75 5.83
E_{max} (kg) v_{min} (kg) DR (kg)	50000 10.00 8.33	50000 7.14 8.33	50000 2.78 8.33	50000 2.78 8.33	50000 2.50 8.33	50000 2.50 8.33

Where: nLC = Maximum number of verification intervals

E_{max} = Maximum capacity

v_{min} = Minimum value of verification interval

DR = Minimum dead load output return value

Note: The load cell markings may include the v_{min} value. Be aware that the values in the above table are rounded values, whereas the marked value may be unrounded and may be expressed in different units and using a ‘decimal comma’ rather than a decimal point (e.g. the marking may be 1111,111 g where the value in the above table is 1.11 kg).

3. Description of Variant 2 approved on 09/06/26

Certain capacities and characteristics of Bilanciai model CPD-TD series digital load cells (Figure 3) as listed in Table 3.

These load cells shall only be used with indicators which are approved for use with compatible Bilanciai digital load cells.

TABLE 3

Model Number	CPD-TD-C6		
Maximum capacity, E_{max} (kg)	20 000	35 000	50 000
Minimum dead load, E_{min} (kg)	0		
Accuracy class - Classification	C		
Maximum number of verification intervals, nLC	6000		
Minimum value of verification interval, v_{min} (kg)	1.111	1.944	2.778
Minimum dead load output return value, DR (kg)	1.667	2.917	4.167
Output rating (resolution)	200 000 counts at E_{max}		
Supply voltage (DC), (V)	10 - 18		
Cable length	up to 18 m (*)		

Operating temperature range	−10 °C / +40 °C
Communication	RS485
Apportionment factor, p_{LC}	0.8
Software version number	Software ID 491411 (***) Version 1.01 Checksum 0x327FC9AB
Junction box	Bilanciai model JB10QD-1 (**)
Digital indicator	Bilanciai model OMNIA 120 series indicators or DD700 series indicators or Diade & Flynet series (#) indicators

(*) The CPD-TD series load cells are connected to a junction box and then to the indicator. The load cell cables may be up to 18 metres in length. The connecting cable to the indicator may be up to 1000 metres in length.

(**) Or alternative Bilanciai digital junction box for use with compatible Bilanciai model CPD-TD digital load cells. The submittor should be consulted regarding the acceptability of alternative junction box arrangements.

(***) The software version number and checksum may be displayed on the connected indicator (if the indicator supports this).

(#) Bilanciai model DD1050 or DD1050I or DD2050 or DD1010H or DD1050IH or DD1050ICH or DD1010 or DD1010I or DD1010IC or DD2060 with digital version weighing board or TTL digital version weighing board, Flynet 100i or Flynet 100ic or Flynet 50 or Flynet 50i or Flynet 50ic indicator, or alternative NMI-approved indicator for use with compatible Bilanciai model CPD-TD digital load cells.

Note: The load cell markings may include the v_{min} value. Be aware that the values in the above table are rounded values, whereas the marked value may be unrounded and may be expressed in different units (e.g. the marking may be 1111.111 g where the value in the above table is 1.111 kg).

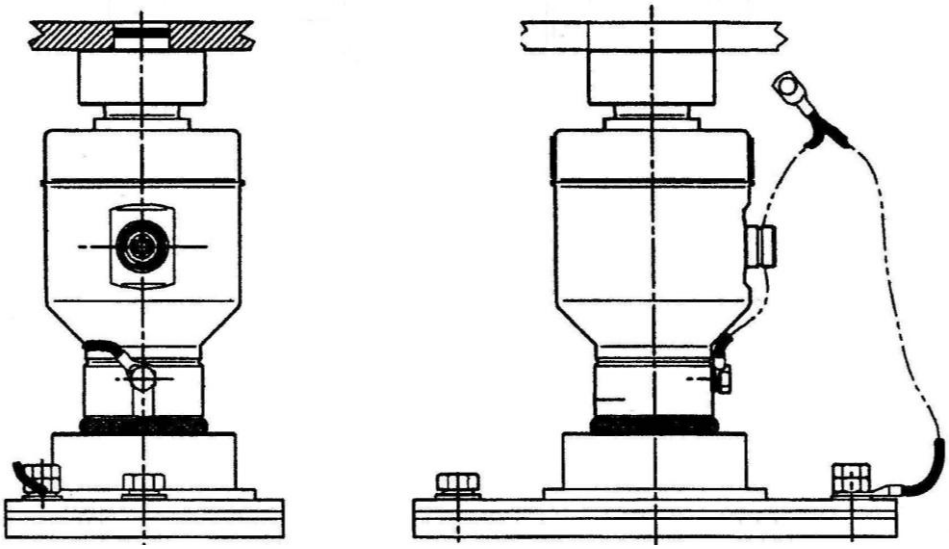
3.1 Method of Mounting

Mounting is to be in accordance with the manufacturer's instructions and as shown in Figure 4.

FIGURE S490 – 1

Eurocell Model CPD-M Load Cell

FIGURE S490 – 2

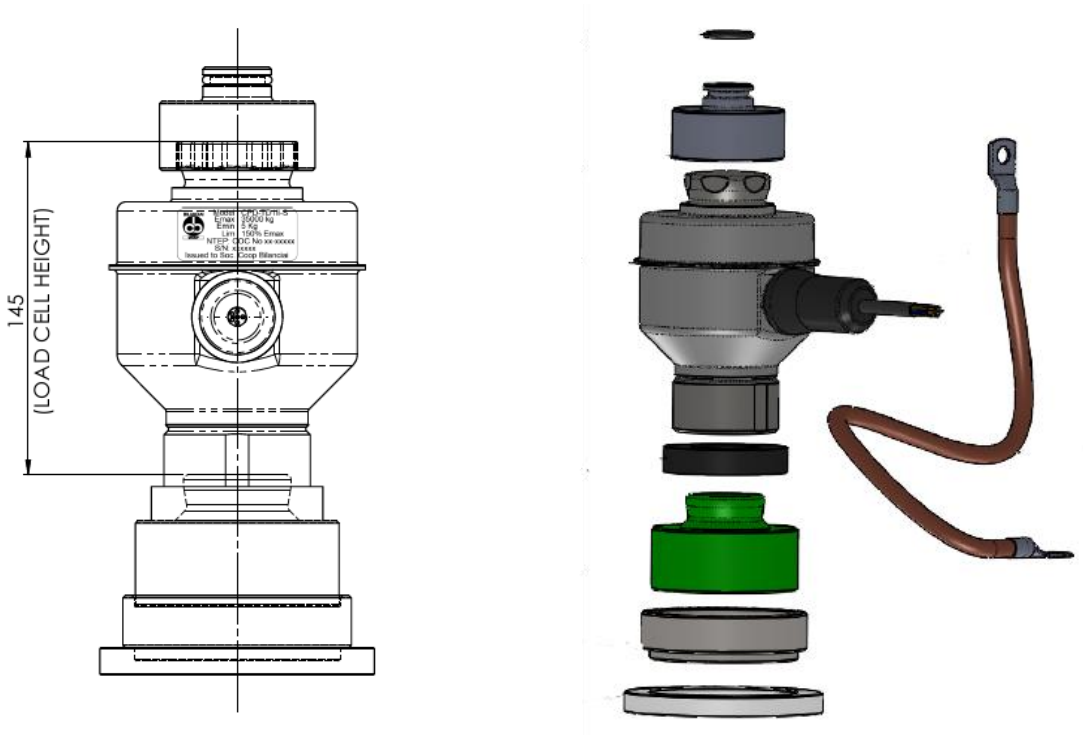


Mounting Arrangement

FIGURE S490 – 3

Bilanciai Model CPD-TD Load Cell

FIGURE S490 – 4



Bilanciai Model CPD-TD Mounting Arrangement

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