



Bradfield Road, West Lindfield NSW 2070

# Interim Supplementary Certificate of Approval NMI S676

**VALID FOR VERIFICATION PURPOSES UNTIL 20 SEPTEMBER 2015**

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.

Leon Engineering Model LD 5290 Digital Indicator

submitted by Grainline  
1 Hartog Place  
Wagga NSW 2650

**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 76, *Non-automatic weighing instruments, Parts 1 and 2*, dated July 2004.

## DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern provisionally approved – interim certificate issued	23/10/14
1	Pattern approved – interim certificate issued	20/03/15

## CONDITIONS OF APPROVAL

### General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI S676' and only by persons authorised by the submitter.

It is the submitter'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.



Auxiliary devices used with this instrument shall comply with the requirements of General Supplementary Certificate No S1/0B.

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.

### Special

Certain aspects of this instrument (in particular transaction record printing formats) are able to be configured by the user. Whilst NMI believes that acceptable formats can be achieved for typical basic sales modes, it is also possible for the instrument to be configured to produce unacceptable formats, and use of some formats may be inappropriate for different sales modes. It is the responsibility of the user to ensure that acceptable and appropriate formats are used in any particular situation.



### 1. Description of Pattern provisionally approved on 23/10/14 approved 20/03/15

A Leon Engineering model LD5290 non-automatic self-indicating digital indicator with the specifications listed in Table 1 which may be configured to form part of a class  or class  single range weighing instrument.

Instruments may be fitted with output sockets (output interfacing capability) for the connection of auxiliary and/or peripheral devices.

This approval does not include the use of the indicator as an automatic weighing instrument, unless specifically mentioned in a certificate of approval for such an instrument.

TABLE 1 – Specifications

Maximum number of verification scale intervals	10 000 or 10 000 per range (class  1000 or 1000 per range (class 
Minimum sensitivity	0.4 $\mu$ V / scale interval
Excitation voltage	5 V DC
Maximum excitation current	142.86 mA
Fraction of maximum permissible error	$p_i = 0.5$
Minimum load cell impedance	35 $\Omega$
Maximum load cell impedance	1000 $\Omega$
Measuring range minimum voltage	-1.25 mV
Measuring range maximum voltage	20 mV
Maximum tare range	-100% Max
Operating temperature range	-10°C to +40°C
Load cell connection	6-wire shielded

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



Dr A Rawlinson

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