

Australian Government

Department of Industry, Innovation and Science

National Measurement Institute

36 Bradfield Road Lindfield NSW 2070

Supplementary Certificate of Approval NMI S758

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.

Laumas Model WTAB-BR Digital Mass Indicator

submitted by	Laumas Elettronica	
	Via Primo Maggio, 6	
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	Parma 43022	
	Italy	

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 October 2015.

This approval becomes subject to review on 1/05/23, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variant 1 to 6 approved – certificate issued	18/04/18
1	Variant 5 & figure 6 error corrected – certificate issued	19/09/18

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI S758' and only by persons authorised by the submittor.

Instruments incorporating a component purporting to comply with this approval shall be marked 'NMI S758' 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.

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.

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

Platte

Phillip Mitchell Acting Manager Pattern Approval, Policy and Licensing Section

TECHNICAL SCHEDULE No S758

1. Description of Pattern

approved on 18/04/18

A Laumas model WTAB-BR digital mass indicator (Figure 1 and Table 1) which may be configured to form part of a weighing instrument as follows:

- A class 3 weighing instrument with a single weighing range of up to 10 000 verification scale intervals; or
- A class 3 multi-interval weighing instrument with up to three partial weighing ranges in which case it is approved for use with up to 10 000 verification scale intervals per partial weighing range; or
- A class 3 multiple range weighing instrument with up to three partial weighing ranges in which case it is approved for use with up to 10 000 verification scale intervals per weighing range; or
- A class 4 weighing instrument with single range, or multi-interval (up three partial ranges), or multiple range (up to three weighing ranges) and with up to 1000 verification scale intervals.

The changeover between weighing ranges is automatic.

The Instrument has an ABS enclosure and may be fitted with output sockets (output interfacing capability) for the connection of auxiliary and/or peripheral devices.

The instrument has 6 digits, 7 segments LED display for display of the weight value.

Instruments may be fitted with an integral printer for printing of tickets.

TABLE 1 – Specifications

Maximum number of verification scale intervals	10 000 (Class 3) 1000 (Class 4)
Minimum sensitivity	0.2 µV / scale interval
Excitation voltage	5 V DC
Maximum excitation current	228.3 mA
Fraction of maximum permissible error	pi = 0.5
Minimum load cells impedance	43 Ω
Maximum load cell impedance	1200 Ω
Maximum tare range	-100% Max
Operating temperature range	-10°C to +40°C
Load cell connection (analogue load cell)	4 or 6 wire plus shield
Maximum length of connecting cable	
Between indicator and junction box for load cell	1315 m/mm ² (Note mm ² is the cross section area of load cell wire)

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.

1.1 Zero

The instrument may be fitted with a zero tracking device.

The instrument has a semi-automatic zero-setting device with a nominal range of not more than 4% of the maximum capacity of the instrument.

The instrument has an initial zero-setting device with a nominal range of not more than 20% of the maximum capacity of the instrument.

1.2 Tare

A semi-automatic subtractive taring device of up to the maximum capacity of the instrument may be fitted. A pre-set taring device of up to the maximum capacity (or of up to the *Max*¹ for multi-interval instruments) may also be fitted.

1.3 Initial Display Check

Upon switch-on, the display will check the 7 segment of the number in sequence $111111 \rightarrow 999999$ (ONLY in case of trade approved program).

1.4 Power Supply

The instrument may be fitted with the one of following power supply.

- 12 24 V DC supplied by the AC/DC mains adaptor, or
- 230 V AC mains power, or
- 12 V DC battery, or
- Battery pack (8 x 1.2 V DC AA rechargeable batteries).
- Note: The AC/DC mains adaptor supplied was a model DHECN made HDR-45-24, 100 - 240 V AC power supply (output 12 V DC, 5 A) – the manufacturer should be consulted regarding the acceptability of alternative power supply units or suitable type of rechargeable battery pack.

1.5 Descriptive Markings and Notices

Instruments carry the following markings:

Manufacturer's mark, or name written in full	Laumas Elettronica SRL
Indication of accuracy class	3 or 4
Maximum capacity	<i>Max</i> kg #1
Minimum capacity	<i>Min</i> kg #1
Verification scale interval	e = kg #1
Maximum subtractive tare	<i>T</i> = kg #2
Serial number of the instrument	
Pattern approval number for the indicator	NMI No S758
Pattern approval number for other components.	#3

#1 These markings are shown near the display of the result.

#2 This marking is required if *T* is not equal to *Max*.

#3 May be located separately from the other markings.

In addition, instruments not greater than 100 kg capacity carry a notice stating NOT TO BE USED FOR TRADING DIRECT WITH THE PUBLIC, or similar wording.

Note: For multi-interval instruments the markings shall be as above, with the exception of the following (example is for instruments with three partial ranges):

Maximum capacity	<i>Max</i> / kg
Verification scale interval	<i>e</i> =/ kg

Note: For multiple range instrument the markings shall be as above, with the exception of the following (example is for instrument with three ranges)

	W1	W2	W3
Maximum capacity	kg	kg	kg
Minimum capacity	kg	kg	kg
Verification scale interval	g	g	g

1.6 Verification Provision

Provision is made for the application of a verification mark.

1.7 Linearisation Facility

Instruments are fitted with a linearisation correction facility having up to five correction points.

1.8 Additional Features

The additional functions (other than the indications of measured mass, i.e. gross, tare, net displayed either on the indicator or an auxiliary or peripheral device) are not approved for trade use.

The weighing unstable goods, special batching, and peak measurement functions are not approved for trade use.

Note: In particular circumstances (e.g. in regard to weighbridge or public weighbridge operation), Trade Measurement legislation or other NMI Certificates of Approval may impose requirements in regard to specific features, methods of operation, or records to be provided (and in what form).

Certain features of this instrument are able to be configured by the installer or user. Whilst NMI believes that an acceptable configuration can be achieved for typical basic modes of operation, it may also be possible for the instrument to be configured to produce unacceptable configurations, and use of some configurations may be inappropriate in different situations. It is the responsibility of the installer and user to ensure that the configuration is acceptable and meets relevant requirements for any particular situation.

1.9 Interfaces

The instrument may be fitted with interfaces for the connection of auxiliary and/or peripheral devices. Any interfaces shall comply with clause 5.3.6 of document NMI R76 (the basic intent of which is that it shall not be possible to alter weighing results via the interfaces).

Any measurement data output from the instrument or its interfaces (e.g. printing) shall only be used for trade in compliance with Supplementary Certificate No S1/0/B (in particular in regard to the data and its format).

Instruments may be fitted with following interfaces.

- RS-232C or RS-485 serial data interface.
- Modbus RTU, Profibus, DeviceNet and CANopen.
- Ethernet TCP/IP, Ethernet/IP, Modbus/TCP and Profinet IO, EtherCAT, Powerlink, SercosIII and CC-link.
- Wi-Fi.
- Digital inputs/outputs.
- Analogue inputs/outputs.
- USB.

1.10 Software Version

The instrument uses version 01.00.46 software – later software versions in the series 01.yy.zz are also approved, where yy and zz are major and minor version numbers for changes and corrections not influencing the legal function of the software.

The software version and number can be seen in the switch-on display sequence when the power is first applied to the instrument.

1.11 Sealing Provision

a) The calibration adjustments can be protected by software method (in which a customer password table is required).

For software seal method, follow the steps below to check if the calibration adjustment is protected.

Checking information menu.

- Press buttons. The indicator should display PASSUN if the parameters are protected, CALIE if they are not.
- * Press ▲ ▼ buttons to select [InFI], and then press button to enter the information menu.
- * Press $\mathbf{\nabla} \mathbf{A}$ buttons to select LEGAL menu.
- * Press button, and observe the parameters scrolled through. After displaying 'PrOG' the instrument should display 'LEGAL' if the instrument is used for single range instrument; or 'LEGMI' if the instrument is used for multi-interval instrument; or 'LEGMr if the instrument is used for multiple range. Note: if the instrument displays 'nOtLEG' then the parameters is not for trade purpose, therefore the indicator is not set for legal use.
- * After indicator displays 'refnUN', record the next displayed number on the seal for verification purpose.

b) The span adjustment via protective interfaces is protected by the passcode. To gain access to span adjustment via interfaces, a qualified access via protocol is required. Like in software seal method, a customer passcode table is required; the identification code and the passcode are entered via protocol.

The instrument has an event counter, which increment each time the calibration or configuration, or span adjustment via interfaces is performed. If it is different from the number on the instrument verification or data label, then an unauthorised access is evident.

The value of the event counter is displayed in the 'Menu' under 'Info'.

2. Description Variant 1

approved on 18/04/18

Certain other WTAB models (Figure 2) which are similar to the pattern. The differences between these models and the pattern are listed in Table 2.

Model	Difference		
WTAB-BL	Display: 6 digits, 7 segments Backlit LCD, numeric keypad.		
WTAB-R	Optional: analog output, fieldbus interface, USB.		
	No numeric keypad.		
WTAB-L	Display: 6 digits, 7 segments Backlit LCD.		
	Optional: analogue output, fieldbus interface, USB.		
	No numeric keypad.		
WTAB-BGE	Display: STN transmissive graphic LCD, white on blue, backlit.		
	Instrument has an alphanumeric keypad.		
	Optional: Ethernet TCP/IP port, 2 USB ports.		
WTAB-G	Display: STN transmissive graphic LCD, white on blue, backlit.		
	Instrument has an alphanumeric keypad without truckin-truckout		
	function.		
	Optional: analogue output, fieldbus interface, USB.		
WTAB-2G	Display: STN transmissive graphic LCD, white on blue, backlit.		
	Instrument has a numeric keypad.		
	Optional: analogue output, fieldbus interface, USB.		

Table 2: Other WTAB models

3. Description Variant 2

approved on 18/04/18

Certain WDESK models (Figure 3) which are similar to the pattern and variant 1. The differences between these models and the pattern and variant 1 are listed Table 3.

WDESK model	Similarity to WTAB model	Differences	
WDESK-BR	WTAB-BR	Different enclosure.	
		No optional integrated printer.	
WDESK-BL	WTAB-BL	Different enclosure.	
		No optional integrated printer.	
WDESK-G	WTAB-G	Different enclosure.	
		Possible connectors: screw terminals, D-sub	
		trays or cable glands.	
		No optional integrated printer.	
		Wall, column or panel mounting.	
WDESK-R	WTAB-R	Different enclosure.	
		Software version: base 1.07.08.	
		Possible connectors: screw terminals, D-sub	
		trays or cable glands.	
		No optional integrated printer.	
		Wall, column or panel mounting.	
WDESK-L	WTAB-L	Different enclosure.	
		Software version: base 1.07.08.	
		Possible connectors: screw terminals, D-sub	
		trays or cable glands.	
		No optional integrated printer.	

		Wall, column or panel mounting.	
WDESK-BG	WTAB-G	Different enclosure.	
		Possible connectors: screw terminals, D-sub	
		trays or cable glands.	
		No optional integrated printer.	
		Wall, column or panel mounting.	

4. Description Variant 3

approved on 18/04/18

Certain WINOX models (Figure 4) which are similar to the pattern and variant 1. The differences between these models and the pattern and variant 1 are listed in table 4.

WINOX	Similarity to	Differences	
model	WTAB model		
WINOX-BR	WTAB-BR	Stainless steel enclosure.	
		No optional integrated printer.	
WINOX-BL	WTAB-BL	Stainless steel enclosure.	
		No optional integrated printer.	
WINOX-G	WTAB-G	Possible connectors: screw terminals, D-sub	
		trays or cable glands.	
		No optional integrated printer.	
		Wall, column or panel mounting.	
		Stainless steel enclosure.	
WINOX-R	WTAB-R	Software version: base 01.07.08.	
		Stainless steel enclosure.	
		Possible connectors: screw terminals, D-sub	
		trays or cable glands.	
		No optional integrated printer.	
		Wall, column or panel mounting.	
WINOX-L	WTAB-L	Software version: base 01.07.08.	
		Stainless steel enclosure.	
		Possible connectors: screw terminals, D-sub	
		trays or cable glands.	
		No optional integrated printer.	
		Wall, column or panel mounting.	
WINOX-2L	WTAB-L	Software version: base 1.07.08.	
		Stainless steel enclosure.	
		Digit height: 40 mm.	
		Possible connectors: screw terminals, D-sub	
		trays or cable glands.	
		No optional integrated printer.	
		Wall, column or panel mounting.	
WINOX-BGE	WTAB-BGE	Stainless steel enclosure.	
WINOX-2G	WTAB-2G	Stainless steel enclosure.	
		Possible connectors: screw terminals, D-sub	
		trays or cable glands.	
		No optional integrated printer.	
		Wall, column or panel mounting.	
WINOX-B2G	WTAB-2G	Stainless steel enclosure.	
		Possible connectors: screw terminals, D-sub	
		trays or cable glands.	

Table	4:	WINOX	models
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		No optional integrated printer. Wall, column or panel mounting.
WINOX-BG	WTAB-G	Stainless steel enclosure. Possible connectors: screw terminals, D-sub trays or cable glands. No optional integrated printer. Wall, column or panel mounting.

5. Description Variant 4

approved on 18/04/18

The WDOS model (Figure 5) which are similar to the pattern and WINOX-G (variant 3).

The differences between WDOS and the pattern and WINOX-G (variant 3) are:

- ABS enclosure
- Panel mounting
- Screw terminals
- Display: STN transmissive graphic LCD, white on blue, backlit, resolution: 128 x64 pixels, visible area: 60 x 32 mm.
- No 12 V DC battery.
- No battery pack (8 x 1.2 V DC AA rechargeable batteries).

5.1 Sealing

In addition to passcode protection, access to the calibration parameters and configurations is protected by removal of a link ('jumper') on the mainboard which is located within the indicator housing as shown in Figure 8.

Provision is made for access to within the indicator housing to be sealed by use of destructible adhesive label(s) over joins of the housing (Figure 8).

The steps for checking the jumper setting are as follows.

- Press weighing mode.
- If 'PASSUN' will be displayed, the link ('jumper') is correctly set to protect the access. Otherwise 'CALIb' will be displayed.

The indicator is sealed by recording the event counter on verification.

6. Description Variant 5

approved on 18/04/18

The W200 models (Figure 6) which are similar to the pattern and WINOX-R (variant 3).

Other differences are listed in the table 5.

W200 model	Differences	
W200	ABS enclosure. Panel mounting. Screw terminals.	
	No optional battery power. Hardware (jumper) seal.	
W200BOX	IP67 ABS enclosure. Cable glands.	
W200BOX-EC	IP67 ABS enclosure. Cable glands.	
ADPEW200	Explosion proof enclosure. Hardware (jumper) seal.	

Table 5: W200 models

The W200 models are not fitted with 12 V DC battery or battery pack (8 x 1.2 V DC AA rechargeable batteries).

The indicator is sealed as described in clause 5.1 Sealing.

Note: The hardware (jumper) protection is not available for W200BOX models.

7. Description Variant 6

approved on 18/04/18

The W100 model (Figure 7) which are similar to the pattern and W200 (variant 5).

The differences between W100 and the pattern and W200 (variant 5) are:

- Different ABS enclosure.
- No optional fieldbuses.
- No optional USB.
- No numeric keypad.
- Not fitted with 12 V DC battery or battery pack (8 x 1.2 V DC AA rechargeable batteries).

The indicator is sealed as described in clause **5.1 Sealing**.

TEST PROCEDURE

Instruments shall be tested in accordance with any relevant tests specified in the National Instrument Test Procedures.

The instrument shall not be adjusted to anything other than as close as practical to zero error, even when these values are within the maximum permissible errors.

Maximum Permissible Errors

The maximum permissible errors are specified in Schedule 1 of the *National Trade Measurement Regulations 2009*.

Tests

For multi-interval and multiple range instruments with verification scale intervals of e_1 , e_2 ..., apply e_1 for zero adjustment, and maximum permissible errors apply e_1 , e_2 ..., as applicable for the load.



WTAB-BR (pattern)

FIGURE S758 - 2



FIGURE S758 - 3



WDESK-L



WDESK-G



WDESK-BR



WDESK-BL



WDESK-BG



WDESK-R



WINOX-L



WINOX-G



WINOX-BGE



WINOX-BG



WINOX-B2G



WINOX-2G



WINOX-R



WINOX-BL



WINOX-BR



WINOX-2L



WDOS

FIGURE S758 - 6



W200BOX



W200



W200BOX-EC



ADPEW200

FIGURE S758 - 7



W100



Typical hardware seal by jumper



Typical destructible label seal of W100 model



Typical destructible label seal of W200 model



Typical destructible label seal of W200BOX and W200BOX-EC



Typical destructible label seal of WDOS

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