



Australian Government
Department of Industry,
Science and Resources

**National
Measurement
Institute**



OIML Member State

Australia

OIML Certificate No.

R50/2014-A-AU1-2023.01 Revision 0

NMI file No. PA-2021/012

OIML CERTIFICATE ISSUED UNDER SCHEME A

OIML Issuing Authority

Name: National Measurement Institute Australia
Address: 36 Bradfield Rd, West Lindfield, NSW 2070, Australia
Person responsible: Darryl Hines – Manager, Policy and Regulatory Services

Applicant

Name: Control Systems Technology Pty Ltd
Address: 47 Fitzpatrick St, Revesby, NSW 2212, Australia

Manufacturer

Name: Control Systems Technology Pty Ltd
Address: 47 Fitzpatrick St, Revesby, NSW 2212, Australia

Identification of the certified type *(the detailed characteristics will be defined in the additional pages)*

Control Systems Technology model PFS4-CSRR continuous totalising automatic weighing instruments (belt weighers) using integrator/indicator models WIM3.0 or WIM3.1.

Designation of the module *(if applicable)*

Continuous totalizing automatic weighing instrument

This OIML Certificate attests the conformity of the above identified type (represented by the sample(s) identified in the OIML type evaluation report) with the requirements of the following Recommendation of the International Organization of Legal Metrology (OIML):

OIML R 50, Edition: 2014

For accuracy class: 0.2, 0.5, 1 & 2

OIML Member State Australia	OIML Certificate No. R50/2014-A-AU1-2023.01 Revision 0 NMI file No. PA-2021/012	
<p>This OIML Certificate relates only to metrological and technical characteristics of the type of measuring instrument covered by the relevant OIML Recommendation identified above.</p> <p>This OIML Certificate does not bestow any form of legal international approval.</p>		
<p>The conformity was established by the results of tests and examinations provided in the associated OIML type evaluation report No. PA-2021/012 [1] dated 3 November 2023.</p>		
<p>The technical documentation relating to the identified type is contained in documentation file: PA-2021/012 - Documentation</p>		
OIML Certificate History		
Revision No.	Date	Description of the modification
Initial version	1 December 2023	
<p>Identification, signature and stamp The OIML Issuing Authority National Measurement Institute Australia, OIML Issuing Authority AU1</p> <p>Date: 1 December 2023</p>  <p>Darryl Hines Manager, Policy and Regulatory Services Legal Metrology Branch National Measurement Institute Australia</p>		
<p><i>Important note:</i> Apart from the mention of the Certificate's reference number and the name of the OIML Member State in which the Certificate is issued, partial quotation of the Certificate and of the associated OIML type evaluation report(s) is not permitted, although either may be reproduced in full.</p>		

Descriptive Annex

Characteristics of the continuous totalising automatic weighing instrument (belt weigher):

Accuracy class	0.2, 0.5, 1 or 2 (note 1)
Maximum flow rate (Q_{max})	Up to 10 000 t/h actual Q_{max} dependent upon application
Minimum flow rate (Q_{min})	20% of Q_{max}
Minimum totalised load (Σ_{min})	3.6 t actual value dependent upon application and determined in accordance with R50-1 Clause 3.4
Totalisation scale interval (d)	$d \geq 0.001$ t
Maximum capacity (Max)	actual Max dependent upon application $Max = W_L \times Q_{max} / v_{max}$
Belt speed (v_{max})	Single speed from 0.5 m/s to 5.2 m/s (nominal) (note 2)
Temperature range	-10 °C / +40 °C
Maximum pulse frequency (at Nom. Speed)	1000 Hz
Power supply voltage (switchable)	110 - 120 V or 230 - 240 V AC 50 Hz 24 V DC mains
Embedded software identification	Control Systems Technology embedded firmware version WIM3-7.4-20230824

Note 1: Refer to test reports listed in the OIML type evaluation report No. PA-2021/012 [1].

Note 2: An actual maximum speed (up to 7 m/s) is determined upon application conditions and performed metrological characteristics.

Characteristics of the instrument:

The pattern is a fixed speed, continuous totalising automatic weighing instrument (beltweigher) designated Control Systems Technology (CST) model PFS-CSRR using model WIM3 or WIM3.1 integrator. It comprises:

- Integrator
- Basework (weigh platform)
- Speed sensor
- Junction box

Integrator

The integrator is designated CST model MaVIS-ICS-ARM WIM3 or WIM3.1:

- Totalisation indicator device (non-resettable)
- Indication of the flowrate
- Indication of the belt speed
- Error messages and alarms
- Automatic zero setting (4% Max)
- Dual basework facility and dual totalisation

Basework

The basework is designated PFS4-x CSRR, with x number of weigh idlers (2 to 8), and additional 'close spaced rack rollers' CSRR mandatory for class 0.2 and optional for classes 0.5, 1 or 2.

The basework is supported by four (4) Scaime SK 30X 500 C6 CH 15e 8z load cells, each with a maximum capacity E_{max} of 500 kg. The Scaime load cells have an OIML Certificate of Conformity R60/2000-NL-08.01.

Displacement transducer

Autonics rotary encoder (e.g., Autonics, Leine Linde or Bauner).

The instrument is fitted with a Length Reference System (Tacho tracking device).

Interface

- RJ45 port (ANYBUS)
- Ethernet
- RS-232
- Analogue and digital I/O
- Speed sensor connection
- Load cell connection

Additional features

The instrument may be fitted with a belt temperature control system.

Sealing

Sealing of the system is achieved by a combination of an audit trail, with access to change settings restricted via passwords and with a login arrangement for personnel carrying out changes. Access may be restricted according to four levels (0 = User, 1=Supervisor, 2=Technician, 3=Factory), with the highest (Level 3) access restricted to factory personnel.

Software

There is no non-legally relevant software. The software identification shall be as follows:
WIM3-7.4-20230824.

The software for the integrator is embedded and is held on the integrator's mainboard. Download of software requires Level 3 access to upload – hence is sealed by audit trail.