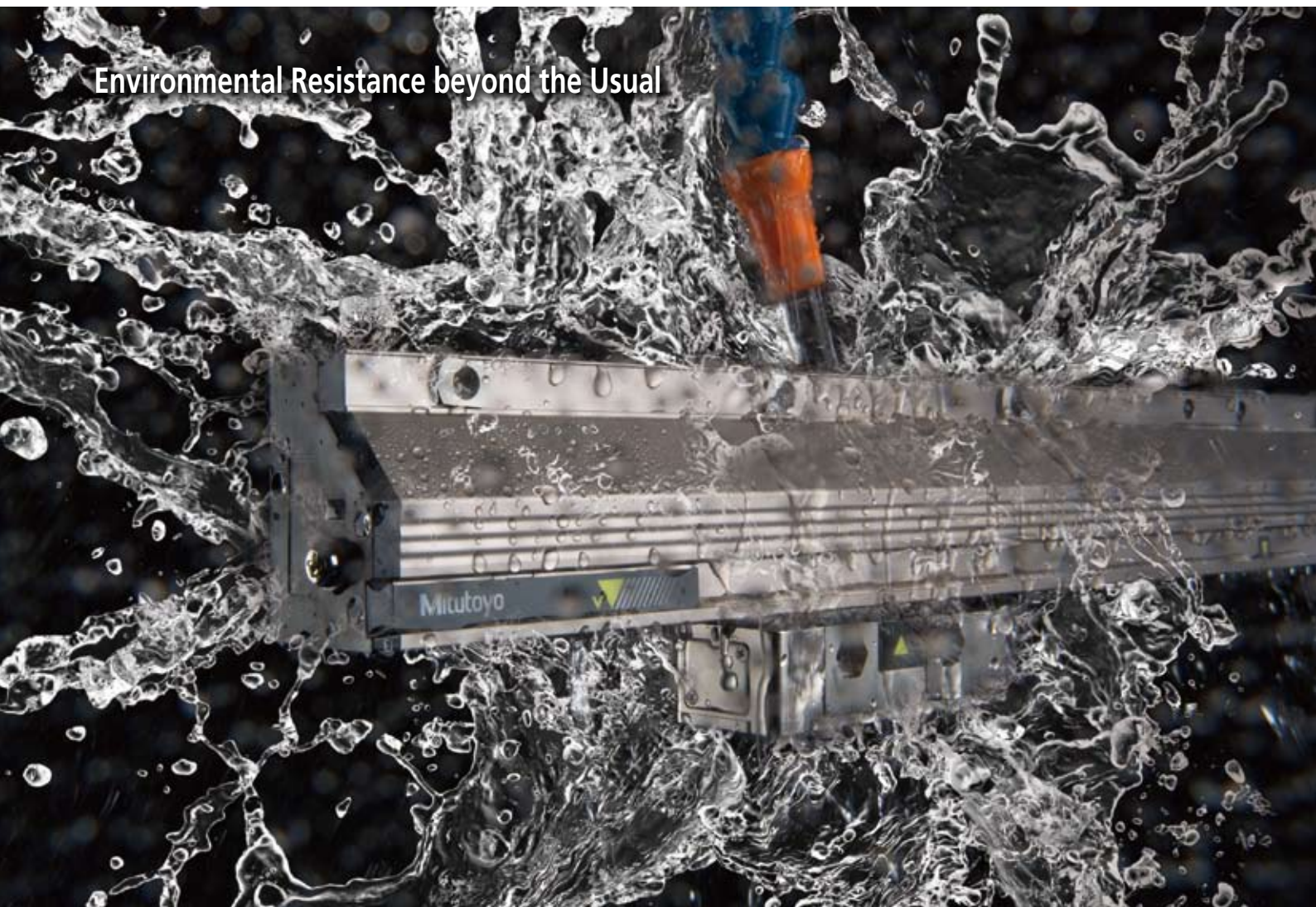


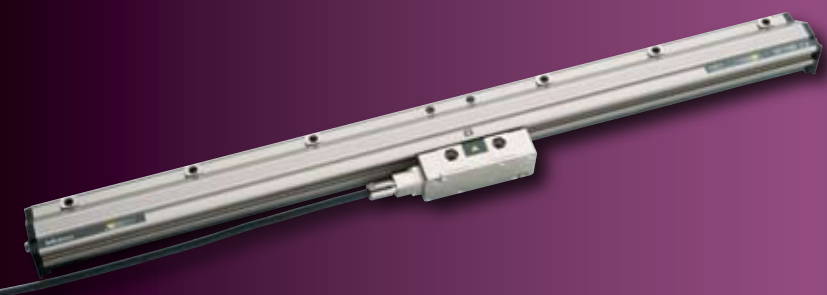
Latest Generation Absolute System  
Assembly Type Linear Scale  
**ABS AT1100**



Environmental Resistance beyond the Usual



Digital Scale and DRO Systems



# Environmental Resistance Defying Conventional Wisdom

## Newly released Scale Unit

### Outstanding Environmental Resistance

This scale unit leverages Mitutoyo's unique electromagnetic induction technology to provide excellent resistance to oil and water compared with the optical linear encoder type, elevating the ABS AT1100 to the level of a highly reliable NC machine-tool scale suitable for tough shop floor conditions.

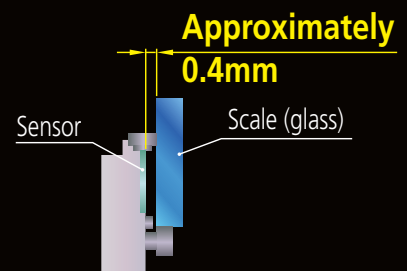


### Robust Dustproof/Waterproof Structure

Additional factors in providing the high performance of the ABS AT1100 are the innovative shaping and location of the detector track in the aluminum frame and the extreme coolant resistance of the track-seal material. Together these combine in a highly effective first defence against contamination of the scale and sensor even in extremely severe installation environments.

### World's Largest Air Gap

The sensor-to-scale air gap is approximately 0.4mm, around 4 times as wide as that of the conventional optical or electromagnetic induction design. This is yet another factor that makes issues due to dust or oil contamination unlikely to arise. This air gap is actually the largest in the world for a machine-tool scale.







## Specifications

	ABS AT1100
Detection method	Electromagnetic induction
Maximum effective range	3040mm
Resolution	0.05μm
Accuracy (at 20 °C)	(3+5L/1000)μm L= 140 to 2040mm (5+5L/1000)μm L= 2240 to 3040mm
Maximum response speed	3 m/s
Cross-section size	85x37 (mm)
Thermal expansion coefficient	≈ 8±1.5x10 <sup>-6</sup> / K
Vibration resistance (at 55 to 2000Hz)	20g
Impact resistance (at 11ms, 1/2sin)	35g L=140 to 2040mm 30g L=2240 to 3040mm
Compatible interfaces *1	FANUC Corporation's Serial αi Interface Mitsubishi Electric Corporation's High-speed Serial Interface

\*1: For details about connection of any applicable system, please be sure to contact each manufacturer for confirmation.

Coordinate Measuring Machines



Vision Measuring Systems



Form Measurement



Optical Measuring



Sensor Systems

Test Equipment  
and Seismometers

Digital Scale and DRO Systems

Small Tool Instruments  
and Data Management

**Whatever your challenges are, Mitutoyo supports you from start to finish.**

Mitutoyo is not only a manufacturer of top quality measuring products but one that also offers qualified support for the lifetime of the equipment, backed up by comprehensive services that ensure your staff can make the very best use of the investment.

Apart from the basics of calibration and repair, Mitutoyo offers product and metrology training, as well as IT support for the sophisticated software used in modern measuring technology. We can also design, build, test and deliver bespoke measuring solutions and even, if deemed cost-effective, take your critical measurement challenges in-house on a sub-contract basis.



**Find additional product literature  
and our product catalogue**

<http://www.mitutoyo.co.jp/global.html>

Note: Product illustrations are without obligation. Product descriptions, in particular any and all technical specifications, are only binding when explicitly agreed upon.

MITUTOYO and MICAT are either registered trademarks or trademarks of Mitutoyo Corp. in Japan and/or other countries/regions. Other product, company and brand names mentioned herein are for identification purposes only and may be the trademarks of their respective holders.

# Mitutoyo

## Mitutoyo Corporation

20-1, Sakado 1-Chome,  
Takatsu-ku, Kawasaki-shi,  
Kanagawa 213-8533, Japan

T +81 (0) 44 813-8230

F +81 (0) 44 813-8231

<http://www.mitutoyo.co.jp>