PERFECTA-241-S I-Series

THICKNESS GAUGE

★ MADE IN AMERICA, RESPECTED WORLDWIDE ★

GAMMA RAY NON-CONTACT MEASUREMENT | PLC-BASED ELECTRONICS

EVERYONE KNOWS WE BUILD THE BEST NON-CONTACT MEASUREMENT SYSTEMS

With our partners in Europe and Asia, we have a worldwide reach. We provide the complete system engineering, design, fabrication, and installation, along with knowledgeable service and availability when you need us, regardless of your spot on the globe. Let us show you how we can help with your gauge needs.

AM-241	**< 25 ms**	**± 0.1%**
Sealed Source Device	Response Time	Accuracy (2σ)

GlobalGauge CORPORATION

THE **PERFECTA-241-S I-SERIES** GAUGE

THE INDUSTRY STANDARD IN PLC-BASED GAUGING

- **FAST**
- **ACCURATE**
- **DEPENDABLE**
- **COST-EFFECTIVE**

The Perfecta-241-S I-Series was born from an industry request to create a cost-effective, high-speed, non-contact isotope gauge system based on off-the-shelf industrial PLC technology. From the first installation, the Perfecta has exceeded customer expectations. The system maximizes the use of top quality, off-the-shelf components, including a robust industrial PLC. The gauge software was specifically developed by GGC engineers to take advantage of high-speed processors available in today's industrial PLCs. The resultant gauge system is extremely fast, well beyond the requirements of most closed-loop mill control systems. Perfecta I-Series gauges are installed worldwide on rolling mills and process lines measuring the thickness of ferrous and non-ferrous metals, plastics, ceramics, and many other materials.

- **INDUSTRIAL PC-BASED DESIGN**
- **RITTAL CABINET**
- **KEYBOARD OR TOUCHSCREEN**
- **AM-241 SEALED SOURCE DEVICE**
- **LND ION CHAMBER DETECTOR**
- **GGC CONTROL ELECTRONICS**

GAUGE PERFORMANCE SPECIFICATIONS

• GAUGE **RESPONSE**

The time required for the output signal to register 63% of a 10% step-change in thickness at 0.100", to within the accuracy specification.

Gauge Response: at or better than 25 milliseconds (adjustable)

• NOISE **(2σ or 95.5%)**

The 2σ (or 95.5%) value of the random variation of the gauge output signal while gauging on a static sample.

Thickness	15ms	50ms	100ms	250ms
at 0.0 mm (0.0000")	± 3.7 µm	± 2.1 µm	± 1.5 µm	± 1.0 µm
at 1.0 mm (0.0393")	± 0.58%	± 0.32%	± 0.23%	± 0.15%
at 2.0 mm (0.0787")	± 0.45%	± 0.26%	± 0.18%	± 0.11%
at 3.0 mm (0.1181")	± 0.48%	± 0.26%	± 0.19%	± 0.13%
at 4.0 mm (0.1575")	± 0.58%	± 0.32%	± 0.23%	± 0.15%
at 5.0 mm (0.1968")	± 0.72%	± 0.40%	± 0.29%	± 0.18%
at 6.0 mm (0.2362")	± 0.96%	± 0.53%	± 0.37%	± 0.24%
at 6.5 mm (0.2559")	± 1.12%	± 0.61%	± 0.43%	± 0.27%

• MEASUREMENT **ACCURACY = ±0.10%**

The accuracy of the gauge is ±0.10% of the set thickness of the precision master on which the gauge has been standardized.

• DRIFT **= ±0.15%**

The drift of the gauge signal as recorded on a chart recorder during an eight-hour period will not range more than 0.15% from the set thickness on which the gauge, with cooling, was standardized.

• REPEATABILITY **(2σ) = ±0.10%**

Closeness of agreement among a number of consecutive measurements of the gauge output signal for the same input and under the same operating conditions.

These standard specifications are valid if the installation is in compliance with Global Gauge installation specifications as will be provided in Engineering Approval Drawings. Variations on these specifications to meet the customer's specific requirements can be accommodated. Please contact Global Gauge Corporation for further details.

ISOTOPE SOURCE CONFIGURATION

Isotope Source	AM-241 Sealed Source Device (51004768)
Source Activity	Per application requirements
Source Housing	GGC Sealed Source Holder (51504135)
Radiation Direction	Upward path, Bottom to Top
Detector	LND Ion Chamber (51004902)
Shutter	5.56 mm (51504140-01, 1/8" aluminum + 3/32" lead)
Interlocks	(1) Shutter lockout
Emergency Stop	(2) Panel and Mill
Warning System	(2) 2-Light system, Panel and Mill
Safety	(1) Lockable switch and software
Dimensions (SSD)	152 mm W × 178 mm L × 90 mm H
Weight (SSD)	91 kg