Presenting

AttoIC

Industrial Colour Sensor

AttoIC is a cutting-edge industrial colour (IC) sensor designed to deliver quality assurance in demanding colour based industrial applications.

With advanced sensor technology coupled with high CRI white LEDs, AttoIC enables accurate detection of minute colour variations by employing CIE L*a*b* based colour tolerancing.

The system measures the full spectrum of a sample illuminated by an internal white LED from a fixed working distance of 9 cm with a reflectance geometry of 10°/0° (illumination/reflectance). The sensor could be triggered via digital inputs or RS485. RS485 based communication protocol enables remote operation and easy automation to achieve desired results.

AttoIC is a highly reliable sensor delivering consistent and accurate colour variation data, even in the most challenging industrial environments.

Features

- **Higher precision** in colour measurement as compared to conventional RGB systems
- Precise colour variation measurement using **L*a*b* based tolerancing** against a specified colour reference
- **Adjustable tolerance levels** for different colour tolerancing requirements
- On-board storage of **255 different reference colours**
- **Working distance of 9 cm** (customizable for bigger orders)
- Measures colour by reflectance at 10°/0° with internal white LED
- **PLC controllable**
    - Trigger readout on/off
    - Stored Reference Selection for 4 references using dedicated digital inputs
    - Switching output for GO/NG communication
- **IP6x rated** metallic housing for protection against dust and water splash
- **RS485 based communication** for sensor configuration, triggering and data exchange
- **Ultra-compact** (61 x 66 x 34 mm^3)

AttoIC Specification Sheet

	Specification	Description
Optical	**Light Source (LS)**	Internal: High CRI white LED, 110 lm
	Optical Arrangement (Illumination/ Detection)	10°/0°
	Max Lifetime LS	estimated. 50,000 hrs
	Working Distance (WD)	Internal LS: fixed 9 cm ± 1 cm
	Spot Diameter[1]	5-12 mm
	Colour Tolerancing Method	dE L*a*b*
	Tolerancing Levels	0.3, 0.5, 1.0, 3.0, 5.0, Custom
	Total Stored References	255
Control	**Response time[2]**	1 s
	Number of switching outputs	1, pnp type
	Number of Digital Inputs	3
	Input 1	Trigger Input Signal
	Input 2	Reference Address Line 1
	Input 3	Reference Address Line 2
	Trigger	PLC / Internal / RS485
	Reference Mode	Manual / RS485
	Interface	8 Core Cable,
	Communication Interface	RS485
Electrical	**Supply Voltage**	+24 V DC
	Power Consumption	Approx. 0.6 W
	Protection Class	Class III (SELV Safety Extra Low Voltage)
Mechanical	**Housing**	Aluminium (Anodized)
	Protection	IP64
	Size	61 x 66 x 34 mm[3]
	Weight	<240 g
	Mounting	L-bracket attachment (M3x40)
	Cable Gland	M12
	Cable Length	1.5 m
Enviro	**Ambient Light Immunity[3]**	Up to 10,000 lux (3)
	Temperature Range	15 – 50 °C
	Humidity Range (non-condensing)	40 – 85 %

1 Depends on aperture size
2 Depends on integration time
3 Influenced by ambient light

For queries or more information, please reach out to us at info@attonics-systems.com