

New Products

Page 1 of 2

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P1PW Contrast Sensors Detect the Smallest Differences in Contrast

Maximum flexibility with three integrated operating modes

The new P1PW series contrast sensors from the wenglor sensoric group detect the smallest differences in contrast on a wide range of surfaces and materials. The sensors with white light can reliably detect color-intensive to pale markings against any background, even in fast process flows. Three integrated operating modes enable the P1PW sensors to be used variably as print mark readers, contrast sensors and for detecting color differences. A job memory ensures quick batch changes so that no individual settings are required during operation.

The P1PW contrast sensors offer maximum flexibility thanks to the three integrated operating modes. Thanks to the emitted white light and the differentiated evaluation of the received light according to red, green and blue values, the sensors also detect markings with even the smallest contrast difference. The functional principle is impressive: While in print mark mode, the most significant contrast difference in a color channel can be used to distinguish reliably between the mark and the background, in contrast mode, the evaluation of the average light intensity of all color channels ensures the detection of even the smallest contrast differences. Color mode enables reliable detection of color differences by using the signal values of all color channels. Thanks to the automatic adjustment of the light intensity during teach-in across modes, the P1PW sensors also solve challenging process situations with colorful, glossy and transparent material.

Reliable Detection of Contrast Markings – Even in Dynamic Processes

The P1PW series is ideal for dynamic processes: With the integrated step detection, stable detection of contrast differences is possible independently without the need for re-parametrization in the ongoing process. Applications with high process speeds are reliably solved thanks to the high switching frequency of 50 kHz and low jitter. Automatic adjustment of the light intensity also ensures precise detection of a wide range of surfaces, including high gloss. The emitted homogeneous and rectangular light spot as clearly visible white light reliably detects even the smallest objects.

High User-Friendliness Thanks to Integrated LED Bar Display

Teach-in takes place intuitively at the touch of a button. The mode of operation is also set directly on the unit, meaning no setting tools are required. The P1PW sensors provide clear feedback on the teach-in quality and process stability at any point in the ongoing process through the integrated LED bar display. Easy operation ensures optimal adaptation to challenging applications. Relevant product information can be accessed directly via the printed QR code. The nuts that can be inserted into the housing enable flush and flexible mounting of the sensors, which is also made even easier by the plug that can be rotated by 270 degrees.

New Products

Page 2 of 2

The Highlights at a Glance:

- Three integrated teach modes: Print mark, contrast and color mode
- LED bar display for configuration and contrast value display
- Integrated jump detection for dynamic processes
- High switching frequency of 50 KHz
- Automatic adjustment of the light intensity ensures precise detection of a wide range of surfaces
- Small, homogeneous and rectangular light spot for detecting even the smallest objects
- Integrated IO-Link interface

Approximately 3,500 characters

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Captions

P1PW series contrast sensors detect contrast and color differences on a wide range of materials and surfaces.

About the wenglor sensoric group

The wenglor sensoric group develops innovative sensors, safety systems and machine vision products with intelligent interfaces and software for industry all over the world. Founded in 1983, wenglor is one of the world's key high-tech providers for the automated industry. The solutions of the wenglor sensoric group enable the trends of Industry 4.0 as well as the Internet of Things, 3D technologies, robotics and artificial intelligence (AI). In doing so, they conserve resources and increase the quality and safety of the manufactured products. The second-generation owner-managed family business is represented worldwide with 28 subsidiaries in 53 countries. In addition to the company headquarters in Tettwang, the group of companies with over 1,100 employees also develops and produces its multi-patented products in Munich, Berlin, Sibiu (Romania), Perth (Scotland), La Chevrolière (France) and Belgrade (Serbia).