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IPF ELECTRONIC INFO

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FAIR TRADE DATES

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COMPACT FLOW SENSORS WITH INTEGRATED PRESSURE SWITCH

The diverse product portfolio of flow sensors from ipf electronic has been expanded to include another exciting series. The highly flexible devices in the **SL55**-series monitor the flow of compressed air and non-corrosive gases. The devices also have a pressure switch for additional precise monitoring of the operating pressure. Thanks to their compact design, the sensors can be individually integrated into machines and system components such as grippers or robot arms to save space.

The series comprises ten devices (see table) with different process connections (AD6, AD8, G1/2“ and G3/4“) and measuring ranges (0.5l/min to 2000l/min). The flow sensors have a 3-color and 2-line display with an intuitive menu structure. Thanks to a color change, the display provides an additional visual signal when the threshold values (pressure and flow rate) are reached, for example.

The measured values are evaluated either via the analogue output (4...20mA) or via two parameterizable switching outputs. In addition, an external input is available for various reset functions. The connection is made via a 2m long cable included in the scope of delivery. Suitable accessories such as holders (**AS000021, AS000023, AS000024**) and/or mounting frames (**AS000022**) are available separately. (bb)

Table of products:

Art. No.	Process connection	Flow rate	Pressure measuring range
SL550700	Hose connection AD6	0...0.5l/min	-0.9...8bar
SL550701	Hose connection AD6	0...1l/min	-0.9...8bar
SL550702	Hose connection AD6	0...5l/min	-0.9...8bar
SL550703	Hose connection AD6	0...10l/min	-0.9...8bar
SL550704	Hose connection AD6	0...50l/min	-0.9...8bar
SL550705	Hose connection AD8	0...100l/min	-0.9...8bar
SL550706	Hose connection AD8	0...200l/min	-0.9...8bar
SL550707	Internal thread G1/2“	2...500l/min	0...10bar
SL550708	Internal thread G1/2“	5...1000l/min	0...10bar
SL550709	Internal thread G3/4“	10-2000l/min	0...10bar

THE BENEFITS OF LOGIC MODULES

Like human hands, a machine needs information and time to produce the product we want. The information must be collected and processed in order to carry out the next logical steps. If the requirements become more complex, more information must be provided and processed, which requires additional resources. Our logic modules help to distribute these resources so that each individual piece of information no longer has to be processed centrally in a controller. This ensures shorter cable routes, less wiring and significantly reduces the need for control inputs thanks to decentralized information distribution, which is also more accessible for expansions.

With the introduction of standardized IO-Link technology, the logic distributors from ipf electronic have finally developed into flexibly parameterizable devices, which once again massively expands the potential application possibilities. To complete our portfolio in this area, we have now added the **VL530100** IO-Link logic module for freely wireable control cabinet installation as a further development of the popular **VL25**-series for the top-hat rail.

To save space on the DIN rail, the housing of the **VL530100** has been made significantly narrower at 22.5mm. In terms of performance, the device is similar to its siblings in the **VL31** and **VL61**-series, which are designed for field use, although the functions of the new module are identical to those of the **VL610328** IO-Link logic module. The two digital switching outputs of the **VL53** can be logically linked with up to eight sensor inputs. Both the inputs and logics can be freely selected. In addition, tried and tested features of the previous IO-Link logic modules have been adopted in the **VL530100**. These include the creation of virtual groups, which allow several conventional modules to be replaced by a single IO-Link module.

The device also has a debounce function that makes it possible to route a signal via a mechanical contact. If, for example, the signal of a mechanical limit switch, plunger switch or roller limit switch is to be coupled to an input of the **VL53** instead of a sensor signal, this special function prevents the evaluation of several switching signals due to contact bounce of a switch. (rt)

VL530100

VL31-series

NEW RING LIGHT MOUNTS FOR C-MOUNT CAMERAS OF THE OC53-SERIES

The **OC53**-series camera sensors from ipf electronic have already proven themselves in many applications. New mountings for the coaxial mounting of LED ring lights are now available for the devices with C-mount lens connection.

Thanks to the new mounting solutions, the camera and ring light do not have to be aligned separately, which considerably simplifies the installation of the system. A further advantage is the simple and quick replacement of the lights, as the respective fastening enables a new LED light to be installed reproducibly at all times.

The fixings are made of robust PA12 plastic and are available in three versions for the different designs of the LED ring lights from ipf electronic.

The **AO000667** mounting is designed for the **ER70** LED ring light series. The **AO000668** attachment is suitable for the ER1B and **ER1D** light series. The **AO000669** can be used to attach the **ER1A**-series of LED ring lights. (sf)

AO00667

EVERYTHING IN THE RIGHT POSITION?

Inclination sensors are used in stationary and mobile applications to measure and reliably monitor an inclination angle. Typical areas of application for inclination sensors are construction and agricultural machinery such as excavators, wheel loaders, tractors or harvesters, forklifts, cranes, lifting platforms, but also wind turbines, telescopes and robots.

Compared to other inclination sensors on the market, the inclination sensors in the **YN58**-series from ipf electronic are characterized by some special features that are not visible at first glance.

For example, there is a very easy-to-read LED display inside the sensors to visualize the tilt angle. In addition, four crosshair LEDs are arranged around the display to indicate the sensor's tilt direction during installation. This makes installation and commissioning of the devices extremely easy.

The devices in the **YN58**-series detect the tilt angle in both the X and Y directions with a repeat accuracy of 0.03°, with a total of three variants available: **YN580020** (-10° to +10°), **YN580021** (-45° to +45°) and **YN580022** (-85° to +85°).

The tilt angles are measured contactlessly via a high-precision microelectromechanical sensor element (MEMS) with an intelligent microcontroller. Two analog outputs are available for evaluation, which provide a signal of 4...20mA over the entire measuring range. Both the start and end values of the analog signal can be freely parameterized. The robust aluminum housing of the sensors has protection class IP67 and is suitable for ambient temperatures from -25°C to +80°C. The connection is made via a 5-pin M12-connector.(nc)

YN580020

EMD0012

IDEAL FOR HARSH INDUSTRIAL APPLICATIONS

Our new beautifully designed **EMD0**-series lights are ideal for harsh industrial applications, not least due to their IP67 protection rating for complete protection against dust and temporary immersion in water. The robust materials of the luminaires, anodized aluminium and hardened float glass, offer high resistance to thermal and mechanical loads.

Even the most common coolants and lubricants cannot harm the new light series. Their beam angle of 100˚ ensures homogeneous and wide-area illumination. Thanks to the diffuser, the lights are glare-free and do not create multiple shadows, which is particularly useful in working environments with moving parts.

In addition, the highly efficient LED driver provides absolutely flicker-free light with a color temperature of 5,000K.

For easy installation, the M12-connector plug is not screwed in but is part of the end piece of the light.

The light series includes various lengths from: 190mm (8 watts) to 1040mm (48 watts):

Art. No.	Length
EMD00120	190mm
EMD00121	280mm
EMD00122	365mm
EMD00123	540mm
EMD00124	715mm
EMD00125	1040mm

Accessories **AE000011**, **AE000012**, **AE000013** and **AE000017** allow the lights to be securely fastened and the installation angle to be infinitely adjusted. (sf)

EZ550320

COMPACT AND VERSATILE: NEW BUILT-IN SIGNAL LIGHT

The very compact multi-color LED light **EZ550320** (red, yellow, green) with touch function (e.g. for acknowledging or signalling to a control system) is particularly suitable for integration in machine control panels, on machine housings or control cabinets, e.g. to signal faults or indicate certain statuses.

Despite its compact design (diameter only 55mm), the light signal of the extremely robust **EZ550320** (protection class IP65 or IP69k) is clearly visible from all sides. In addition, the light generates an alarm tone (85dB) that can be heard from afar and does not miss its signal effect even in noisy environments.

A 5-pin M12-connector is used to control the colors, the alarm tone and the output of the push-button signal. The light is fastened with an enclosed M30 lock nut. Alternatively, a mounting bracket (**AE000034**) is also available. (sf)

LED SPINDLE LIGHT - OPTIMUM LIGHTING FOR MACHINING

The spindles of machining centers in metal-cutting production are often not sufficiently illuminated, which makes it difficult to adjust the machine during set-up, especially for the production of small batches.

The aim:
Optimum illumination of the workpiece during setup and therefore ultimately greater precision as well as accuracy when machining workpieces.

The solution:
A particularly robust LED light specially developed for the spindle holder of a machining center, which is available from ipf electronic under the designation **EMB50171**. The light is suitable for both horizontal and vertical machining center spindle mounts with the appropriate diameters.

The ring light with borosilicate glass front panel is equipped with several high-power LEDs at 4 positions each (light exit openings). The extremely bright white light LEDs (color temperature 5,000K) with a beam angle of 80 degrees ensure particularly shadow-free and uniform illumination of the workpiece in the processing area.

The **EMB50171** in a die-cast aluminum housing can be attached directly to the spindle mount using four screw points for M5 cylinder head screws. Alternatively, the light can also be fixed to the spindle holder using strong holding magnets such as **AY000129** / **AE000031**. The LED spindle light is connected via a 4-pin M8 plug connector located on the side of the housing.
(sta)

EMB50171

HIGHLIGHTS

- Resistant to shock, vibration and flying chips
- Resistant to most coolants and lubricants
- Integrated safety: ESD protection, reverse polarity protection, overtemperature protection
- Wide operating temperature range from-40°C to +50°C (from +50°C overtemperature control)
- Degree of protection IP67

NO MORE MISUNDERSTANDINGS: SIGNAL + PLAIN TEXT

ADDITIONAL LABELING OF LED SIGNAL LIGHTS FROM THE EZ50-SERIES

In many industrial sectors, clear signaling is immensely important. What exactly does an illuminated segment mean? With a new bracket, ipf electronic now makes it possible to provide the signal lights **EZ500320** (three segments: red, yellow and green) and **EZ500330** (four segments: red, yellow, green and blue) with additional plain text.

The solutions consist of the unprinted acrylic plates **AE000043** (for **EZ500320**) and **AE000044** (for **EZ500330**) with a width of 150mm, which only differ in height due to the respective number of illuminated segments. The plates can be individually labeled, e.g. with a sticker or laser engraving.

The separate clamp holder **AE000040** made of PA12 plastic is available for easy installation. It is attached to the lower section of the signal tower with two screws and ensures that the acrylic plate is securely fixed. The clamp holder can also be positioned flexibly by loosening the screws.

This solution for the plain text labeling of the **EZ50** signal tower series clearly increases operational safety, as there will be no more misunderstandings about the meaning of the individual illuminated signals in future. (sta)

IPF NEWS

IPF HOMEPAGE PRODUCT SELECTION „NEW“

What new products have been released by ipf electronic in the last six months? To provide a quick and targeted overview, the “NEW” product group has been created on the homepage. This means that website visitors are now only a single “click” away from our latest products. It couldn‘t be simpler, faster or more transparent. (mo)

PRODUCT EXTENSIONS

MACHINE LIGHTS EM15-SERIES

Following the introduction of the **EM150200** (140mm), **EM150201** (240mm) and **EM150202** (340mm) machine lights with a housing width of just 15mm, which can also be used in very confined spaces, the product family has now been extended to include the **EM150203** variant, which has an overall length of just 90mm.

Thanks to its very low power consumption, this luminaire can even be controlled directly via a PLC output.

PARAMETERIZABLE ROTARY ENCODERS

In line with the proven principle of "just buy the incremental encoder with the right shaft and set the rest yourself", the **VD58**-series of individually parameterizable encoders from ipf electronic has been expanded to include the **VD589823** variant with a 10mm hollow shaft.

MOUNTING BRACKET FOR OT23 AND OT34

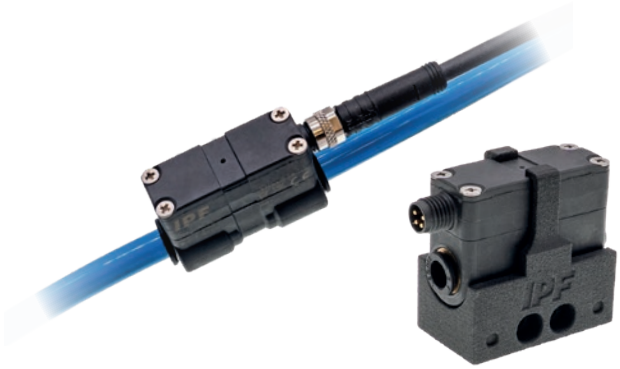
The **AY000183** and **AY000184** holders, which are also suitable for very harsh environmental conditions, are now available for the 23 (e.g. **OT230321**) and 34 (e.g. **OT340571**) optical switches.

INLINE PRESSURE AND VACUUM SENSORS

In addition to our switching inline pressure and vacuum sensors for hose assembly, four analog devices with 4...20mA output are now available for hose diameters of 6mm and 8mm. The sensors cover a pressure range from-1 to 10 bar.

Art. No.	Pressure range
DT064100 / DT084100	-1bar - 0 bar
DT06410D / DT08410D	0bar - 10 bar
DT06410J / DT08410J	-1bar - 1 bar
DT06410K / DT08410K	-1bar - 10 bar

AD000023 (4 and 6mm) and **AD000024** (8mm) stackable holders are now available for both the inline sensors with switching and analog output.



OPTICAL DIFFUSE-REFLECTION SENSORS OT31 / PT31-SERIES

Our tried-and-tested optical sensors from the low-cost **OT31**-series with M8-connection have now been supplemented by the corresponding variants with cable connection.

The **OT310301** / **PT310300** optical sensors with background suppression, the **OR310300** / **PR310300** retro-reflective sensors with polarizing filter and the **OY310300** / **PY310300** through-beam systems have been added. (mo)

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IPF SUCCESS STORYS

MORE TRANSPARENCY THROUGH TARGETED COMPRESSED AIR MONITORING:

FLOW SENSORS FOR PRECISE MEASUREMENTS ON MACHINES

SPAX, known for high-quality wood screws, relies on precise compressed air monitoring with flow sensors from ipf electronic as part of its energy management strategy in order to sustainably reduce energy costs. SPAX has been producing around 50,000 screws a day in Ennepetal and Gevelsberg as a globally renowned brand since 1967.

A lot of compressed air is required for the mechanical production of the screws. For over 10 years, the company has been recording its energy consumption using its own software, among other things. Initially, electricity consumption was measured, then gas and water were added in order to analyze the distribution of energy consumption.

The majority of the approx. 500 machines in production are supplied by a central compressed air station. Compressed air consumption used to be measured at department level and later at each individual machine. Initially, measuring devices with a switching output were used for this purpose, but their installation and handling proved to be too cumbersome and complicated. The decision was therefore made to use flow sensors with analog output from ipf electronic.

Parameterizable flow sensors such as the **SL900020** and the **SL920020** with freely scalable analogue output (4...20mA) enable simple and very precise measurement of compressed air consumption in order to sustainably reduce energy costs for compressed air generation. The compact solutions for air (also gases on request) are available in seven versions. The consumption meters are set using two capacitive buttons on the display, which shows the flow rate, consumption, speed and temperature.

The simple installation, commissioning and not least the intuitive operation of the sensors ultimately convinced SPAX. The company therefore invested in 48 devices, which were mainly installed in the press shop with high compressed air requirements. Based on the measurement data, it quickly became clear that some machines had a high compressed air consumption even in standby mode.

SPAX also discovered immensely high compressed air consumption in newly purchased machines due to incorrect system settings. These problems could be rectified in a targeted manner based on the measurements. In addition, SPAX created a priority list for leak detection based on the collected measurement results in order to eliminate leaks in the compressed air network even faster. Thanks to a specific package of measures and the flow sensors from ipf electronic, the company says it can save around 15,000 Euros a year in electricity costs. (sta)