An all in one

logic distributor links sensor signals and controls the exchanging of signals

Intelligent sensors are also indispensable equipment in metal working companies. In specific applications, the signals of several sensors frequently have to be linked in order to receive a statement concerning the operational status, e.g. an ejection check, feed rate control or a twin sheet inquiry.
If this linkage is carried out in the control unit, each individual sensor signal has to be conducted to the control unit via a line so that it can be processed by its program. The alternative: The VL300148 logic distributor from ipf electronic.

Instead of carrying out the signal linkage of several sensors in a control unit, it is often adequate to directly link signals that have to be pending at the same time at the place where the sensor is installed and transfer them to the control unit as a final signal. In connection with this, it is often important to check the input signals there for a signal exchange so that any damaged sensors or faults are spotted and/or to prevent jamming of material, and with it, more extensive damage. And it is exactly these tasks that the logic module from ipf electronic (Fig. 1) performs.

Fig. 1

The linking of switch signals from up to four sensors

Up to four sensors can be connected via the inputs of the logic module. The switch signals from this unit can be AND-linked with one another if the associated enabling slots have been activated via so-called simulation plugs (Fig. 2).

And this is how the module specifically works: Switch output 1 is only activated when all of the enabled inputs provided with a status LED carry a HIGH signal. This however only takes place when all of the occupied inputs have undergone an exchange from LOW to HIGH once. Up until this point in time, an LED and a signal on switch output 2 indicate that a signal exchange has not yet taken place on all inputs.

If all inputs are pending following a LOW to HIGH signal exchange, the signal is deactivated on output 2 of the logic module. The corresponding LED goes out and output 1 is set. Here, output LED 1 remains illuminated until one of the inputs is deactivated again.

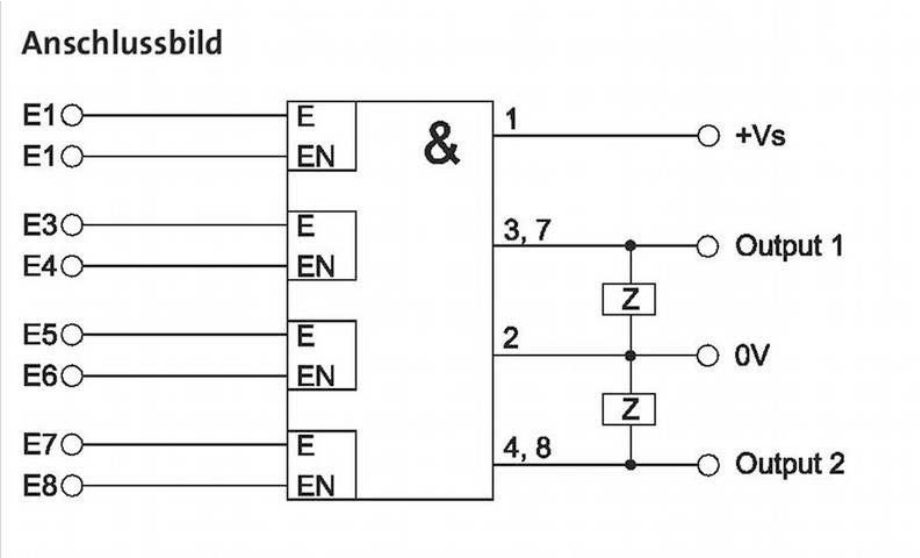

Fig. 2

Old plant, new tools? No problem

In addition to the application of the logic distributor for making inquiries relating to the operational status (e.g. an ejection check, feed rate control or a twin sheet inquiry) it is also conceivable that the module could be used, among other things, in the case of old cutting systems. If new tools and/or multiple use tools are used in this type of plant, the mold protection system of the control unit is often not in a position to process the signals of all sensors. Here as well, via the logic module, signals pending at the same time can be linked and reliably controlled.