Power supplies

Circuit protection with monitoring function for the 24 V secondary circuit

Accessories

Modular and selective protection in plant and machinery

Reliable circuit protection allows reduction of wire cross-sections

Fast replacement using innovative connection technology

Detection of triggering cause (via IO-Link)

Current and voltage measurement in each channel (via IO-Link)

Safety on the 24 V side

As opposed to the 230 V primary side, the circuit protection in the secondary circuit is often neglected. Another issue is that in the event of a failure of the 24 V DC voltage supply standard mechanical circuit breakers often do not trigger. This may happen with long cables, for example. The electronic circuit breakers from ifm monitor the circuit ideally and, if required, disconnect reliably. Individual branch circuits can be selectively disconnected. This allows a reduction of wire cross-sections in the load circuit of the switched-mode power supplies. The system has a modular structure and can be ideally adapted to the circuits of plant and machinery. The IO-Link version also allows evaluation of important diagnostic data.
Modular installation

The system has a modular structure and consists of a supply module to feed max. 40 A. The protection modules can be mounted side by side. This is done via a simple clip mechanism, completely without any bridges, jumpers or the like.

Easy mounting and minimised wiring complexity save cost and time. With the standard version the user can connect up to 10 and with the IO-Link version up to 8 safety modules to the head module.

Versions

There is a standard and an IO-Link version. In addition to the triggering mechanism, the modules feature an LED for signalling if the module has triggered, if it is active and to what extent it is utilised.

By means of a pushbutton each channel can be activated, deactivated or set.

The feed module has an additional collective output to provide a warning signal if a module has triggered.

More transparency with IO-Link

The IO-Link version has the same function; there is, however, additional information about each channel:

Transfer to the IO-Link master:
  • effective nominal current (1 byte cyclical)
  • output voltage (acyclical)
  • triggering counter (acyclical)
  • current unit status (1 byte cyclical):
    – short circuit
    – overload
    – undervoltage
    – limit reached (80 % In)

Transfer from the IO-Link master:
  • activation/deactivation
  • reset with triggering
  • reset triggering counter

The modules are available in the fixed sizes 2 A, 4 A, 6 A, 8 A and 10 A. The fixed current values prevent subsequent misuse by changing the max. current value.