

BACHMANN Whitepaper

GPIO Sensor with Relay Contacts

Connection to the building control system/sensor extension

Extended range of functions now available thanks to potential-free contacts

Monitoring is becoming a vital asset in data centres because metrics are fundamental in maintaining functional integrity. By monitoring critical measurement values, preventive measures can be taken to guarantee 24x7x365 availability.

On the rack level, that is the job of intelligent PDUs, which, besides collecting typical measurement values such as voltage [V], current [A] or output [W], use additional sensors to also track other operating parameters like temperature [°C] or air humidity [%].

These measurement values can be easily accessed by software and can be reported to master systems via Ethernet or Modbus TCP. However, transmitting alarm signals via relay contacts or using such contacts to evaluate external signals is often also required.

GPIO – General-Purpose Input/Output

Virtually no data centre administrator can predict today what the infrastructure requirements will be in a few years' time. This is why new investments are made in modular systems in order to remain flexible for the future too. For this reason, more and more signal contacts are used with a general-purpose input/output function. This function enables the user to monitor the status of a pushbutton or a door contact, for example. Another conceivable option would be to switch a signal lamp to display an alarm notification. A GPIO sensor offers the operator all kinds of possibilities.

PDU with integrated GPIO sensor

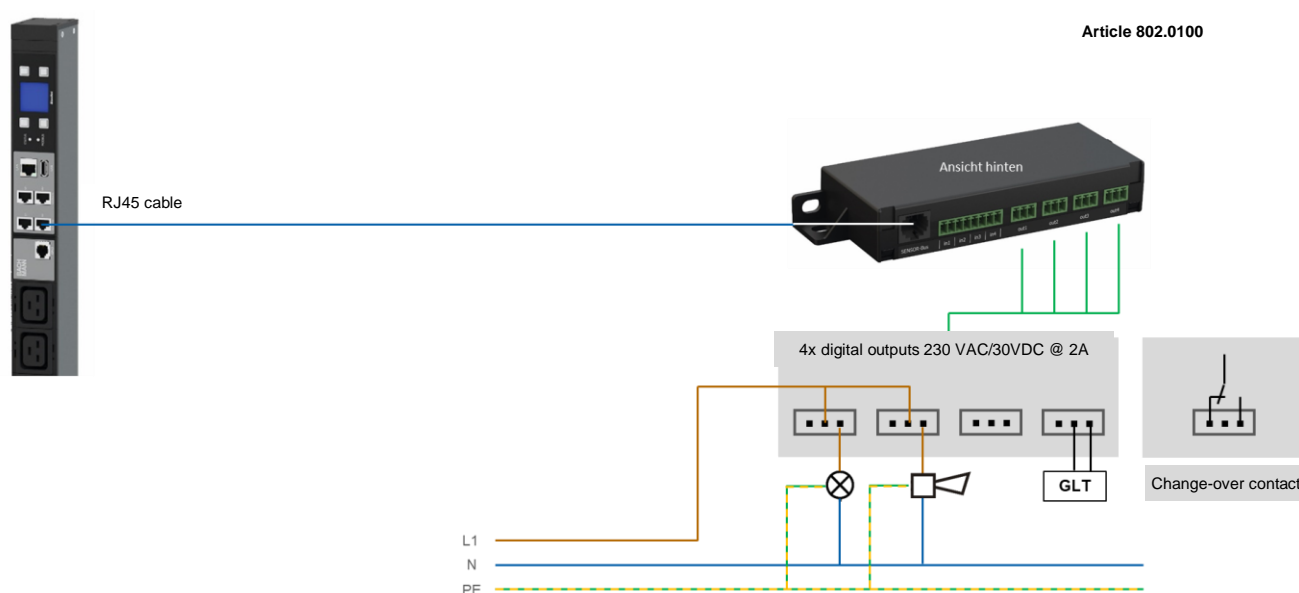
All PDUs from the *BlueNet* series (BN3000 to 7000) are fitted with an internal GPIO sensor (marked yellow) and offer the flexibility the user needs. If more inputs/outputs are required, the user can simply use the external GPIO module as an add-on module.



Application examples

A typical application for the GPIO sensor would be, for example, as additional door contacts on the server rack. In this case, the PDD would communicate the opening of a server rack door to the building management system as an alarm notification.

Other possibilities include an external leakage sensor, triggering a signal lamp or horn, and sending alarm signals to the building management system.



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