Universal current-sensitive ring-type current transformer according to the EN/IEC 62020-1 standard

Standard-compliant differential current measurement increases system efficiency and availability

With the SCT5564 ring-type current transformer, Beckhoff offers a universal current-sensitive measurement system for AC and DC differential currents in conformance with the EN/IEC 62020-1 standard. Its use in machine monitoring ensures, among other things, increased system availability and minimized maintenance costs through the early detection of insulation faults.

The SCT5564 differential current transformer (type B/B+) can be used as a residual current monitor (RCM) and can measure DC and AC residual currents with up to 100 kHz frequency in the 0 to 2 A range. With its numerous setting options, this RCM offers a flexible platform for differential current measurement and is suitable for a wide range of systems engineering applications. This offers advantages both in the planning phase of an industrial plant and when it is expanded to include new loads that operate with DC voltages or high switching frequencies and can potentially increase the leakage current in the overall system. Furthermore, early detection of insulation faults allows predictive maintenance to be implemented, thus increasing system availability. In addition, unwanted tripping of the residual current circuit breaker due to diminishing machine insulation is avoided, and the expense of (repeated) insulation tests in accordance with DGUV v3/VDE 0100 is replaced by efficient, permanent residual current measurement.

The SCT5564 differential current transformer has an analog 4...20 mA output that represents the real-time RMS value (TRMS) of the

Beckhoff Automation GmbH & Co. KG
Huelshorstweg 20
33415 Verl, Germany
Phone: +49 5246 963-0
E-Mail: info@beckhoff.com
www.beckhoff.com

Press contact
Silke Franke
Vera Schnatmeyer
Phone: +49 5246 963-140
E-Mail: press@beckhoff.com
www.beckhoff.com/press

measured differential current. In addition, a potential-free relay output (NO/NC) with freely selectable residual current can be used for warning purposes or even system shutdown if the TRMS residual current measured value exceeds the pre-set value. A test button and an external test button input are provided for periodic testing of the RCM in accordance with applicable product standards.

Crucial advantages and added value with PC-based control

Fault currents can also occur during normal operation, e.g. due to the magnetizing of an electric motor during startup. In such cases, the seamless integration of the current transformer into the PC-based control technology from Beckhoff creates special application advantages. In the example mentioned, the information available in the control system regarding the startup of a motor can reliably exclude false tripping. This is particularly relevant when multiple motors or actuators are used in a machine since an increasing residual current and thus a probable insulation fault can be assigned directly to the corresponding component without having to measure the differential current of each individual drive. The same applies, for example, to the monitoring of heating elements in plastics machines, where insulation loss due to aging can be efficiently and cost-effectively prevented by early replacement – via just one central measurement device and with corresponding control data.

➔ **www.beckhoff.com/sct5564**

Beckhoff Automation GmbH & Co. KG
Huelshorstweg 20
33415 Verl, Germany
Phone: +49 5246 963-0
E-Mail: info@beckhoff.com
www.beckhoff.com

Press contact
Silke Franke
Vera Schnatmeyer
Phone: +49 5246 963-140
E-Mail: press@beckhoff.com
www.beckhoff.com/press

Press picture:

Picture caption:

Machines and systems can be more efficient with intelligent differential current measurement via the SCT5564 ring-type current transformer.

Press kit:

www.beckhoff.com/media/downloads/press/pr032022_beckhoff.zip

Beckhoff Automation GmbH & Co. KG
Huelshorstweg 20
33415 Verl, Germany
Phone: +49 5246 963-0
E-Mail: info@beckhoff.com
www.beckhoff.com

Press contact
Silke Franke
Vera Schnatmeyer
Phone: +49 5246 963-140
E-Mail: press@beckhoff.com
www.beckhoff.com/press