digital reach pvt ltd

Image shown is a representation only

DR TPI- 11

TAP POSITION INDICATOR FOR TRANSFORMER MONITORING

INTRODUCTION:

Tap Position Indicator is used to indicate the tap position of the Power Transformer. Resistors are connected between each tap on the tap-changer. The connections from the Minimum, Maximum, and Wiper positions coming from the tap-changer are connected to the respective Min, Max, and Com terminals marked on the Rear Panel of the TPI.

When the unit is powered on, the display indicates the current position of the Tap-changer. As the tap is increased, the display increases and decreases as the tap is decreased. Check the TPI by changing the tap from position 1 (min) to the max. position and confirm that it reads correctly.

For 4-20mA Output, if required, adjust the output current by changing the count in 4-20mA O/P calibration mode as shown below.

For the 4-20mA Input option, if Max Tap is other than 17, Adjust it in SET mode Mt (Max Tap) using INC and SFT key.

APPLICATION

1. Transformer Operation Monitoring: Tap position indicators are essential for monitoring the tap-changer's position in real-time. This information helps operators assess the transformer's performance and ensures that it is operating at the desired voltage level.

2. Voltage Regulation: In power systems, tap changers are used to regulate voltage levels and compensate for variations in the electrical grid. Tap position indicators enable operators to adjust the transformer's turns ratio as needed to maintain a stable and reliable power supply.

3. Load Changes: During periods of varying electrical load, tap changers can be adjusted to optimize the transformer's efficiency and maintain a consistent voltage output. Tap position indicators provide the necessary feedback for operators to make timely adjustments based on load changes.

4. Remote Monitoring: Tap position indicators often come with remote monitoring capabilities, allowing operators to check the tap-changer status from a centralized control room. This feature enhances the overall efficiency of transformer management and reduces the need for on-site inspections.

5. Maintenance Planning: Monitoring tap-changer positions helps in planning preventive maintenance. Regular checks on the tap position indicator data can reveal patterns or trends that may indicate the need for maintenance or replacement of tap-changer components, ensuring the longevity of the transformer.

MAIN FEATURES

Robust Microcontroller-based design for the tropical application

Precise & Stable Indication of the Transformer Tap.

Low power requirement

All solid-state design and no moving parts offer extremely high reliability

Bright digital display offers accurate and unambiguous reading

4-20mA output for SCADA / PLC application

DR TPI- 11
SPECIFICATIONS

SPECIFICATION

Input	3 wires resistance input
Output	RS485 Modbus and 4-20 mA
Max. No. of tap position	17 Taps
Step Resistance /Tap	1 K ± 1% or user defined
Display	2 Digit 7 segment LED
Test mode	Display indicates 88
Auxiliary Supply	95-260V AC/DC, 5VA
Overall Dimensions	96 x 96 x 110 mm (H x W x D)
Panel Cutout Dimensions	96 x 96 mm (H x W)
Depth	110 mm
Operating temperature	0 °C - 60 °C
Weight	0.5 Kg. approx.

ABOUT US

Digital Reach enables the IoT devices to interconnect the embedded systems to the internet. The IoT devices are fully programmable as per customer requirements and it can be deployed in nearly all the areas like Manufacturing, Energy & Utility, Health Care, Home Automation, Retail etc. With our expertise in embedded hardware development, embedded software development, system integration, and project execution, we bring in our experience, commitment and team work to exceed our customer expectation in every customer engagement.

DIGITAL REACH PVT. LTD.
502, Venus Atlantis, Prahlad Nagar, Ahmedabad 380015, India
Mobile : +91 9898062209 | Email : info@digireach.com | www.digireach.com