

## IPOT 19

### HV Transformer Tap Changer Position Indicator



## Instrument Description

IPOT 19 high-voltage transformer tap changer position indicator is a panel mountable instrument which displays number of active transformer tap on its LED display. The code of tap position is also transmitted to 5 output relays. The instrument is capable to process up to 19 signals from transformer tap changer contacts and a signal of change-over state including its timing control.

During tap change-over ( in case change-over maximum time is not exceeded simultaneously ), two dashes are displayed and all relays are closed.

Error states of the switching, such like missing tap signal (E0 error message), two or more switched taps (E2) or change-over maximum time overrun (E1) are displayed and indicated with release of all output relays.

Voltage outage is indicated with all relays open.

Required time sequences and signal levels are factory preset according to customer specification.

## Installation

The instrument is built in a plastic box mountable in a switchboard panel. The installation opening dimensions are 92 x 92 mm. The instrument's position is fixed through enclosed locks.

To connect the controller there is connector with screw-on terminal in the back wall.

## Technical Specifications

### Customizable Parameters (to be specified at order)

tap signal loss (E0) or two or more tap signals (E2) maximum time	1 ÷ 60 seconds ( 0.5 sec step) default value 5 seconds
tap change-over (E1) maximum time	1 ÷ 60 seconds ( 0.5 sec step) default value 15 seconds

### Inputs-Outputs

maximum number signal inputs	19 tap signals + 1 change-over signal
input signal level	passive ( tap open ) active ( tap closed )
	0 ÷ +40 V DC *) +80 ÷ +240 V DC *)
number of output relays	5
output relay load capacity	250 V AC / 4 A
power supply	+80 ÷ +240 V DC, max. 0.8 W
installation overvoltage category	III as specified in EN 61010-1
EMC – emission	EN 50081-2 EN 55011 , class A
EMC – immunity	EN 61000-6-2

### Operating Conditions

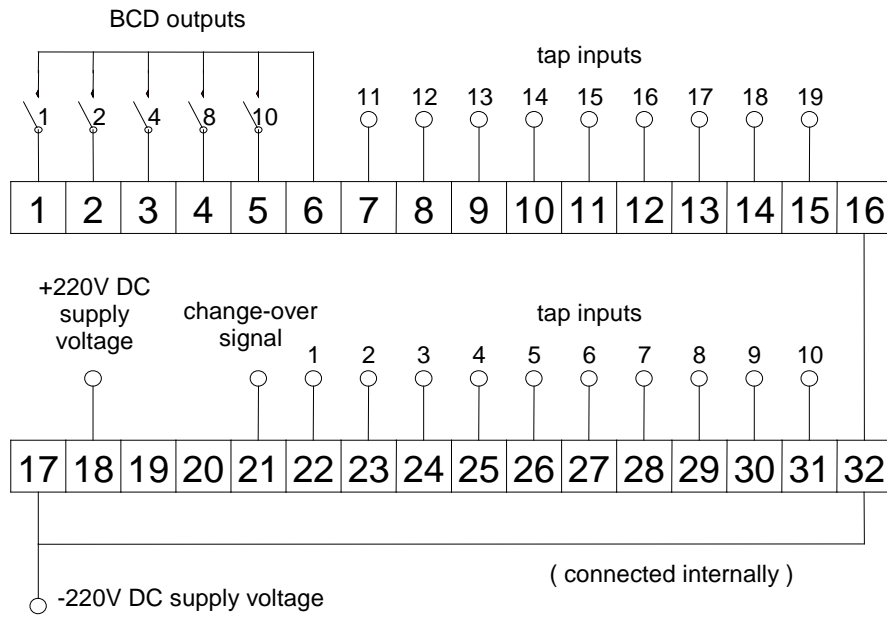
operating environment	class B2 as specified in IEC 654-1
temperature	operating storage
	-5° ÷ +40° C -40° ÷ +70° C
relative humidity	10 ÷ 75 %

### Physical Features

sealing	front panel rear panel	IP40 ( IP54 on request ) IP 20
dimensions	front panel installation depth installation panel cutout	96 x 96 mm 80 mm 92 x 92 mm
mass		0.2 kg

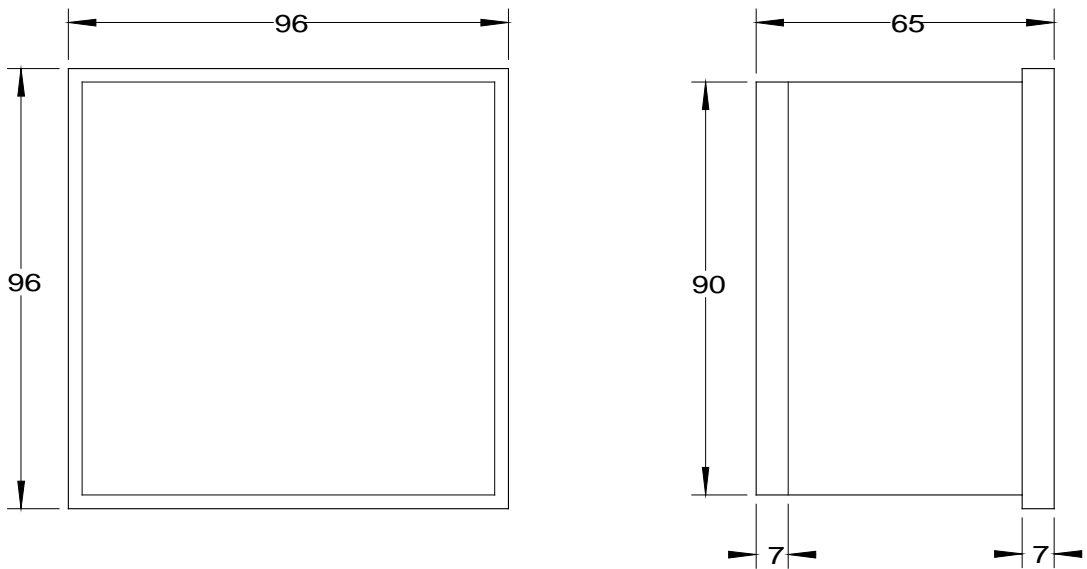
Comment.: \*) – other values on request

**Schematic Diagram**



Comment : other than BCD coding, normally closed output relay signals or alarm signal on request.

**Dimensions**



### Warranty Certificate

Warranty period of 24 months from the date of purchase, maximum 30 months from the date of dispatch from manufacturer's warehouse however, is provided for the instrument. Problems in the warranty period, provably because of faulty workmanship, design or inconvenient material, will be repaired free of charge by the manufacturer or an authorized servicing organization.

The warranty ceases even within the warranty period if the user makes unauthorized modifications or changes to the instrument, connects it to out-of-range quantities, if the instrument got damaged in out-of-specs falls or by improper handling or if it has been operated in contradiction with the technical specifications presented.

type of product: **IPOT 19**..... serial number .....

date of dispatch: ..... final quality inspection: .....

manufacturer's seal:

date of purchase: ..... supplier's seal: