

## **Voltage Presence Indicating System VPIS/3-52 kV (IEC 61958)**

### **General Characteristic:**

- Voltage presence indicating system for permanent monitoring of all 3-phase line voltages serves to indication of service voltage presence in range from 3 kV up to 52 kV/50-60 Hz, above all for el. distribution systems
- It complies with requirements given in the IEC 61958 (2000) international standard
- Fixed installation in front sheet cut-out (standardized dimension 96 x 48 mm according to DIN)
- Flashing LED diodes ensure a bright red signaling of individual phase service voltage in the 3-phase system network
- No external power is required, power demand is covered by direct consumption from individual MV system lines with help of capacitive coupling electrodes
- No maintenance is required
- Easy installation incl. cable connection with FAST-ON connectors
- Connection between capacitive sensors and indicator by unscreened three-core cable
- It is intended for indoor use in standard environment, for intermediate panels of rated voltage from 3 kV up to 52 kV / 50-60Hz
- Built-in test points in order to determine phase sequence
- Built-in protection by means of surge arrester
- Safe voltage at the built-in test points
- Maximum operating current 2.5  $\mu$ A (at start of signaling – threshold voltage)
- Simple functional check of the indicator with help of an external tester under service conditions (it is not subject of the set delivery, to be ordered separately)
- A special testing power supply enables indicator functional test with disconnected MV system network (it is not subject of the set delivery, to be ordered separately)
- Delivery of complete three-phase set (see below)
- Type test executed according to IEC 61958 (2000) and EN 61958 (2001) standards



## **Indicator Technical Data:**

Type	VPIS/3-52 kV
Nominal frequency	50 - 60 Hz
Suitable coupling electrodes	KUVAG supporting insulators series SGX xxNcap
$U_0 < 10 \% U_n$	no voltage signaling (IEC 61958)
$U_0 \geq 45 \% U_n$	voltage signaling (IEC 61958), flashing frequency > 1 Hz
Max. voltage at the indicator	safe (below 50 VAC according to IEC 529)
Max. thickness of switchgear's front sheet	2.5 mm
Degree of protection	IP 42 (event. IP 54, if requested)
Operating temperature	-25 to +55 °C
Dimensions (W x H x D)	96 x 48 x 70 mm
Weight	approx. 76 g

## **The Three-Phase Set Contains:**

- 3 pieces supporting insulator with built-in KUVAG capacitive sensors according to selected rated voltage (see below)
- 3 pieces screw M6x8
- 1 piece unscreened three-core cable equipped with 4.8 mm FAST-ON female connectors (indicator's side) and cable lugs M6 (for connection of coupling electrodes). Standard cable length: 3 m. Other lengths consult with manufacturer
- 1 piece earth cable equipped with 4.8 mm FAST-ON female connector (indicator's side) and cable lug M6 (for earth connection). Standard cable length: 0.3 m. Other lengths consult with manufacturer
- 1 piece integrated voltage presence indication system for permanent indication, type VPIS / 3-52 kV
- Instructions for Installation and Use

## **Rating of Coupling Electrodes**

In order to guarantee proper function of the VPIS, capacitances of coupling electrodes should be in ranges specified in table below:

Rated voltage (phase to phase) (kV)	3	6	10	17.5	24	36	52
Capacitance of coupling electrode (pF)	64-132	32-66	19-40	11-23	8-17	5.4-11	3.7-7.6

Suitable capacitance values for other rated voltages that are not given in the table can be obtained by linear interpolation.

## **Note**

External tester under service conditions, special testing power supply unit, and equipment to determine phase sequence simultaneously are not subject of the set, they have to be ordered separately.