05 CAPACITIVE DIVIDER INSULATORS

NECESSARY INFORMATION FOR ORDERING:

1- Voltage detecting system: HR or LRM system.

2- Nominal voltage, Un (if different from Um).

3- Length of the coaxial cable for connection.

4- If the capacitance of the indicator is different from IEC 61243-5, please inform us about the capacitance of the indicator.

APPLICATION

Indoor voltage divider insulators are used for the detection of the presence of voltage on phase lines.
The basic operation principle is on the capacitive division of phase voltage. The voltage divider insulators are used with capacitance coupled voltage indicating system.
They are suitable for temperatures from -25°C up to +90°C.

CONSTRUCTION

Indoor voltage divider insulators are epoxy cast resin.
The main dimensions and mechanical requirements are in accordance with DIN 48136.

TESTS

In addition to the tests applied to the standard insulators according to VDE 0441 part 3 (1984),

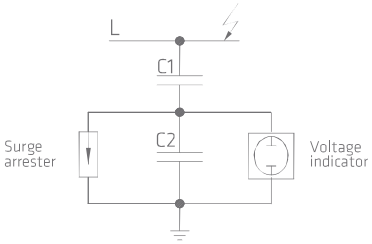
IEC 60660-1999 FOLLOWING ROUTINE TESTS ARE PERFORMED:

- Power-frequency withstand voltage test [dry]
- Partial discharge measurement
- Capacitance test

Capacitive voltage indicating system for medium voltage

Capacitance-coupled voltage indication system

The voltage indication system consists essentially of a capacitive voltage divider between a conductor L and earth. Moreover, the system includes an indicator for the detection of voltage and a surge arrester for protection purposes.

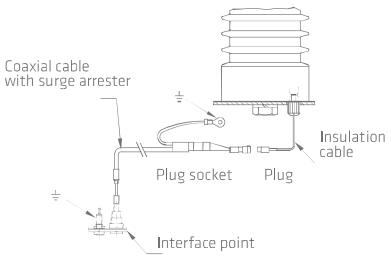


Function

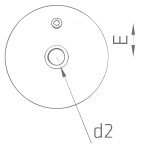
Voltage division occurs due to the capacitive values of C1 and C2.
According to IEC 61243-5 the indication should start in between 10% of the read voltage of the system. For that reason, the capacitance values are adjusted in accordance within this range so that the indication starts.
Up to 10% of the rated voltage, there shall be no indication. Under any circumstance above 45% of the rated voltage the indication shall be "ON".
The presence of voltage is indicated separately and independently for each phase conductor. The system operates without a battery or auxiliary supply.
The energy required for the system is being drawn from the high voltage system (CAPDIS system may require auxiliary power for some additional functions depending on the application).

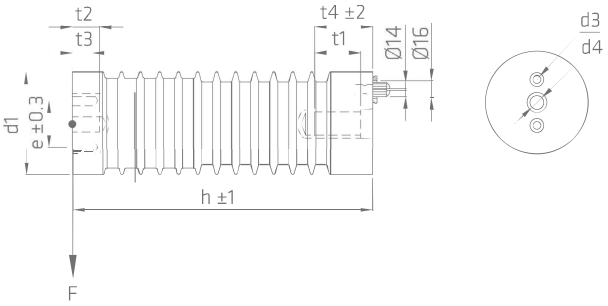
Shock hazard protection

Voltage indication system does not present any risk during normal or disturbed operation. During normal operation, the voltage divider capacitance CI limits the currents to less than 100µ±A.



CAPACITIVE DIVIDER INSULATORS (FOR INDICATION AND STATIC LOADS)





Part No	Type	Um (kV)	Min. Creepage [mm]	Ripples	Capacitance (LCR meter)	Min. Bending [N] (Static)	h	Dimensions [mm] E	e	d1	d2	d3	d4	t1	t2	t3	t4	Weight [kg]	PCS/Box
1000514	DKA-10N	7.2	184	5	21 ±20%	5000	130	30	36	76	M16	M6	M10	25	20	10	37	0,9	9
1000515	DKB-10N		184	5		10000		30	46	76	M20	M10	M16	24	20	12	36	1,0	9
1000514	DKA-10N	12	184	5	21 ±20%	5000	130	30	36	76	M16	M6	M10	25	20	10	37	0,9	9
1000515	DKB-10N		184	5		10000		30	46	76	M20	M10	M16	24	20	12	36	1,1	9
1000516	DKA-20S	17.5	237	6	21 ±20%	5000	175	30	36	83	M16	M6	M10	35	20	10	47	1,3	9
1000517	DKB-20S		237	6		10000		30	46	83	M20	M10	M16	35	30	12	47	1,4	9
1000518	DKA-20N	24	300	8	16 ±20%	5000	210	30	36	85	M16	M6	M10	35	20	10	47	1,8	9
1000519	DKB-20N		300	8		10000		30	46	85	M20	M10	M16	35	30	12	47	1,9	9
1000520	DKA-30N	36	438	11	7,5 ±20%	5000	300	34	36	103	M16	M6	M10	35	20	10	47	3,8	6
1000521	DKB-30N		438	11		10000		34	46	103	M24	M10	M16	46	30	12	58	3,7	6
1032399	DKB-30N		438	11	16 ±20%	10000		34	46	103	M24	M10	M16	46	30	12	58	3,7	6

Um: Highest voltage for equipment

ATTENTION!

The insulators should be used for indication purposes and should not be exposed to excessive dynamic loads.

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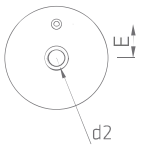
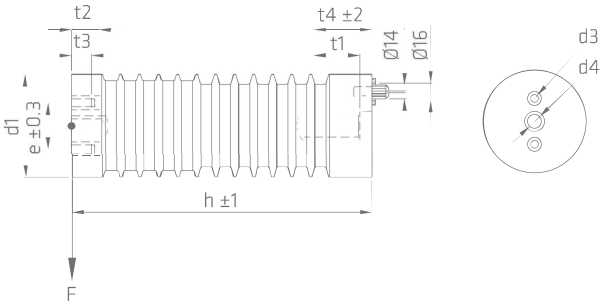
CAPACITIVE DIVIDER INSULATORS (FOR INDICATION AND STATIC LOADS)





Part No	Type	Um (kV)	Min. Creepage [mm]	Ripples	Capacitance (LCR meter) [pF]	Min. Bending (static) [N]	h	Dimensions [mm] E	e	d1	d2	d3	d4	t1	t2	t3	t4	Weight [kg]	PCS/ Box
1000508	KA-20S	17,5	237	6	100 ±20%	5000	175	30	36	83	M16	M6	M10	33	20	10	45	1,3	9
1000509	KB-20S		237	6		10000		30	46	83	M20	M10	M16	35	20	20	47	1,4	9
1000510	KA-20N	24	300	8		5000	210	30	36	85	M16	M6	M10	33	20	10	45	1,8	9
1000511	KB-20N		300	8		10000		30	46	85	M20	M10	M16	38	20	12	50	1,9	9
1000443	EK30N-400	36	520	11	16 ±20%	4000	300	30	36	80	M12	M6	M10	23	20	9	33	2,15	9
1000512	KA-30N		488	11	50 ±20%	5000		34	36	95	M16	M6	M10	33	20	10	45	3,00	6
1000513	DKB-30N/E		488	11		10000		34	46	95	M24	M10	M16	48	30	12	60	3,18	6

Um: Highest voltage for equipment

ATTENTION!

The insulators should be used only for indication purposes and should not be exposed to dynamic loads .
High voltage connection for indication shall be flexible cable.