

Coupler Specifications

Overhead

Manufacturer - Arteche

**ARTECHE**N° 0608367**TESTS CERTIFICATE**

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COUPLING TYPE: CAPACITIVE**MODEL: OVERCAP-S-24****INSULATION V.: 24 KV.****STANDARDS:**

IEC-60358

IEC-61334-3-22

INDIVIDUAL ELECTRIC TESTS

TEST VOLTAGE (DIELECTRIC STRENGTH):

50 KV.

Applied during 1 minute between primary terminal and earth

FRECUENCY: 50 Hz

TEST VOLTAGE (POWER FREQUENCY):

5 KV.

Applied during 1 minute between secondary terminal and earth

PARTIAL DISCHARGES TEST

≤ 50 pC

28,8 KV.

INSERTION LOSSES

PIECE N°.	INSERTION LOSSES < THAN					RESULT	TESTED BY
	4Mz	10Mhz	20Mhz	30Mhz	40Mhz		
0608367/ 14	3dB	3dB	3dB	3dB	3dB	OK	Borja

Date: 12/06/2006

Certified Correct:

OVERCAP S-24



CAPACITIVE COUPLING SOLUTION FOR OVERHEAD MEDIUM VOLTAGE LINES

Technical Specifications

TYPE	CAPACITIVE COUPLER			
Insulation Voltage	24 kV			
Frecuency range	2 – 40 MHz			
Insertion losses	< 2dB			
Impedance Line side PLC equipment side	Depends on Overhead Line 's Topology (200Ω supposed) 50Ω			
Line connection	Hot line clamp. Over metallic base on the pole			
Cable diameter	mm		AWG	
	Min	Max	Min	Max
	5,3	13,8	3	5/0
PLC connection	TNC connector			
Earth connection	M6 A2 screws			
Dimensions Height Diameter Leakage distance Weight	318 mm Ø112 mm (max) & Ø60 mm (base) 875 mm 2,85 Kg (with connector)			
Operating and storage conditions	-Temperature: from -20 to +85°C and relative humidity from 10 to 100% according to EN 60870-2-2 class C2 -Storage: from -40 to +85°C and relative humidity from 10 to 100% according to EN 60870-2-2 class C3 -Ageing: according to IEC 1109			
Materials Insulation Circuitry	Silicone Polyamide 6			
Drain Coil Impedance at 50/60 Hz Current carried at 50/60 Hz	<20 Ω -1 Arms permanent -50 Arms for 0.2 s (according to IEC 61334-3-22)			
Gas surge arrester Discharge current(ISN)	5kA (8/20μs) according to IEC 60060-1			
Tests Type tests AC Voltage test, dry AC Voltage test, wet Lightning impulse voltage test Capacitor discharge		IEC 60358	ANSI C93.1 (equivalent)	
	50kV	9.2.1	6.2.1.2	
	50kV	9.2.2	6.2.1.3	
	125kV	9.2.5	6.2.1.4	
	125kV	11		
Mechanical tests Cantilever Terminal Torquing	Test procedure determined according to UNE EN 60099-4 standard			
Routine test Dielectric strength Partial discharges Galvanic insulation	50kV	9.1	6.2.6	
	<50pC for 28,8 kV	13	6.2.7	
	5kV _{rms} according to IEC 61334-3-22			

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ARTECHE

ISO 9001:2000
ISO 14001

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Coupler Specifications

Overhead

Manufacturer - IBEC



OHC10K - Overhead Medium-Voltage BPL Coupler

Specifications

- 12.5 KV Nominal Line Voltage, (12–14.5 KV)
- Coupler and Arrester in one
- Frequency Response: 3-40 MHz
- Coupling Loss: 3-4 dB
- Input Impedance: 50-75 Ohms unbalanced coax (F-type female)
- Line Impedance: 400 ohms
- Ground lead/Coax Isolator – Prevents system fault in unlikely event of device failure
- Certified to ANSI/IEEE C62.11
- 10KA surge rating
- Surge Tested as follows:
 - 20 current surges of 10 kA crest, 8/20 μ s waveshape followed by 2 current surges of 40 kA crest, 8/20 μ s waveshape
 - 2 current surges of 100 kA crest, 4/10 μ s waveshape
 - 20 current surges of 250 A crest 2000 μ s duration rectangular wave
- Housing Insulation withstand ratings:
 - 90 kV Impulse (1.2/50 μ s)
 - 62 kV Dry (1 min)
 - 46 kV Wet (10 sec)

Coupler Protective Characteristics

Rating (kV rms)	MCOV (kV rms)	Front-of-wave Protective Level* (kV crest)	Maximum Discharge Voltage (kV crest) 8/20 μ s Current Wave					
			1.5 kA	3 kA	5 kA	10 kA	20 k	40 kA
10	8.40	34.4	25.8	27.4	28.6	31.2	34.5	38.9

*Based on 10 kA current impulse that results in a discharge voltage cresting in 0.5 μ s.

Dimensions: 13 in x 2 in

Weight: 2.2 Kg, 4.8 lbs

U.S. patents 5,864,284 6,040,759

U.S. and Foreign patents pending



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Coupler Specifications

Underground

Manufacturer - KAICOM



Product

Kaicom is a leading designer and manufacturer of unique and creative telecommunication products based on experienced wireline and wireless telecommunication fields.

Kaicom Power Line Communication

❖ KPA-MLC-451 MV Inductive Coupler

Test	Insertion Loss	

Parameter	Details
Nominal voltage	24kV-36kV insulated cable
Coupling mode	Phase-to-phase, Phase-to-earth
Cable diameter	< 44 mm
Operating Frequency Range	2 - 40 MHz
Insertion Loss	< 3dB
Connecting cable Impedance	50 Ω
Rated lightning impulse withstand voltage	5kV
Insulation resistance	>100M Ω
Dielectric strength	3kV
Nominal current 50Hz	360A
Operating temperature	-20 $^{\circ}$ C / +60 $^{\circ}$ C
Relative humidity	100%
Connection to communication terminal	BNC connector