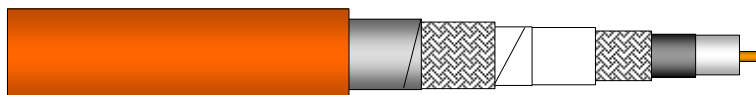


TCA3, 0.5/2.9

Coaxial and Triaxial FRNC-High Voltage Low Power
Cables acc. to CERN and DESY Specifications



Application

see product overview

Standards

Cern-Spec. DO-25315/TS/LHC April 2008

Flame resistance

IEC 60332-1

Construction

Inner conductor	copper clad steel wire, bare , diameter 0.5 mm
Insulation	PE, diameter 2.5 mm
Semiconductive layer	semiconductive PE, diameter 2.9 mm
1 st braid	copper wire braid, tinned + tinned stranded copper drain wire, diameter 3.5 mm, covering factor $\geq 80\%$
Inner sheath	PE, diameter 4.7 mm
Wrapping	PET-foil, diameter 4.8 mm
2 nd braid	copper wire braid, tinned + tinned stranded copper drain wire, diameter 5.4 mm, covering factor $\geq 80\%$
Wrapping	Al-PET-Al-foil, diameter 5.7 mm
Sheath	FRNC, flame retardant, non corrosive Copolymer, diameter 7.0 ± 0.3 mm
Marking	CERN TCA3 – DRAKA – manufacturing year ZERO HALOGEN, batch code and meter marking
Colour	orange, RAL 2011

Mechanical properties

Minimum bending radius (during Installation)	without load	5 x D (D= outer diameter)
	with load	10 x D (D= outer diameter)
Temperature range		-25° C to + 70° C
Radiation resistance		$\geq 10^6$ Gy (= 10^8 rad)
Fire propagation test		cables < 10 mm acc. to IEC 60332-1
		cables > 10 mm acc. to IEC 60332-2-24
Corrosivity		acc. to IEC 60754-2
Smoke density		acc. to IEC 61034

TCA3, 0.5/2.9

Electrical properties

at 20°C

DC resistance	Inner conductor	$\leq 242.6 \Omega/\text{km}$
	1 st screen	$\leq 15.7 \Omega/\text{km}$
	2 nd screen	$\leq 9.8 \Omega/\text{km}$
Mutual capacitance		ca. 75 pF/m
Characteristic impedance		$70 \Omega \pm 10 \%$
Operating voltage	conductor/1 st screen	2.7 kV _{DC}
	1 st screen/2 nd screen	0.5 kV _{DC}
Test voltage	conductor/1 st screen	7 kV _{DC}
	1 st screen/2 nd screen	1 kV _{DC}
Insulation resistance	conductor/1 st screen	$\geq 10 \text{ G}\Omega \cdot \text{km}$
	1 st screen/2 nd screen	$\geq 100 \text{ M}\Omega \cdot \text{km}$

Technical data

Product code	Designation	Type	Brand name	Outer diameter mm	Weight kg/km	Standard delivery length m	Drum size *OWD	Gross weight kg	Copper content	Tensile force N
1002807	2YC2YC (St)H	0.5/2.9	TCA 3	7.0	80	1000	600/250/403	104	36.3	250

*OWD (One way drum)

All other requirements in accordance with CERN Spec. DO-25315/TS/LHC April 2008
Standard delivery lengths 1000 m: The drum width shall not exceed 750 mm.

[PRODUCT CODE TABLE]

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