

Insulated Airfield Lighting Cable (2.8/5kV)

Designed for runway series circuits



**CABLE
YOU CAN
TRUST**

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ABERDARE
CABLES

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Cable Description

Conductor	: Single core, 6mm ² cross sectional area, 7 wire tinned annealed copper conductor.
Conductor Screen	: Extruded semi-conducting layer to equalise electric stress around the conductor.
Insulation	: Cross-linked polyethylene insulation giving superior electrical and mechanical characteristics.
Insulation Screen	: Semi-conducting woven tape for stress equalisation.
Metallic Screen	: Brass screen tape - Copper is available where enhanced mechanical properties is not required.
Sheath	: Polyethylene (PE) or Polyvinylchloride (PVC) - Standard colours are yellow, black, red, blue, green, grey and white.

* Other constructions and conductor sizes are available on request.

Applications Information

Aberdare's primary airfield lighting cable has been designed for runway series circuits to connect the constant current regulator with the primary windings of the series transformers. The brass screened cables offer higher mechanical resistance against termites and small rodents and is suitable for direct burial in ground. The cable is also semi-conductive screened to allow the cable to be safely operated continuously at the nominal voltage rating of 2.8kV to ground.

Properties

Voltage Rating	: 2.8/5kV
Packaging	: 1000 metres on wooden drums

Specification

- Federal Aviation Administration (FAA) advisory circular L824 AC 150/5345 7E.
- Aerodrome Design Manual (ICAO) part 5, Electrical Systems.
- Insulation Cable Engineers Association (ICEA) S-93-639 and S-93-659.
- South African National Standard (SANS) 1411 Part 1 - Metric conductors

Aberdare theft prevention technologies: use CableGuard® exclusively available through Aberdare Cables and accredited stockists.

Our website, www.aberdare.co.za, shows the methods used and has the full demonstration video available to view.

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Technical Data

Electrical Properties

Cable Size (mm ²)	Nominal Stranding No. x diameter	Approx. Overall Diameter (mm)	Conductor Resistance @ 20°C (Ω/km)	Impedance (Ω/km)	Current Rating		1 Sec Short Circuit Rating (kA)	Approx. Cable Mass (kg/m)
					Ground (A)	Duct (A)		
6	7/1,05	12,5	3,11	3,93	67	61	0,860	0,2

Electrical data is based on the following parameters:

Maximum sustained conductor temperature	Ground temperature	Ambient air temperature (Free air shaded)	Ground thermal resistivity	Depth of laying to top of cable or duct
90°C	25°C	30°C	1,2 K.m/W	800mm

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Edition 1



Notice to the user of Electric Cable products manufactured by Aberdare Cables:

- **“WARNING: Electrical equipment (including cable) and installations which form part of a facility, whether fixed, mobile or moveable are by nature inherently dangerous when energized with electrical power as contact with un-insulated or damaged components of such a facility may result in injury, loss of life and damage to property. Only qualified persons should attend to the installation of such electrical equipment, the maintenance thereof, and the repair of any faulty facilities which have an electrical component.”**
- Selection and Installation of the product must be carried out as per the applicable compulsory specifications by appropriately qualified persons and certified by a competent person so authorized by law prior to being put into service. All fixed electrical Low Voltage installations must have a valid Certificate of Compliance (COC)
- Low voltage electrical installations up to 600/1000V must conform to the compulsory specification SANS 10142-1 “The Wiring of Premises Part 1: Low voltage installations”
- SA Legislation determines that the User or Lessor is responsible for the safety of the electrical installation.
- All Medium Voltage installations above 1 kV must conform to the specification SANS 10198 “The Selection, Handling and installation of electric power cables of rating not exceeding 33 kV”; and where applicable SABS 10142-2 “The wiring of premises Part 2: Medium voltage installations above 1 kV a.c. and not exceeding 22kV a.c. and up to and including 3 000 kW installed capacity”.
- The following **Compulsory Safety Standards** are applicable to Electric Cables manufactured, imported and used in South Africa and no product may be used which does not comply to the applicable standard:
 - (VC 8075) SANS 1507: Electric Cables with solid dielectric insulation for fixed installations (300/500 V to 1900/3300 V)
 - (VC 8077) SANS 1339: Electric Cables Cross linked Polyethylene (XLPE) insulated cables for rated voltages 3,8/6,6 kV to 19/33 kV
 - (VC 8077) SANS 97: Electric Cables Impregnated paper insulated metal sheathed cables for rated voltages 3,3/3,3 kV to 19/33 kV
 - (VC8006) SANS 1574: Electric Flexible Cables with solid dielectric insulation.
- All cables manufactured to a compulsory safety standard must be clearly marked with the applicable SANS standard number as well as the Manufacturer's name.
- Aberdare Cables manufactures all Electric Cables made to Compulsory standards under the SABS Mark scheme. Products manufactured under the SABS mark scheme carries the wording “SABS” to show that the manufacturer is a licensed Mark Holder. The SABS Mark gives the user the assurance that the South African Bureau of Standards monitors the quality of the products which carries this mark and verifies the quality system used by Aberdare Cables to manufacture these products, on an ongoing basis.
- Compulsory specifications (VC's) may be downloaded for free from the SABS website www.sabs.co.za.
- The user of electric cable products has the right to take up any issue of concern with the **National Regulator of Compulsory Specifications at +27(0)12 428 5000**

POSSIBLE SPECIFICATION CHANGES: Aberdare's policy of continuous product improvement may result in changes to the finished product, the parameters of which may differ from the published parameters in this brochure. Aberdare reserves the right to change product specifications from time to time to effect improvements and/or enhancements and accepts no liability arising from any differences between the published parameters of this brochure and the finished product, unless by prior written agreement.

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Electrical Accessories

