

Specification for

Minyvin type electric cables (metric units)

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Foreword

This British Standard was first published in 1976 to provide a range of cables based on the same construction as Minyvin cables specified in G 195:1966, but having dimensions and test measurements in metric units. A range of multicore, screened and sheathed cables was also introduced.

This revision is identical with the 1976 edition except that provision has been made for the identification of cable manufactured in accordance with this standard, and changes have been made to the “resistance to fluids” and the “check voltage” tests.

Although cables manufactured in accordance with this standard are intended to be interchangeable with cables in the G 195 range, attention is drawn to the variations in dimensions of certain sizes that may have an effect on crimping and insulation stripping characteristics. Differences in current ratings exist between the two ranges, and further information is included in Appendix A.

This standard is intended to be read in conjunction with G 212 “*General requirements for aircraft electrical cables*” which specifies the general requirements and test methods for this range of cables.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 9 and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

Amendments issued since publication

Amd. No.	Date of issue	Comments

This British Standard, having been prepared under the direction of the Aerospace Standards Committee, was published under the authority of the Executive Board and comes into effect on 31 December 1980

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Section 1. General

1 Scope

1.1 This British Standard states the requirements for Minyvin type cables for aircraft wiring, which are suitable for continuous use where the maximum stabilized conductor temperature does not exceed 105 °C. The cables are suitable for fixed wiring in aircraft at temperatures down to – 75 °C, but are not suitable for severe flexing at temperatures below – 30 °C.

1.2 The cables do not support combustion but they do not comply with the requirements of 3G 100 in respect of fire resistance.

1.3 The cables are suitable for use where the potential between conductors or between a conductor and screen or the aircraft structure does not exceed 300 volts (r.m.s) and the frequency does not exceed 1 600 Hz. The cables withstand a transient voltage of up to 1 500 volts.

1.4 The cables are suitable for use in areas where ester-base fluids are present.

1.5 The maximum current ratings for Minyvin cables are shown in Appendix A.

2 References

Reference is made in this standard to the following British Standards:

3G 100, *General requirements for equipment for use in aircraft — Part 2: All equipment — Section 3. Environmental conditions — Subsection 3.12. Fluid contamination.*

G 212, *General requirements for aircraft electrical cables.*

3 Requirements

The cables shall comply with the requirements specified in the relevant sections of this British Standard, and with the related requirements of G 212 “*General requirements for aircraft electrical cables*”, which are also specified.

Section 2. Minyvin cables

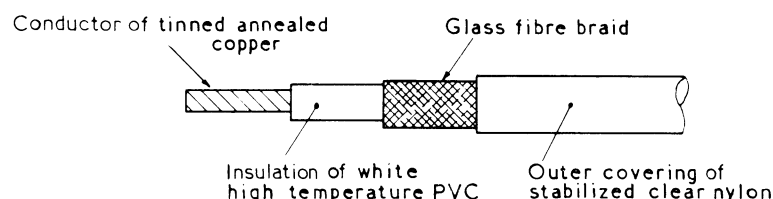


Table 1 — Details of Minyvin cables

Cable size	Nominal conductor area		No. and nom. dia. of wires	Conductor dia.		Radial thickness of PVC	Radial thickness of nylon ^a		Overall dia.		Max. conductor resistance at 20 °C Ω/km	Mass	
	mm ^{2b}	circ. mils ^c (ref. only)		nom. mm	max. mm		min. mm	Average (max.) mm	min. mm	max. mm		nom. (ref. only) g/m	max. g/m
22	0.336	663	19/0.15	0.75	0.80	0.15	0.08	0.17	1.40	1.70	60.0	5.1	5.4
20	0.597	1 180	19/0.2	1.00	1.05	0.18	0.08	0.17	1.70	2.00	33.4	8.0	8.5
18	0.933	1 840	19/0.25	1.25	1.30	0.20	0.08	0.17	2.00	2.30	21.2	11.7	12.4
16	1.34	2 650	19/0.30	1.50	1.55	0.23	0.08	0.17	2.30	2.60	14.7	16.2	17.2
14	1.82	3 580	37/0.25	1.75	1.82	0.23	0.08	0.17	2.60	2.90	10.9	21.4	22.7
12	2.89	5 690	37/0.315	2.20	2.28	0.23	0.08	0.17	3.05	3.35	6.73	32.2	34.1

^a For the measurement of the radial thickness of nylon, see Appendix B.

^b Calculated on the basis of the formula $\frac{n\pi d^2}{4}$, where d is the nominal diameter of each individual wire in millimetres, and n is the number of individual wires in the conductor.

^c Calculated on the basis of the formula d^2n , where d is the nominal diameter of each individual wire in mils (1 mil = 0.001 in (0.0254 mm)), and n is the number of individual wires in the conductor (given for reference in relation to inch-dimensional crimped terminations).