



BS 4941 : Part 1 : 1979

UDC 621.313.13.027.4 - 57 : 621.316.5/.9

(Reprinted, incorporating Amendment No. 1)

Specification for

**Motor starters for voltages up to
and including 1000 V a.c. and 1200 V d.c.**

Part 1. Direct-on-line (full voltage) a.c. starters

(Implementation of CENELEC HD 421)

Spécification des démarreurs de moteur pour les tensions inférieures
et égales à 1000 V en courant alternatif et 1200 V en courant continu

Partie 1. Démarreurs directs (sous pleine tension) en courant alternatif

Spezifikation für Motorstarter für Spannungen bis und einschließlich
1000 V Wechselstrom und 1200 V Gleichstrom

Teil 1. Wechselstrom- Motorstarter zum direkten einschalten

BS 4941 : Part 1 : 1979

Foreword

This revision of BS 4941 : Part 1 has been prepared under the direction of the Power Electrical Engineering Standards Committee. It specifies direct-on-line (full voltage) a.c. motor starters. BS 4941 : Part 1 : 1973 was harmonized technically with IEC 292-1 : 1969, published by the International Electrotechnical Commission (IEC), but was not published as a dual-numbered standard. Since its publication Parts 2, 3 and 4 of BS 4941 were published as dual-numbered standards. BS 4941 : Part 1 incorporated IEC 292-1A : 1971 but subsequently substantial amendments to the IEC Publication have been published by way of IEC 292-1B : 1973 and IEC 292-1C : 1975 and since these affected certification it was decided to issue a revision of BS 4941 : Part 1 as a dual-numbered standard incorporating these amendments. Amendment No. 1 to the 1979 revision of BS 4941 : Part 1 brings the British Standard into alignment with the harmonized standard document HD 421 published by the European Committee for Electrotechnical Standardization (CENELEC) and removes the dual-numbering. HD 421 consists of IEC Publication 292-1 : 1969 and its Amendment No. 1 : 1979 and supplements 292-1A : 1971, 292-1B : 1973 and 292-1C : 1975, but has introduced modifications to clauses 4.4.4.3.1, 7.1.3.2 and 7.2.2. HD 421 also incorporates IEC Publication 292-2 : 1970 and IEC Publication 292-3 : 1973.

For ease of reproduction most of the text and format of the referenced IEC Publications have been used as the basis of this British Standard. Some terminology and conventions are not identical with those in British Standards; attention is drawn especially to the following.

Wherever the word 'Recommendation' appears referring to this standard, it should be read as 'Part of BS 4941'.

Cross-references

International standards	Corresponding British Standards
IEC 85 : 1984	BS 2757 : 1986 Method for determining the thermal classification of electrical insulation (Identical)
IEC 144 : 1963	BS 5420 : 1977 Specification for degrees of protection of enclosures of switchgear and controlgear for voltages up to and including 1000 V a.c. and 1200 V d.c. (Identical)
IEC 292	BS 4941 Specification for motor starters for voltages up to and including 1000 V a.c. and 1200 V d.c.
IEC 292-2 : 1970	Part 2 : 1977 Reduced voltage a.c. starters, star delta starters (Identical)
IEC 292-3 : 1973	Part 3 : 1977 Rheostatic rotor starters (Identical)
IEC 439 (now reissued as IEC 439-1 : 1985)	BS 5486 Low voltage switchgear and controlgear assemblies Part 1 : 1986 Specification for type-tested and partially type-tested assemblies (Identical)

The Technical Committee has reviewed the provisions of the following international standards to which reference is made in the text, and has decided that they are acceptable for use in conjunction with this standard.

International standards	Related British Standards
IEC 157-1 : 1973	BS 4752 Specification for switchgear and controlgear for voltages up to and including 1000 V a.c. and 1200 V d.c. Part 1 : 1977 Circuit-breakers
IEC 158-1 : 1970	BS 5424 Specification for controlgear for voltages up to and including 1000 V a.c. and 1200 V d.c. Part 1 : 1977 Contactors
IEC 269-1 : 1968	BS 88 Cartridge fuses for voltages up to and including 1000 V d.c. and 1500 V d.c. Part 1 : 1977 General requirements BS 1361 : 1971 Cartridge fuses for a.c. circuits in domestic and similar premises BS 1362 : 1973 General purpose fuse links for domestic and similar purposes (primarily for use in plugs)
IEC 282 : 1974	BS 2692 Fuses for voltages exceeding 1000 V a.c. Part 1 : 1975 Current limiting fuses

NOTE. In table V, note 2 to table V, table VI, note 5 to table VI and in paragraphs 3 and 5 of 8.2.2.5, the unit symbol 'deg C' should be read as '°C'. In paragraph 6, of 8.2.2.2 and paragraph 5 of 8.2.2.3 '1 deg C per hour' should be read as '1 °C/h'.