

Resistance welding water-cooled transformers of the press package and portable types —

Part 1: Specification for press-package transformers

[ISO title: Resistance welding equipment — Particular specifications applicable to transformers with two separate secondary winding for multi-spot welding as used in the automobile industry]

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Welding Standards Committee (WEE/-) to Technical Committee WEE/26, upon which the following bodies were represented:

- Association of Supervisory and Executive Engineers
- British Non-ferrous Metals Federation
- British Steel Industry
- British Telecommunications plc
- Copper Development Association
- Electricity Supply Industry in England and Wales
- Health and Safety Executive
- Society of British Aerospace Companies Limited
- Society of Motor Manufacturers and Traders Limited
- Welding Institute
- Welding Manufacturers' Association (BEAMA Ltd.)
- Coopted members

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National foreword

This Part of BS 4819, which has been prepared under the direction of the Welding Standards Committee, supersedes part of BS 4819:1972. It is identical with ISO 7284:1984 *“Resistance welding equipment — Particular specifications applicable to transformers with two separate secondary windings for multi-spot welding, as used in the automobile industry”*, published by the International Organization for Standardization (ISO). It is one of a series of covering standards resistance welding equipment and associated accessories.

The present edition of BS 4819 has been divided into the following two Parts, for ease of use:

- *Part 1: Specification for press-package transformers;*
- *Part 2: Specification for portable transformers.*

For the purposes of this Part of BS 4819 the designation statement required by item a) of clause 8 is replaced by the following:

- a) the reference to this Part of BS 4819, i.e. BS 4819-1;

In the example the designation then reads:

“Transformer BS 4819-1-B-1-7, 1-45-380”.

Terminology and conventions. The text of the International Standard has been approved as suitable for publication as a British Standard without deviation. Some terminology and certain conventions are not identical with those used in British Standards; attention is drawn especially to the following.

The comma has been used as a decimal marker. In British Standards it is current practice to use a full point on the baseline as the decimal marker. It is also current practice to use the symbol “L” for litre, rather than “l”.

Wherever the words “International Standard” appear, referring to this standard, they should be read as “Part of BS 4819”.

Cross-references

International Standard	Corresponding British Standard
ISO 669:1981	BS 3065:1982 <i>Specification for rating of resistance welding equipment</i> (Identical)
IEC 423:1973	BS 6053:1981 <i>Specification for outside diameters of conduits for electrical installations and threads for conduits and fittings</i> [Technically equivalent to IEC 423 and IEC 423A (Supplement)]

The Technical Committee has reviewed the provisions of ISO 5826, to which reference is made in the text, and has decided that they are acceptable for use in conjunction with this standard. It is intended to implement ISO 5826 as an identical British Standard.

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 8, an inside back cover 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.

1 Scope and field of application

The purpose of this International Standard is to give specific details or to complement ISO 5826, which deals with general specifications applicable to all transformers, relating to particular transformers within its field of application.

Unless otherwise specified, those requirements of ISO 5826 not modified by this International Standard are applicable.

This International Standard applies to transformers with two separate secondary windings for electric resistance welding machines for multi-spot welding as used in the automobile industry.

NOTE By agreement between the manufacturer and the user, this International Standard may also be applied to those transformers for multi-spot welding used in other industries or for other types of welding machines where possible. ISO 5826 is applicable in all cases.

2 References

ISO 669, *Rating of resistance welding equipment*.

ISO 5826, *Transformers for resistance welding machines — General specifications applicable to all transformers*.

IEC Publication 423, *Outside diameters of conduits for electrical installations and threads for conduits and fittings*.

3 Types of transformers

This International Standard covers the following types of transformers which are characterized by the secondary no-load voltage U_{20} , the secondary permanent current I_{2p} and, for information, by continuous output S_p and/or the rated power at the duty factor 50 % (S_{50}) (see Table 1).

Transformers may have a control switch or not for the secondary no-load voltage U_{20} .

The power on which the definition of the transformer type is based is the primary power, i.e. the sum of the powers of both the secondary windings.

Table 1 — Types of transformers, electrical characteristics

U_{20} without steps V	U_{20} with steps		I_{2p} kA	S_p kVA	S_{50} kVA
	Position	V			
5,0	1	3,0	5,6	28	40
	2	3,6			
	3	4,2			
	4	5,0			
7,1	1	5,0	6,3	45	63
	2	5,6			
	3	6,3			
	4	7,1			
10,0	1	7,1	7,1	71	100
	2	8,0			
	3	9,0			
	4	10,0			

NOTE 1 The selection of the secondary voltage is made on the primary side by means of a rotary switch or a set of connectors. In the following clauses, only rotary switch assemblies are shown.

NOTE 2 For requirements concerning the secondary permanent current I_{2p} and the secondary no-load voltage U_{20} , see ISO 5826.

4 Positions of the rotary switch

The rotary switch shall be either on the transformer according to one of the five positions shown in Figure 1 or separated from the transformer (position 6).

5 Dimensions

5.1 Transformers

The dimensions of the transformers shall be as given in Figure 2 and Table 2.

5.2 Rotary switch

The dimensions of the rotary switch when it is separate from the transformer shall be as given in Figure 3.