

TEST CERTIFICATE

Issued to: Prof. Ir. Damstra Laboratory
Europalaan 202
7559 SC Hengelo
The Netherlands

For the product: Compression and mechanical connectors for power cables for rated voltages up to 36 kV ($U_m = 42$ kV)

Trade name: SWA

Types/Models: TQ copper tube terminals

Tested compression connectors;
10-8TQ, for stranded conductor size 10 mm²
95-10TQ, for stranded conductor size 95 mm²
185-10TQ, for stranded conductor size 185 mm²
630-20TQ, for stranded conductor size 630 mm²

Ratings: See for the covered range and product information the annex of this Test Certificate.

Manufactured by: Specialised Wiring Accessories Ltd. (SWA)
Abbey Mills, Charfield Road, Kingswood
Wotton-under-edge, Gloucestershire
United Kingdom

Requirements: BS EN 61238-1:2003 / IEC 61238-1:2003

Remarks: The compression connectors verified in agreement with the requirements for class A as stated in the standard have successfully passed the tests and verifications.

This Test Certificate is granted on account of an examination by Prof. Ir. Damstra Laboratory and witnessed by DEKRA, the results of which are laid down in a confidential Damstra test reports nos. PDL-16.105.1, PDL-16.105.2, PDL-16.105.3 and PDL-16.105.4, dated 04-10-2017 and which are laid down in a confidential file no 219773700.

The examination has been carried out on one single specimen of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by DEKRA is not the responsibility of DEKRA.

Arnhem, 23 October 2017

Number: 2197737.01

DEKRA Certification B.V.



H.L. Schendstok
Certification Manager

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SPECIFICATION OF THE TESTED PRODUCT
Product data

Trade name	:	SWA
Manufacturer	:	Specialised Wiring Accessories Ltd.
Product	:	copper tube terminals
Material	:	copper
Tested copper tube terminals	:	10-8TQ, for stranded conductor size 10 mm ² 95-10TQ, for stranded conductor size 95 mm ² 185-10TQ, for stranded conductor size 185 mm ² 630-20TQ, for stranded conductor size 630 mm ²

Range to be covered

Conductor size [mm ²]	Copper tube terminal Part No.	Conductor size [mm ²]	Copper tube terminal Part No.	Conductor size [mm ²]	Copper tube terminal Part No.
10	10-5TQ 10-6TQ 10-8TQ 10-10TQ 10-12TQ	16	16-5TQ 16-6TQ 16-8TQ 16-10TQ 16-12TQ	25	25-5TQ 25-6TQ 25-8TQ 25-10TQ 25-12TQ
35	35-6TQ 35-8TQ 35-10TQ 35-12TQ 35-14TQ 35-16TQ	50	50-6TQ 50-8TQ 50-10TQ 50-12TQ 50-14TQ 50-16TQ	70	70-6TQ 70-8TQ 70-10TQ 70-12TQ 70-14TQ 70-16TQ
95	95-6TQ 95-8TQ 95-10TQ 95-12TQ 95-14TQ 95-16TQ	120	120-8TQ 120-10TQ 120-12TQ 120-14TQ 120-16TQ 120-18TQ 120-20TQ	150	150-8TQ 150-10TQ 150-12TQ 150-14TQ 150-16TQ 150-18TQ 150-20TQ
185	185-10TQ 185-12TQ 185-14TQ 185-16TQ 185-20TQ	240	240-10TQ 240-12TQ 240-14TQ 240-16TQ 240-20TQ	300	300-10TQ 300-12TQ 300-14TQ 300-16TQ 300-20TQ
400	400-10TQ 400-12TQ 400-14TQ 400-16TQ 400-20TQ	500	500-12TQ 500-14TQ 500-16TQ 500-20TQ	630	630-12TQ 630-14TQ 630-16TQ 630-20TQ

Characteristics for part no.: 10-8TQ

Conductor	
Conductor material	: copper
Nominal cross-sectional area	: 10 mm ²
Dimensions	: diameter: 3.67 mm
Shape	: round
Compacted	: yes
Flexible	: no
Number of strands	: 7, diameter each strand: 1.25 mm
Plating / impregnation / water-blocking	: not applicable
Indication of hardness	: hard

Connector (cable lug) and tooling	
Assembly technique	: pressing
Tooling	: SWA hydraulic crimp tool HH10400H
Dies / setting	: die number or reference D210-10 (Issue A) Hexagonal (6-side pressing) 1 pressing
Preparation of contact surface	: not applicable
Connector (cable lug) ID	: 10-8TQ
- Original manufacturer	SWA
- Reference number	TQ range



Characteristics for part no.: 95-10TQ

Conductor	
Conductor material	: copper
Nominal cross-sectional area	: 95 mm ²
Dimensions	: diameter: 11.44 mm
Shape	: round
Compacted	: yes
Flexible	: no
Number of strands	: 19, diameter each strand: 2.45 mm
Plating / impregnation / water-blocking	: not applicable
Indication of hardness	: hard

Connector (cable lug) and tooling	
Assembly technique	: pressing
Tooling	: SWA hydraulic crimp tool HH10400H
Dies / setting	: die number or reference D210-95 (Issue A) Hexagonal (6-side pressing) 1 pressing
Preparation of contact surface	: not applicable
Connector (cable lug) ID	: 95-10TQ
- Original manufacturer	SWA
- Reference number	TQ range



Characteristics for part no.: 185-10TQ

Conductor	
Conductor material	: copper
Nominal cross-sectional area	: 185 mm ²
Dimensions	: diameter: 15.84 mm
Shape	: round
Compacted	: yes
Flexible	: no
Number of strands	: 37, diameter each strand: 2.50 mm
Plating / impregnation / water-blocking	: not applicable
Indication of hardness	: hard

Connector (cable lug) and tooling	
Assembly technique	: pressing
Tooling	: SWA hydraulic crimp tool HH10400H
Dies / setting	: die number or reference D210-185 (Issue A) Hexagonal (6-side pressing) 2 pressings
Preparation of contact surface	: not applicable
Connector (cable lug) ID	: 185-10TQ
- Original manufacturer	SWA
- Reference number	TQ range



Characteristics for part no.: 630-20TQ

Conductor	
Conductor material	: copper
Nominal cross-sectional area	: 630 mm ²
Dimensions	: diameter: 32.49 mm
Shape	: round
Compacted	: yes
Flexible	: no
Number of strands	: 91, diameter each strand: 2.95 mm
Plating / impregnation / water-blocking	: not applicable
Indication of hardness	: hard

Connector (cable lug) and tooling	
Assembly technique	: pressing
Tooling	: SWA hydraulic crimp tool HH10630H
Dies / setting	: die number or reference D410-630 (Issue A) Hexagonal (6-side pressing) 2 pressings
Preparation of contact surface	: not applicable
Connector (cable lug) ID	: 630-20TQ
- Original manufacturer	SWA
- Reference number	TQ range



TESTS**Test result**

The test results are laid down in DEKRA test file 219773700.

Conclusion

The compression connectors verified in agreement with the requirements for class A as stated in the standard have successfully passed the tests and verifications.

Range to be covered

Based on the requirements as stated in clause 5.3 of BS EN 61238-1:2003 together with a statement by the manufacturer that common and relevant connector design criteria were used for the family of connectors, the tested products are considered to approve the entire range of TQ connectors as indicated in this annex.