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ACCESSORIES FOR 3401/073

SOLAR ARRAY CONNECTORS

ESCC Detail Specification No. 3401/075

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DCR No.	CHANGE DESCRIPTION

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1. GENERAL

1.1 SCOPE

This specification details the ratings, physical and electrical characteristics, test and inspection data for Accessories for 3401/073 Solar Array Connectors.

The specification shall be read in conjunction with:

- ESCC Generic Specification No. 3401, Connectors, Electrical, Non-Filtered, Circular and Rectangular.
- ESCC Detail Specification No. 3401/073, Connectors, Electrical, Solar Array with Removable Crimp Contacts based on type D-PASO.

the requirements of which are supplemented herein.

1.2 TYPE VARIANTS

The accessories specified herein, which are also covered by this specification are scheduled in Table 1(a).

1.3 MAXIMUM RATINGS

The maximum ratings, which shall not be exceeded at any time during use or storage, applicable to the accessories specified herein, are scheduled in Table 1(b).

1.4 PARAMETER DERATING INFORMATION

Not applicable.

1.5 PHYSICAL DIMENSIONS

The physical dimensions of the accessories specified herein are shown in Figure 2.

TABLE 1(a) - TYPE VARIANTS

Variant	Description	Weight Max. (g)
01	Holding Fixture with Eyelets	9.7
02	Holding Fixture without Eyelets	7.9
03	Alignment Clamp	9.6

TABLE 1(b) - MAXIMUM RATINGS

No.	Characteristics	Symbol	Maximum Rating	Unit	Notes
1	Operating Temperature Range	T_{op}	-175 to +130	°C	
2	Storage Temperature Range	T_{stg}	-196 to +170	°C	
3	Torque Value for Screws	τ_{max}	0.2	Nm	

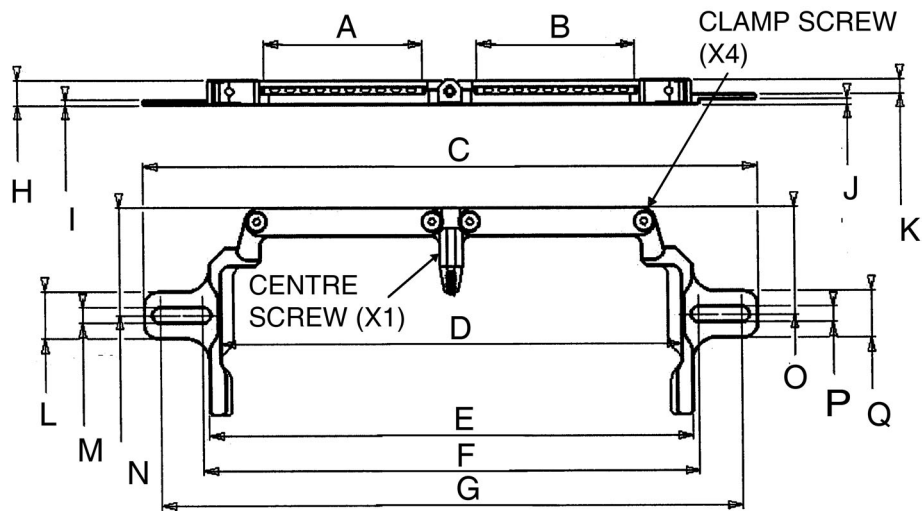
FIGURE 1 - PARAMETER DERATING INFORMATION

Not applicable.

FIGURE 2 - PHYSICAL DIMENSIONS

Consolidated Notes are at the end of Figure 2.

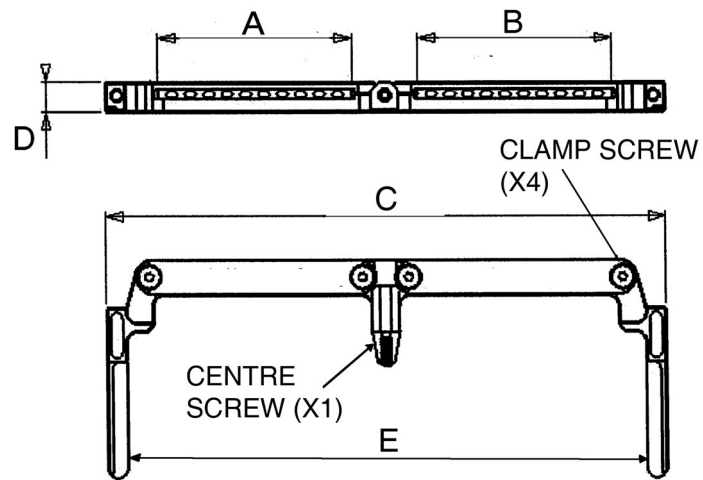
Figure 2(a) - Holding Fixture with Eyelets - Variant 01 (Notes 1, 2, 4 and 5)



Symbols	Dimensions mm		Notes
	Min	Max	
A	33.5	33.7	
B	33.5	33.7	
C	129.5	130.5	
D	97.1	97.7	
E	102.1	102.7	
F	104.8	105.2	
G	122.8	123.2	
H	5.2	5.4	
I	1	1.1	
J	1.1	1.2	
K	2.95	3.05	
L	9.8	10.2	
M	3.1	3.3	
N	22.55	22.95	
O	22.55	22.95	

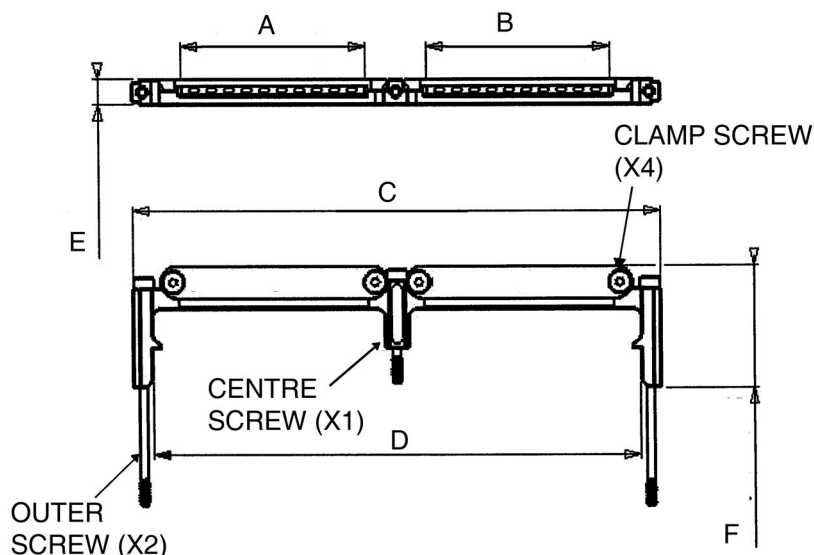
Symbols	Dimensions mm		Notes
	Min	Max	
P	3.1	3.3	
Q	9.8	10.2	

Figure 2(b) - Holding Fixture without Eyelets - Variant 02 (Notes 1,2, 4 and 5)



Symbols	Dimensions mm		Notes
	Min	Max	
A	33.5	33.7	
B	33.5	33.7	
C	96.8	97.2	
D	5.2	5.4	
E	89.8	90.2	

Figure 2(c) - Alignment Clamp - Variant 03 (Notes 1, 3, 4 and 5)



Symbols	Dimensions mm		Notes
	Min	Max	
A	33.5	33.7	
B	33.5	33.7	
C	96.8	97.2	
D	89.45	89.75	
E	4.5	4.7	
F	22.15	22.45	

Consolidated Notes for Figure 2.

- All variants shall be able to guide and hold, without damaging, wires for each contact as follows:-
 - One wire of maximum diameter of 1.4mm (AWG 22 or 24).
 - Two wires of maximum diameter of 1mm (AWG 24)
 - One flat wire of 0.227 thickness and 3.5mm width.
- Variants 01 and 02 are supplied with the following screws:-
 - 1 x captive centre locking screws - M2 x 12
 - 4 x clamp screw - M2 x 4.5
- Variant 03 is supplied with the following screws:-
 - 1 x captive centre locking screws - M2 x19
 - 2 x captive outer locking screw - M2 x 40
 - 4 x clamp screw - M2 x 4.5
- All variants are supplied with flat silicone gaskets to hold wire types per Note 1.
- All screws shall have Hexalobular Internal Driving Heads.

2. **APPLICABLE DOCUMENTS**

The following documents form part of this specification and shall be read in conjunction with it:

- (a) ESCC Generic Specification No. 3401 for Connectors, Electrical, Non-Filtered, Circular and Rectangular.
- (b) ESCC Detail specification No. 3401/073, Connectors, Electrical, Solar Array with Removable Crimp Contacts based on type D-PASO.

3. **TERMS, DEFINITIONS, ABBREVIATIONS, SYMBOLS AND UNITS**

For the purpose of this specification, the terms, definitions, abbreviations, symbols and units specified in ESCC Basic Specification No. 21300 shall apply.

4. **REQUIREMENTS**

4.1 **GENERAL**

The complete requirements for procurement of the components specified herein are stated in this specification and ESCC Generic Specification No. 3401. Deviations from the Generic Specification, applicable to this specification only, are detailed in Para. 4.2.

Deviations from the Generic Specification and this Detail Specification, formally agreed with specific Manufacturers on the basis that the alternative requirements are equivalent to the ESCC requirements and do not affect the components' reliability, are listed in the appendices attached to this specification.

4.2 **DEVIATIONS FROM GENERIC SPECIFICATION**

4.2.1 **Deviations from Special In-process Controls**

- (a) Para. 5.2.2, Gold Plate Porosity: Not applicable.
- (b) Para. 5.2.3, Plating Thickness: Not applicable.
- (c) Para. 5.2.4, Crimping Capability: Not applicable.
- (d) Para. 5.2.5, Solderability: Not applicable.

4.2.2 **Deviations from Final Production Tests (Chart II)**

Only the following tests shall be performed:-

- (a) Para. 4.4, Marking.
- (b) Para. 9.6, Dimension Check.

4.2.3 **Deviations from Burn-in and Electrical Measurements (Chart III)**

Burn-in and Electrical Measurements (Chart III): Not applicable.

4.2.4 **Deviations from Qualification Tests (Chart IV)**

Qualification Tests (Chart IV): Not applicable

4.2.5 **Deviations from Lot Acceptance Tests (Chart V)**

Lot Acceptance Tests (Chart V): Not applicable.

4.3 MECHANICAL REQUIREMENTS

4.3.1 Dimension Check

The dimensions of the accessories specified herein shall be verified in accordance with the requirements set out in Para. 9.6 of ESCC Generic Specification No. 3401 and they shall conform to those shown in Figure 2 of this specification.

4.3.2 Weight

The maximum weight of the accessories specified herein shall be as shown in Table 1(a) of this specification.

4.3.3 Maximum Torque Value

The maximum torque value to be used for tightening of the screws of the accessories specified herein shall be as specified in Table 1(b) of this specification.

4.4 MATERIALS AND FINISHES

The materials and finishes shall be as specified herein. Where a definite material is not specified, a material which will enable the components specified herein to meet the performance requirements of this specification shall be used. Acceptance or approval of any constituent material does not guarantee acceptance of the finished product.

4.4.1 Accessory Bodies

Accessory bodies shall be made of Aluminium Alloy. The plating shall be 1.27µm minimum of gold over electroless nickel.

4.4.2 Holding Fixture Gaskets

The gaskets for all variants shall be made of silicone elastomer.

4.4.3 Locking Jackscrews

All jackscrews supplied with all Variants shall be Brass with 1.27µm minimum of gold plating over copper underplating of 0.4 to 0.6 µm thickness.

4.4.4 Magnetism Level

As specified in ESCC Detail Specification No. 3401/073.

4.5 MARKING

4.5.1 General

The marking of components delivered to this specification shall be in accordance with the requirements of ESCC Basic Specification No. 21700 and the following paragraphs.

The information to be marked and the order of precedence, shall be as follows:

- (a) The ESCC Component Number.
- (b) Traceability Information

4.5.2 The ESCC Component Number

The ESCC Component Number shall be constituted and marked as follows:
340107501B

- Detail Specification Reference: 3401075

- Type Variant: 01
- Testing Level B

4.5.3 Traceability Information

Each component shall be marked in respect of traceability information in accordance with the requirements of ESCC Basic Specification No. 21700.

4.6 ELECTRICAL MEASUREMENTS

4.6.1 Electrical Measurements at Room Temperature

Not applicable.

4.6.2 Electrical Measurements at High and Low Temperatures

Not applicable.

4.6.3 Circuits for Electrical Measurements

Not applicable.

4.7 BURN-IN AND ELECTRICAL MEASUREMENTS

Not applicable.

4.8 ENVIRONMENTAL AND ENDURANCE TESTS

Not applicable.