



## DOCUMENT CHANGE REQUEST

DCR number	529	Changes required for:	N/A	Originator:	Olivier Masson Chief
Date:	2009/07/06	Date sent:	2009/07/06	Organisation:	CNES
Status:	IMPLEMENTED				

Title: Connectors Electrical Rectangular Microminiature, based on type MDM

Number: 3401/029 Issue: 5

Other documents affected:

Page:

Variants size 51 FR139 to be added

Paragraph:

Variants size 51 FR139 to be added

Original wording:

Proposed wording:

New variant to be added after page 26 of the 3401/029 issue 5

Justification:

Variants added in the re-qualification programm and tested successfully

Attachments:

DCR529att.pdf, DCR529\_change\_wording.pdf, null

Modifications:

Additional changes required to fully implement this DCR are:

Page 7, Table 1(a), replace "N/A" for Max. Weight (g) for shell size 51 for FR139 by 10.5

Clarify addition of new Pages 27 & 28, new Figures 2.2I & 2.2J based on the drawing provided in DCR529 (with 51 contacts), similar to Figures 2.2G & 2.2H including notes (see attached mark-ups).

i.e.

Figure 2.2I – Connectors Type -FR139

Plug Male Contacts

Figure 2.2J – Connectors Type -FR139

Receptacle Female Contacts

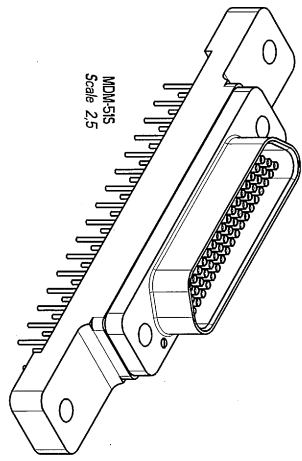
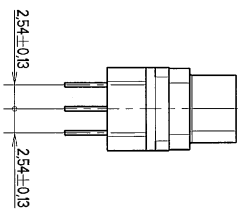
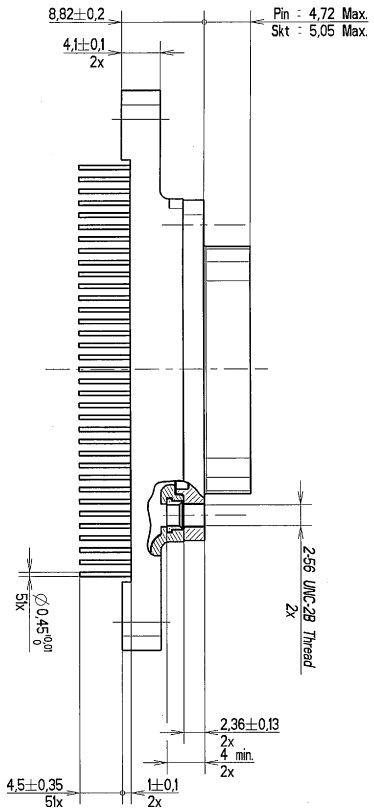
Page 24 & 26, Figures 2.2G & 2.2H, delete note 2 and renumber subsequent notes accordingly.

Approval signature:

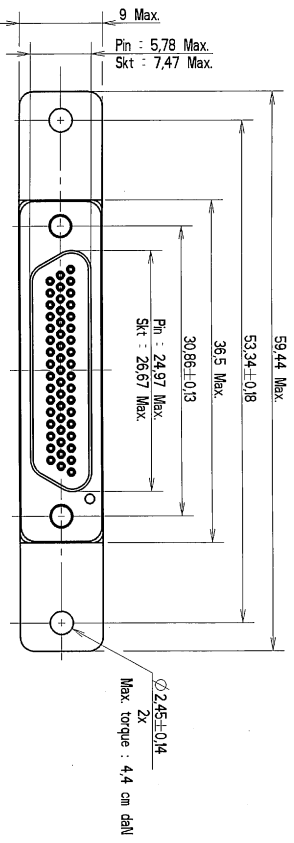
*P. C. Fleish*

Date signed:

2009-07-06

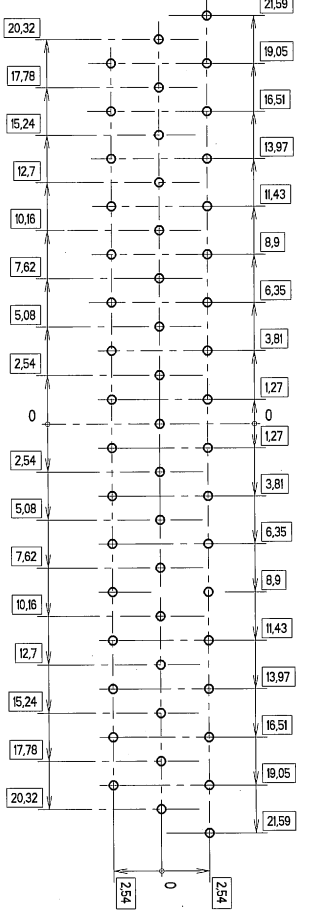


SYSTEM CONFIDENTIAL



CONTACT TYPE	REFERENCES ACCORDING TO CAMMION FRO22 SPECIFICATION		REFERENCES ACCORDING TO ESA/ESCC 3401 029 SPECIFICATION	
	Part-Number	Description	Part-Number	Description
FR022 (plating A174)	FR022 (plating FR172)	ESA / ESCC 3401 (plating A174)	ESA / ESCC 3401 (plating FR172)	
MDM-SIFR139-A174-FR022	MDM-SIFR139-FR172-FR022	340102901B SIFR139	340102902B SIFR139	
MDM-SIFR139-A174-FR022	MDM-SIFR139-FR172-FR022	340102901B SIFR139	340102902B SIFR139	
MDM-SIFR139-A174-FR022	MDM-SIFR139-FR172-FR022	340102901B SIFR139	340102902B SIFR139	

RECOMMENDED PCB HOLE PATTERN Scale 5



PARTS-LIST	MATERIALS	PLATING
SHELL (A174 code)	ALUMINIUM ALLOY 6061T6	CHEMICAL NICKEL
SHELL (FR172 Code)	ALUMINIUM ALLOY 6061T6	GOLD OVER CHEMICAL NICKEL
INSULATOR	THERMOPLASTIC LCP	
HOUSING	THERMOPLASTIC LCP	
CONTACTS	COPPER ALLOY	GOLD OVER COPPER
PIGTAILS	COPPER	GOLD OVER SILVER
CAPTIVE NUT	STAINLESS STEEL	PASSIVATED

NOTES:  
1 - Materials and finish:

- 2 - Insulation with epoxy resin.
- Marking: Year, Week / CK / FR (example: 0806 CK FR)
- Description (see tabulation)
- 340102901B SIFR139 (see tabulation)
- Controls according to CAMMION FRO22 specification
- Controls according to ESA/ESCC 3401 029 specification
- 6 - Packaging: Individual plastic bag with identification label
- 7 - For cavities identification, refer to drawing CUC030243Y0009

<b>SAUF INDIQUE :</b> COTES DIMENSIONS AVANT PROTECTION BAVURES ET ANGES VIVES SUPPRIMEES		<b>MATIERE</b> TOUL LINDRE		<b>TRAITEMENT</b> EX 1 ± 0.2		<b>PROTECTION</b> DIMENSIONS CRITIQUE	
DATE: 04-02-08 DATE: 04-02-08		DATE: 04-02-08 DATE: 04-02-08		DATE: 04-02-08 DATE: 04-02-08		DATE: 04-02-08 DATE: 04-02-08	
PDMABIGNY OMASSON LKUBAT		PDMABIGNY OMASSON LKUBAT		PDMABIGNY OMASSON LKUBAT		PDMABIGNY OMASSON LKUBAT	
BP 359 - 39105 Dole - FRANCE		BP 359 - 39105 Dole - FRANCE		BP 359 - 39105 Dole - FRANCE		BP 359 - 39105 Dole - FRANCE	
CKK Components		CKK Components		CKK Components		CKK Components	
A2		A2		A2		A2	
MDM-SIP/S-FR139 CONNECTORS		MDM-SIP/S-FR139 CONNECTORS		MDM-SIP/S-FR139 CONNECTORS		MDM-SIP/S-FR139 CONNECTORS	
030243Y0039		030243Y0039		030243Y0039		030243Y0039	

DR 529 MARKUP.  
S.I. 13/7/9.

27


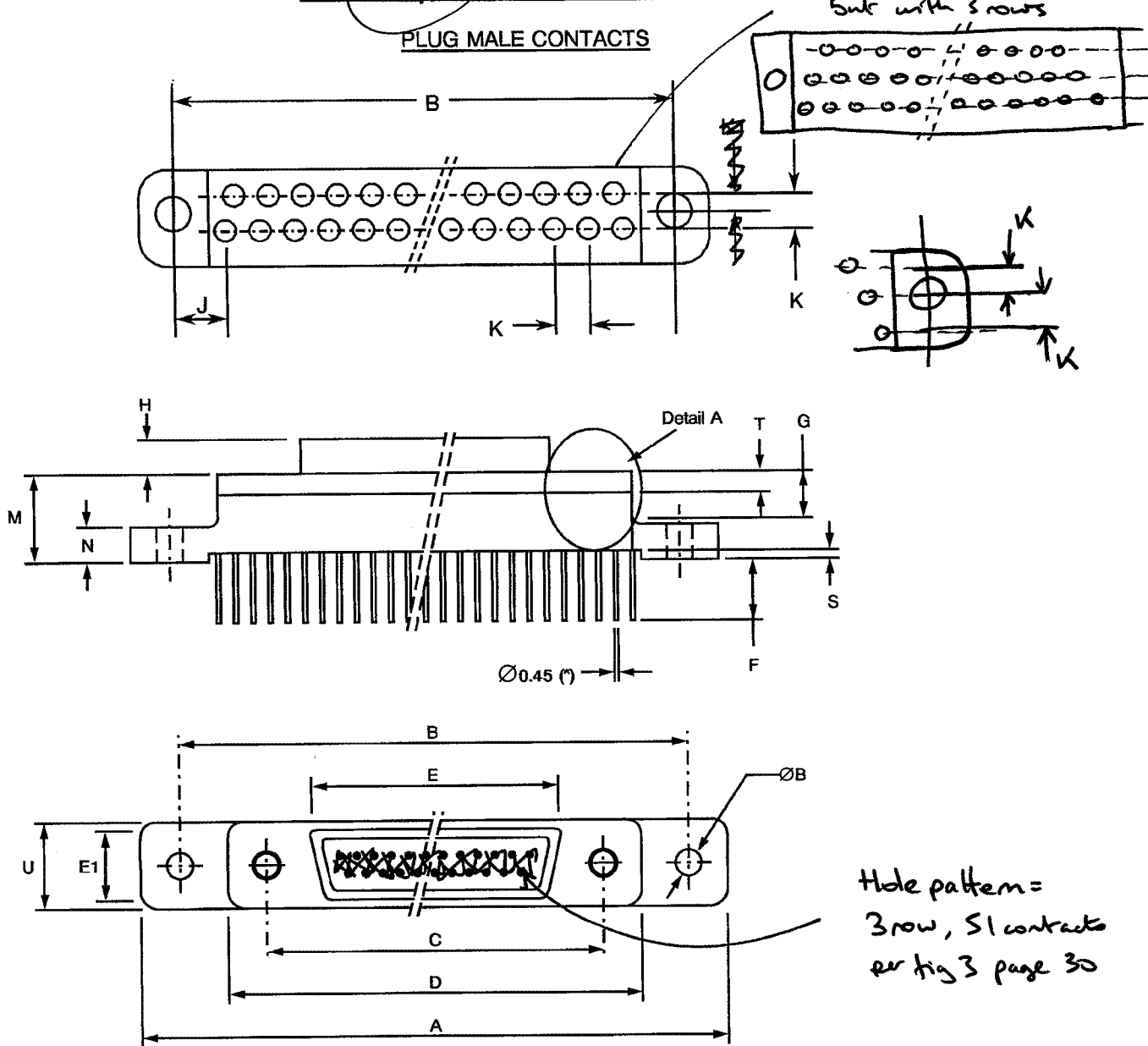
	ESCC Detail Specification No. 3401/029	PAGE <del>28</del> ISSUE 5
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FIGURE 2 - PHYSICAL DIMENSIONS (CONTINUED)

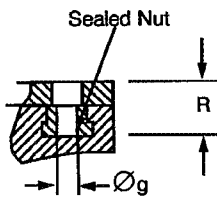
FIGURE 2.2 <sup>I</sup> - CONNECTORS TYPE -FR139

PLUG MALE CONTACTS

hole pattern similar  
but with 3 rows



DETAIL A





ESCC Detail Specification  
No. 3401/029

FIGURE 2 - PHYSICAL DIMENSIONS (CONTINUED)

FIGURE 2.2G - CONNECTOR TYPE - FR139 (CONTINUED)

PLUG MALE CONTACTS (CONTINUED)

Shell Size	A		B		ØB (4X3)		C		D	E	E1	F		G	H	J
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Max.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
9	35.31	29.03	29.39	2.31	2.59	14.22	14.48	19.94	8.46	4.69	4.15	4.85	4.6	4.72	6.53	
15	35.81	29.03	29.39	2.31	2.59	18.08	18.29	23.75	12.27	4.69	4.15	4.85	4.6	4.72	5.72	
21	42.93	36.65	37.01	2.31	2.59	21.84	22.1	27.56	16.08	4.69	4.15	4.85	4.6	4.72	5.72	
25	44.2	37.92	38.28	2.31	2.59	24.38	24.64	30.10	18.62	4.69	4.15	4.85	4.6	4.72	3.81	
31	51.82	45.54	45.9	2.31	2.59	28.19	28.45	33.91	22.43	4.69	4.15	4.85	4.6	4.72	3.81	
37	59.44	53.16	53.52	2.31	2.59	32.0	32.26	37.72	26.24	4.69	4.15	4.85	4.6	4.72	3.81	

Shell Size	K	M		N		R	S		T		U
	Typ.	Min.	Max.	Min.	Max.	Min.	Min.	Max.	Min.	Max.	Max.
9	2.54	8.62	9.02	4.0	4.2	4.6	0.9	1.1	2.23	2.49	7.82
15	2.54	8.62	9.02	4.0	4.2	4.6	0.9	1.1	2.23	2.49	7.82
21	2.54	8.62	9.02	4.0	4.2	4.6	0.9	1.1	2.23	2.49	7.82
25	2.54	8.62	9.02	4.0	4.2	4.6	0.9	1.1	2.23	2.49	7.82
31	2.54	8.62	9.02	4.0	4.2	4.6	0.9	1.1	2.23	2.49	7.82
37	2.54	8.62	9.02	4.0	4.2	4.6	0.9	1.1	2.23	2.49	7.82

NOTES

- All dimensions are in millimetres.
- For reference to Para. A.5.2.3 of this specification.
- Øg: 2.56-UNC-2B.
- Maximum torque 0.44Nm.

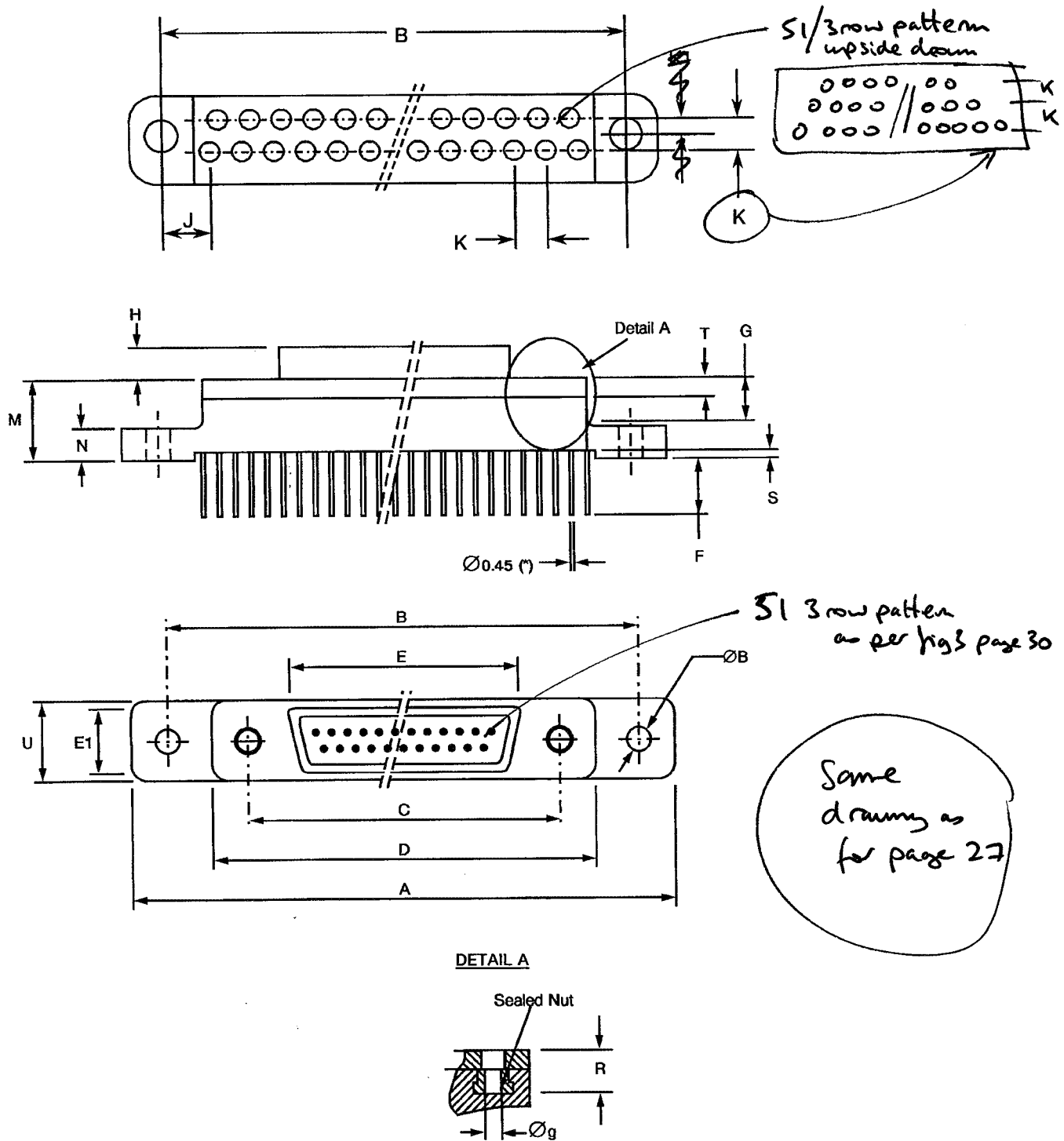
delete K1



FIGURE 2 - PHYSICAL DIMENSIONS (CONTINUED)

FIGURE 2.2H - CONNECTORS TYPE -FR139

RECEPTACLE FEMALE CONTACTS



**FIGURE 2 - PHYSICAL DIMENSIONS (CONTINUED)**

**FIGURE 2.2H - CONNECTOR TYPE - FR139 (CONTINUED)**

**RECEPTACLE FEMALE CONTACTS (CONTINUED)**

Shell Size	A		B		ØB (3)		C		D	E	E1	E		G	H	J	K
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Max.	Max.	Min.	Max.	Min.	Max.	Typ.	Typ.
9	35.31	29.03	29.39	2.31	2.59	14.22	14.48	19.94	10.16	6.38	4.15	4.85	4.6	5.05	9.53	2.54	2.54
15	35.31	29.03	29.39	2.31	2.59	18.03	18.29	28.35	13.97	6.38	4.15	4.85	4.6	5.05	5.72	2.54	2.54
21	42.93	36.65	37.01	2.31	2.59	21.84	22.1	27.56	17.78	6.38	4.15	4.85	4.6	5.05	5.72	2.54	2.54
25	44.2	37.92	38.28	2.31	2.59	24.38	24.64	30.10	20.32	6.38	4.15	4.85	4.6	5.05	3.81	2.54	2.54
31	51.82	45.54	45.9	2.31	2.59	28.19	28.45	33.91	24.13	6.38	4.15	4.85	4.6	5.05	3.81	2.54	2.54
37	59.44	53.16	53.52	2.31	2.59	32.0	32.26	37.72	27.94	6.38	4.15	4.85	4.6	5.05	3.81	2.54	2.54

51 59.44 53.16 53.52 2.31 2.59 30.73 30.99 36.5 26.67 7.47 4.15 4.85 4 5.05 3.81 2.54

Shell Size	Z1		M		N		R	S		T		U
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Max.	
9	1.27	9.02	4.0	4.2	4.6	0.9	1.1	2.23	2.49	7.82	7.82	
15	1.27	9.02	4.0	4.2	4.6	0.9	1.1	2.23	2.49	7.82	7.82	
21	1.27	9.02	4.0	4.2	4.6	0.9	1.1	2.23	2.49	7.82	7.82	
25	1.27	9.02	4.0	4.2	4.6	0.9	1.1	2.23	2.49	7.82	7.82	
31	1.27	9.02	4.0	4.2	4.6	0.9	1.1	2.23	2.49	7.82	7.82	
37	1.27	9.02	4.0	4.2	4.6	0.9	1.1	2.23	2.49	7.82	7.82	

51 8.62 9.02 4 4.2 4 0.9 1.1 2.23 2.49 9.

- NOTES**
1. All dimensions are in millimetres.
  2. ~~For reference to Para 4.5.3 of this specification.~~
  3. Øg: 2-56-UNC-2B.
  4. Maximum torque 0.44Nm.
- delete K1*