DOCUMENT CHANGE REQUEST

DCR number 403	Changes required for: General	Originator: Steve Thacker - ESCC
Date: 2008/04/22	Date sent: 2008/04/22	Organisation: ESA/ESTEC
Status: IMPLEMENTED		

Title:	Extruded Crosslinked Fluoropolymer Insulated Wires and Cables on Silver Plated Copper		
Number:	3901/012	Issue:	2

Other documents affected:

3901/020-2, 3901/022-2

Page:

Table 1(a) & Para 4.8.8, 4.8.13 in each specification.

Paragraph:

Table 1(a) & Para 4.8.8, 4.8.13 in each specification.

Original wording:

Proposed wording:

A) Maximum weight and diameter limits specified for Variants in Table 1(a) for finished wire are amended to reflect actual manufactured product characteristics from ESCC qualified Manufacturer(s).
See attached excel file for details of changes for each specification for the affected variants.

B) Test conditions for Cut-through Resistance and Abrasion Resistance, per paras 4.8.8 & 4.8.13 respectively, are amended as detailed in attached excel file for each specification..

Justification:

A) After review of the relevant design and production limits for both applicable ESCC QPL Manufacturer(s) and all variants, the maximum limits in the ESCC detail specifications are amended to be the worse case values in order to include the full production capability of both manufacturers.

B) The test conditions for Cut-through Resistance and Abrasion Resistance are reduced to take into account the previous change to the failure criteria in ESCC 3901 (per DCR23952) based on zero failures allowed (which effectively increased the severity of each test).

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Note - this DCR replaces DCRs 349, 365, 370, which are to be withdrawn, as discussed between ESCC/TYCO/AXON

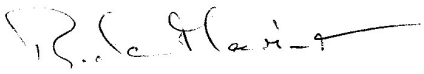
Attachments:

DCR403attachment3901020.pdf, DCR403attachment3901022.pdf, DCR403attachment3901012.pdf, null

Modifications:

N/A

Approval signature:



Date signed:

2008-04-22

DCR403 - 3901/020, Table 1(a) - Type Variants		
Variant No.	Finished Wire Or Cable Characteristics	
	Max Φ (mm)	Max Weight (kg/km)
01	0.56	**0.82**
02	0.63	**1.15**
03	0.75	1.81
04	0.87	2.50
05	1.01	3.76
06	1.26	6.25
07	1.56	9.60
08	1.90	**14.05**
09	2.29	**19.44**
10	2.74	**29.92**
11	1.11	1.65
12	1.25	2.32
13	1.49	3.64
14	1.74	5.03
15	2.01	7.58
16	2.52	12.59
17	3.12	19.35
18	**3.79**	**28.31**
19	4.57	**39.16**
20	5.47	60.27
21	1.20	2.47
22	1.35	3.48
23	1.61	5.47
24	1.88	7.55
25	2.18	11.38
26	2.72	18.91
27	3.36	29.06
28	**4.10**	**42.51**
29	4.94	**58.80**
30	5.91	90.50
31	1.34	3.30
32	1.51	4.64
33	1.80	7.30
34	2.10	10.08
35	2.43	15.20
36	3.03	25.25
37	3.75	38.80
38	**4.57**	**56.77**
39	5.51	**78.53**
40	6.59	120.86
41	**1.39**	**4.18**
42	**1.45**	**4.78**
43	**1.57**	**5.91**
44	1.69	**7.06**
45	**1.87**	**9.09**
46	**2.12**	**12.57**
47	**2.41**	**17.10**
48	**2.78**	**23.25**
49	3.16	**30.22**
50	3.59	**42.52**
51	1.92	**6.61**
52	2.06	**7.71**
53	2.29	9.78
54	2.53	11.90
55	**2.85**	**15.64**
56	3.33	22.21
57	3.91	30.81
58	**4.61**	**42.39**
59	5.37	55.67
60	6.24	79.56
61	**2.01**	8.25
62	2.16	9.76
63	2.41	12.64
64	2.66	15.59
65	3.00	20.84
66	3.52	30.22
67	4.15	42.57
68	**4.91**	**59.14**
69	5.72	78.34
70	6.66	113.35
71	2.14	9.89
72	2.31	11.83
73	2.59	15.51
74	2.87	19.31
75	3.24	26.06
76	3.83	38.28
77	4.53	54.38
78	**5.37**	**75.97**
79	6.27	**101.09**
80	7.32	**147.27**

	indicates changed value

DCR403 - 3901/020, Para. 4.8.8 Cut-through Resistance										
Wire Size (mm^2)	0.06	0.08	0.15	0.21	0.34	0.60	0.93	1.20	2.00	3.00
Cut-through Load (kg)	1	1.5	2	2.5	3.5	4.5	5.5	6.5	7	7.5

DCR403 - 3901/020, Para. 4.8.13 Abrasion Resistance										
Wire Size (mm^2)	0.06	0.08	0.15	0.21	0.34	0.60	0.93	1.20	2.00	3.00
Scrape Abrasion (kg)	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.6	0.9	0.9

DCR403 - 3901/022, Table 1(a) - Type Variants		
Variant No.	Finished Wire Or Cable Characteristics	
	Max Φ (mm)	Max Weight (kg/km)
01	1.19	3.41
02	1.31	4.40
03	1.43	5.51
04	**1.61**	7.33
05	1.85	**10.51**
06	2.14	**15.47**
07	1.80	5.76
08	2.03	**7.68**
09	2.27	9.55
10	2.58	13.01
11	3.07	18.84
12	**3.69**	**30.37**
13	1.89	7.48
14	2.15	10.10
15	2.40	12.90
16	2.74	17.73
17	3.30	27.81
18	3.93	39.76
19	2.14	**12.99**
20	2.43	**17.11**
21	2.71	**21.11**
22	3.08	**28.35**
23	3.66	38.83
24	4.36	55.42
25	**2.52**	**20.49**
26	**2.89**	**26.98**
27	3.33	**40.13**
28	**4.39**	**42.30**
29	5.15	**58.72**
30	6.02	**95.10**
31	**4.69**	**58.99**
32	5.50	**81.78**
33	6.44	**121.47**
34	**5.20**	**80.79**
35	6.11	**111.08**
36	7.15	**163.72**
37 to 72	**no changes**	

	indicates changed value

DCR403 - 3901/022, Para. 4.8.8 Cut-through Resistance									
Wire Size (mm^2)	0.08	0.15	0.21	0.34	0.60	0.93	1.20	2.00	3.00
Cut-through Load (kg)	1.5	2	2.5	3.5	4.5	5.5	6.5	7	7.5

DCR403 - 3901/022, Para. 4.8.13 Abrasion Resistance									
Wire Size (mm^2)	0.08	0.15	0.21	0.34	0.60	0.93	1.20	2.00	3.00
Scrape Abrasion (kg)	0.2	0.3	0.3	0.4	0.4	0.5	0.6	0.9	0.9

DCR403 - 3901/012, Table 1(a) - Type Variants		
Variant No.	Finished Wire Or Cable Characteristics	
	Max Φ (mm)	Max Weight (kg/km)
01	0.64	0.98
02	0.70	1.35
03	0.86	2.11
04	0.99	2.97
05	1.14	4.30
06	1.37	6.91
07	1.63	10.37
08	1.90	14.59
09	2.29	19.60
10	2.74	31.23
11	1.28	2.04
12	1.40	2.78
13	1.78	4.43
14	1.98	6.12
15	2.28	8.86
16	2.74	14.48
17	3.26	21.74
18	3.80	30.58
19	4.58	40.84
20	5.48	65.46
21	1.37	3.05
22	1.50	4.17
23	1.86	6.64
24	2.14	9.18
25	2.46	13.29
26	2.95	21.72
27	3.52	32.61
28	4.10	45.88
29	4.95	61.26
30	5.92	98.19
31	1.54	4.07
32	1.68	5.56
33	2.07	8.86
34	2.39	12.24
35	2.75	17.72
36	3.30	28.96
37	3.93	43.48
38	4.57	61.17
39	5.52	81.68
40	6.60	130.92
41	1.57	5.60
42	1.65	6.12
43	1.76	7.63
44	1.89	8.97
45	2.03	10.95
46	2.26	14.97
47	2.52	19.71
48	2.78	25.03
49	3.17	31.20
50	3.65	45.48
51	2.18	8.82
52	2.34	9.86
53	2.59	12.92
54	2.87	15.31
55	3.17	19.34
56	3.59	27.06
57	4.14	36.45
58	4.61	47.43
59	5.46	59.82
60	6.43	88.52
61	2.28	11.14
62	2.43	12.69
63	2.72	17.05
64	3.01	20.42
65	3.35	26.06
66	3.81	37.29
67	4.40	50.94
68	4.91	66.79
69	5.82	84.76
70	6.86	127.02
71	2.46	13.01
72	2.64	15.05
73	2.95	20.34
74	3.27	24.50
75	3.65	31.72
76	4.16	46.25
77	4.80	63.76
78	5.37	84.44
79	6.40	107.94
80	7.57	162.98

	indicates changed value

DCR403 - 3901/012, Para. 4.8.8 Cut-through Resistance										
Wire Size (mm^2)	0.06	0.08	0.15	0.25	0.40	0.60	1.00	1.20	2.00	3.00
Cut-through Load (kg)	2.8	3	3.5	4	5	5.5	6	6.5	7	7.5

DCR403 - 3901/012, Para. 4.8.13 Abrasion Resistance										
Wire Size (mm^2)	0.06	0.08	0.15	0.25	0.40	0.60	1.00	1.20	2.00	3.00
Scrape Abrasion (kg)	0.3	0.3	0.35	0.4	0.45	0.55	0.6	0.6	0.9	0.9