

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Cable Clamps**with type designation(s)
PPEO/PPET

Issued to

Dong-A Bestech Co., Ltd.
BUCHON KYONGGI-DO, Republic of Koreais found to comply with
DNV GL rules for classification – Ships and offshore units**Application :****Cable shoes for installation inside switchboards/ enclosures onboard ships and mobile offshore units.****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**This Certificate is valid until **2021-12-31**.Issued at **Busan** on **2017-01-01**DNV GL local station: **Seoul**Approval Engineer: **Hee Jin Song**for **DNV GL**

Baeg Soon Choi
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

Product description

Type PPEO.....One-hole type
PPET.....Two-hole type

Classification of:

Class A These are connectors intended for electricity distribution or industrial networks in which they can be subjected to short-circuits of relatively high intensity and duration. As a consequence, Class A connectors are suitable for the majority of applications.

PPEO Terminal lugs

Wire Range (mm ²)		Part No.					Dimensions(mm)					
Rated Cross section	FLEX	Conductor Part	Barrel Form	Tongue Form	Stud size	FL EX	Width (Min)	I.D	C		L	
									S	L	S	L
0.75	0.75	0000.75	S	R/S	03	-	6.5	1.3	6	-	17	-
					04	-	9				19	
					05	-						
1.5	1.5	0001.5	S/L	R	03	-	6.5	1.8	6	-	17	-
					04	-	9				19	
					05	-					21	
					06	-						
2.5	2.5	0002.5	S/L	R	03	-	6.5	2.3	6	-	17	-
					04	-	9				19	
					05	-					21	
					06	-					25	
					08	-	13				.5	
4	4	0004	S/L	R	03	-	6.5	3.0	8	-	19	-
					04	-	9.5				.5	
					05	-					21	
					06	-					.5	
					08	-	13				23	
6	6	0006	S/L	R	04	-	7.5	3.5	10	-	21	-
					05	-	11				.5	
					06	-	15.5				26	
					08	-					30	
					10	-						
10	10	0101	S/L	R	05	-	9.5	4.6	15	21	33	39
					06	-	15.5				39	45
					08	-	18				43	49
					10	-						
					12	-						
16	16	0102	S/L	R	05	-	10.5	5.5	15	21	33	39
					06	-	15.5				39	45
					08	-					43	49
					10	-						
					12	-						
25	25	0103	S/L	R	05	-	13.5	7.2	17	23	40	46

Job Id:
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Wire Range (mm ²)		Part No.					Dimensions(mm)					
Rated Cross section	FLEX	Conductor Part	Barrel Form	Tongue Form	Stud size	FL EX	Width (Min)	I.D	C		L	
									S	L	S	L
					06	-	15.5				44	50
					08	-						
					10	-						
					12	-						
35		0104	S/L	R	05	-	16	8.5	20	26	46	52
					06	-						
					08	-						
					10	-						
					12	-	18				50	56
					05	F						
					06	F						
					08	F						
	35	0104	S/L	R	10	F	17	8.8	20	26	48	54
					12	F						
					05	-						
					06	-						
50	35	0105	S/L	R	08	-	18.4	9.5	20	35	50	65
					10	-						
					12	-						
					14	-						
					16	-	24.5				55	70
					05	-						
					06	-						
					08	-						
	50	0106	S/L	R	10	-	19	10.2	20	35	52	67
					12	-						
					14	-						
					16	-						
					24	-	24				55	70
					05	-						
					06	-						
					08	-						
70		0107	S/L	R	10	-	21	11.2	22	35	54	67
					12	-						
					14	-						
					16	-						
					25	-	25				57	70
					08	F						
					10	F						
					12	F						
	70	0108	S/L	R	14	F	23	12.5	24	40	64	80
					16	F						
					08	-						
					10	-						
95		0109	S/L	R	12	-	24.5	13.3	29	40	69	80
					14	-						
					16	-						
					08	F						
	95	0109	S/L	R	10	F	26	14	29	37	69	82
					12	F						
					14	F						
					16	F						

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Wire Range (mm ²)		Part No.					Dimensions(mm)					
Rated Cross section	FLEX	Conductor Part	Barrel Form	Tongue Form	Stud size	FL EX	Width (Min)	I.D	C		L	
									S	L	S	L
					16	F						
120		0110	S/L	R	08	-	27.5	15.2	29	50	70	90
					10	-						
					12	-						
					14	-						
					16	-						
150	120	0111	S/L	R	08	-	31	16.8	32	50	77	94
					10	-						
					12	-						
					14	-						
					16	-						
		0111	S/L	R	08	F	31	17.5	30	45	80	95
					10	F						
					12	F						
					14	F						
					16	F						
185	150	0112	S/L	R	08	-	34	18.5	35	50	83	98
					10	-					87	102
					12	-						
					14	-						
					16	-						
200	185	0113	S/L	R	08	-	37.5	20	40	50	88	98
					10	-					92	102
					12	-						
					14	-						
					16	-						
		0113	S/L	R	08	F	37.5	20.5	40	51	94	105
					10	F						102
					12	F						
					14	F						
					16	F						
240	240	0114	L	R	08	-	40.5	22	-	50	-	102
					10	-						114
					12	-						
					14	-						
					16	-						
300		0115	L	R	20	-	43.5	24	-	54	-	110
					12	-						122
					14	-						
					16	-						
					20	-						
	300	0116	L	R	10	F	46	25	-	57	-	125
					12	F						
					14	F						
					16	F						
					20	F						

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Wire Range (mm ²)		Part No.					Dimensions(mm)					
Rated Cross section	FLEX	Conductor Part	Barrel Form	Tongue Form	Stud size	FL EX	Width (Min)	I.D	C		L	
									S	L	S	L
					24	F						
400		0116	L	R	12	F	49	26.5	-	57	-	127
					14	F						
					16	F						
					20	F						
					24	F						131
500		0117	L	R	12	-	56.5	30	-	60	-	122
					14	-						
					16	-						
					20	-						
					24	-						135
630		0118	L	R	12	-	64.5	35.5	-	70	-	150
					14	-						
					16	-						
					20	-						
					24	-						

PPET Terminal lugs

Wire Range (mm²)		Part No.					Dimensions(mm)					
Rated Cross secti on	FLEX	Conduc tor Part	Barrel Form	Tongue Form	Stud size	FL EX	Width (Min)	I.D	C		L	
									S	L	S	L
10	10	0201	S/L	R	05	-	9	4.6	15	30	52	67
					06	-						
					08	-	15				67	82
					10	-						
					12	-	18				70	85
16	16	0202	S/L	R	05	-	15	5.5	15	30	52	67
					06	-						
					08	-	15				67	82
					10	-						
					12	-	18				70	85
25	25	0203	S/L	R	05	-	13	7.2	17	33	54	70
					06	-						
					08	-	15				70	86
					10	-						
					12	-	18				73	89
35		0204	S/L	R	05	-	16	8.5	20	33	62	75
					06	-						
					08	-	18				72	85
					10	-						
					12	-	18				75	88
	35	0204	S/L	R	05	F	17	8.8	20	40	97	117
					06	F						
					08	F						

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Wire Range (mm ²)		Part No.					Dimensions(mm)							
Rated Cross secti on	FLEX	Conduc tor Part	Barrel Form	Tongue Form	Stud size	FL EX	Width (Min)	I.D	C		L			
									S	L	S	L		
					10	F								
					12	F								
50	35	0205	S/L	R	05	-	18.4	9.5	20	35	97	112		
					06	-								
					08	-								
					10	-								
					12	-	24.5						103	115
					14	-								
					16	-								
	50	0206	S/L	R	05	-	19	10.2	20	35	100	115		
					06	-								
					08	-								
					10	-								
					12	-	24						106	121
					14	-								
					16	-								
70		0207	S/L	R	05	-	21	11.2	24	45	108	128		
					06	-								
					08	-								
					10	-								
					12	-	25						111	130
					14	-								
					16	-								
	70	0208	S/L	R	08	F	23	12.5	24	45	106	130		
					10	F					112	128		
					12	F								
					14	F								
					16	F								
95		0209	S/L	R	08	-	25.5	13.3	24	40	106	122		
					10	-					112	128		
					12	-								
					14	-								
					16	-								
	95	0209	S/L	R	08	F	26	14	24	47	112	135		
					10	F					115	138		
					12	F								
					14	F								
					16	F								
120		0210	S/L	R	08	-	27.5	15.2	24	50	112	137		
					10	-					115	140		
					12	-								
					14	-								
					16	-								
150	120	0211	S/L	R	08	-	31	16.8	30	50	122	142		
					10	-					124	147		
					12	-								
					14	-								
					16	-								
		0211	S/L	R	08	F	31	17.5	30	50	124	147		

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Wire Range (mm ²)		Part No.					Dimensions(mm)					
Rated Cross section	FLEX	Conduc tor Part	Barrel Form	Tongue Form	Stud size	FL EX	Width (Min)	I.D	C		L	
									S	L	S	L
					10	F						
					12	F						
					14	F						
					16	F						
185	150	0212	S/L	R	10	-	34	18.5	35	50	129	144
					12	-						
					14	-						
					16	-						
					20	-						
200		0213	S/L	R	10	-	37.5	20	35	50	129	144
					12	-						
					14	-						
					16	-						
					20	-						
	185	0213	S/L	R	10	F	37.5	20.5	40	57	138	155
					12	F						
					14	F						
					16	F						
					20	F						
240	240	0214	S/L	R	10	-	40.5	22	40	57	142	159
					12	-						
					14	-						
					16	-						
					20	-						
					24	-					147	162
300		0215	L	R	10	-	43.5	24	-	60	-	162
					12	-						
					14	-						
					16	-						
					20	-						
					24	-						
		0216	L	R	10	F	46	25	-	66	-	168
					12	F						
					14	F						
					16	F						
					20	F						
					24	F						
400		0216	L	R	12	-	49	26.5	-	66	-	168
					14	-						
					16	-						
					20	-						
					24	-						
500		0217	L	R	12	-	56.5	30	60	73	173	189
					14	-						
					16	-						
					20	-						
					24	-						
630		0218	L	R	12	-	64.5	35.5	-	70	-	195
					14	-						

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Wire Range (mm ²)		Part No.					Dimensions(mm)					
Rated Cross secti on	FLEX	Conduc tor Part	Barrel Form	Tongue Form	Stud size	FL EX	Width (Min)	I.D	C		L	
									S	L	S	L
					16	-						
					20	-						
					24	-						

Application/Limitation

To be used with tools as stated in the Dong-A Bestech catalogue only.
Drawing Fig. 1/2/3 is as in the Dong-A Bestech catalogue.
Manufacturer instructions to be followed.

Type Approval documentation Tests carried out

IEC 61238-1 (2003-05)

Marking of product

Manufacturer's Logo, Conductor size of cable, Stud hole size

Periodical assessment

The scope of the retention/renewal survey is to verify that the conditions stipulated for the Type Approval Certificate are complied with and that no alterations are made to the design and/or the material of the product.

The main elements of the survey are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Check of results from Production Sample Tests (PST and Routine Tests (RT) (if not available, PST and RT are to be carried out)
- Review of type approval documentation
- Review of possible changes in design, material and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Survey is to be performed at least every second year.

END OF CERTIFICATE