

DK-621 Series of electrical connectors

Description

DK-621 series electrical connectors are dedicated to 1553B data bus system. There are three connection methods: screw type, four-bayonet type, and three-bayonet type, with locking device. This series of connectors has the characteristics of small size, light weight, environmental resistance, 360° shielding, easy installation, and high reliability.



There are three connection methods: threaded, three-bayonet, and four-bayonet, and the fuse is anti-loosening.
 Welding of contacts and accessories
 360° shielding
 Transmission rate: 1Mbps
 Characteristic impedance: 77.Ω
 Cable: Shielded twisted pair M17/176-00002
 Implementation of corporate standards: Q/21EJ651

Main technical performance

[Environmental and mechanical properties]

Cycles: 500-in cycles
 One shock: 11ms rear peak saw tooth wave, acceleration peak 50g-vibration: sinusoidal vibration 20g, with temperature cycle and simulation accessories
 Temperature range: -65°C~+125°C
 Seal: 1 meter water depth, one salt spray: 500 hours
 A working height: ≤ 21336m

[Electrical performance]

Withstand voltage (Vrms)
 Normal conditions: center conductor to outer conductor: 500V AC
 Between the outer conductor and the housing: 500V AC
 Insulation resistance (at 500Vdc) Under standard conditions temperature: ≥ 5000MΩ; heat and humidity ≥ 100MΩ
 Contact specifications, contact resistance, rated current, rated voltage:

Contact specifications	Contact resistance (before test)	Contact resistance (after test)	Rated current	Rated voltage
Φ 0,58mm(Center conductor)	≤10mΩ	≤15mΩ	1A	27V
Φ 1,85 mm(Outer conductor)	≤5mΩ	≤15mΩ	5A	27V

Shielding:

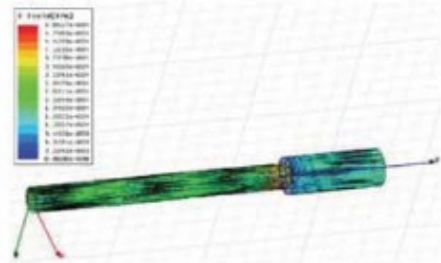
Frequency MHz	100	200	300	400	800	1000
Leakage reduction (dB) min	55	53	51	51	50	50

Simulation and data transmission test

[Bus connector simulation]:



Contact modeling diagram



Electric field distribution map

[Bus connector transmission test results]

The transmission rate of the 1553B data bus is 1Mbps, and a message word is composed of 20 bits. According to the current military standards, our company's DK-621 series electrical connectors are tested at 20Mbps (a word is composed of 8 bits) data transmission rate, transmission eye diagram with a rise time of 10ns, return loss and other indicators. For testing of 20 megabits per second (a word consists of 8 bits), which is equivalent to 8 megabits per second in the 1553B system (a message word consists of 20 bits).

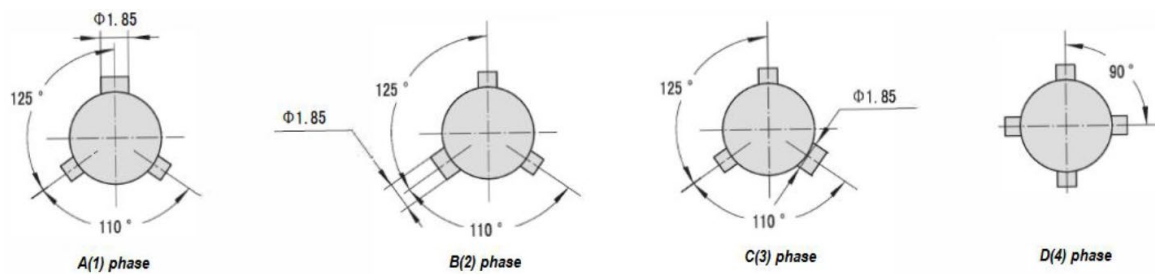
Model	DK-621	-04XX	C	-4	P
Shell type	0411 - Threaded connecting plug 0412 - Threaded connecting socket 0433 - Three bayonet 1 phase plug 0434 - Three bayonet 1 phase socket 0435 - Three bayonet 2 phase plug 0436 - Three bayonet 2 phase socket 0437 - Three bayonet 3 phase plug 0438 - Three bayonet 3 phase socket 0439 - Four bayonet connector plug 0440 - Four bayonet connector plug				
Attachment type	No marking – Common straight attachment C – Short straight attachment L – L-bend attachment				
Phase	1 – 1 Phase 2 – 2 Phases 3 – 3 Phases 4 – 4 Phase (four bayonet)				
Contact type	P-Pin S-Socket				

[Example of model numbering]

DK-621-0411-P, DK-621 series, threaded connection plug, straight accessories, contact parts are pin

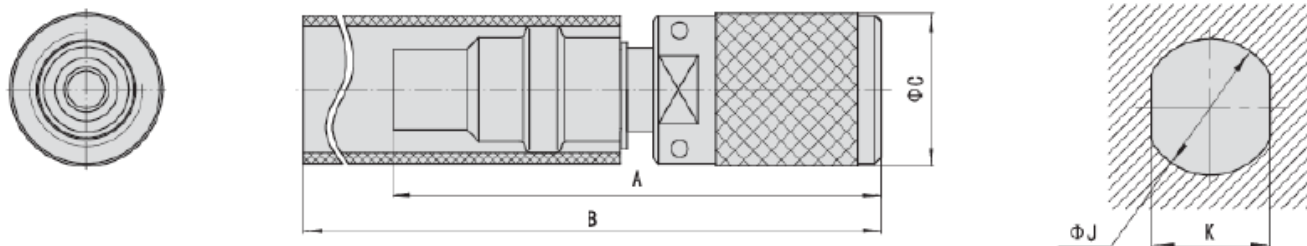


APMA

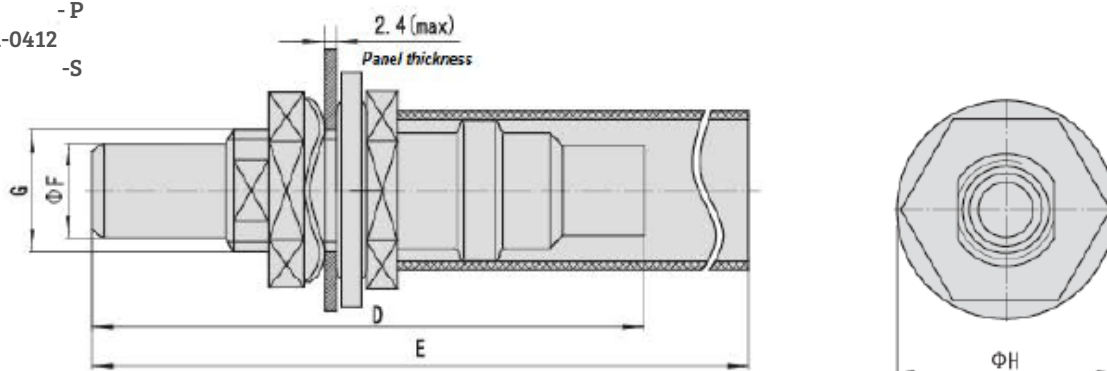


	A	B	C	D	E	F	G	H	J	K
Threaded connectors	35.3	59	11.05	36.2	64	6.1	0.3125-32UNE F-2A	15.3	8	7

- P
DK-621-0411
- S



- P
DK-621-0412
- S

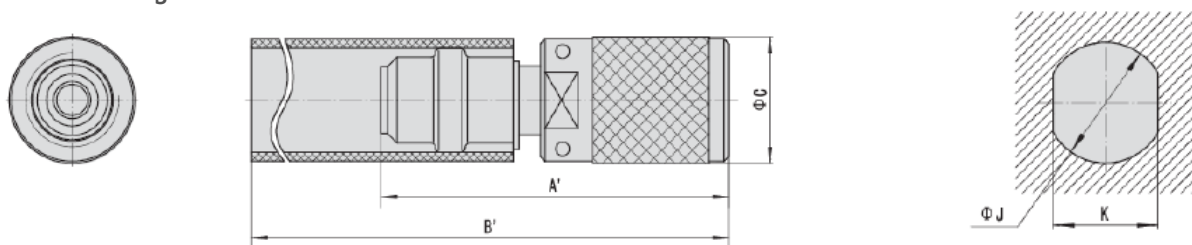




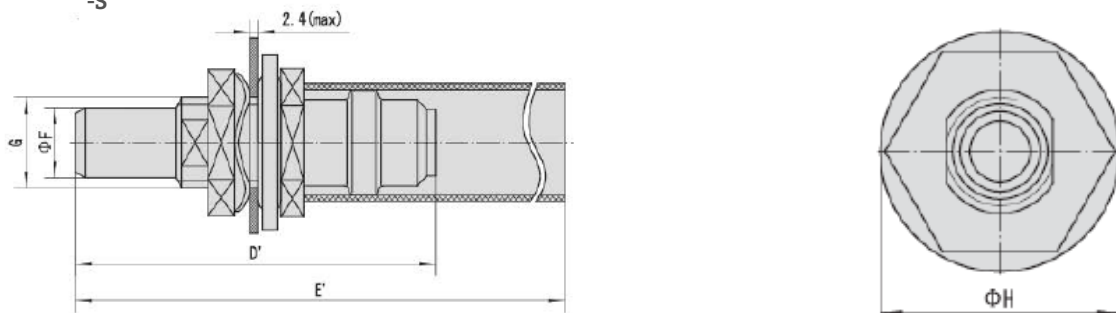
APMA

Threaded connectors	A	B	C	D	E	F	G	H	J	K
		30.8	58.5	11.05	31.7	59.5	6.1	0.3125-32UNE F-2A	15.3	8

- P
DK-621-0411C
- S

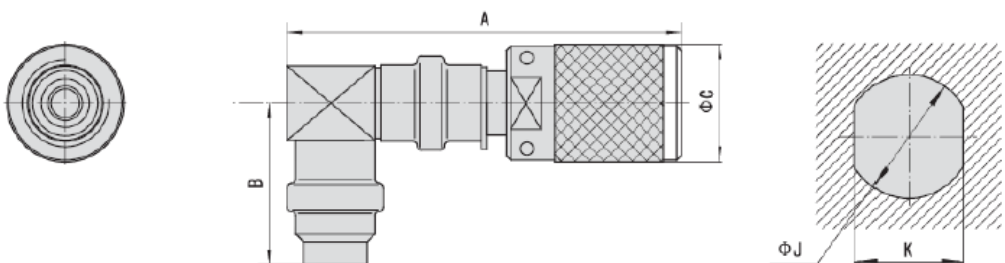


- P
DK-621-0412C
- S

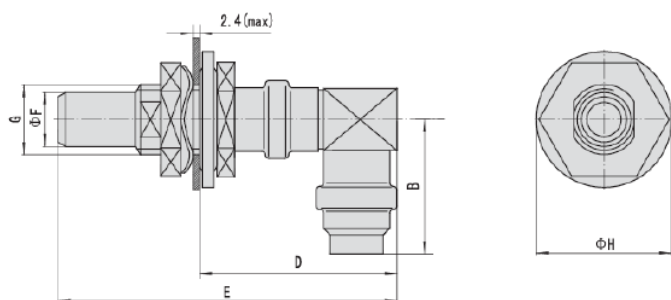


Threaded connectors L - type bent attachment	A	B	C	D	E	F	G	H	J	K
		39	15.2	11.05	22.5	39	6.1	0.3125-32UNE F-2A	15.3	8

- P
DK-621-0411L
- S



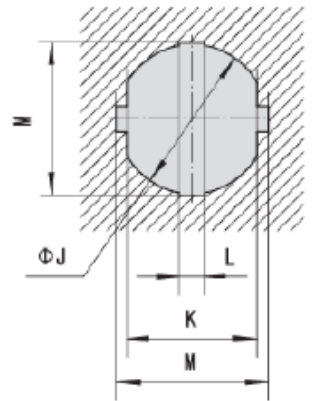
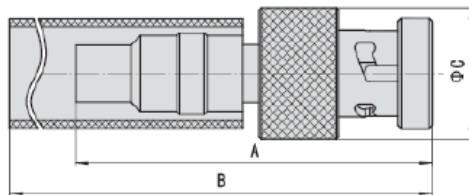
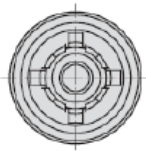
- P
DK-621-0412L
- S



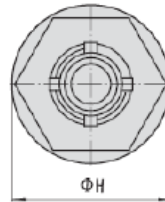
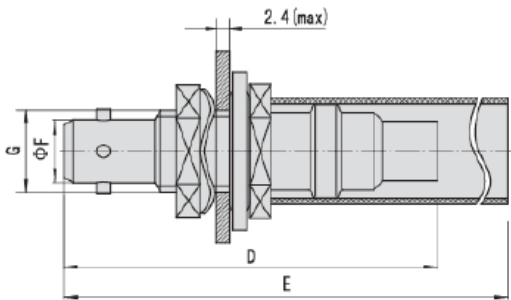
[Dimension of four bayonet connectors]

	A	B	C	D	E	F	G	H	J	K	L	M
Four bayonet	34	61.2	12.9	36.2	64	6.1	0.3125 - 32UN EF-2A	15.3	8	7	1.4	8.2

- 4P
DK-621-0439
- 4S

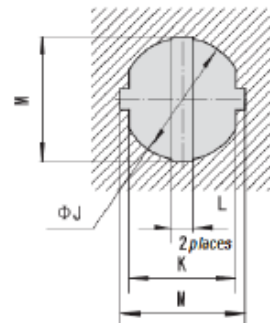
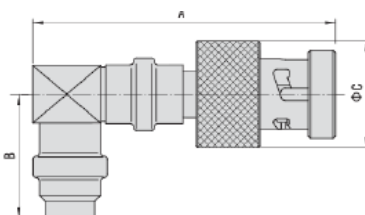
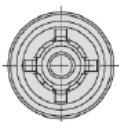


- 4P
DK-621-0440
- 4S

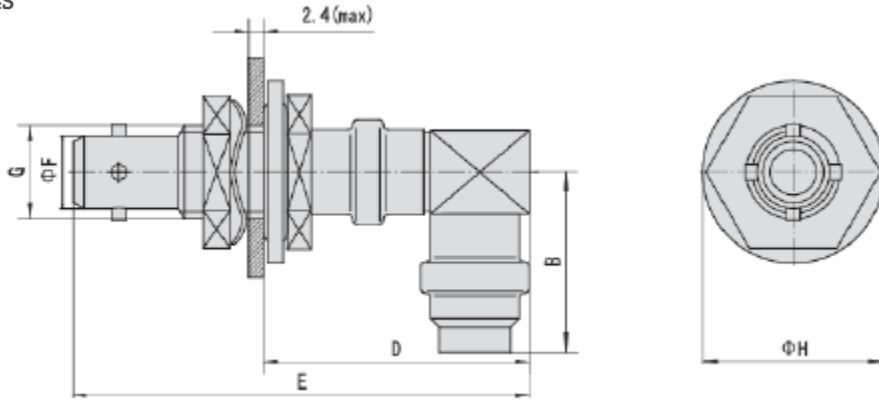


	A	B	C	D	E	F	G	H	J	K	L	M
Four bayonet	38	15.2	12.9	22.5	39	6.1	0.3125 - 32UN EF-2A	15.3	8	7	1.4	8.2

- 4P
DK-621-0439L
- 4S



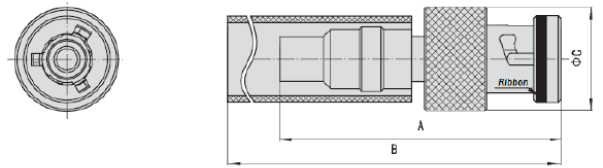
- 4P
DK-621-0440L
- 4S



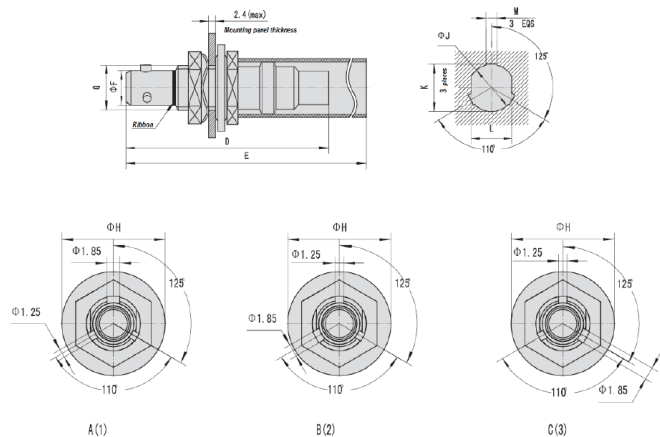
[Three bayonet connector dimensions]

Three bayonet connector	A	B	C	D	E	F	G	H	J	K	L	M
	34.5	61.2	12.9	36.2	64	6.1	0.3125 - 32UN EF-2A	15.3	8	8.1	7	2

Model	Phase	Ribbon
DK-621-0433 - 1P - 1S	A(1)	RED
DK-621-0435 - 2P - 2S	B(1)	WHITE
DK-621-0437 - 3P - 3S	C(3)	GREEN

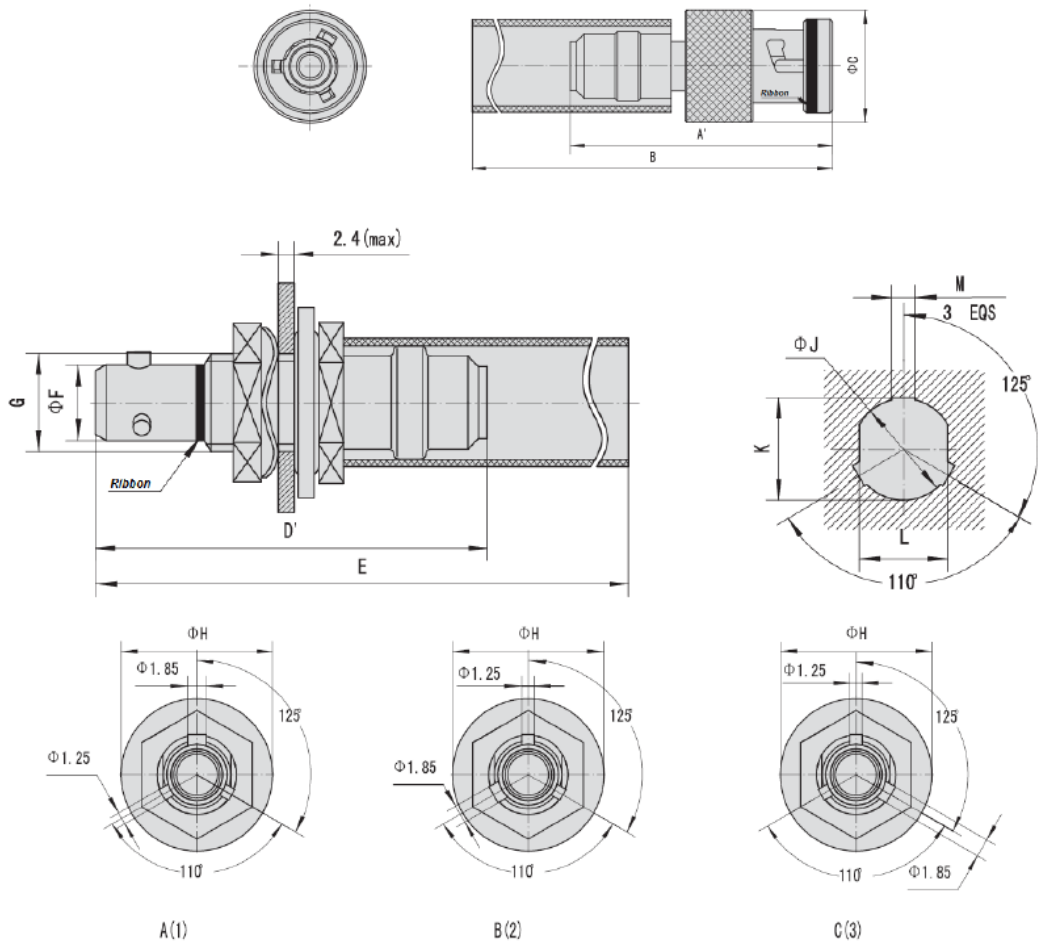


Model	Phase	Ribbon
DK-621-0434 - 1P - 1S	A(1)	RED
DK-621-0436 - 2P - 2S	B(1)	WHITE
DK-621-0438 - 3P - 3S	C(3)	GREEN



Three bayonet connector	A	B	C	D	E	F	G	H	J	K	L	M
	30	56.7	12.9	31.7	59.5	6.1	0.3125 - 32UN EF-2A	15.3	8	8.1	7	2

Model	Phase	Ribbon
- 1P DK-621-0433C - 1S	A(1)	RED
- 2P DK-621-0435C - 2S	B(1)	WHITE
- 3P DK-621-0437C - 3S	C(3)	GREEN





Three bayonet connector	A	B	C	D	E	F	G	H	J	K	L	M
	38	15.2	12.9	22.5	39	6.1	0.3125 - 32UN EF-2A	15.3	8	8.1	7	2

Model	Phase	Ribbon
- 1P DK-621-0433L - 1S	A(1)	RED
- 2P DK-621-0435L - 2S	B(1)	WHITE
- 3P DK-621-0437L - 3S	C(3)	GREEN

