

VAR Series Circular Electrical Connectors

Brief introduction

- Quick bayonet coupling system with blind mating function
- Hyperboloid wire spring socket with low contact resistance and smooth mating and unmating
- Vibration and shock resistant and long service life
- Types of termination: crimp and soldering
- Various crimp bucket inner diameters for crimp contacts, applicable for wire section from 1.0~3.0mm²
- Optional wire protection rubber sleeve at plug end
- Applied in electrical connection between railway train and signal control boxes
- Standard: Q/21EJ127

Main technical characteristics

[Mechanical performances]

- shell: high strength aluminum alloy anodized black paint
- insulator: thermosetting plastic
- contact: copper alloy with gold plating
- vibration: 10~2000Hz, acceleration 147m/s²
- shock: acceleration 735m/s²
- Endurance: 1000 cycles

[Environmental characteristics]

- Operation temperature: -55~+125°C
- RH: 95% at 40°C
- Protection performances: moisture proof, salt spray proof, rainproof, fungus proof, dust proof.

[Electrical performances]

—crimp contacts (VAR28, VAR36, VAR50) :

Contact size	Wire section (mm ²)	Contact resistance (Ω)	Rated current (A)	Crimp tool	Locator
Φ1.5A	1.0	≤0.0025	10	XCXY-02	DWQ07-00
Φ1.5B	1.2~1.5				
Φ1.5C	2.5~3.0				
Φ2.5A	1.0	≤0.001	25		
Φ2.5B	1.2~1.5				
Φ2.5C	2.5~3.0				

- Select appropriate crimp contact size according to applicable wire section when ordering

——soldering contact (VAR21, VAR28-21) :

Contact size	Wire section (mm ²)	Contact resistance (Ω)	Rated current (A)
Φ1.0	≤1.0	≤0.005	5
Φ1.5	≤1.5	≤0.0025	10
Φ2.5	≤4.0	≤0.001	25

——rated voltage, withstanding voltage and

Insulation resistance:

Operation environment	rated voltage (V)	withstanding voltage (V)	Insulation resistance
Normal	500	1500	≥1000
Heat damp	250	1000	≥20

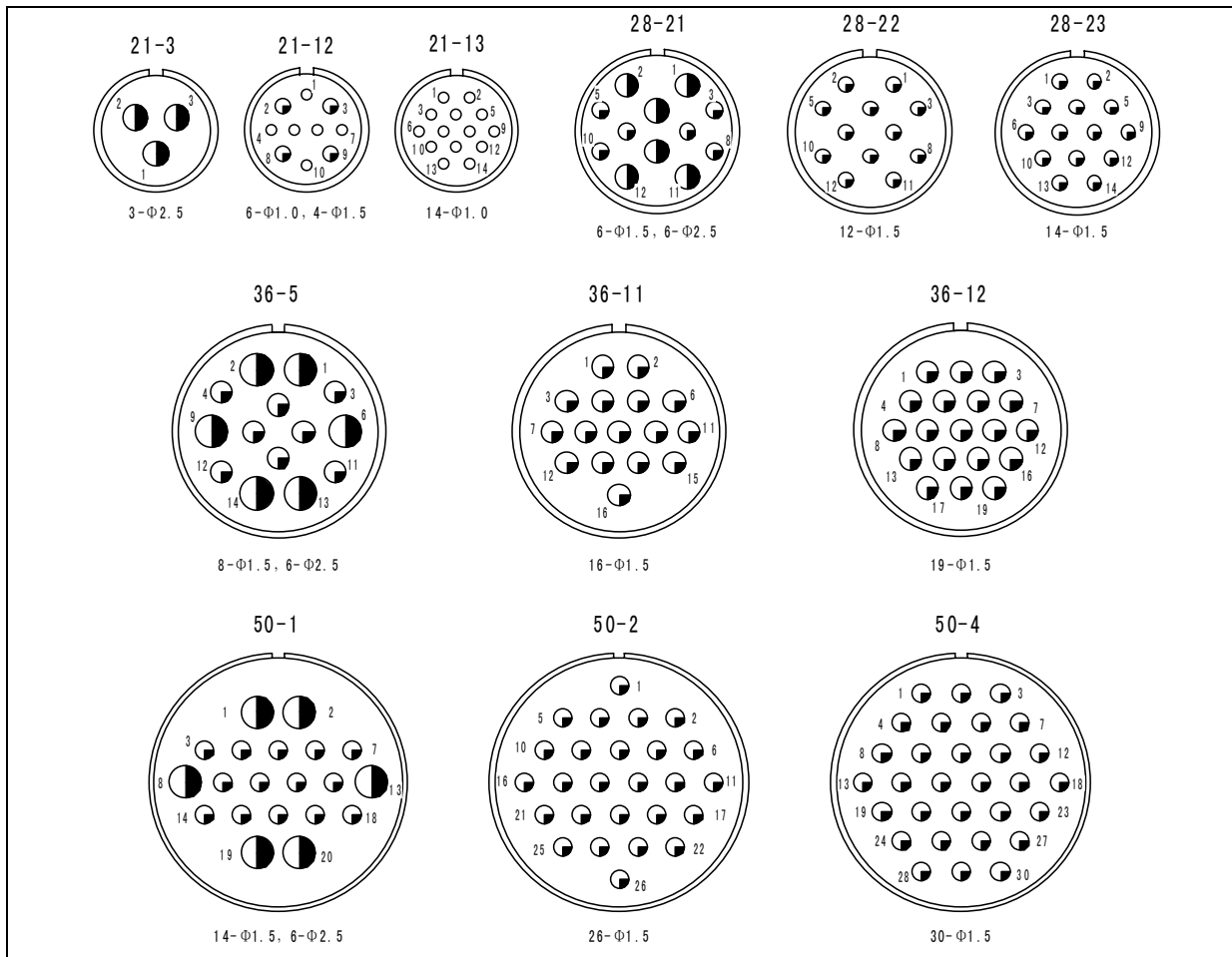
Designation

Series	VAR	36	T	K	11	Y	A
Shell size	21, 28, 36, 50						
Connector type	Z—receptacle	T—plug					
Contact type	J - pin	K - socket					
Layout	see "Layout table"						
Types of termination *	Y—crimp; H—soldering						
Back shells (only for plug)	blank—without back shell						
	A, B—with back shell, A, B stand for different cable outlet diameters						

Notes:

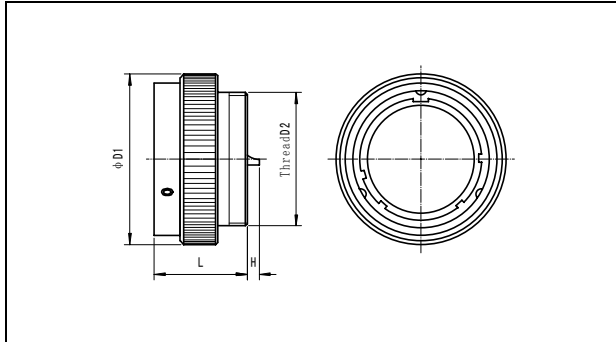
- 1) Only type of termination for VAR21 and VAR28-21 is soldering and plug and receptacle can be loaded with pins or sockets;
- 2) type of termination for VAR28, VAR36, VAR50 is crimp, plug loaded with sockets and receptacle with pins;
- 3) various sizes optional for $\Phi 1.5$ and $\Phi 2.5$ crimp contacts (applicable for different wire sections), please note while ordering

Layout



Outline dimensions

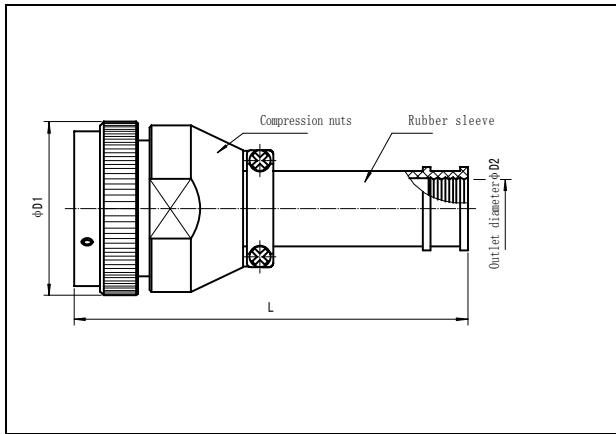
[Plug]



P/N	D1	Thread D2	L	H
VAR21TJ(K)×H	32	M22×1left	22	2.5
VAR28TJ(K)21H	38	M27×1left	27	2.5
VAR28TK22(23)Y	38	M27×1left	25	—
VAR36TK×Y	46	M36×1left	25	—
VAR50TK×Y	60	M50×1.5left	25	—

* “x” in part numbers stand for optional insert arrangement code

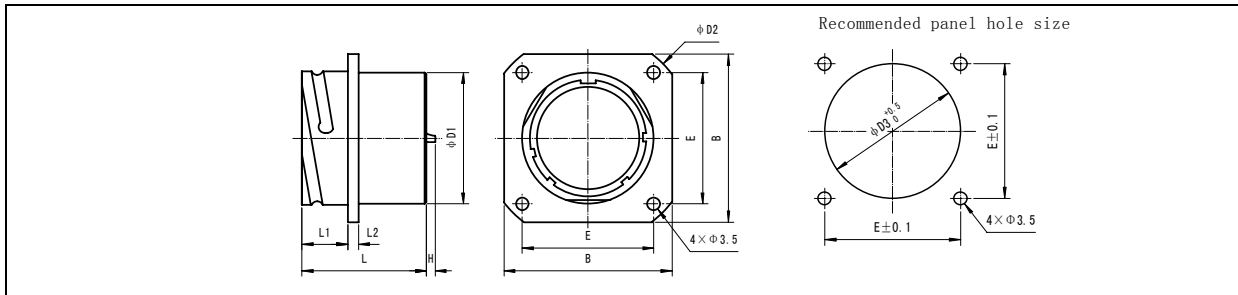
[Plug (with backshells)]



P/N	D1	D2	L
VAR21TP(S)×HA	32	16	82.5
VAR21TP(S)×HB	32	8	82.5
VAR28TJ(K)21HA	38	16	102
VAR28TK22(23)YA	38	16	100
VAR36TK×YA	46	16	110.5
VAR50TK×YA	60	24	120
VAR50TK×YB	60	18	120

* “x” in part numbers stand for optional insert arrangement code

[Receptacle]



P/N	L1	L2	L	H	D1	D2	E	B	D3
VAR21ZK(J)×H	13.0	2	22	2.5	21	39	23	31	21.5
VAR28ZK(J)21H	12.5	2.5	22	2.5	28	48	28	38	28.5
VAR28ZJ22(23)Y	12.5	2.5	34	—	28	48	28	38	28.5
VAR36ZJ×Y	12.5	3	34	—	36	59	36	46	36.5
VAR50ZJ×Y	12.5	3	34	—	50	80	50	62.5	50.5

* “x” in part numbers stand for optional insert arrangement code