

## 2PM series

circular electrical connectors mainly adopt Russian connector technology. It is widely used for electrical connection and signal transmission between electrical equipment in railway system, trams and trolley bus etc. Its unique structure can make up for the shortcomings of many other similar connectors, making it more convenient and scientific to use. The cable plug and panel socket are threaded connection.



The panel socket also has a glass sintered sealed socket (M) and a glass sintered sealed bulkhead socket (C), which can simultaneously meet the user requirements in special environments such as vacuum, sealing, and high temperature. It can be matched and interchanged with original parts of Russian 2PM(T) / 2 (T) 、 2 / 2 、 2 / 2 series.

### Technical Performance

Connector type: Cable plug /panel socket	Termination: Solder
Orientation: Straight/Angled	Mating Cycles: 500 times
Connection method: Thread connection	Working Voltage: ≤700V
Shell Material: Aluminum alloy	Working Current: 5-40A
Contact Material: Copper with silver/gold plated	Insulator: Bakelite(Glass fiber mixed) /PBT
Shell Size: 2PM14/18/22/24/27/30/33/36/39/42/45	Operating temperature: -60°C - +200°C
Contacts: 4/7/8/10/19/20/22/24/32/45/50	Insulation resistance: Normal ≥1000M    Moistheat ≥20M
	Contact resistance: 0.8-5m

Ø1.0	Ø1.5	Ø2.0	Ø3.0
5A	10A	20A	40A

Ø1.0	Ø1.5	Ø2.0	Ø3.0
≤5mΩ	≤2.5mΩ	≤1.6mΩ	≤0.8mΩ

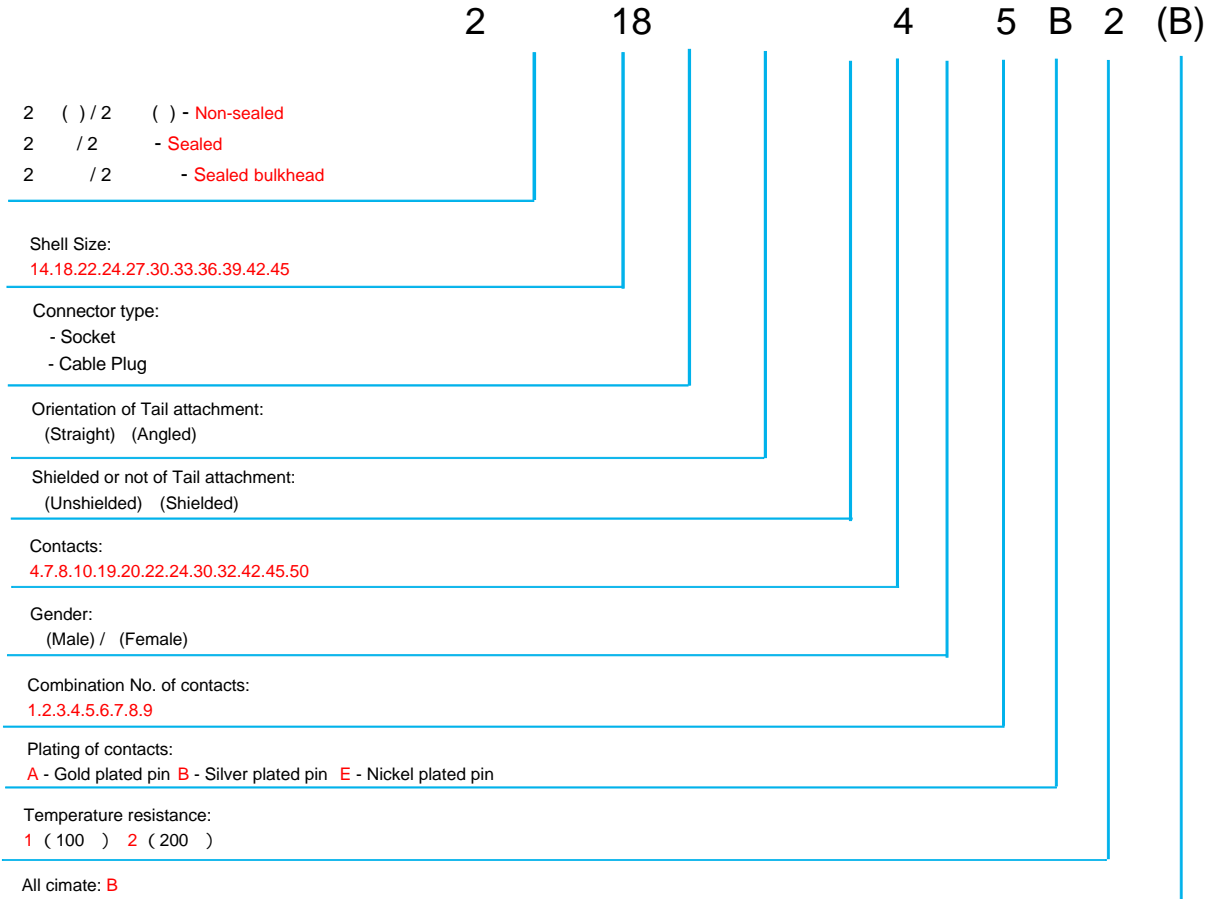
### Russian/ RENHOTEC P/N code Explanation

No.	Explanation of code	Russian code
1	Non-sealed	2PM, 2PMД
	Non-sealed heat resistant(T)	2PMТ, 2PMДТ
	Sealed(Г)	2PMГ, 2PMГД
	Sealed bulkhead(Г)	2PMГГ, 2PMГГД
2	Shell Size (mm)	14.18.22.24.27.30.33. 36.39.42.45
3	Connector type	- Socket - Cable Plug
4	Orientation of Tail attachment	(Straight) / (Angled)
5	Shielded or not of Tail attachment	(Unshielded) / (Shielded)
6	Contacts	4.7.8.10.19.20.22.24.30. 32.42.45.50
7	Gender	(Male) / (Female)
8	Combination No. of contacts	1-Φ1      6-Φ1.5+Φ3 2-Φ1+Φ1.5    7-Φ1.5+Φ2+Φ3 3-Φ2+Φ3    8-Φ1.5+Φ2 4-Φ1+Φ3    9-Φ3 5-Φ1.5
9	Plating of contacts	A - Gold plated pin B - Silver plated pin E - Nickel plated pin
10	Temperature resistance	1 ( 100 ) 2 ( 200 )
11	All climate	B

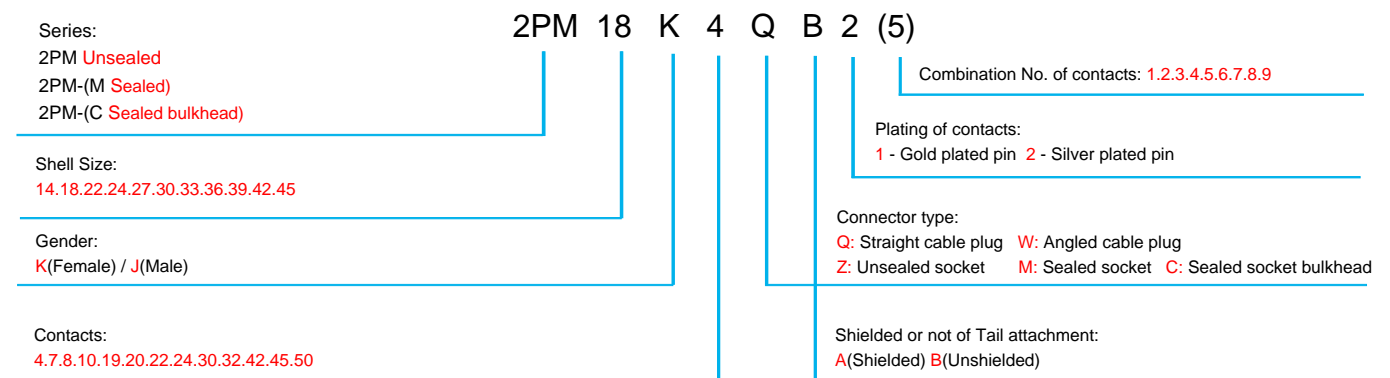
No.	Explanation of code	Renhotec code
1	Non-sealed	2PM
	Non-sealed heat resistant(T)	2PM
	Sealed(Г)	2PM - M
	Sealed bulkhead(Г)	2PM - C
2	Shell Size (mm)	14, 18, 22, 24, 27 30, 33, 36, 39, 42, 45
3	Connector type	Z - Unsealed Socket M - Sealed Socket C - Sealed Socket bulkhead Q/W - Straight/Angled Cable Plug
4	Tail attachment	A (Shielded) / B (Unshielded)
5	Contacts	4, 7, 8, 10, 19, 20, 22, 24, 30, 32, 42, 45, 50
6	Gender	J(Male) / K(Female)
7	Plating of contacts	1- Gold plated pin 2- Silver plated pin
8	Combination No. of contacts	(1).(2).(3).(4).(5).(6).(7).(8).(9)

## P/N RULES

### Russian P/N:



### RENHOTEC P/N:



P/N Image Examples:



**QB**



**WB**



**QA**



**WA**



**Z**

2 ( )/2 ( ) -



**M**

2 /2 -



**C**

2 /2 -



**Z+A/B**

2 ( )/2 ( ) - + /



**M+A/B**

2 /2 - + /



**C+A/B**

2 /2 - + /

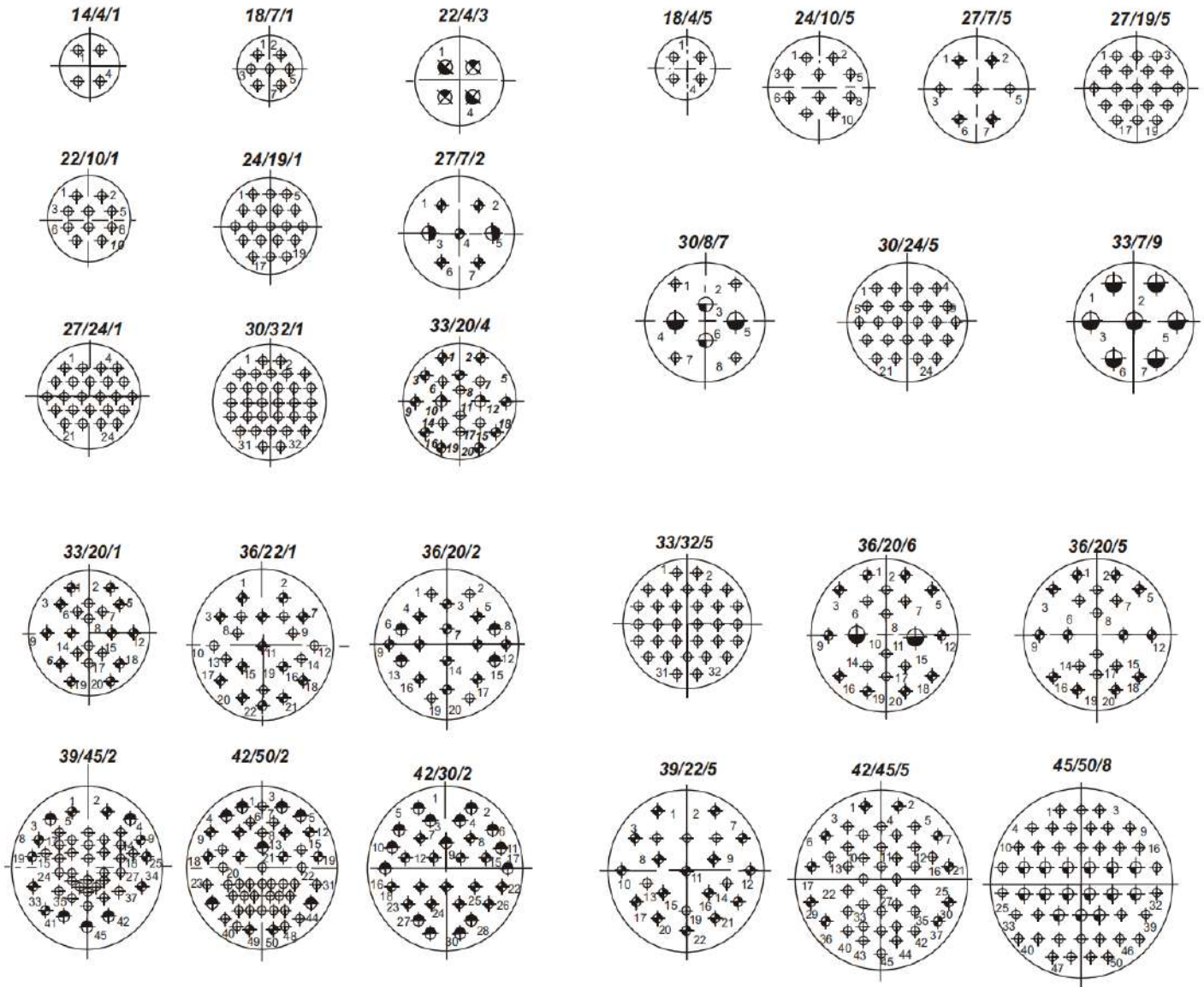
Note:  
Sealed socket(M/C) : Stainless steel material, glass insulator process

## Contacts arrangements (From female view)





























### Contact layout diagrams for 2PM(T)

Ex: Shell Size / No. of Contacts / Combination No.

### Contact layout diagrams for 2PMД(T)

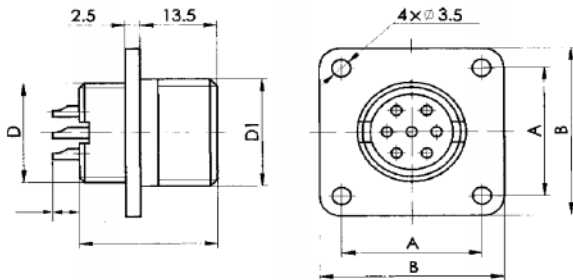


## Contacts arrangements (From female view)

Combination No. Shell Size	Shell size/Contacts/Combination No. of contacts				Contact OD:			
	14/4/1				ø1	ø1.5	ø2	ø3
14								
	18/7/1	18/4/5			22/4/3	22/10/1		
18					22			
	24/10/5	24/19/1						
24								
	27/7/5	27/7/2	27/19/5	27/24/1				
27								
	30/8/7	30/24/5	30/32/1					
30								
	33/7/9	33/20/4	33/20/1	33/32/5				
33								
	36/22/1	36/20/2	36/20/6	36/20/5				
36								
	39/22/5	39/45/2						
39								
	42/30/2	42/45/5	42/50/2			45/50/8		
42				45				

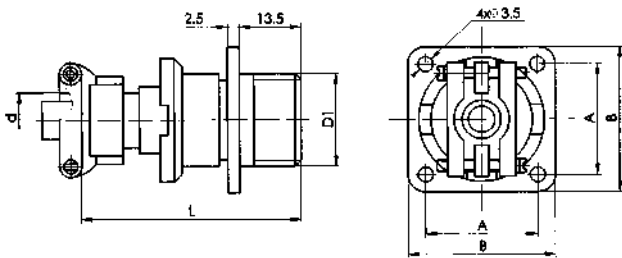
## Appearance and installation dimensions

### Socket **without** tail attachment(Б)



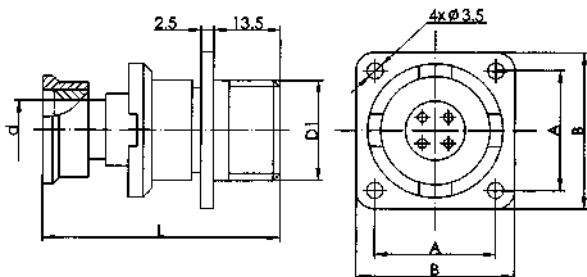
Size (mm)					
Shell Size	D(Left)	D <sub>1</sub>	A	B	B
14	M14×1	M16×1	17±0.1	24	24
18	M18×1	M20×1	20±0.1	27	
22	M22×1	M24×1	23±0.1	30	
24	M24×1	M27×1.5	26±0.1	33	
27	M27×1	M30×1.5	29±0.1	36	
30	M30×1	M33×1.5	31±0.1	38	
33	M33×1	M36×1.5	32±0.1	40	
36	M36×1	M39×1.5	35±0.1	43	
39	M39×1	M42×1.5	37±0.1	46	
42	M42×1	M45×1.5	40±0.1	49	
45	M45×1	M48×1.5	43±0.1	52	

### Socket **with straight unshielded** tail attachment(БПН)



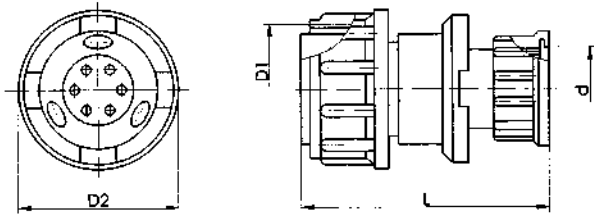
Size (mm)					
Shell Size	D1	d	A	B	L
14	M16×1	6.5	17±0.1	24	54
18	M20×1	10.5	20±0.1	27	54
22	M24×1	14.5	23±0.1	30	57
24	M27×1.5	16.5	26±0.1	33	62.5
27	M30×1.5	18.5	29±0.1	36	62.5
30	M33×1.5	20.5	31±0.1	38	62.5
33	M36×1.5	22.5	32±0.1	40	67.5
36	M39×1.5	22.5	35±0.1	43	67.5
39	M42×1.5	24.5	37±0.1	46	67.5
42	M45×1.5	30.5	40±0.1	49	67.5
45	M48×1.5	30.5	43±0.1	52	67.5

### Socket **with straight shielded** tail attachment(БПЗ)



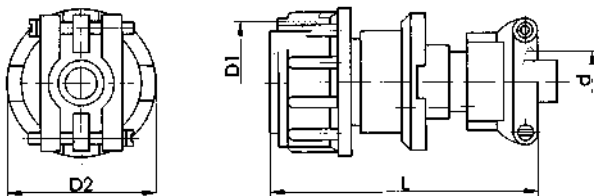
Size (mm)					
Shell Size	D1	d	A	B	L
14	M16×1	6.5	17±0.1	24	48
18	M20×1	10.5	20±0.1	27	48
22	M24×1	14	23±0.1	30	48
24	M27×1.5	16.5	26±0.1	33	54
27	M30×1.5	18	29±0.1	36	54
30	M33×1.5	20.5	31±0.1	38	54
33	M36×1.5	23.7	32±0.1	40	59
36	M39×1.5	22.5	35±0.1	43	59
39	M42×1.5	25	37±0.1	46	59
42	M45×1.5	29.5	40±0.1	49	59
45	M48×1.5	29.5	43±0.1	52	59

☉ Cable plug with **straight shielded** tail attachment(КТЭ)



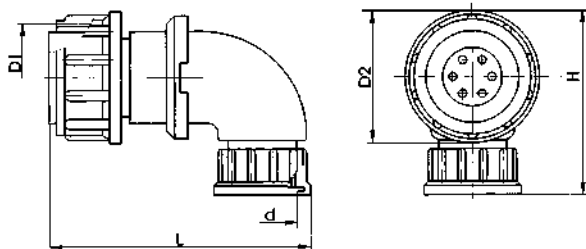
Size (mm)				
Shell Size	D1	D2	d	L
14	M16×1	22	6.5	48
18	M20×1	25	10.5	48
22	M24×1	29	14	48
24	M27×1.5	32	16.5	54
27	M30×1.5	35	18	54
30	M33×1.5	39	20.5	54
33	M36×1.5	42	23.7	59
36	M39×1.5	45	22.5	59
39	M42×1.5	48.5	25	59
42	M45×1.5	51	29.5	59
45	M48×1.5	54	29.5	59

☉ Cable plug with **straight unshielded** tail attachment(КПН)



Size (mm)				
Shell Size	D1	D2	d	L
14	M16×1	22	6.5	54
18	M20×1	25	10.5	54
22	M24×1	29	14.5	57
24	M27×1.5	32	16.5	62.5
27	M30×1.5	35	18.5	62.5
30	M33×1.5	39	20.5	62.5
33	M36×1.5	42	22.5	67.5
36	M39×1.5	45	22.5	67.5
39	M42×1.5	48.5	24.5	67.5
42	M45×1.5	51	30.5	67.5
45	M48×1.5	54	30.5	67.5

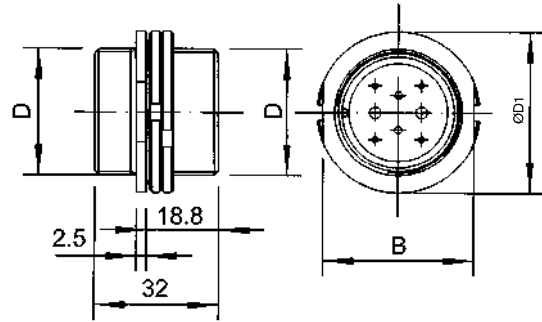
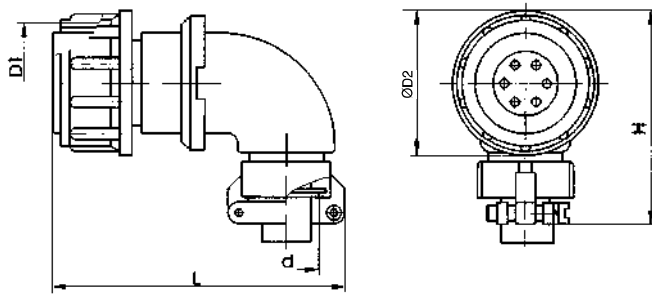
☉ Cable plug with **angled shielded** tail attachment(КУЭ)



Size (mm)					
Shell Size	D1	D2	d	H	L
14	M16×1	22	6.5	30.8	48
18	M20×1	25	10.5	35	51
22	M24×1	29	14	38	54
24	M27×1.5	32	16.5	41	57
27	M30×1.5	35	18	44	59
30	M33×1.5	39	20.5	47.8	62
33	M36×1.5	42	23.7	50.8	65
36	M39×1.5	45	22.5	53.8	72
39	M42×1.5	48.5	25	56	72
42	M45×1.5	51	29.5	60	72

☉ Cable plug **with angled unshielded** tail attachment(KVH)

☉ Sealed socket **bulkhead**(ГП)



Size (mm)					
Shell Size	D1	D2	d	H	L
14	M16×1	22	6.5	40	51
18	M20×1	25	10.5	41	54
22	M24×1	29	14.5	47	59
24	M27×1.5	32	16.5	50	60
27	M30×1.5	35	18.5	53	64
30	M33×1.5	39	20.5	57	65
33	M36×1.5	42	22.5	60	69
36	M39×1.5	45	22.5	63	74
39	M42×1.5	48.5	24.5	66	73
42	M45×1.5	51	30.5	69	76

Size (mm)			
Shell Size	D	D1	B
14	M16×1	25	22
18	M20×1	29	26
22	M24×1	33	30
24	M27×1.5	36	33
27	M30×1.5	39	36
30	M33×1.5	42	39
33	M36×1.5	45	42
36	M39×1.5	48	45
39	M42×1.5	51	48
42	M45×1.5	54	51

### Contact combination code list

Shell Size	Contact combination no.	Contacts	Contact OD(mm) and numbers			
			Ø1.0	Ø1.5	Ø2.0	Ø3.0
14	1	4	4			
18	1	7	7			
	5	4		4		
22	1	10	10			
	3	4			2	2
24	1	19	19			
	5	10		10		
27	1	24	24			
	2	7	5	2		
	5	7		7		
	5	19		19		
30	1	32	32			
	5	24		24		
	7	8		4	2	2

Shell Size	Contact combination no.	Contacts	Contact OD(mm) and numbers			
			Ø1.0	Ø1.5	Ø2.0	Ø3.0
33	1	20	20			
	4	20	18			2
	5	32		32		
	9	7				7
36	1	22	22			
	2	20	16	4		
	5	20		20		
	6	20		18		2
39	2	45	40	5		
	5	22		22		
42	2	30	15	15		
	2	50	43	7		
	5	45		45		
45	8	50		35	15	