

Specifications

■ Introduction



LS PowerMax series 2.54 mm connector provide High reliability board to wire connection solution:

- Compact structure design, with high current transmission capacity, excellent heat resistance and vibration resistance, and function of avoiding misinsertion.
- Excellent terminal design ensures stable current transmission.

PowerMax series connector is designed base on VW 75174 (LV 214) /USCAR technical requirements for vehicle connector, It is mainly suitable for new energy vehicle (NEV) / electric vehicle (EV) powertrain and LED / laser

■ Feature

描述	PowerMax Series
Pitch	2.54mm
Rated current (Per contact)	Up to 12A (depends on cable and operation environment)
Pin quantity	Single row: 2/3/4/5/6/8 Dual row: 10/12/14/16/18/20/22/24/26/28/30
Termination type	Male connector SMT. female connector with crimp contact
Suitable wire/cable specification	AWG18/ AWG20 /AWG22/AWG24/AWG26
Variants	Vertical male connector type V
	Right angle male connector type A
	Female connector type S with 180° cable outlet
Latch	Double side unlock feature without unlocking tool

PowerMax series

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2.54mm single/dual row board to wire connector

Parameter

Parameter	标准 Standard	PowerMax 系列
Temperature Range		-55°C~150°C
Current Rating (Single Pin)	IEC60512/GBT5095	Up to 12A (depends on cable and operation environment)
Creepage distance		>1.2mm
Rated voltage	IEC 60664	Suggest <300V
Dielectric strength (Pin to Pin)	IEC60512/GBT5095	>1000V _{rms}
Contact resistance	IEC60512/GBT5095	<20mΩ
Insulator resistance	IEC60512/GBT5095	>10000MΩ
Vibration half sine	IEC60512/GBT5095	20g/10~2000Hz No interruption
Shock	IEC60512/GBT5095	50g 11ms
Mechanical operation	IEC60512/GBT5095	500 Times
Insertion&Withdrawal force	IEC60512/GBT5095	<1N Per Pin
Gauge retention force	IEC60512/GBT5095	>0.1N Per Pin
Hand soldering temperature	IEC 68-2-20	350°C <3.5s
Reflow soldering temperature	JEDEC / J-STD-020	260°C <30s
Coplanarity		<0.1mm
Connector plastic		LCP
CTI Value		175
UL flaming rating		UL94 V-0
Contact base material		Cu alloy
Termination area (PCB)		Sn plated
Mating area		Au plated
Environment compatibility		RoHS/REACH

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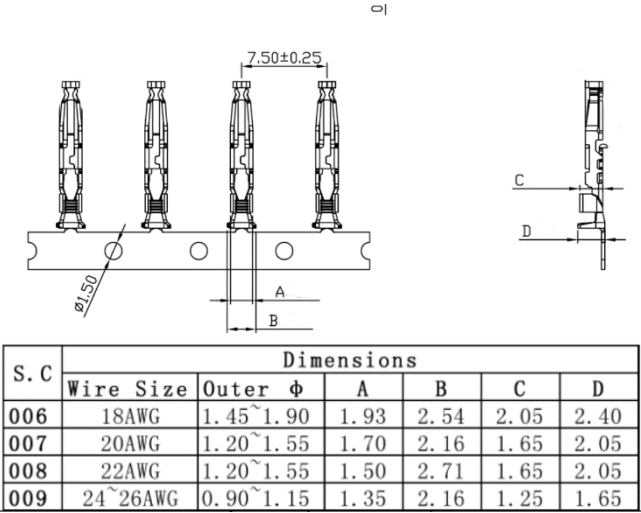
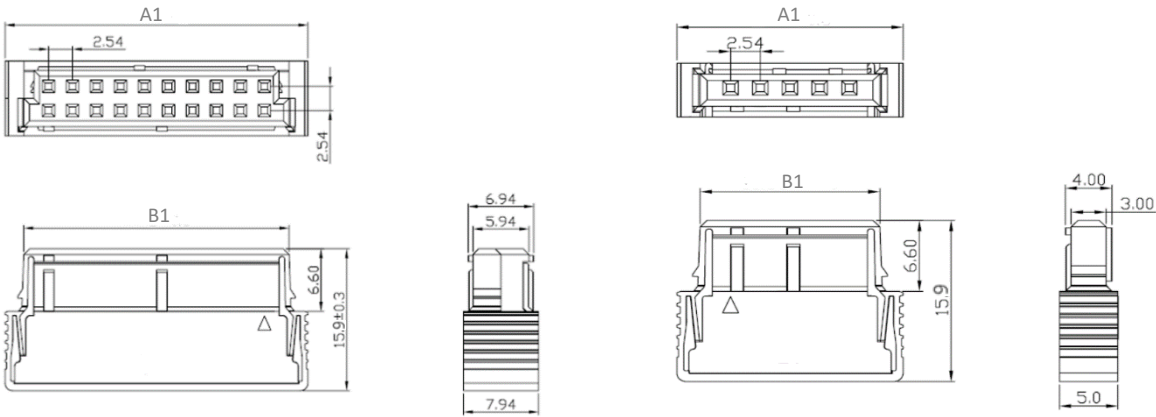
2.54mm single/dual row board to wire connector

Female connector



- 180° cable outlet
- Crimp contact
- Four point contact terminal design provides reliable connection
- Wire from AWG18~AWG26
- Error proof feature, effectively protect the terminal
- Double side unlock feature without unlocking tool, Provide high reliable connection and plug flexibility.
- PE bag package

Dimensions



类型	针数	A1	B1
单排	2	11.74	7.76
	3	14.28	10.3
	4	16.82	12.84
	5	19.36	15.38
	6	21.9	17.92
	8	26.98	23
双排	10	19.36	15.38
	12	21.9	17.92
	14	24.44	20.46
	16	26.98	23
	18	29.52	25.54
	20	32.06	28.08
	22	37.14	33.16
	24	42.22	38.24
	26	47.3	43.32
	28	52.38	48.4
	30	57.46	53.48

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Male connector

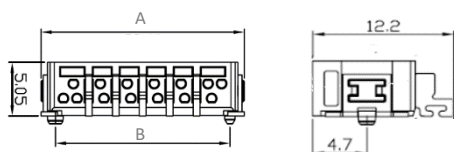


- PowerMax offers 2 kinds of male connectors, Right angle and Vertical type connector.
- SMT Termination
- Reflow soldering is suggested
- Reel package with tape for SMT.

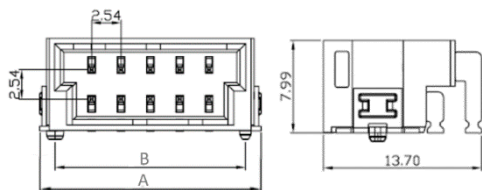
Dimensions

Angle:

Single row:

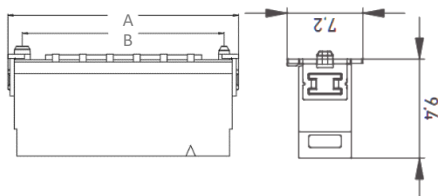


Dual row:

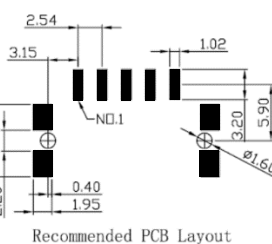
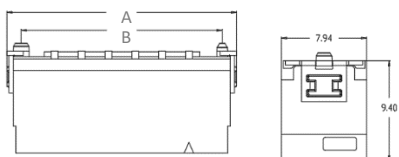


Vertical:

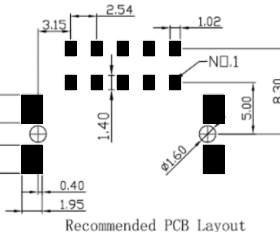
Single row:



Dual row:

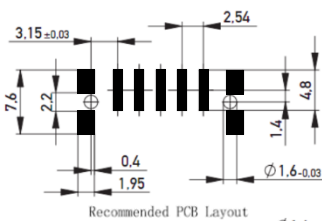


Recommended PCB Layout

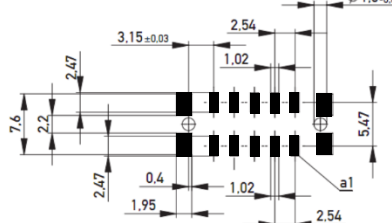


Recommended PCB Layout

类型	针数	A	B
单排	2	11.54	8.84
	3	14.08	11.38
	4	16.62	13.92
	5	19.16	16.46
	6	21.7	19
	8	26.78	24.08
	10	19.16	16.46
	12	21.7	19
双排	14	24.24	21.54
	16	26.78	24.08
	18	29.32	26.62
	20	31.86	29.16
	22	36.94	34.24
	24	42.02	39.32
	26	47.1	44.4
	28	52.18	49.48
	30	57.26	54.56



Recommended PCB Layout



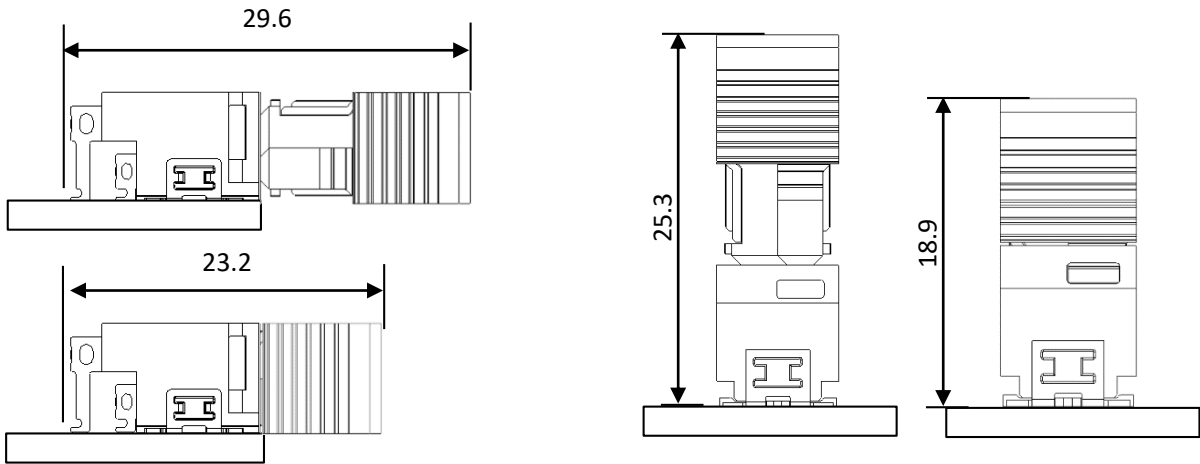
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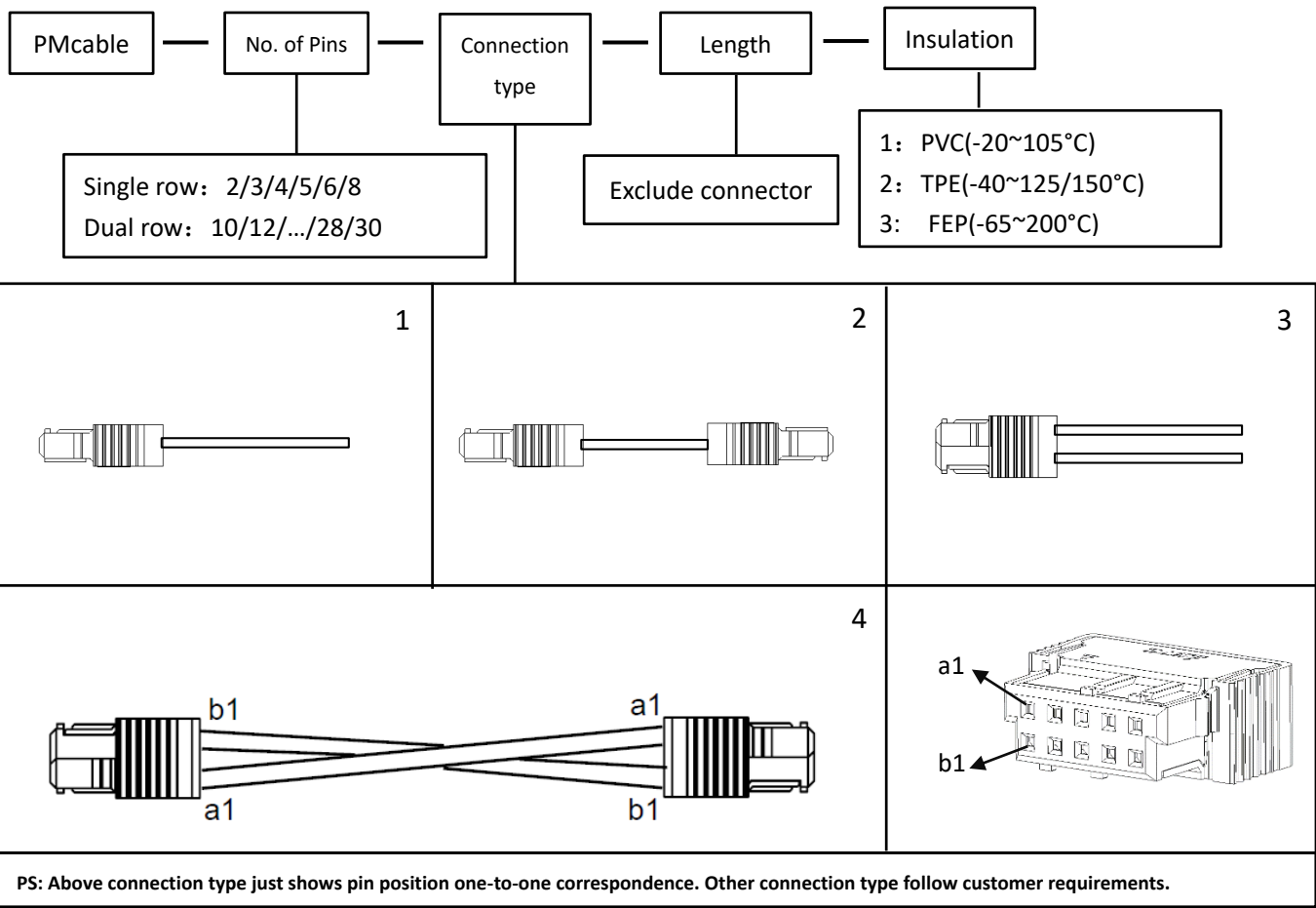
2.54mm single/dual row board to wire connector

■ Matching state



■ Cable assembly type

Example: PMcable-10-4-100-3



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Order code

PowerMax series code description :

Series	Female/Male	Variants	No. of pins	Plating	Special code
PM	X	X	XX	X	XX
①	②	③	④	⑤	⑥

①: PM

②: Female/Male : F-Female, M-Male.

③: Variants : Male : A-Angle , V-Vertical. Female : S-180°outlet

④: No. of pins

⑤: Plating spec code : 1-10u" , 2-G/F , 3-5u" .

⑥: Special code

Male connector(Tape packing)							
Variants	No. of Pins	Part No.	SPQ/pcs	Variants	No. of Pins	Part No.	SPQ/pcs
Single row right angle male connector	2	PM-MA02201	440	Single row vertical male connector	2	PM-MV02201	320
	3	PM-MA03201	440		3	PM-MV03201	320
	4	PM-MA04201	440		4	PM-MV04201	320
	5	PM-MA05201	440		5	PM-MV05201	320
	6	PM-MA06201	440		6	PM-MV06201	320
	8	PM-MA08201	440		8	PM-MV08201	320
Dual row right angle male connector	10	PM-MA10201	300	Dual row vertical male connector	10	PM-MV10201	300
	12	PM-MA12201	300		12	PM-MV12201	300
	14	PM-MA14201	300		14	PM-MV14201	300
	16	PM-MA16201	300		16	PM-MV16201	300
	18	PM-MA18201	300		18	PM-MV18201	300
	20	PM-MA20201	300		20	PM-MV20201	300
	22	PM-MA22201	300		22	PM-MV22201	300
	24	PM-MA24201	300		24	PM-MV24201	300
	26	PM-MA26201	300		26	PM-MV26201	300
	28	PM-MA28201	300		28	PM-MV28201	300
	30	PM-MA30201	300		30	PM-MV30201	300

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Female connector (PE bag)				Contact (reel strip)		
类型/类别	针数	料号	SPQ/pcs	规格描述	料号	SPQ/pcs
Single row 180° outlet female connector	2	PM-FS02201	800	AWG18	PM-FT18201	10K
	3	PM-FS03201	800			
	4	PM-FS04201	800			
	5	PM-FS05201	400			
	6	PM-FS06201	400	AWG20	PM-FT20201	10K
	8	PM-FS08201	400			
Dual row 180° outlet female connector	10	PM-FS10201	200	AWG22	PM-FT22201	10K
	12	PM-FS12201	200			
	14	PM-FS14201	200			
	16	PM-FS16201	200			
	18	PM-FS18201	200	AWG24/AWG2 6	PM-FT24201	10K
	20	PM-FS20201	200			
	22	PM-FS22201	200			
	24	PM-FS24201	200			
	26	PM-FS26201	200			
	28	PM-FS28201	200			
	30	PM-FS30201	200			