

Product Specification [产品规格书]:	Document No	PS-1204-01
Subject [主题]: 1.20mm MQS Series Connector Specification	Date Issued	2023/8/2
	Date Revised	/
	Version	X0

This specification is referred to the 1.20mm MQS series Connector

## 索引【INDEX】

1. 适用范围【Scope】
2. 规格与料号【Spec and Part number】
3. 材质与表面处理【Disposal of Material and surface】
4. 额定等级【Ratings and applicable wires】
5. 测试方法及要求【Test Methods and Requirements】
  - 5-1. 电气的性能【Electrical Performance.】
  - 5-2. 机械的性能【Mechanical Performance】
  - 5-3. 环境性能及其它【Environmental Performance and Others】
6. 测试组【Test Group】

Product Specification [产品规格书]:	Document No	PS-1204-01
Subject [主题]: 1.20mm MQS Series Connector Specification	Date Issued	2023/8/2
	Date Revised	/
	Version	X0

**【1.适用范围 Scope】**

此种规格包括 1.20mm MQS Series 端子连接器规格说明。  
This Specification Covers the 1.20mm Series MQS Terminal Connector Specification.

**【2.规格与料号 Spec and Part number】**

规格内容 Specification	产品料号 Production No.	产品图示 Picture of Product
母端/ Female Terminal	1204TXF-HY2B	
公端/ Male Terminal	1204TXM-HY2B	

**【3.材质与表面处理 Disposal of Material and surface】**

规格内容 Specification	材质 Materials	表面处理 Disposal of Surface
Contact	Copper Alloy	Tin Plated: 40~120u" (1~3μm )
PIN	Copper Alloy	Tin Plated: 40~120u" (1~3μm ) Ni : 30~200u" (0.75~5μm )

(上述参数请以工程图为准/Please Refer to the Project drawing for the above Specification)

**【4. 额定等级 Ratings and applicable wires】**

项目【Item】	规格【Standard】	
额定电压 Rated Voltage (Max.)	12V	[AC/DC]
额定电流 Rated Current (Max.)	16A	
使用温度范围 Ambient temperature Range	-40℃ ~ +125℃	

Product Specification [产品规格书]:	Document No	PS-1204-01
Subject [主题]: 1.20mm MQS Series Connector Specification	Date Issued	2023/8/2
	Date Revised	/
	Version	X0

**【5.性能 PERFORMANCE】**

项 目 【Item】	条 件 【Test Condition】	规 格 【Requirement】																																																																																																	
5-1 产品验收检查 Inspection of as-received condition	接触区域的体积电阻符合 DIN EN 60512-2-1 连接区域的体积电阻符合 DIN EN 60512-2-1 Visual inspection Contact resistance in contact area Crimp resistance	VW75174 Rev.2018 TG0																																																																																																	
5-2 机械和热张弛特性 Mechanical and thermal relaxation behavior	根据 DIN EN 60512-1-1 进行目视检查 接触法向力测试, 确定法向接触力 热老化测试, 持续时间 1000H,然后在相应的时间 (1 小时、100 小时、200 小时、500 小时和 1000 小时) 依次取出, 并测量法向力不能小于 1N。 Visual inspection /Contact normal force and Aging in dry heat	VW75174 Rev.2018 TG5																																																																																																	
5-3 端子与线材间的引张强度 Conductor pull out strength	<table border="1"> <thead> <tr> <th rowspan="2">Cable cross-section (Cu)</th> <th colspan="6">Contact size in mm</th> </tr> <tr> <th>0.5</th> <th>0.63</th> <th>1.2 or 1.5</th> <th>2.8</th> <th>4.8</th> <th>9.5</th> </tr> </thead> <tbody> <tr> <td>0.35 mm<sup>2</sup></td> <td colspan="5">50 N (75 N)</td> <td>-</td> </tr> <tr> <td>0.13 mm<sup>2</sup> (CuMg)</td> <td colspan="5">60 N (85 N)</td> <td>-</td> </tr> <tr> <td>0.5 mm<sup>2</sup></td> <td>-</td> <td>-</td> <td colspan="2">85 N (105 N)</td> <td>-</td> <td>-</td> </tr> <tr> <td>0.75 mm<sup>2</sup></td> <td>-</td> <td>-</td> <td colspan="2">108 N (125 N)</td> <td>140 N (162 N)</td> <td>-</td> </tr> <tr> <td>1.0 mm<sup>2</sup></td> <td>-</td> <td>-</td> <td>150 N (180 N)</td> <td colspan="2">150 N (180 N)</td> <td>-</td> </tr> <tr> <td>1.5 mm<sup>2</sup></td> <td>-</td> <td>-</td> <td>-</td> <td colspan="2">200 N (235 N)</td> <td>-</td> </tr> <tr> <td>2.5 mm<sup>2</sup></td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>310 N (325 N)</td> <td>-</td> </tr> <tr> <td>4.0 mm<sup>2</sup></td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>450 N</td> <td>450 N</td> </tr> <tr> <td>6.0 mm<sup>2</sup></td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>500 N</td> </tr> <tr> <td>10.0 mm<sup>2</sup></td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>1500 N</td> </tr> <tr> <td>16.0 mm<sup>2</sup></td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>1900 N</td> </tr> <tr> <td>25.0 mm<sup>2</sup></td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	Cable cross-section (Cu)	Contact size in mm						0.5	0.63	1.2 or 1.5	2.8	4.8	9.5	0.35 mm <sup>2</sup>	50 N (75 N)					-	0.13 mm <sup>2</sup> (CuMg)	60 N (85 N)					-	0.5 mm <sup>2</sup>	-	-	85 N (105 N)		-	-	0.75 mm <sup>2</sup>	-	-	108 N (125 N)		140 N (162 N)	-	1.0 mm <sup>2</sup>	-	-	150 N (180 N)	150 N (180 N)		-	1.5 mm <sup>2</sup>	-	-	-	200 N (235 N)		-	2.5 mm <sup>2</sup>	-	-	-	-	310 N (325 N)	-	4.0 mm <sup>2</sup>	-	-	-	-	450 N	450 N	6.0 mm <sup>2</sup>	-	-	-	-	-	500 N	10.0 mm <sup>2</sup>	-	-	-	-	-	1500 N	16.0 mm <sup>2</sup>	-	-	-	-	-	1900 N	25.0 mm <sup>2</sup>	-	-	-	-	-	-	VW71574 Rev.2018 TG10 Refer to : VW60330 and USCAR-21  优先以 VW60330 标准 The VW60330 standard is preferred
Cable cross-section (Cu)	Contact size in mm																																																																																																		
	0.5	0.63	1.2 or 1.5	2.8	4.8	9.5																																																																																													
0.35 mm <sup>2</sup>	50 N (75 N)					-																																																																																													
0.13 mm <sup>2</sup> (CuMg)	60 N (85 N)					-																																																																																													
0.5 mm <sup>2</sup>	-	-	85 N (105 N)		-	-																																																																																													
0.75 mm <sup>2</sup>	-	-	108 N (125 N)		140 N (162 N)	-																																																																																													
1.0 mm <sup>2</sup>	-	-	150 N (180 N)	150 N (180 N)		-																																																																																													
1.5 mm <sup>2</sup>	-	-	-	200 N (235 N)		-																																																																																													
2.5 mm <sup>2</sup>	-	-	-	-	310 N (325 N)	-																																																																																													
4.0 mm <sup>2</sup>	-	-	-	-	450 N	450 N																																																																																													
6.0 mm <sup>2</sup>	-	-	-	-	-	500 N																																																																																													
10.0 mm <sup>2</sup>	-	-	-	-	-	1500 N																																																																																													
16.0 mm <sup>2</sup>	-	-	-	-	-	1900 N																																																																																													
25.0 mm <sup>2</sup>	-	-	-	-	-	-																																																																																													
5-4 端子插入力与拔出力 Insertion and removal forces, mating cycle frequency	插入和拔出力, 无需额外润滑剂 Sn: 20 次插拔循环, Ag: 50 次插拔循环 Au: 100 次插拔循环 Mating and unmating forces /Mating cycles Sn: 20 mating cycles, Ag: 50 mating cycles , Au: 100 mating cycles. The insertion force may change by at most 25% compared to the initial value. The insertion and extraction forces must correspond to the drawing or the, product specification.	VW71574 Rev.2018 TG11																																																																																																	

Product Specification [产品规格书]:	Document No	PS-1204-01
Subject [主题]: 1.20mm MQS Series Connector Specification	Date Issued	2023/8/2
	Date Revised	/
	Version	X0

项 目 【Item】	条 件 【Test Condition】	规 格 【Requirement】
5-5 温升/降额 Current temperature rise, derating	<p>负载逐渐增加的电流并测量温升 要求: 测量值必须符合规格要求, 在降额图中标出以下内容: 测量值的 80% 特性曲线必须在图表中表示 (根据 DIN EN 60512-5-2), 电流是可以从 80 °C 环境温度下的降额曲线读取的电流.</p> <p>The 80-% characteristic curve of the measured values must be represented in the graph (as per DIN EN 60512-5-2). The nominal current is the current that can be read from the derating curve at 80 °C ambient temperature.</p>	VW71574 Rev.2018 TG12
5-6 热时间常数 Thermal time constant	<p>以 1/2/3/4/5 倍的额定电流加载触点并同时记录随时间推移的温度曲线, 直至稳定或达到最大值。 达到允许的温度。</p> <p>Loading of a contact with 1/2/3/4/5times the nominal current and simultaneous recording of the temperature curve over time until stabilization occurs or until the max. permissible component temperature is reached.</p>	VW71574 Rev.2018 TG14

Product Specification [产品规格书]:	Document No	PS-1204-01
Subject [主题]: 1.20mm MQS Series Connector Specification	Date Issued	2023/8/2
	Date Revised	/
	Version	X0

流程图		连接器机械测试					
参考标准	测试序列	Receiving inspection and testing 接收检验和测试	Mechanical and thermal relaxation behavior 机械和热松弛行为	Conductor pull-out strength 导体拉拔强度	Insertion and removal forces, mating cycle frequency 插拔力, 配合循环频率	Current temperature rise, derating (withouth housing) 电流温升、降额(无外壳)	Thermal time constant 热时间常数
VW715 74 2018	序列 ID	A	B	D	E	F	G
	Visual inspection 目视检查	1	1,5	1,3	1,3	1,3	1,3
	Contact resistance 接触电阻	2					
	Contact normal force 接触法向力		2,4				
	Contact retention force 触点保持力						
	Conductor pull-out strength 导体拉拔强度			2			
	Cross section 横截面						
	Insertion and removal forces, mating cycle frequency 插拔力, 配合周期 频率				2		
	Derating 降额					2	
	Aging in dry heat 干热老化			3			
	Thermal time constant 热时间常数						2

说明:

准备的样品应与适用于生产的说明一致, 应随机从当前生产中选择