

3M™ Mini D Ribbon (MDR) Cable Assembly

.050" High Speed Video Data Transmission System, 36 Position

14X36-SZ6B-XXX-0HC



- Supports LVDS Channel Link™ signaling
- 10 shielded pairs (100 ohm) +2 drains for high bandwidth applications
- 1 USB pair & 4 singles
- High density 36 position MDR with rugged ribbon type contact
- Metal junction shell with Quick Release Latches
- EMI over-molded junction shell with rugged thumbscrew retention
- See Regulatory Information Appendix (RIA) for chemical compliance information

Date Modified: October 9, 2007

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Physical

Connector Contact Plating

Wiping Area: 30 μ " [0.76 μ m] Min. Gold

Thumbscrew Shell Color: Beige

Thumbscrew Shell Material: Acrylonitrile Butadiene Styrene (ABS)

Metal shell plating: Nickel

Metal shell material: Aluminum, .050" [1.27 mm] Thick

Cable

Color: Beige

Jacket Material: Polyvinyl Chloride (PVC)

Flammability: AWM VW-1

Electrical

Voltage Rating: 30 V

Current Rating: 1 A

Insulation Resistance: $> 1 \times 10^8 \Omega$ at @100 V_{DC}

Withstanding Voltage: 350 V_{RMS} for 1 minute

Individually Shielded Twisted Pairs

Characteristic Impedance: $100 \pm 10 \Omega$

Conductor Size: 28 AWG Stranded

Propagation Velocity: 1.25 ns/ft [4.1 ns/m]

Environmental

Temperature Rating: -20°C to +75°C

UL File No.: E86982

Channel Link is a trademark of National Semiconductor.



Interconnect Solutions

<http://www.3M.com/interconnects/>

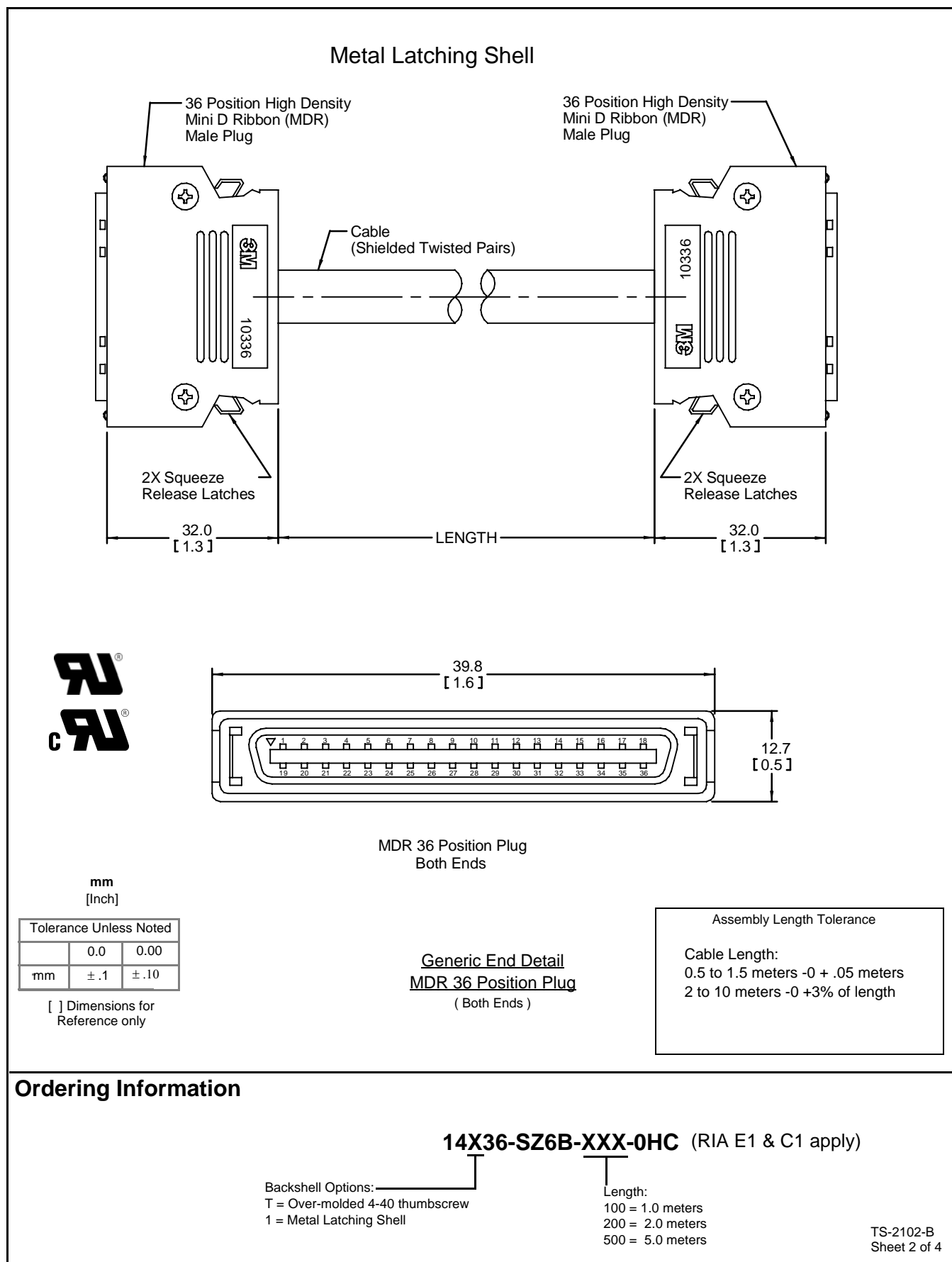
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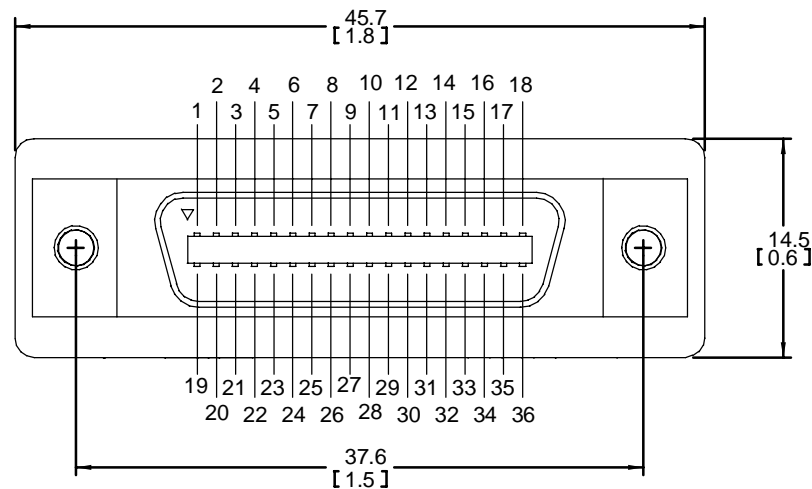
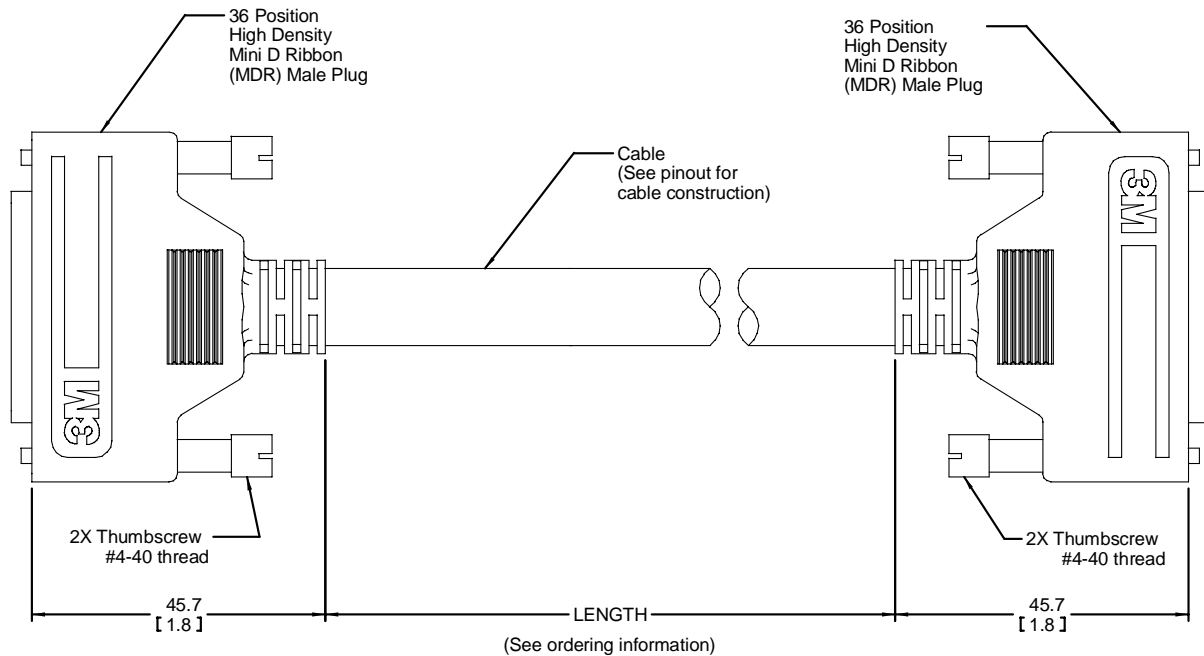
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Over-Molded #4-40 Thumbscrew



Generic End Detail
MDR 36 Position Plug
(Both Ends)

mm
[Inch]

| Tolerance Unless Noted | | |
|------------------------|-----|------|
| | 0.0 | 0.00 |
| mm | ±.1 | ±.10 |

[] Dimensions for
Reference only

Assembly Length Tolerance

Cable Length:
0.5 to 1.5 meters -0 + .05 meters
2 to 10 meters -0 +3% of length



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Note: 1. Use 3341-31 jacksocket for mounting receptacle to panel.



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MDR 36 Position Pinout (F36-02)

| P1 | | | | | | P2 | | | | | |
|-------|----------|----------|----------|----------|-------|-------|----------|----------|----------|----------|-------|
| Pair | Signal | Position | Position | Signal | Pair | Pair | Signal | Position | Position | Signal | Pair |
| 1 | A0- | 1 | 13 | USB Pwr | W6 | 1 | A0- | 1 | 13 | USB Pwr | W6 |
| 1 | A0+ | 19 | 31 | Shld Gnd | Drain | 1 | A0+ | 19 | 31 | Shld Gnd | Drain |
| 2 | A1- | 2 | 14 | A4- | 6 | 2 | A1- | 2 | 14 | A4- | 6 |
| 2 | A1+ | 20 | 32 | A4+ | 6 | 2 | A1+ | 20 | 32 | A4+ | 6 |
| 3 | A2- | 3 | 15 | A5- | 7 | 3 | A2- | 3 | 15 | A5- | 7 |
| 3 | A2+ | 21 | 33 | A5+ | 7 | 3 | A2+ | 21 | 33 | A5+ | 7 |
| 4 | CLK1- | 4 | 16 | A6- | 8 | 4 | CLK1- | 4 | 16 | A6- | 8 |
| 4 | CLK1+ | 22 | 34 | A6+ | 8 | 4 | CLK1+ | 22 | 34 | A6+ | 8 |
| 5 | A3- | 5 | 17 | A7- | 9 | 5 | A3- | 5 | 17 | A7- | 9 |
| 5 | A3+ | 23 | 35 | A7+ | 9 | 5 | A3+ | 23 | 35 | A7+ | 9 |
| Drain | Shld Gnd | 6 | 18 | CLK2- | 10 | Drain | Shld Gnd | 6 | 18 | CLK2- | 10 |
| | N/C | 24 | 36 | CLK2+ | 10 | | N/C | 24 | 36 | CLK2+ | 10 |
| | N/C | 7 | | | | | N/C | 7 | | | |
| | N/C | 25 | | | | | N/C | 25 | | | |
| | N/C | 8 | | | | | N/C | 8 | | | |
| | N/C | 26 | | | | | N/C | 26 | | | |
| | N/C | 9 | | | | | N/C | 9 | | | |
| W1 | DDC Gnd | 27 | | | | W1 | DDC Gnd | 27 | | | |
| W2 | DDC/SCL | 10 | | | | W2 | DDC/SCL | 10 | | | |
| W3 | DDC/SDA | 28 | | | | W3 | DDC/SDA | 28 | | | |
| W4 | DDC Pwr | 11 | | | | W4 | DDC Pwr | 11 | | | |
| W5 | USB Gnd | 29 | | | | W5 | USB Gnd | 29 | | | |
| SP1 | USB+ | 12 | | | | SP1 | USB+ | 12 | | | |
| SP1 | USB- | 30 | | | | SP2 | USB- | 30 | | | |
| | | | | | | | | | | | |

Notes:

1. All pairs are individually shielded with aluminum foil.
2. Pair shields are wrapped Aluminum out and in contact with six internal drains (logic ground).
3. Outer braid and foil (chassis ground) is isolated from inner drains (logic ground).

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Regulatory Information Appendix

3M Electronic Solutions Division/Interconnect

EUROPE

Appendix E1: European Union RoHS

Directive 2002/95/EC, Restriction of the Use of Certain Hazardous Substances in Electrical & Electronic Equipment, as amended by EU Commission Decision 2005/618/EC.

This product is RoHS Compliant 2005/95/EC.

“RoHS Compliant 2005/95/EC” means that the product or part (“Product”) does not contain any of the substances in excess of the maximum concentration values in EU Directive 2002/95/EC, as amended by Commission Decision 2005/618/EC, unless the substance is in an application that is exempt under EU RoHS. Unless otherwise stated by 3M in writing, this information represents 3M’s best knowledge and belief based upon information provided by third party suppliers to 3M.

In the event any product is proven not to conform with 3M’s Regulatory Information Appendix, then 3M’s entire liability and Buyer’s exclusive remedy will be in accordance with the Warranty stated below.

Appendix E2: European Union RoHS

Directive 2002/95/EC, Restriction of the Use of Certain Hazardous Substances in Electrical & Electronic Equipment, as amended by EU Commission Decision 2005/618/EC.

This product contains lead in the compliant pin area in excess of the maximum concentration value allowed but is compliant by exemption under EU Commission Decision 2005/747/EC.

“RoHS Compliant 2005/95/EC” means that the product or part (“Product”) does not contain any of the substances in excess of the maximum concentration values in EU Directive 2002/95/EC, as amended by Commission Decision 2005/618/EC, unless the substance is in an application that is exempt under EU RoHS. Unless otherwise stated by 3M in writing, this information represents 3M’s best knowledge and belief based upon information provided by third party suppliers to 3M.

In the event any product is proven not to conform with 3M’s Regulatory Information Appendix, then 3M’s entire liability and Buyer’s exclusive remedy will be in accordance with the Warranty stated below.

Appendix E3: European Union RoHS

Directive 2002/95/EC, Restriction of the Use of Certain Hazardous Substances in Electrical & Electronic Equipment as amended by Commission Decision 2005/618/EC.

This product contains lead in the solder tail area in excess of the maximum concentration value allowed.

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Appendix E4: European Union RoHS

Directive 2002/95/EC, Restriction of the Use of Certain Hazardous Substances in Electrical & Electronic Equipment, as amended by EU Commission Decision 2005/618/EC.

This product contains decaBDE in the insulating material in excess of the maximum concentration value allowed but is compliant by exemption under EU Commission Decision 2005/717/EC.

“RoHS Compliant 2005/95/EC” means that the product or part (“Product”) does not contain any of the substances in excess of the maximum concentration values in EU Directive 2002/95/EC, as amended by Commission Decision 2005/618/EC, unless the substance is in an application that is exempt under EU RoHS. Unless otherwise stated by 3M in writing, this information represents 3M’s best knowledge and belief based upon information provided by third party suppliers to 3M.

In the event any product is proven not to conform with 3M’s Regulatory Information Appendix, then 3M’s entire liability and Buyer’s exclusive remedy will be in accordance with the Warranty stated below.

Appendix E5: European Union RoHS

Directive 2002/95/EC, Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment, as amended by EU Commission Decision 2005/618/EC.

This product contains lead in excess of the maximum concentration value allowed but is compliant by exemption under Item 6 of the Annex to the Directive.

“RoHS Compliant 2005/95/EC” means that the product or part (“Product”) does not contain any of the substances in excess of the maximum concentration values in EU Directive 2002/95/EC, as amended by Commission Decision 2005/618/EC, unless the substance is in an application that is exempt under EU RoHS. Unless otherwise stated by 3M in writing, this information represents 3M’s best knowledge and belief based upon information provided by third party suppliers to 3M.

In the event any product is proven not to conform with 3M’s Regulatory Information Appendix, then 3M’s entire liability and Buyer’s exclusive remedy will be in accordance with the Warranty stated below.

CHINA

Appendix C1: China RoHS



Electronic Industry Standard of the People’s Republic of China, SJ/T11363-2006, Requirements for Concentration Limits for Certain Hazardous Substances in Electronic Information Products.

This symbol, per Marking for the Control of Pollution Caused by Electronic Information Products, SJ/T11364-2006, means that the product or part **does not** contain any of the following substances in excess of the following maximum concentration values in any homogeneous material: (a) 0.1% (by weight) for lead, mercury, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers; or (b) 0.01% (by weight) for cadmium. Unless otherwise stated by 3M in writing, this information represents 3M’s best knowledge and belief based upon information provided by third party suppliers to 3M.

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Appendix C2: China RoHS



Electronic Industry Standard of the People’s Republic of China, SJ/T11363-2006, Requirements for Concentration Limits for Certain Hazardous Substances in Electronic Information Products.

This symbol, per Marking for the Control of Pollution Caused by Electronic Information Products, SJ/T11364-2006, means that the product or part **does** contain a substance, as detailed in the chart below, in excess of the following maximum concentration values in any homogeneous material: (a) 0.1% (by weight) for lead, mercury, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers; or (b) 0.01% (by weight) for cadmium. Unless otherwise stated by 3M in writing, this information represents 3M’s best knowledge and belief based upon information provided by third party suppliers to 3M.

The numerical reference in the symbol above should not be construed as a representation regarding the product’s life or an extension of a product warranty. The product warranty is stated below. In the event any product is proven not to conform with 3M’s Regulatory Information Appendix, then 3M’s entire liability and Buyer’s exclusive remedy will be in accordance with the product Warranty stated below.

产品中有毒有害物质或元素的名称及含量 Name and Content of Hazardous Substances or Elements

| 部件名称 (Part or Component Name) | 有毒有害物质或元素 (Hazardous Substances or Elements) | | | | | |
|--|--|--------|--------|---------------|------------|--------------|
| | 铅 (Pb) | 汞 (Hg) | 镉 (Cd) | 六价铬 (Cr (VI)) | 多溴联苯 (PBB) | 多溴二苯醚 (PBDE) |
| 端子镀层 (contact plating) | × | ○ | ○ | ○ | ○ | ○ |
| ○：表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T11363-2006 标准规定的限量要求以下。(Indicates that this hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in SJ/T11363-2006.) | | | | | | |
| ×：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T11363-2006 标准规定的限量要求。(Indicates that this hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in SJ/T11363-2006.) | | | | | | |

Appendix C3: China RoHS



Electronic Industry Standard of the People's Republic of China, SJ/T11363-2006, Requirements for Concentration Limits for Certain Hazardous Substances in Electronic Information Products.

This symbol, per Marking for the Control of Pollution Caused by Electronic Information Products, SJ/T11364-2006, means that the product or part **does** contain a substance, as detailed in the chart below, in excess of the following maximum concentration values in any homogeneous material: (a) 0.1% (by weight) for lead, mercury, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers; or (b) 0.01% (by weight) for cadmium. Unless otherwise stated by 3M in writing, this information represents 3M's best knowledge and belief based upon information provided by third party suppliers to 3M.

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产品中有毒有害物质或元素的名称及含量 Name and Content of Hazardous Substances or Elements

| 部件名称 (Part or Component Name) | 有毒有害物质或元素 (Hazardous Substances or Elements) | | | | | |
|---|--|-------|-------|-------------|-----------|-------------|
| | 铅(Pb) | 汞(Hg) | 镉(Cd) | 六价铬(Cr(VI)) | 多溴联苯(PBB) | 多溴二苯醚(PBDE) |
| 合金(Metal alloy) | × | ○ | ○ | ○ | ○ | ○ |
| | | | | | | |
| ○：表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T11363-2006 标准规定的限量要求以下。(Indicates that this hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in SJ/T11363-2006.) ×：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T11363-2006 标准规定的限量要求。(Indicates that this hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in SJ/T11363-2006.) | | | | | | |

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