

1394 locking cables



Your locking cables for AVT IEEE 1394 cameras

AVT locking cables are ideal for connection of IEEE 1394 cameras in any industrial application. The high quality cables guarantee low damping and best signal quality for all speeds. Due to the 3 combinations all kinds of AVT cameras can be combined with all kinds of IEEE 1394 interfaces under different conditions.

Highlights

- Compliant with IEEE 1394a and IEEE 1394b
- RoHS compliant
- Compatible with all AVT's IEEE 1394 cameras



AVT I/O cables are manufactured in accordance with the CE standard and its underlying directions.



AVT I/O cables comply with the requirements of the EU directive 2002/95/EC (Restriction of the use of certain hazardous substances in Electrical and Electronic Equipment - RoHS).



We declare, under our sole responsibility, that the described **1394 locking cables** conform to the directives of UL20276.

Technical specifications

Feature	Description
Jacket	Pb free PVC; 0.6 mm thick, 7.1 mm Ø; UL 20276 cert. (@ 80 °C, 30 V)
Outer braid shield	Tinned annealed Cu, min. 85 % coverage
Outer shield	AL-PET tape
Cable assembly	2x (A) plus 2x (B)
Inner shield	AL-PET
Drain wire A	Tinned annealed Cu; 7x 0.203 (AWG24); 0.61 mm Ø
Insulation A	FM-PE; 0.5 mm thick; 1.6 mm Ø
Conductor A (Data)	Tinned annealed Cu; 7x 0.203 (AWG24); 0.61 mm Ø
Conductor B (Power)	Tinned annealed Cu; 7x 0.203 (AWG24); 0.61 mm Ø
Insulation B	HR-LF-PVC; 0.15 mm thick; 0.91 mm Ø
Max. DC resistance	88 Ohm/km at 20 °C
Char. impedance	110 Ohm +/-6
Attenuation	400 MHz: <= 0.4 dB/m
Time delay	Max. 5.05 ns/m
Skew delay	Max. 50 ps/m between pairs

Table 1: 1394 locking cables specifications

Pinout

IEEE 1394 legacy (9-pin to 6-pin)

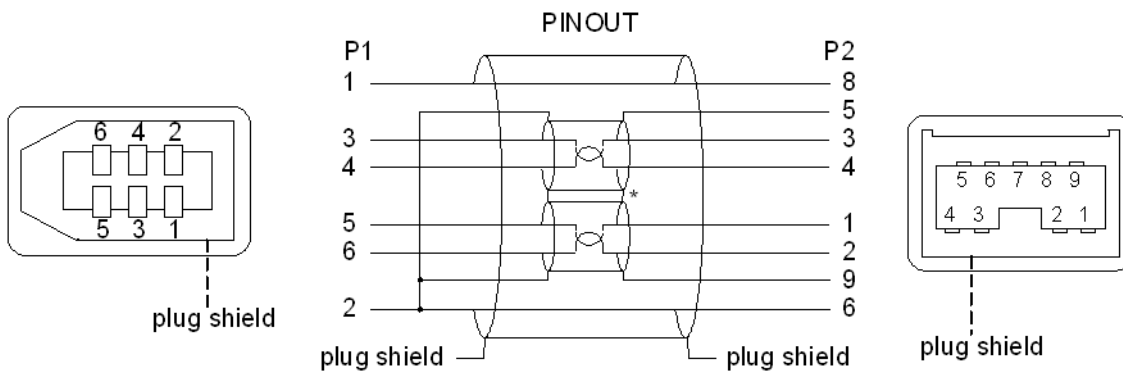


Figure 1: Pinout: IEEE 1394 legacy (9-pin to 6-pin)

Note

Twisted pair shields are only connected by using cable material according to IEEE Std 1394TM -1995.



If cable material according to IEEE Std 1394bTM -2002 is used, twisted pair shields are **not** connected inside the cable.

Connectors are viewed as looking at the front plug face.

Plug 1	Signal name at plug 2 end	Plug 2
5	TPB* (Twisted Pair B minus)	1
6	TPB (Twisted Pair B plus)	2
3	TPA* (Twisted Pair A minus)	3
4	TPA (Twisted Pair A plus)	4
2	TPA (R) (Twisted Pair A ground reference)	5
2	VG (Power Ground)	6
	No connection	7
1	VP (Power Voltage)	8
2	TPB (R) (Twisted Pair B ground reference)	9
Plug shield	Cable outer shield	Plug shield

Table 2: Connectors layout

IEEE 1394a

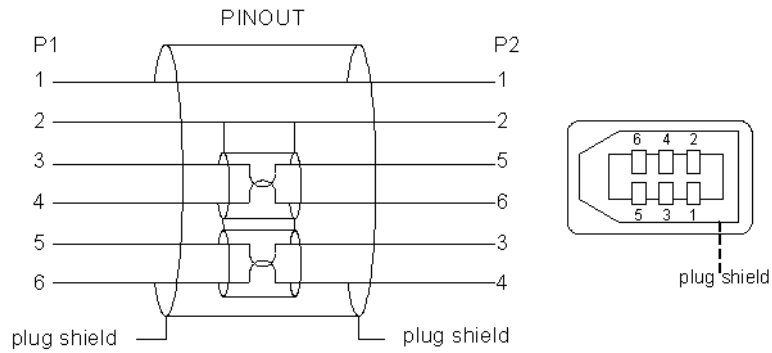


Figure 2: Pinout: IEEE 1394a

Connectors are viewed as looking at the front plug face.

Plug 1	Signal name at plug 1 end	Plug 2
1	VP (Power Voltage)	1
2	VG (Power Ground)	2
3	TPB* (Twisted Pair B minus)	5
4	TPB (Twisted Pair B plus)	6
5	TPA* (Twisted Pair A minus)	3
6	TPA (Twisted Pair A plus)	4
Plug shield	Cable outer shield	Plug shield

IEEE 1394b

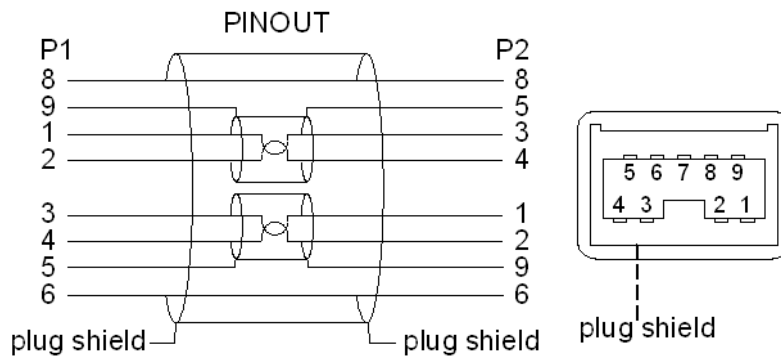


Figure 3: Pinout: IEEE 1394b

Connectors are viewed as looking at the front plug face.

Plug 1	Signal name at plug 1 end	Plug 2
1	TPB* (Twisted Pair B minus)	3
2	TPB (Twisted Pair B plus)	4
3	TPA* (Twisted Pair A minus)	1
4	TPA (Twisted Pair A plus)	2
5	TPA (R) (Twisted Pair A ground reference)	9
6	VG (Power Ground)	6
7	No connection	7
8	VP (Power Voltage)	8
9	TPB (R) (Twisted Pair B ground reference)	5
Plug shield	Cable outer shield	Plug shield

Order codes

1394a cables	Description	Order code
FireWire cable -2x Interlock	IEEE 1394a; 2x Interlock, 4.5 m with Ferrites, for Marlin/Oscar/Guppy	K1200064
FireWire cable -2x Interlock	IEEE 1394a; 2x Interlock, 10 m with Ferrites, for Marlin/Oscar/Guppy	K1200163
FireWire cable -2x Interlock	IEEE 1394a; 2x Interlock, 12.5 m with Ferrites, for Marlin/Oscar/Guppy	K1200165
FireWire cable -2x Interlock	IEEE 1394a; 2x Interlock, 17.5 m with Ferrites, for Marlin/Oscar/Guppy	K1200162
FireWire cable -1x Interlock	IEEE 1394a; (1x Interlock) 3.0 m, for Marlin/Oscar/Guppy	K1200167
FireWire cable -1x Interlock	IEEE 1394a; (1x Interlock) 4.5 m, for Marlin/Oscar/Guppy	K1200091
FireWire cable -1x Interlock	IEEE 1394a; (1x Interlock) 6.0 m, for Marlin/Oscar/Guppy	K1200160
FireWire cable -1x Interlock	IEEE 1394a; (1x Interlock) 7.5 m, for Marlin/Oscar/Guppy	K1200212
FireWire cable -1x Interlock	IEEE 1394a; (1x Interlock) 10 m, for Marlin/Oscar/Guppy	K1200159

1394 legacy cables	Description	Order code
Cable 0.5 m 9-pin to 6-pin industrial	IEEE 1394b/a; 9 pin (screw lock)/6 pin (latch), 0.5 m	K1200198
Cable 3.0 m 9-pin to 6-pin industrial	IEEE 1394b/a; 9 pin (screw lock)/6 pin (latch), 3.0 m	K1200211
Cable 4.5 m 9-pin to 6-pin industrial	IEEE 1394b/a; 9 pin (screw lock)/6 pin (latch), 4.5 m	K1200171
Cable 7.5 m 9-pin to 6-pin industrial	IEEE 1394b/a; 9 pin (screw lock)/6 pin (latch), 7.5 m	K1200210
Cable 10 m 9-pin to 6-pin industrial	IEEE 1394b/a; 9 pin (screw lock)/6 pin (latch), 10 m	K1200209

1394b cables straight without ferrite	Description	Order code
Cable 0.5 m 9-pin to 9-pin, industrial	IEEE 1394b; 2x screw lock, 0.5m, black, without ferrite	K1200306
Cable 1.0 m 9-pin to 9-pin, industrial	IEEE 1394b; 2x screw lock, 1.0m, black, without ferrite	K1200112
Cable 2.0 m 9-pin to 9-pin, industrial	IEEE 1394b; 2x screw lock, 2.0m, black, without ferrite	K1200330
Cable 3.0 m 9-pin to 9-pin, industrial	IEEE 1394b; 2x screw lock, 3.0m, black, without ferrite	K1200307
Cable 5.0 m 9-pin to 9-pin, industrial	IEEE 1394b; 2x screw lock, 5.0m, black, without ferrite	K1200169
Cable 7.5 m 9-pin to 9-pin, industrial	IEEE 1394b; 2x screw lock, 7.5m, black, long distance, without ferrite	K1200308
Cable 10.0 m 9-pin to 9-pin, industrial	IEEE 1394b; 2x screw lock, 10 m, black, long distance, without ferrite	K1200333

1394b cables angled	Description	Order code
Cable 3.0 m 9-pin to 9-pin angled	IEEE1394b; angled on one side, 2x screw lock, 3.0 m Pike↔, Stingray↔, Guppy PRO↑	K1200297
Cable 5.0 m 9-pin to 9-pin angled	IEEE1394b; angled on one side, 2x screw lock, 5.0 m Pike↔, Stingray↔, Guppy PRO↑	K1200298
Cable 7.5 m 9-pin to 9-pin angled	IEEE1394b; angled on one side, 2x screw lock, 7.5 m Pike↔, Stingray↔, Guppy PRO↑	K1200295
Cable 3.0 m 9-pin to 9-pin angled	IEEE1394b; angled on one side, 2x screw lock, 3.0 m Pike⇒, Stingray⇒, Guppy PRO↓	K1200296
Cable 5.0 m 9-pin to 9-pin angled	IEEE1394b; angled on one side, 2x screw lock, 5.0 m Pike⇒, Stingray⇒, Guppy PRO↓	K1200299
Cable 7.5 m 9-pin to 9-pin angled	IEEE1394b; angled on one side, 2x screw lock, 7.5 m Pike⇒, Stingray⇒, Guppy PRO↓	K1200300

Angled cables (cable exit direction at view on camera back):

↔ = angle left, ↑ = angle up, ⇒ = angle right, ↓ = angle down

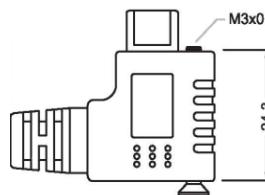


Figure 4: IEEE 1394b angled connector (left and right version have the same dimensions)

Ferrites	Description	Order code
Ferrite for AVT cables	for cable diameter 3.5 - 5.0 mm	K8420055
Ferrite for AVT cables	for cable diameter 4.5 - 6.0 mm	K8420057
Ferrite for AVT cables	for cable diameter 6.0 - 7.5 mm	K8420056
Tool for ferrites	for all sizes, to remove ferrites from cable	K8420058

Other lengths on request.

Additional references

To download AVT Technical Manuals etc.:

<http://www.alliedvisiontec.com/emea/support/downloads/product-literature.html>

AVT product page:

<http://www.alliedvisiontec.com/emea/products/cameras.html>

AVT knowledge base:

<http://www.alliedvisiontec.com/emea/support/knowledge-base.html>

AVT case studies:

<http://www.alliedvisiontec.com/emea/products/applications.html>

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Allied Vision Technologies GmbH 03.07.12

Headquarters:

ALLIED VISION TECHNOLOGIES GMBH
Taschenweg 2a
D-07646 Stadtroda / Germany
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Managing Director:
Mr. Frank Grube
Tax ID: DE 184383113

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