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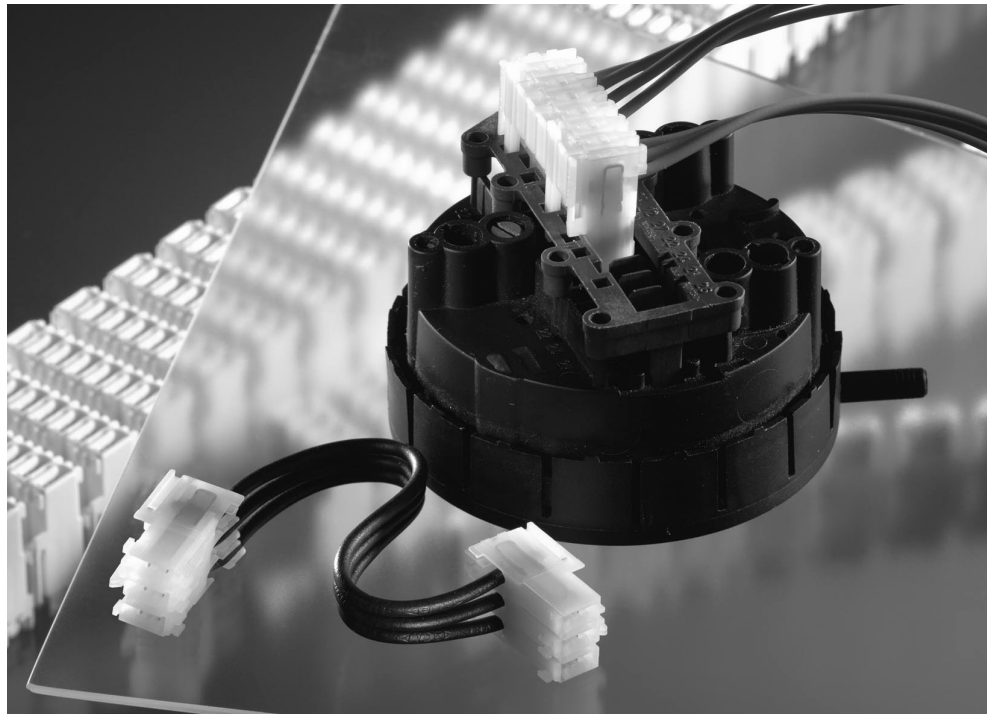
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Introduction

Product Features

- Direct Mating Connectors for PC Boards, 2–8 Positions, up to 6 A Current Carrying Capacity
- Indirect Mating Connectors, 1–8 Positions, up to 16 A Current Carrying Capacity
- Variable Keying
- Double Wire Termination possible



Tyco Electronics' newly designed AMP multifitting Mark II Connector System was developed according to the latest connector design standards.

The requirements of advanced In-Line mating technology for the components and contacts of pc boards are incorporated in the direct and indirect versions of these connector systems.

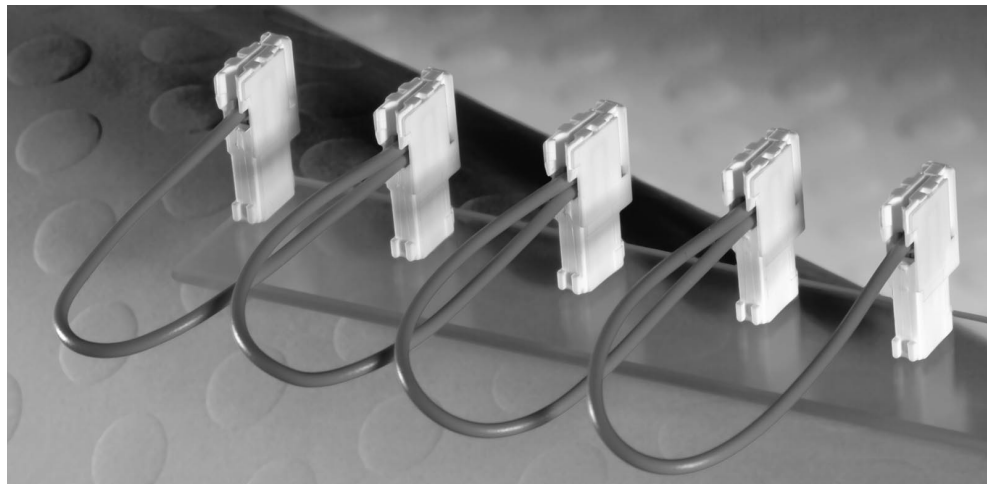
This system is suitable for a wide wire size range. Current carrying capacity is 16 A maximum.

Double termination is possible with 0.5 and 0.5 mm² or 0.5 and 0.75 mm² conductors.

The connectors are available in 1- to 8-positions (indirect) resp. 2- to 8-positions (direct) with an exterior locking device.

Interior locking options are available on request.

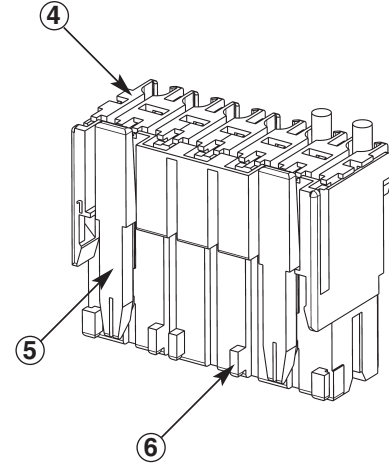
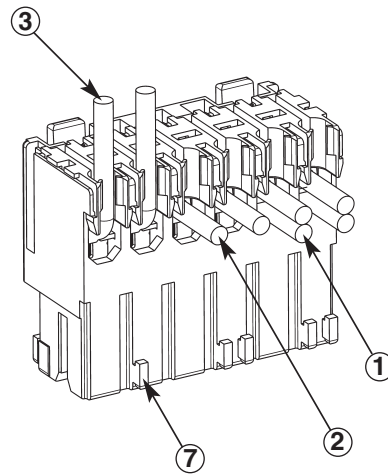
Supplied in chain and provided with all keying and polarisation ribs, the connectors can be operated economically with modern Application Tooling Equipment.



Direct and Indirect Mating Connection, 5.0 mm Centerline

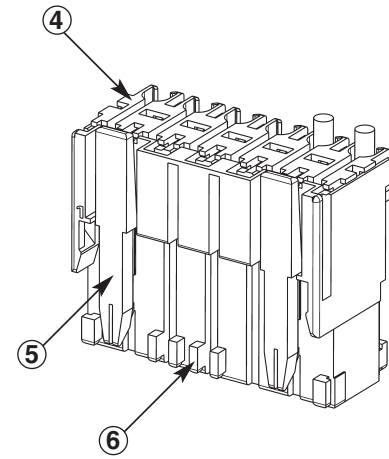
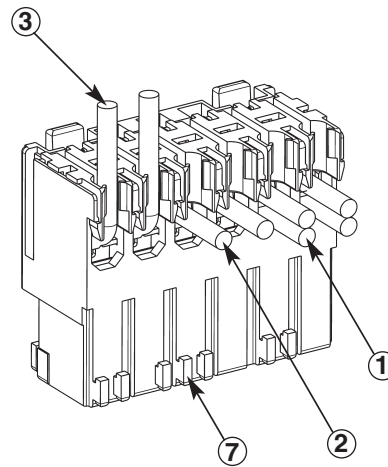
**Direct Mating Connection,
5.0 mm Centerline**

- 1 Double Wire Exit
- 2 Wire Exit 90°
- 3 Wire Exit 180°
- 4 Cover
- 5 Exterior Locking Latch
- 6 Keying
- 7 Polarisation



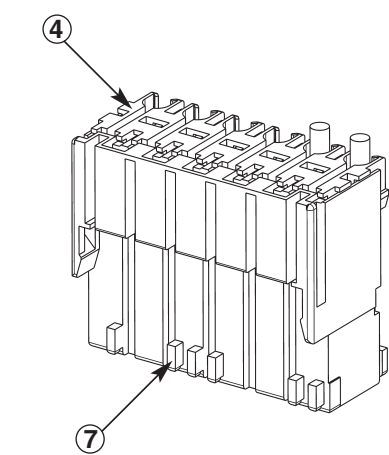
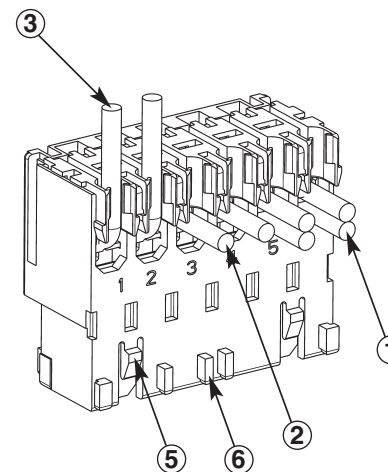
**Indirect Mating Connection,
5.0 mm Centerline**

- 1 Double Wire Exit
- 2 Wire Exit 90°
- 3 Wire Exit 180°
- 4 Cover
- 5 Exterior Locking Latch
- 6 Keying
- 7 Polarisation



**Indirect Mating Connection
with Interior Locking,
5.0 mm Centerline**

- 1 Double Wire Exit
- 2 Wire Exit 90°
- 3 Wire Exit 180°
- 4 Cover
- 5 Interior Locking Latch
- 6 Keying
- 7 Polarisation



Derating Curves

Direct Mating Connector System

Connector:

8 positions

Material:

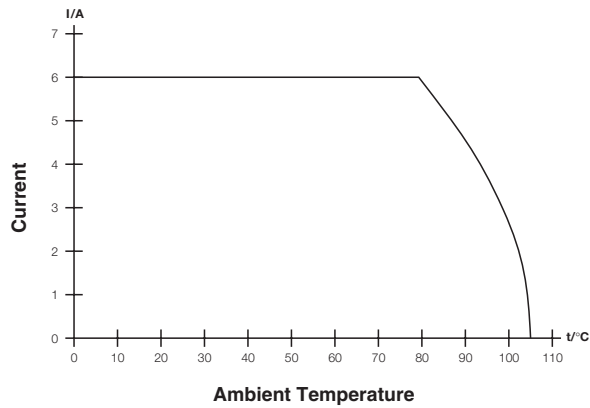
Brass, tin plated

Wire:

0.5 mm²

PC Board:

FR4, 2 x 0.35 µm Copper, tin plated



Indirect Mating Connector System

Material:

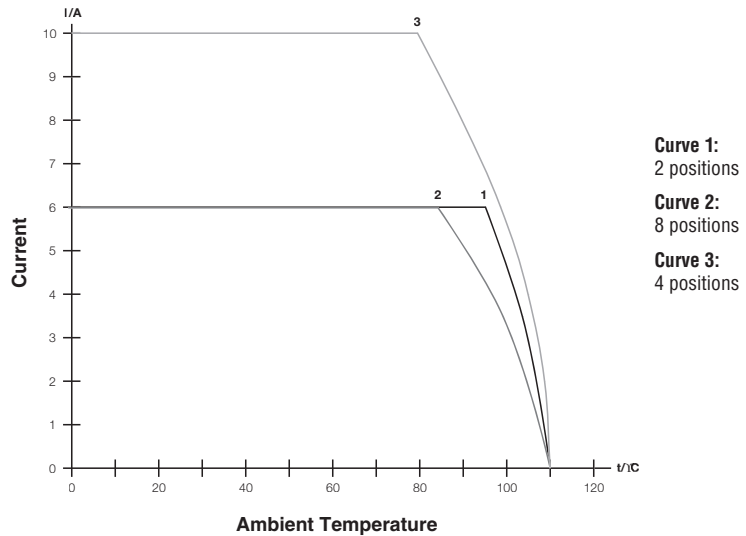
Brass, tin plated

Wire:

0.5 mm² (Curve 1 and 2)
1.0 mm² (Curve 3)

Mating Part:

6.3 x 0.8 mm Tab, Brass, tin plated



Indirect Mating Connector System

Material:

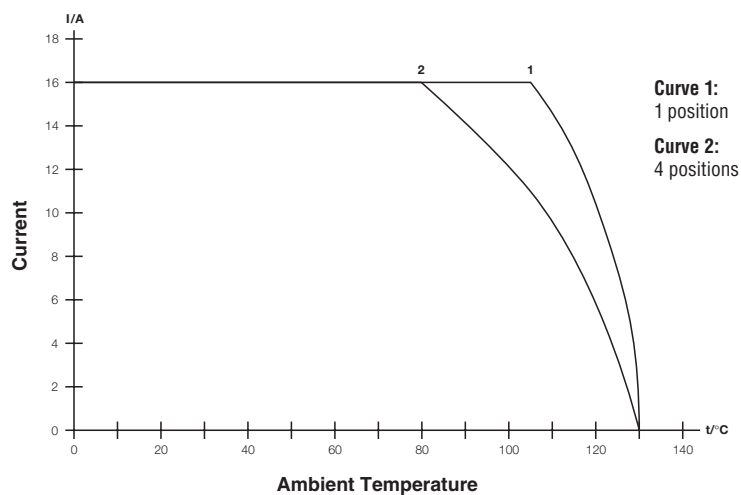
CuNi2Si, silver plated

Wire:

1.5 mm², tin plated

Mating Part:

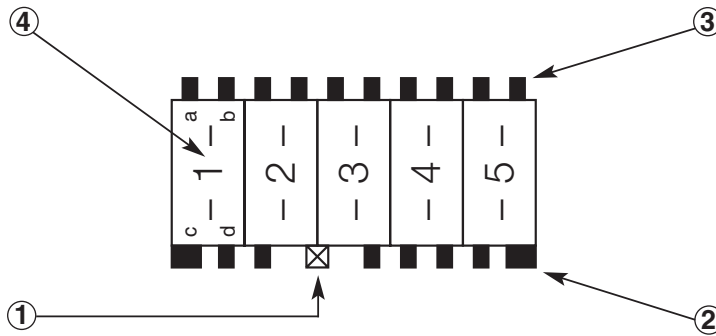
6.3 x 0.8 mm Tab, Brass, tin plated



Keying Plan and Cable Exit

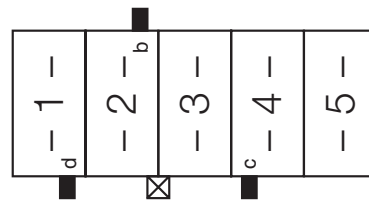
**Keying Plan
from Mating Direction,
Fully-Keyed Version**

- 1 Locking Latch
- 2 Keying Rib
- 3 Polarisisation Rib
- 4 Cavity Number

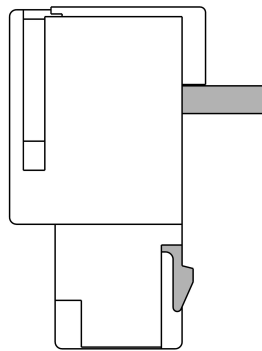


Keyed Version:
05-C according RAST 5

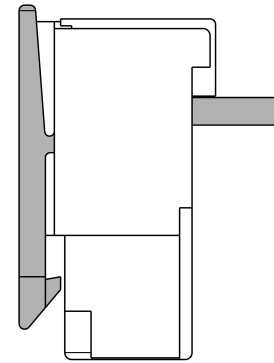
This final keying version will be produced on the Application Tooling Equipment.



**Cable Exit with Interior
and Exterior Locking**

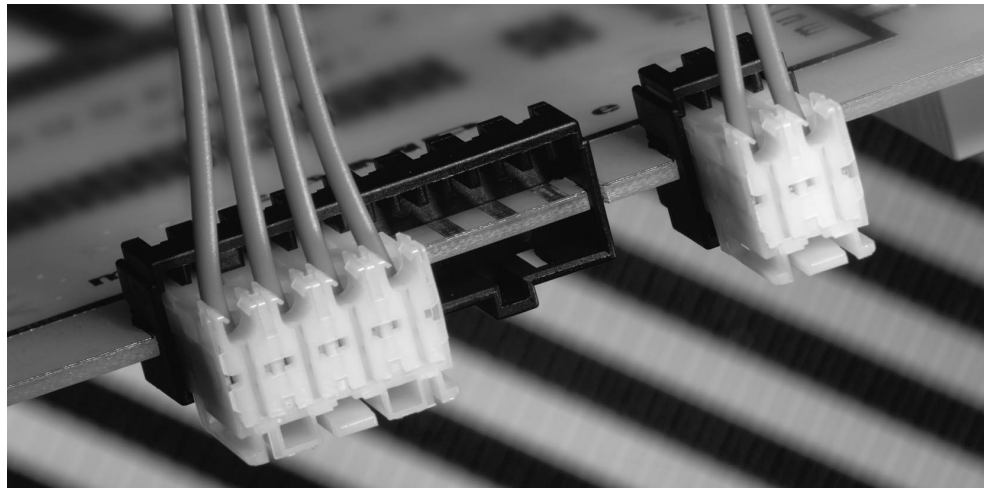


Cable Exit with Interior Locking



Cable Exit with Exterior Locking

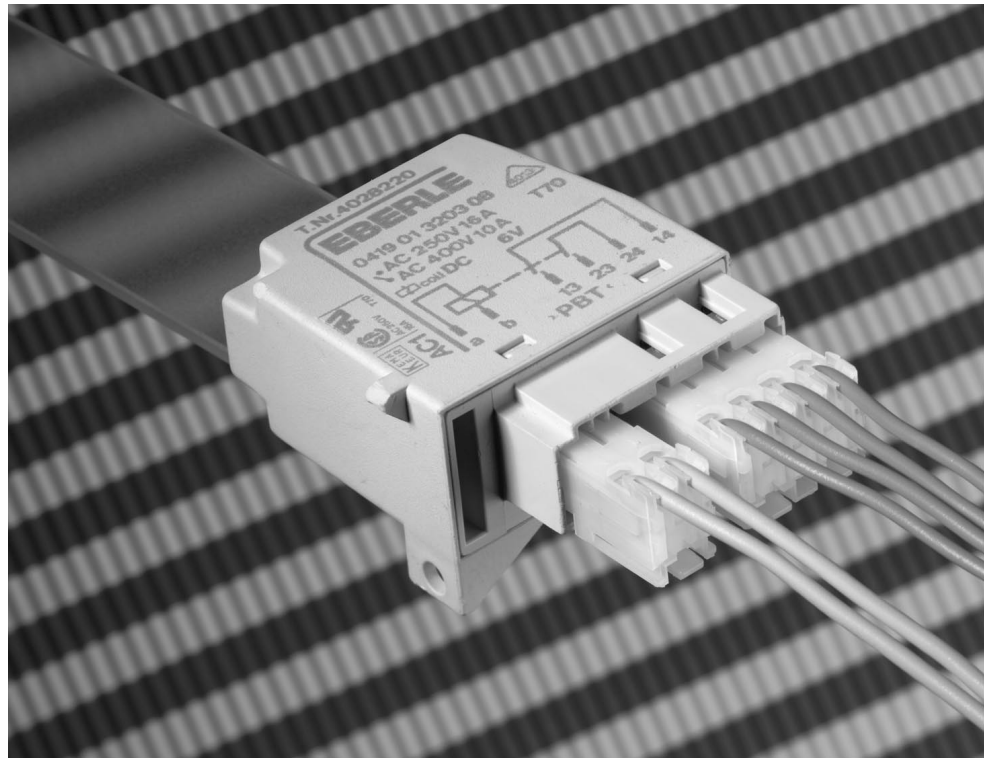
**Direct Mating of a PCB
with PC Board Frames**



Technical Features

Technical Data

- Centerline:**
5.0 mm
- Housing Material:**
Polyamide, PA 6.6 and PA 6
- Standard Colour:**
Natural
- Current Voltage:**
250 V ≈
- Air and Creepage Distance:**
>3.2 mm
- Flammability Rating:**
UL 94 V-2
- Approvals:**
VDE, UL



Direct Mating Connectors

- No. of Positions:**
2- to 8-positions
 - Contact Material:**
Brass
 - Contact Finish:**
Tin plated
 - Wire Size Range:**
0.35–1.0 mm²
 - Temperature Range:**
–40 °C up to +105 °C
 - Current Rating:**
6 A max.
 - Insulation Diameter:**
2.8 mm max.
 - Insulation Resistance:**
>10 MΩ
 - Mating Force:**
≤7 N per contact *
 - Unmating Force:**
≥1.5 N *
 - Product Specification:**
108-18653
 - Application Specification:**
114-18289
- *) measured with polished steel plate 1.5 mm thickness

Indirect Mating Connectors

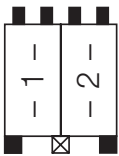
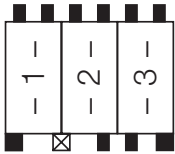
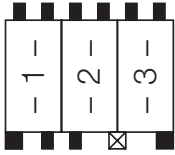
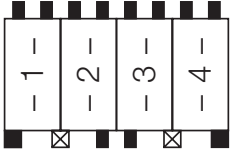
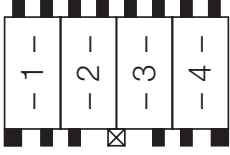
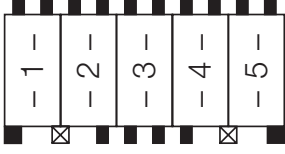
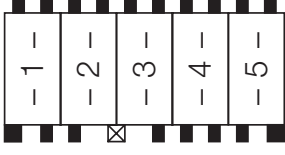
- No. of Positions:**
1- to 8-positions
 - Contact Material:**
Brass / CuNi2Si
 - Contact Finish:**
Tin plated / silver plated
 - Wire Size Range:**
0.35–1.0 mm² / 1.0–1.5 mm²
 - Temperature Range:**
–40 °C up to +130 °C
 - Current Rating:**
10 A, up to 4 contacts 16 A
 - Insulation Diameter:**
3.0 mm max.
 - Insulation Resistance:**
>10 MΩ
 - Mating Force:**
≤6.5 N per contact **
 - Unmating Force:**
≥1.5 N **
 - Product Specification:**
108-18652
 - Application Specification:**
114-18288, 114-18382
- ***) measured with polished steel tab 6.3 x 0.8 mm

Direct Mating Connector System

Technical Data

Wire Size Range:
0.35–1.0 mm²

Current Carrying Capacity (max.):
6 A

RAST 5 Version	Part Numbers with Exterior Locking		Package Quantity	Part Numbers with Interior Locking	
	PA 6.6	PA 6 *		PA 6.6	PA 6 *
	1241172-2	1534075-2	4,900	-	-
	1241172-3	1534075-3	3,136	-	-
	1-1241172-3	1-1534075-3	3,136	-	-
	1241172-4	1534075-4	2,352	-	-
	1-1241172-4	1-1534075-4	2,352	-	-
	1241172-5	1534075-5	1,960	-	-
	1-1241172-5	1-1534075-5	1,960	-	-

*)According to IEC 60695-2-1/1; GWT (Glow Wire Test) 750 °C without flame, see VDE M-Test Report.
The final keying version will be produced on the Application Tooling Equipment.

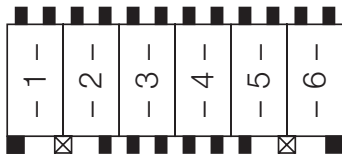
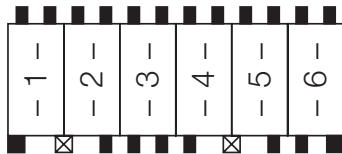
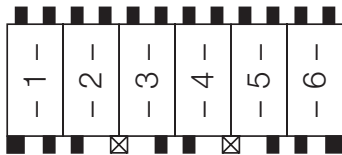
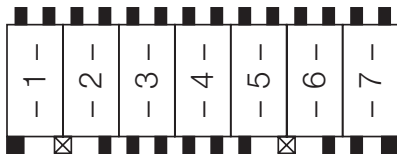
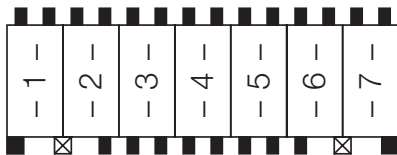
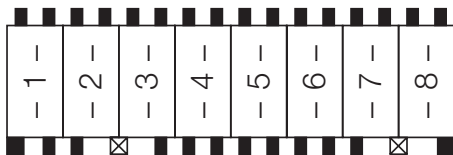
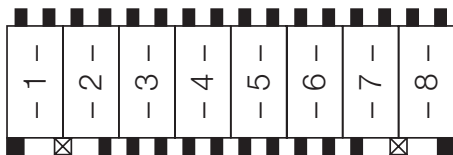
2
RAST 5

Direct Mating Connector System (continued)

Technical Data

Wire Size Range:
0.35–1.0 mm²

Current Carrying Capacity (max.):
6 A

RAST 5 Version	Part Numbers with Exterior Locking		Package Quantity	Part Numbers with Interior Locking	
	PA 6.6	PA 6*		PA 6.6	PA 6*
	1241172-6	1534075-6	1,568	-	-
	1-1241172-6	1-1534075-6	1,568	-	-
	2-1241172-6	2-1534075-6	1,568	-	-
	1241172-7	1534075-7	1,372	-	-
	1-1241172-7	1-1534075-7	1,372	-	-
	1241172-8	1534075-8	1,176	-	-
	1-1241172-8	1-1534075-8	1,176	-	-

*)According to IEC 60695-2-1/1; GWT (Glow Wire Test) 750 °C without flame, see VDE M-Test Report.
The final keying version will be produced on the Application Tooling Equipment.

Indirect Mating Connector System

Technical Data

Wire Size Range:
0.35–1.0 mm²

Current Carrying Capacity
(max.):
10 A

RAST 5 Version	Part Numbers with Exterior Locking		Package Quantity	Part Numbers with Interior Locking	
	PA 6.6	PA 6*		PA 6.6	PA 6*
	1241170-1	1534072-1	9,604	1241170-1	1534072-1
	1241170-2	1534072-2	4,900	1394355-2	1534077-2
	1241170-3	1534072-3	3,136	1394355-3	1534077-3
	1-1241170-3	1-1534072-3	3,136	1-1394355-3	1-1534077-3
	1241170-4	1534072-4	2,352	1394355-4	1534077-4
	1-1241170-4	1-1534072-4	2,352	1-1394355-4	1-1534077-4
	1241170-5	1534072-5	1,960	1394355-5	1534077-5
	1-1241170-5	1-1534072-5	1,960	1-1394355-5	1-1534077-5

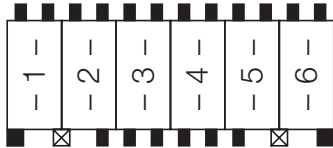
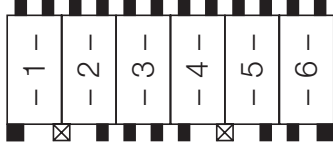
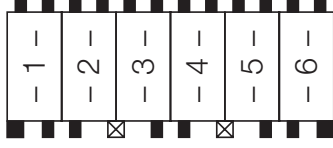
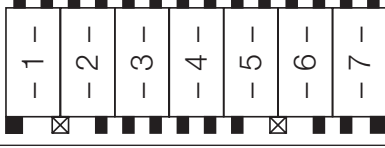
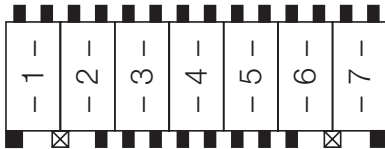
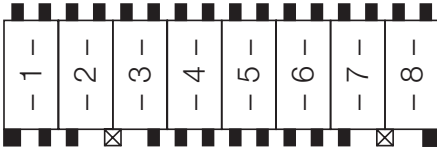
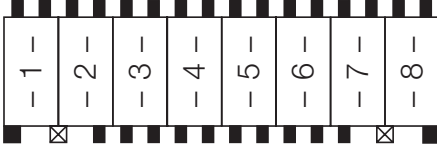
*)According to IEC 60695-2-1/1; GWT (Glow Wire Test) 750 °C without flame, see VDE M-Test Report.
The final keying version will be produced on the Application Tooling Equipment.

Indirect Mating Connector System (continued)

Technical Data

Wire Size Range:
0.35–1.0 mm²

**Current Carrying Capacity
(max.):**
10 A

RAST 5 Version	Part Numbers with Exterior Locking		Package Quantity	Part Numbers with Interior Locking	
	PA 6.6	PA 6*		PA 6.6	PA 6*
	1241170-6	1534072-6	1,568	-	-
	1-1241170-6	1-1534072-6	1,568	-	-
	2-1241170-6	2-1534072-6	1,568	-	-
	1241170-7	1534072-7	1,372	-	-
	1-1241170-7	1-1534072-7	1,372	1394355-7	1534077-7
	1241170-8	1534072-8	1,176	-	-
	1-1241170-8	1-1534072-8	1,176	-	-


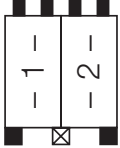
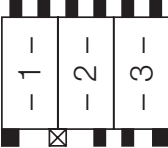
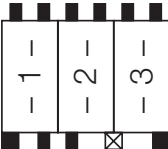
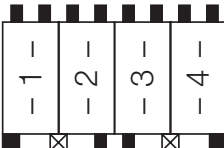
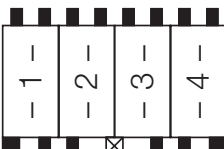
*)According to IEC 60695-2-1/1; GWT (Glow Wire Test) 750 °C without flame, see VDE M-Test Report.
The final keying version will be produced on the Application Tooling Equipment.

Indirect Mating Connector System (continued)

Technical Data

Wire Size Range:
1.0–1.5 mm²

Current Carrying Capacity (max.):
16 A

RAST 5 Version	Part Numbers with Exterior Locking		Package Quantity	Part Numbers with Interior Locking	
	PA 6.6	PA 6 *		PA 6.6	PA 6 *
	1241171-1	1534073-1	9,604	1241171-1	1534073-1
	1241171-2	1534073-2	4,900	1394556-2	1534078-2
	1241171-3	1534073-3	3,136	1394556-3	1534078-3
	1-1241171-3	1-1534073-3	3,136	1-1394556-3	1-1534078-3
	1241171-4	1534073-4	2,352	1394556-4	1534078-4
	1-1241171-4	1-1534073-4	2,352	1-1394556-4	1-1534078-4

*)According to IEC 60695-2-1/1; GWT (Glow Wire Test) 750 °C without flame, see VDE M-Test Report.
The final keying version will be produced on the Application Tooling Equipment.

PC Board Frame



No. of Positions	Dimensions (mm)		Keying	Latching	Polarisation	Additional Board Lock	Part Number	Package Quantity
	A	B					PC Board Frame, PA 6.6, Black	
2	5	10.1	1c, 2d	1/2	—	—	2-964577-2	2,200
4	15	20.1	1c, 2d, 3c	1/2, 3/4	2b	—	1-964577-4	1,700
			1c, 3c, 4d	1/2, 3/4	4b	—	2-964577-4	
			1c, 3c, 4d	1/2, 3/4	1b, 4a	—	3-964577-4	
5	20	25.1	3d	1/2, 4/5	—	—	1-964577-5	1,500
6	25	30.1	4d	1/2, 5/6	6b	—	1-964577-6	1,500
			4d	1/2, 5/6	1b, 6a	—	2-964577-6	
7	30	35.1	2c, 3d, 7c	2/3, 5/6	1b, 2b	4/5	1-964577-7	1,200
			2c, 3d, 7c	2/3, 5/6	2b, 7a	4/5	2-964577-7	
8	35	40.1	2c, 3d, 7c	2/3, 7/8	2a	4/5	1-964577-8	1,000
			2c, 3d, 7c	2/3, 7/8	2b, 4b	4/5	2-964577-8	
12	55	60.1	1c, 2d, 3c, 4d, 5c, 8c, 10d, 12d	1/2, 3/4, 5/6, 8/9, 9/10, 11/12	2b, 3a, 4a, 6a, 7a, 7b, 8a, 8b	4/5, 8/9	1-964578-2	500

Preferred Parts are printed bold

Introduction

AMP MONO-SHAPE Connectors in In-Line Mating Technology

AMP MONO-SHAPE connectors represent a valid solution to the ever-increasing requirements for production and application flexibility. They are high productivity, great flexibility, quality, minimum applied cost.

AMP MONO-SHAPE product-line includes a full range of 5.0 mm pitch modular connectors contents with similar outer shape, several variation in the mating area such as PC Board and 6.3 x 0.8 mm tabs (RAST 5), plus a version for harness shunts.

AMP MONO-SHAPE connection system adopts the IDC termination technology, which improves application results and quality level.

The AMP MONO-SHAPE product range, combined with the performances and properties offered by the termination system, allow to manufacture extremely complicated harness structures while still maintaining high production levels.



Technical Features

- IDC Connector system design to maximise the full integration with the application tooling assuring total flexibility in harness design.
- High current system, up to 16 Ampere, designed to satisfy several appliance requirements.
- ID Contact designed to accept standard discrete wires ranging from 0.5 up to 1.5 mm², according to the connector configuration.
- The connector incorporates modern in-line mating technology on a 5.0 mm centerline with no loss of spacing and a variety of keying possibilities.
- Wiring faults eliminated through high automation.
- Approvals:
VDE: 4751-1431-4024 / A 10A and
4751-1431-4024 / A 9E
UL E 28476 Vol. 9 Sec. 7;
97 ME 17936; AP-27HB

AMP MONO-SHAPE Connector Versions

Same Shape - Different Applications

With the same outside shape four connector versions are available, which are to handle with the same application tooling.

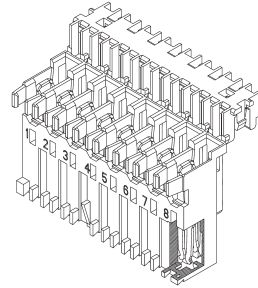
TAB Connectors

2–12 position 5.0 mm pitch connectors with insulation displacement contacts mateable with components according to RAST 5 and with tinned copper alloy tab 6.3 x 0.8 mm according to DIN 46244.

Wire Size Range:
0.5–1.5 mm²

Current Rating:
16 Ampere max. acc. to wire size

-For LIF version up to
10 Ampere max



LIF version 2 point contact instead of 4 as per standard version

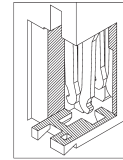
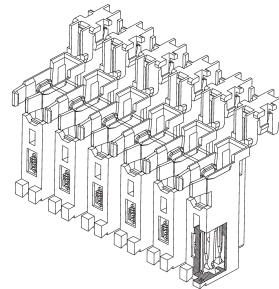
Single Way Connectors

Single Way connectors with insulation displacement contacts for use on tinned copper alloy tab 6.3 x 0.8 mm according to DIN 46244.

Wire Size Range:
0.5–1.5 mm²

Current Rating:
16 Ampere max. acc. to wire size

Supply Status:
In order to increase product-ivity these items are supplied in sticks.



PCB Connectors

2–12 position 5.0 mm pitch connectors with insulation displacement contacts according to printed circuit boards with thickness 1.5±0.2 mm and 5.0 mm pitch.

Wire Size Range:
0.5–0.75 mm²

Current Rating:
6 Ampere max. acc. to wire size

PC Board:
Single or both sides printed 5 µm tin over 35 µm copper

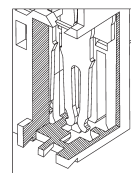


Satellite Connectors

3 position connectors, pitch 5.0 mm, with short circuited insulation displacement contacts for harness shunts.

Wire Size Range:
0.5–1.5 mm²

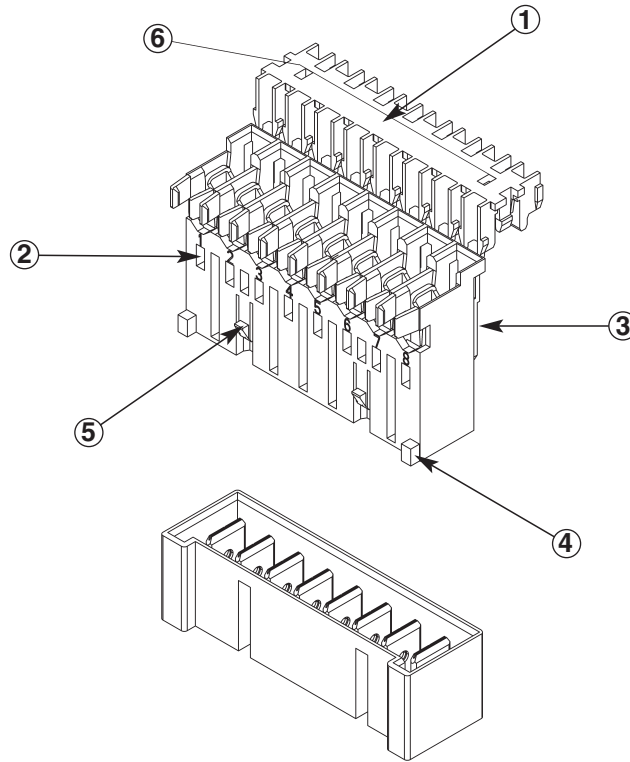
Current Rating:
16 Ampère max. acc. to wire size



TAB Connector

AMP MONO-SHAPE TAB Connector

- 1 Cover closed after Wire Insertion. Wire Direction 90°. 180° when locked in Cover Recess
- 2 Cavity Numbers
- 3 Polarisation similar to the Keying (Located on the Back Side)
- 4 Keying
- 5 Interior Locking Latch
- 6 Colour Marking



Technical Features

Centerline:

5.0 mm, according to RAST 5 specifications

Configurations:

2- to 12-positions

Housing Material:

Plastic PA 6.6

Housing Colour:

Natural colour for standard version

Grey colour for LIF version

Contact Material:

Copper alloy, post-tinned
2.0 µm min.

**Polarisation, Keying,
Locking Latches:**

according to RAST 5
specifications
(see customer drawings)

Track Resistance:

as per IEC 112 (250 V)

Glow Wire Test:

as per IEC 695-2-1 (850 °C)
and 750°C no flame

Air and Creepage Distance:

according to EN 60998-1
(IEC 998-1) for 380 V, ≥4.0 mm

Voltage Resistance:

according to EN 60998-1
(IEC 998-1) 1750 V for 4 minutes

Insulation Resistance:

according to EN 60998-1
(IEC 998-1) >5 MΩ

Wire Size Range:

from 0.5 to 1.5 mm²

Current Rating:

Standard Version

16 A max. according to wire
size
0.5 mm² ≤ 3 A, 0.75 mm² ≤ 6 A,
1.0 mm² ≤ 10 A, 1.5 mm² ≤ 16 A

LIF Version

10 A max. according to wire
size
0.5 mm² ≤ 3 A, 0.75 mm² ≤ 6 A,
1.0 mm² ≤ 10 A, 1.5 mm² ≤ 10 A

Rated Voltage:

380 Volts max.

Wire Type:

H05V-K (70 °C max.)
or FR 3/2 (105 °C max.)
for 0.5–1.0 mm² wires with
copper or tinned stranded wires

H07V-K (70 °C max.)

or FR 3/2 (105 °C max.)

for wires from 1.5 mm² with
copper or tinned stranded wires

Insulation Type:

PVC suitable for temperatures
up to 70 °C / 105 °C

Insulation Diameter Range:

2.0–3.5 mm

Temperature Range:

–25 °C up to +105 °C

Wire Extraction Force/Way:

50 N min. on wire size 0.5 mm²

Application Specification:

114-20016

Product Specification:

Standard version: 108-20065

LIF version: 108-20215

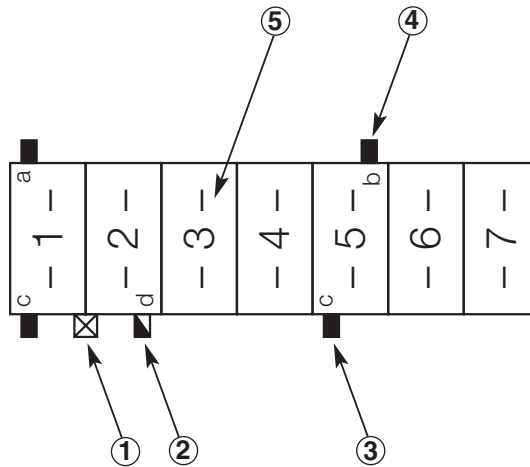
Homologations:

acc.to VDE File No. 3905
(to 16 A) and UL File No.
E28476 (to 14 A)

Keying Plan

Keying Plan from Mating Direction,

- 1 Locking Latch
- 2 Slanted Keying Rib
- 3 Keying Rib
- 4 Polarisation Rib
- 5 Cavity Number



AMP MONO-SHAPE TAB Connector

2 Position RAST 5 Variations (Variable Keying)*

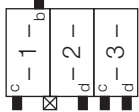
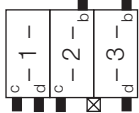
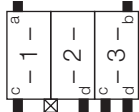
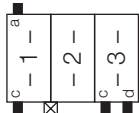
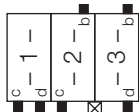
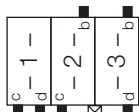
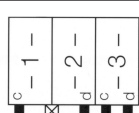
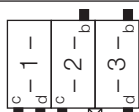
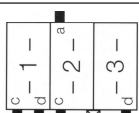
Suitable for RAST 5 Version Colour Marking	RAST 5 Version	Part Numbers			Packaging Unit		
		On Tray	Loose Piece	On Reel	On Reel	Loose Piece	On Reel
02-B 02-E 02-F Grey		1-282002-2 1-284338-2	2-282002-2 2-284338-2	3-282002-2 —	6.500	3.500	28.500
02-C Black		1-282002-1 1-284338-1	2-282002-1 2-284338-1	2-282002-1 —	6.500	3.500	28.500
02-L 02-P Red		1-282002-3 1-284338-3	2-282002-3 2-284338-3	— 3-284338-3	6.500	3.500	28.500
02-A 02-O Blue		1-282002-4 1-284338-4	2-282002-4 —	— —	6.500	3.500	—
02-Q Black		1-282002-5	2-282002-5	—	6.500	3.500	—
— Black		1-282002-6	2-282002-6	—	6.500	3.500	—
— —		1-282002-7 1-284338-7	2-282002-7 —	3-282002-7 —	6.500	3.500	28.500

* Final keying version is produced on the Application Tooling Machines.

Bold Part Numbers are LIF Version

AMP MONO-SHAPE TAB Connector

3 Position RAST 5 Variations (Variable Keying)*

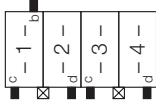
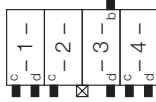
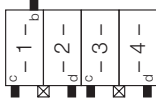
Suitable for RAST 5 Version Colour Marking	RAST 5 Version	Part Numbers			Packaging Unit		
		On Tray	Loose Piece	On Reel	On Reel	Loose Piece	On Reel
03-A 03-I Orange		1-282003-1 1-284339-1	2-282003-1 2-284339-1	3-282003-1 —	4.160	2.500	24.000
03-B 03-K Blue		1-282003-2 1-284339-2	2-282003-2 2-284339-2	3-282003-2 —	4.160	2.500	24.000
03-F Green		1-282003-3 1-284339-3	2-282003-3 2-284339-3	— —	4.160	2.500	—
03-D —		282233-2	282233-2	—	4.160	2.500	—
03-B 03-K Red		1-282003-4 1-284339-4	2-282003-4 2-284339-4	— —	4.160	2.500	—
03-B 03-K Grey		1-282003-5 1-284339-5	2-282003-5 2-284339-5	— —	4.160	2.500	—
— Violet		1-282003-6	2-282003-6	—	4.160	2.500	—
03-B Black		1-282003-7	—	—	4.160	—	—
— Black		1-284396-1	—	—	4.160	—	—

* Final keying version is produced on the Application Tooling Machines.


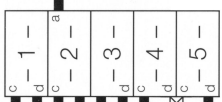
Bold Part Numbers are LIF Version

AMP MONO-SHAPE TAB Connector

4 Position RAST 5 Variations (Variable Keying)*

Suitable for RAST 5 Version Colour Marking	RAST 5 Version	Part Numbers			Packaging Unit		
		On Tray	Loose Piece	On Reel	On Reel	Loose Piece	On Reel
04-A Grey		1-282004-1	2-282004-1	3-282004-1	2.120	2.000	18.750
04-D Black		1-282004-2	2-282004-2	3-282004-2	2.120	2.000	18.750
04-A Red		1-282004-3	2-282004-3	—	2.120	2.000	—

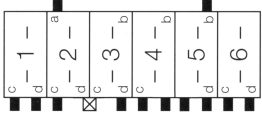
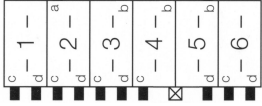
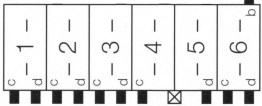
5 Position RAST 5 Variations (Variable Keying)*

Suitable for RAST 5 Version Colour Marking	RAST 5 Version	Part Numbers			Packaging Unit		
		On Tray	Loose Piece	On Reel	On Reel	Loose Piece	On Reel
Red		1-282005-1	2-282005-1	—	2.600	1.500	18.750
Red		1-284545-1	—	—	2.600	1.500	18.750

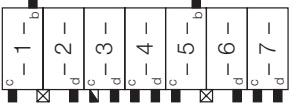
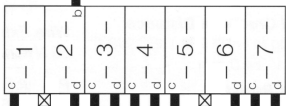
* Final keying version is produced on the Application Tooling Machines.

AMP MONO-SHAPE TAB Connector

6 Position RAST 5 Variations (Variable Keying)*

Suitable for RAST 5 Version Colour Marking	RAST 5 Version	Part Numbers			Packaging Unit		
		On Tray	Loose Piece	On Reel	On Reel	Loose Piece	On Reel
Violet		1-282006-1	2-282006-2	3-282006-2	2.080	1.200	13.500
—		1-282006-3	2-282006-3	3-282006-3	2.080	1.200	13.500
Red		1-284745-1	—	—	2.080	—	—

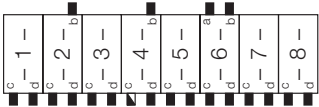
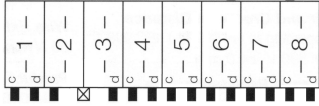
7 Position RAST 5 Variations (Variable Keying)*

Suitable for RAST 5 Version Colour Marking	RAST 5 Version	Part Numbers			Packaging Unit		
		On Tray	Loose Piece	On Reel	On Reel	Loose Piece	On Reel
—		1-282007-1	2-282007-1	—	1.820	1.200	—
Black		1-284397-1	—	—	1.820	1.200	—

2
RAST 5

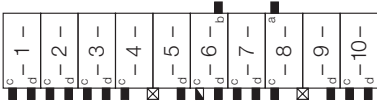
AMP MONO-SHAPE TAB Connector

8 Position RAST 5 Variations (Variable Keying)*

Suitable for RAST 5 Version Colour Marking	RAST 5 Version	Part Numbers			Packaging Unit		
		On Tray	Loose Piece	On Reel	On Reel	Loose Piece	On Reel
—		284085-1	2-284085-1	—	1.560	900	—
		1-284685-1	2-284685-1	—			
Violet		284085-2	2-284085-2	—	1.560	900	—

* Final keying version is produced on the Application Tooling Machines.
Bold Part Numbers are LIF Version

10 Position RAST 5 Variations (Variable Keying)*

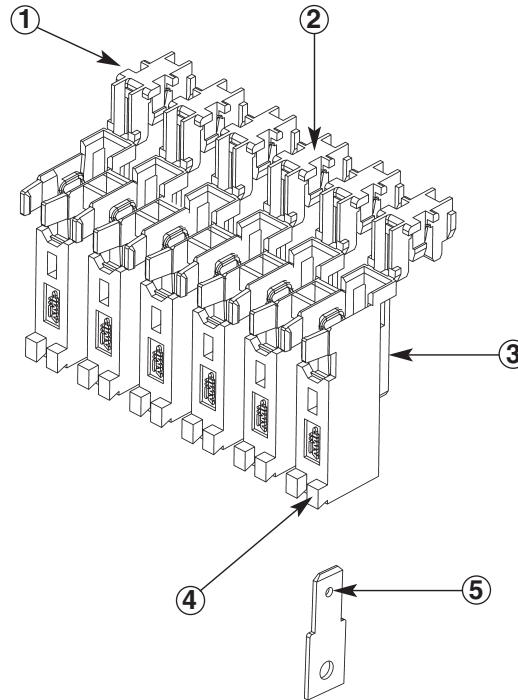
Suitable for RAST 5 Version Colour Marking	RAST 5 Version	Part Numbers			Packaging Unit		
		On Tray	Loose Piece	On Reel	On Reel	Loose Piece	On Reel
—		1-282010-1	2-282010-1	—	1.300	700	—
		1-284686-1	2-284686-1	—			

* Final keying version is produced on the Application Tooling Machines.
Bold Part Numbers are LIF Version

AMP MONO-SHAPE Single Way Connector

Single Way Connector

- 1 All Single Way Connectors are supplied in "stick-form" by 6 single ways each. They will be cut from the Application Tooling Machines
- 2 Cover closed after Wire Insertion. Wire Direction 90°. 180° when locked in Cover Recess
- 3 Polarisation similar to the keying of the front side
- 4 Keying
- 5 Plastic Noses which Lock into the TAB Hole
- 6 Colour Marking



2
RAST 5

Technical Features

Centerline:
5.0 mm, according to RAST 5 specifications

Configurations:
1 position

Housing Material:
Plastic PA 6.6

Housing Colour:
Natural colour

Contact Material:
Copper alloy, post-tinned
2.0 µm min.

Polarisation, Keying, Locking Latches:
according to RAST 5 specifications
(see customer drawings)

Track Resistance:
as per IEC 112 (250 V)

Glow Wire Test:
as per IEC 695-2-1 (850 °C)
and 750°C no flame

Air and Creepage Distance:
according to EN 60998-1
(IEC 998-1) for 380 V, ≥4.0 mm

Voltage Resistance:
according to EN 60998-1
(IEC 998-1) 1750 V for 4 minutes

Insulation Resistance:
according to EN 60998-1
(IEC 998-1) >5 MΩ

Wire Size Range:
from 0.5 to 1.5 mm²

Current Rating:
16 A max. according to wire size
0.5 mm² ≤ 3 A, 0.75 mm² ≤ 6 A,
1.0 mm² ≤ 10 A, 1.5 mm² ≤ 16 A

Rated Voltage:
380 Volts max.

Wire Type:
H05V-K (70 °C max.)
or FR 3/2 (105 °C max.)
for 0.5–1.0 mm² wires with
copper or tinned stranded wires

H07V-K (70 °C max.)
or FR 3/2 (105 °C max.)
for wires from 1.5mm² with
copper or tinned stranded wires

Insulation Type:
PVC suitable for temperatures
up to 70 °C / 105 °C

Insulation Diameter Range:
2.0–3.5 mm

Temperature Range:
–25 °C up to +105 °C

Wire Extraction Force/Way:
50 N min. on wire size 0.5 mm²

Application Specification:
114-20017

Product Specification:
108-20066

Homologations:
acc.to VDE File No. 3905
(to 16 A) and UL File No.
E28476 (to 14 A)

Counter Part:
Tab 6.3 x 0.8 mm
as per DIN 46244 norms

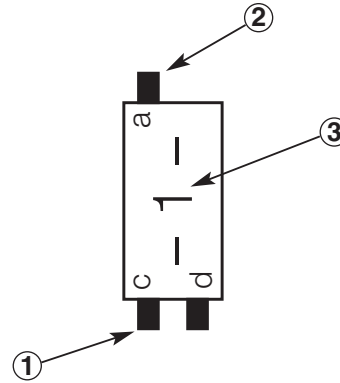
Materials:
Copper alloy

Finishing:
Tinned (6.0 µm max.)

Keying Plan from Mating Direction

Keying Plan

- 1 Keying Rib
- 2 Polarisation Rib
- 3 Cavity Number



AMP MONO-SHAPE Single Way Connector

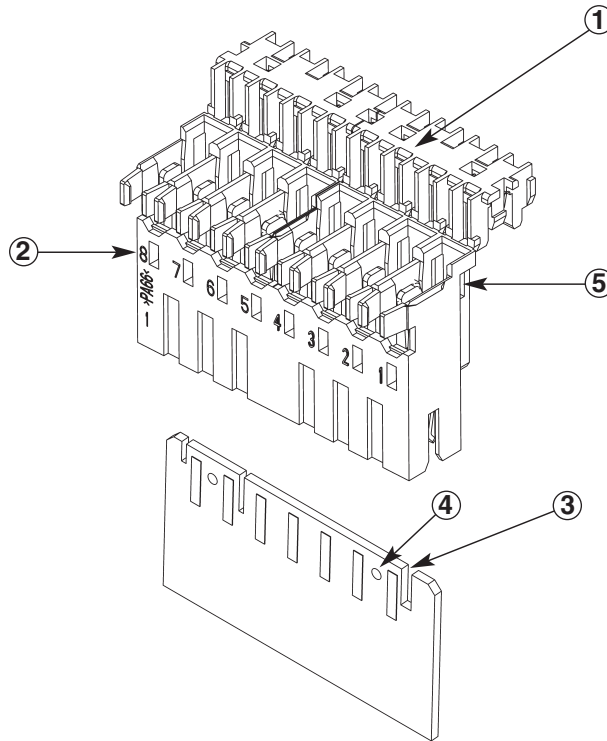
1 Position (Variable Keying)*

Suitable for RAST 5 Version Colour Marking	RAST 5 Version	Part Numbers		Packaging Unit	
		On Tray	On Reel	On Tray	On Reel
—		—	1-282086-1	1.024	10.500
Black		—	1-282086-2	1.024	—
Orange		—	1-282086-3	1.024	—
Green		—	1-282086-4	1.024	—
Blue		—	1-282086-5	1.024	—
Violet		—	1-282086-6	1.024	—

AMP MONO-SHAPE PCB (Printed Circuit Board) Connector

PCB Connector

- 1 Cover closed after Wire Insertion. Wire Direction 90°. 180° when locked in Cover Recess
- 2 Cavity Numbers
- 3 Keying Slot in PC Board
- 4 Locking Hole in PC Board
- 5 Colour Marking



2
RAST 5

Technical Features

Centerline:
5.0 mm

Configurations:
2-12 positions

Housing Material:
Plastic PA 6.6

Housing Colour:
Natural colour

Contact Material:
Copper alloy, post-tinned
2.0 µm min.

Polarisation, Keying, Locking Latches:
according to RAST 5 specifications (see customer drawings)

Track Resistance:
as per IEC 112 (250 V)

Glow Wire Test:
as per IEC 695-2-1 (850 °C) and 750°C no flame

Air and Creepage Distance:
according to EN 60998-1 (IEC 998-1) for 240 V, ≥3.0 mm

Voltage Resistance:
according to EN 60998-1 (IEC 998-1) 1750 V for 4 minutes

Insulation Resistance:
according to EN 60998-1 (IEC 998-1) >5 MΩ

Wire Size Range:
from 0.5 to 0.75 mm²

Current Rating:
6 A max. according to wire size
0.5 mm² ≤3 A, 0.75 mm² ≤6 A

Rated Voltage:
220 Volts max.

Wire Type:
H05V-K (70 °C max.)
or FR 3/2 (105 °C max.)
for 0.5–1.0 mm² wires with copper or tinned stranded wires
H07V-K (70 °C max.)
or FR 3/2 (105 °C max.)
for wires from 1.5mm² with copper or tinned stranded wires

Insulation Type:
PVC suitable for temperatures up to 70 °C / 105 °C

Insulation Diameter Range:
2.0–2.8 mm

Temperature Range:
–25 °C up to +105 °C

Wire Extraction Force/Way:
50 N min. on wire size 0.5 mm²

Application Specification:
114-20025

Product Specification:
108-20067

Homologations:
acc.to VDE File No. 3905 (to 6 A) and UL File No. E28476 (to 6 A)

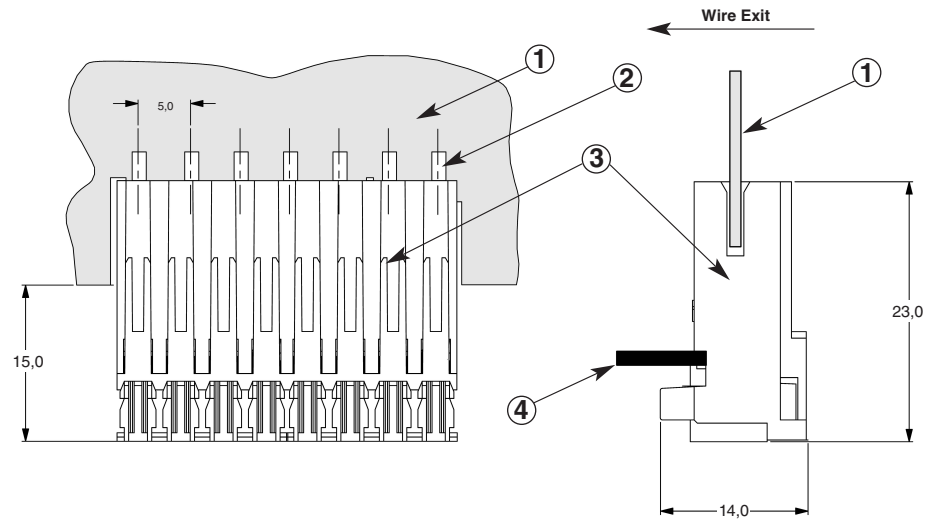
Printed Circuit Board:
Thickness 1.5±0.2mm

Tinned Circuit Paths:
5.0mm pitch and width of 1.8mm

AMP MONO-SHAPE PCB (Printed Circuit Board) Connector

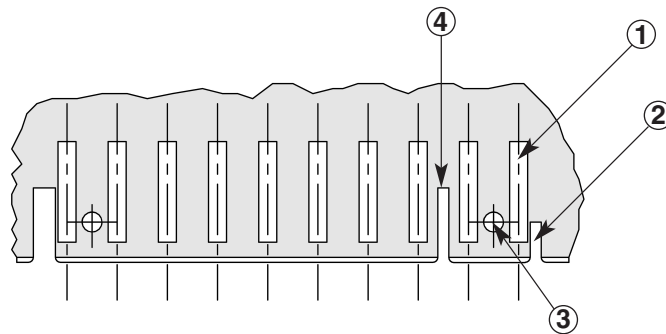
PCB Connector

- 1 PC Board
- 2 First Circuit Path
- 3 MONO-SHAPE Connector
- 4 Wire



Notes Concerning the PC Board Layout

- 1 First circuit path
- 2 Slot for keying rib in front of first cavity (according to the connector 4.0 mm or 7.4 mm)
- 3 Bore hole for locking clip symmetric between two cavities (diameter 2.5 mm)
- 4 Slot for keying rib symmetric between two cavities

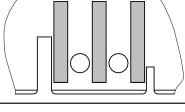
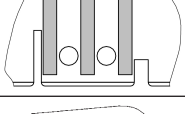


PC Board Layout Dimensions on request.

See Customer Drawing 282042

AMP MONO-SHAPE PCB (Printed Circuit Board) Connector

Centerline 5.0 mm

No. of Positions Colour Marking	PC Board Cut-Out	Part Numbers			Packaging Unit		
		On Tray	Loose Piece	On Reel	On Reel	Loose Piece	On Reel
2 Brown		1-282042-1	2-282042-1	—	5.980	3.500	—
2 Green		1-282042-2	2-282042-2	3-282042-2	5.980	3.500	28.500
2 Blue		1-282042-3	2-282042-3	3-282042-3	5.980	3.500	28.500
2 Red		1-282042-4	2-282042-4	—	5.980	3.500	—
2 Black		1-282042-5	2-282042-5	3-282042-5	5.980	3.500	28.500
3 —		1-282043-2	2-282043-2	3-282043-2	4.160	2.500	24.000
3 Black		1-282043-3	2-282043-3	—	4.160	2.500	—
3 —		282235-2	2-282235-2	—	4.160	2.500	—
3 Black		282235-3	2-282235-3	—	4.160	2.500	—
3 Blue		1-1284546-1	—	—	4.160	—	—
4 —		1-282044-1	2-282044-1	3-282044-1	3.120	2.000	18.750