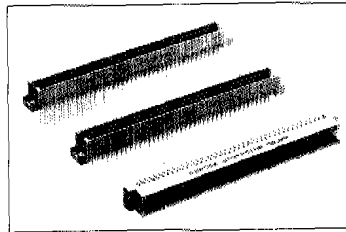


Apfel DIN41612 Connectors

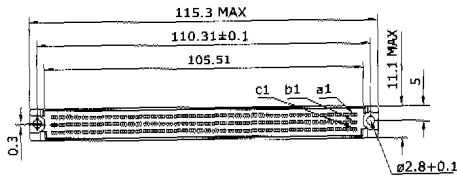
APFEL DIN 41612 EUROCARD CONNECTORS Vertical Male Extended (120 Positions) Type R Press-Fit Connectors



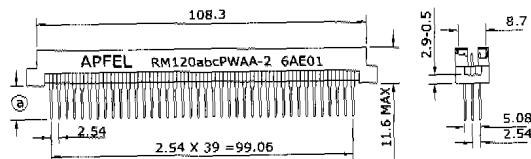
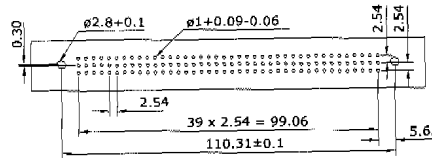
Option:

- Extended male contact
- Variations
- Please refer to page 33 for complete part number coding.
- Other variations, please consult factory.

Dimensions



Recommended P.C.B. layout



	P	PWAA	PWAB	PWBA	PWBB
a =	5	13	13	17	17
K =		0.64x0.64	0.6x0.6	0.64x0.64	0.6x0.6

Ordering Information

Number of contacts	Rows/Positions with Contact	Class3			Class2			Pitch
		5.0mm	13mm Wrap post	17mm Wrap post	5.0mm	13mm	17mm	
120	a+b+c	RM120abc P	RM120abc PWAA RM120abc PWAB	RM120abc PWBA RM120abc PWBB	RM120abc P-2	RM120abc PWAA-2 RM120abc PWAB-2	RM120abc PWBA-2 RM120abc PWBB-2	2.54mm
80	a+c	RM80ac P	RM80ac PWAA RM80ac PWAB	RM80ac PWBA RM80ac PWBB	RM80ac P-2	RM80ac PWAA-2 RM80ac PWAB-2	RM80ac PWBA-2 RM80ac PWBB-2	
80	a+b	RM80ab P	RM80ab PWAA RM80ab PWAB	RM80ab PWBA RM80ab PWBB	RM80ab P-2	RM80ab PWAA-2 RM80ab PWAB-2	RM80ab PWBA-2 RM80ab PWBB-2	
40	a	RM40a P	RM40a PWAA RM40a PWAB	RM40a PWBA RM40a PWBB	RM40a P-2	RM40a PWAA-2 RM40a PWAB-2	RM40a PWBA-2 RM40a PWBB-2	5.08mm half-loaded
60	a+D+c All even no.	RM60abc P	RM60abc PWAA RM60abc PWAB	RM60abc PWBA RM60abc PWBB	RM60abc P-2	RM60abc PWAA-2 RM60abc PWAB-2	RM60abc PWBA-2 RM60abc PWBB-2	
40	a+c All even no.	RM40ac P	RM40ac PWAA RM40ac PWAB	RM40ac PWBA RM40ac PWBB	RM40ac P-2	RM40ac PWAA-2 RM40ac PWAB-2	RM40ac PWBA-2 RM40ac PWBB-2	

Remarks:

P—Straight press-fit 5.0mm tail length
PWAB, PWAA—Straight press-fit 13mm tail length

PWBB, PWBA—Straight press-fit 17mm tail length
K—Cross section of wrap post (Thickness x Width)

Dimensions shown are for reference purpose only. All dimensions are in millimeters unless otherwise specified.

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Apfel DIN41612 Connectors

APFEL

FEATURES OF DIN 41612 EUROCARD

Two-piece printed circuit connectors

■ Indirect connectors

It can eliminate the problems of board warpage, different board thickness

■ High density

96 contacts in 2.54mm grid are available in a compact body.

■ High reliability

Dual beam metal-to-metal contact polarized connectors for all series to prevent mismatching.

This connectors are versatily used in telecommunications, instruments, computers, control system ect.

• General specifications:

Number of contacts: 16,24,32,48,64,96

Contact spacing: 2.54mm(0.1"),5.08mm(0.2" half-loaded)

Material

Insulator: Glass filled polyester (PBT, UL flammability 94V-0)

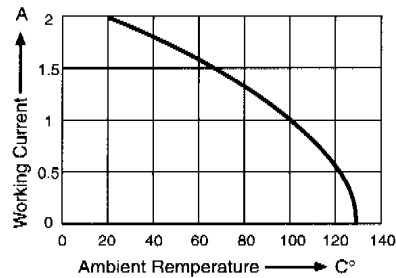
Contacts: Female copper alloy, male brass

Contact finish: Contact area: gold over nickel (per requirements of performance class 3, class 2)

Termination area: TIN-plated or gold-plated for long wrap post

Mechanical

Insertion force: 96 contacts max 90N
64 contacts max 60N
48 contacts max 45N
32 contacts max 30N
16 contacts max 15N
Withdrawl force per contact: min 0.15N
Temperature range:-55°C to +125°C
Air and creepage distance 1.2mm min



Electrical

Current rating: 20°C 2A
70°C 1A
100°C 0.5A

Contact resistance: $\leq 20m\Omega$

(testing current 100mA) $\leq 40m\Omega$ after 400 mating cycles

Capacitance between adjacent contacts: Appr.2PF

Insulation resistance: $\geq 10^{12}\Omega$ (between adjacent cotacts at 100VDC)

Test voltage: 1,000Vrms between contacts (2.54mm spacing)
1,550Vrms between contacts (5.08mm spacing)
1,550Vrms between contacts and body

Operating voltage: 250V AC

- Specifications are subject to change without prior notice.
- All dimensions are in mm (milli meter)

Agency Approval

- U/L File E149341,Electric rating:250V, 2A

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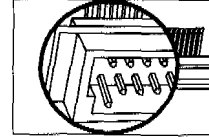
DIN 41612 EUROCARD CONNECTORS

OPTIONS:

-X

**EXTENDED MALE CONNECTORS
—EARLY MAKE/LATE BREAK**

APFEL provides the early make /late break extended male contacts connectors. Before entering order, please advise the positions of extended male contacts of Row a, Row b, Row c and request for correct P/N coding for this variation. Please refer to page 33 for complete part number coding. E.G. CM96abc R-X1(contact positions, a1.b1.c1.a32.b32.c32, with extended longer contact.)



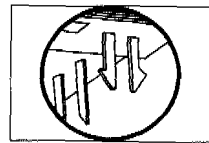
-MC

**CONNECTORS WITH PRE-INSTALLED
SNAP-IN MOUNTING CLIPS**

The mounting clips are designed for use with 1.6mm (0.062")P.C.B. thickness. The material of mounting clips is copper alloy and it is Tin plated.

All solder connectors can be ordered with this feature.

Please refer to page 33 for the complete part number coding. E.G. CM 64ac R-MC1, CF64ac T-MC2.



-C

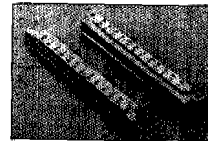
**WITHOUT LOSS OF CONTACTS
CODING SYSTEM**

APPEL provides coded connectors for type B.C.Q.R.M.

The coded connectors are with following advantages

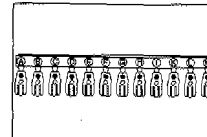
- Without loss of contact
- No need to break off the plastic housing, no tools are required.
- Manually keying, keying can be changed and corrected easily.

E.G. CM64ac R-C



KEYING COMB SET

Each comb set includes 12keys, please order separately. Ordering part number for this plastic comb set is CS12



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Apfel DIN41612 Connectors

DIN 41612 EUROCARD CONNECTORS

APFEL

PRESS-FIT TERMINATION CONNECTORS

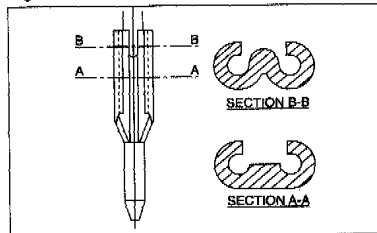
APFEL provides the unique patented compliant twin-eye of the needle press-in terminations.

It owns the following advantages:

- Tapered entry.
- Gas tight and larger contact area with the wall of the plated through hole.
- Conform to the hole variance.

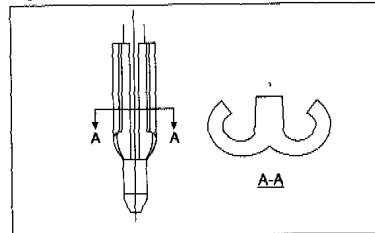
PATENTED CONSTRUCTION

Fig 1



Construction of female short press-fit contact
5mm tail length

Fig 2



Construction of long post (13mm, 17mm) male &
female connectors, male press-fit 5mm tail length

Diameter of P.C.B plated through hole:

$\varnothing = 0.94 - 1.09 \text{mm} (0.037 - 0.43 \text{inch})$

P.C. board thickness:

$\geq 1.6 \text{mm} (0.062 \text{inch})$

Recommended P.C. board holes:

hole $1.15^{+0.02} \text{mm} (0.0453^{+0.0008} \text{inch})$

Copper plating:

25-50 $\mu\text{m} (0.001 \text{inch min.})$

Tin plating:

5-15 $\mu\text{m} (0.002 \text{inch min.})$

Push-in force per pin for plated through hole:

max 8kg/pin (17.5 lbs/pin)

Push-out force per pin for plated through hole:

min. 3.5kg/pin (7.5lbs/pin)

Fig 3



Cross section of an assembled P.C. Board.

Fig 4



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PRESS-FIT TOOLING

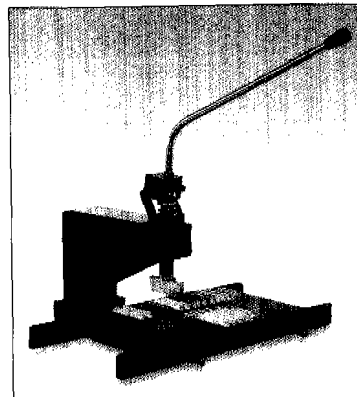
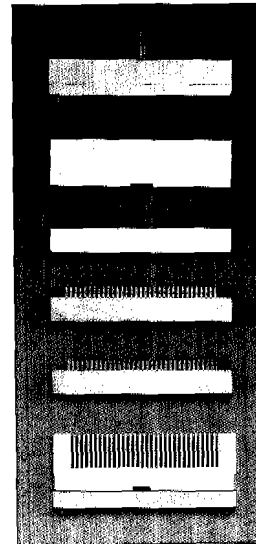
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DIN 41612 EUROCARD CONNECTORS

HAND-ACTUATED PRESS-FIT EQUIPMENT

THE MOST EASY WAY TO PRESS IN PRESS-FIT CONNECTOR

1. Hand bench press
Working stroke: approx. 25mm
Press force: approx. 15KN
Hole ϕ in the RAM: 10mm
Weight: approx. 30kg
Adjustable distance for stroke: approx. 25mm
2. Guide frame
adjustable guide for P.C.board
max: 330mm X 600mm (min P.C.B. width 100mm)
Part No. for item 1, and item 2, in one set is HPE01
3. Mounting tool P/N: MT01
This tool is to be fastened to the 10mm RAM of hand bench press.
4. Alignment tool P/N: AT01
This tool is to make alignment for mounting tool and bottom tool.
5. Female top tool P/N: FTT01
This tool is to be mounted with mounting tool for press-in female connectors.
6. Male top tool
For RM type, P/N: TL-03
For QM type, P/N: TL-02
For 1/2 RM type, P/N: TS-03
For 1/2 QM type, P/N: TS-02
7. Bottom tool P/N: BT-01
This tool is to be mounted on the base of guide frame.



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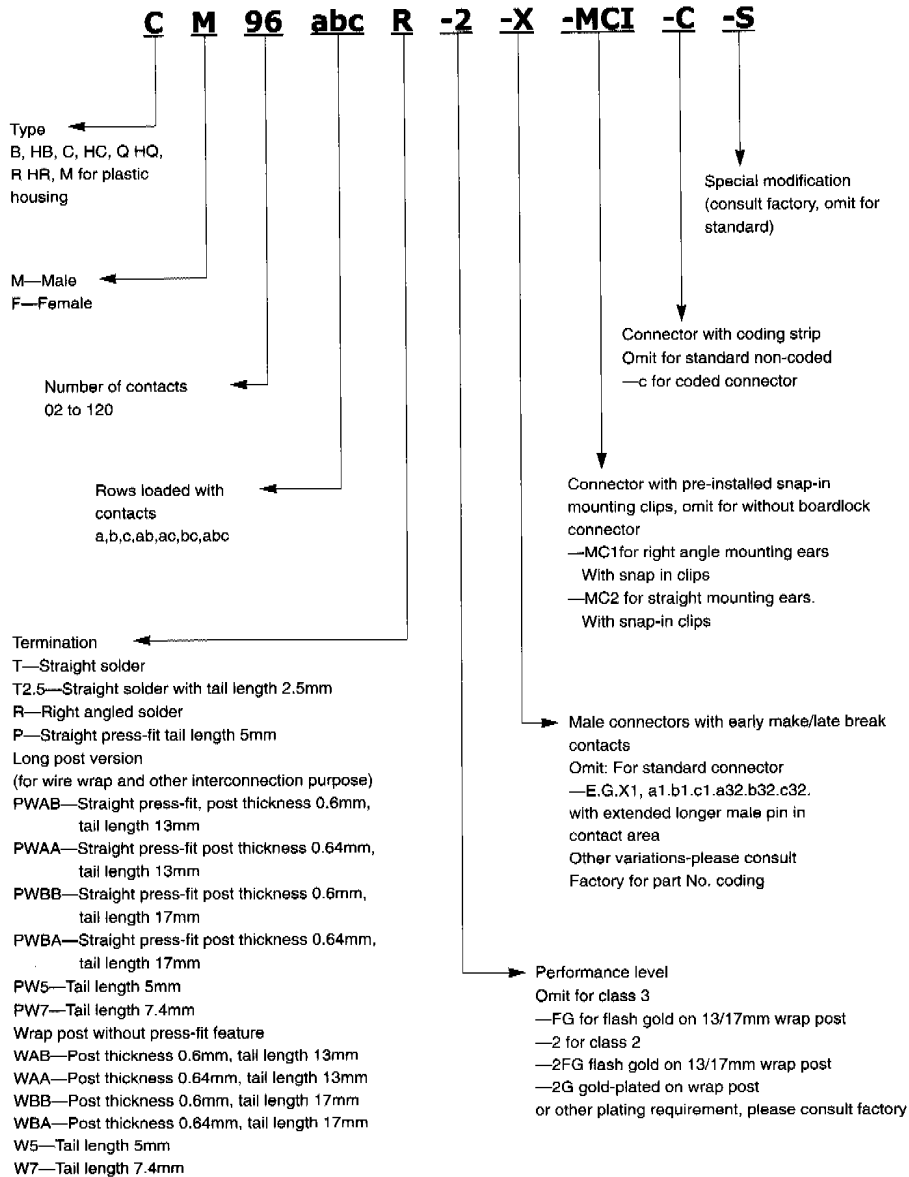
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Apfel DIN41612 Connectors

DIN 41612 EUROCARD CONNECTORS

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How to Order



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Apfel DIN41612 Connectors

ENQUIRY FORM

Faxback to Apfel-Europe on: +44 (0) 1488 685430

Or telephone +44 (0) 1488 685183

SAMPLES / QUOTATION / TECHNICAL ASSISTANCE ON THE FOLLOWING:

Your Part No	Competition Part No	Apfel Part No	Qty per mth/yr

Notes / Descriptions:.....

.....
.....
.....
.....
.....

Your Name:.....

Company:.....

Address:.....

.....

Tel:..... Fax:.....

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