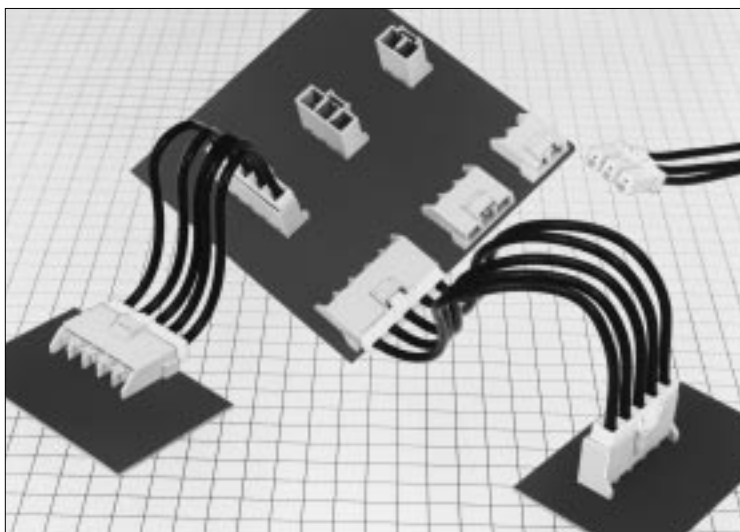


DF22 Series



Complete lock function

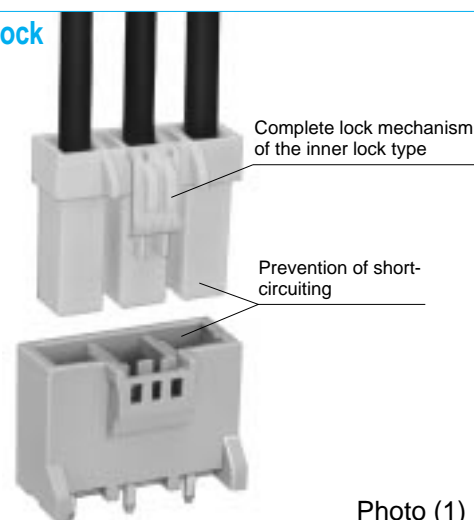


Photo (1)

■ Features

1. 20 A maximum current capacity

The connector can carry a maximum current of 20 A with AWG# 12 wire. (For the rated current, see the next page.)

2. Complete lock function

The complete lock mechanism of the inner lock type prevents slip-off due to inadvertent external shock (see Photo 1).

3. Prevents incorrect connection by three different mating profiles

To prevent incorrect connection, there are three different mating profiles for connectors of the same No. of poles (see Photo 2).

4. Mold lance

The mold lance is used in place of the terminal lance that tends to deform during crimping work.

5. Prevention of reverse insertion

The guide post on the pin header prevents reverse insertion into the board.

6. Potting

Potting is possible up to 10 mm.

7. Prevention of solder cracks

The glass reinforced resin used for the pin header prevents solder cracks due to thermal contraction.

8. Prevention of short-circuits between terminals

Each terminal is boxed in to isolate it from the other terminals and prevent short-circuiting.

9. C-UL and TÜV certifications applied for.

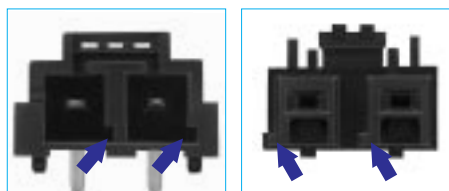
■ Applications

Consumer-oriented appliances and power supplies for electronic devices, business machines, and industrial machinery.

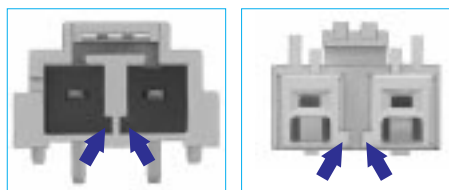
Prevention of incorrect connection

Photo (2)

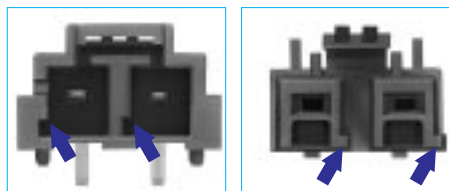
● R type (guide key: right, resin: black)



● Standard type (guide key: inside, resin: natural color)



● L type (guide key: left, resin: red)



*Photo at left: Pin header (board dip side)

Photo at right: Socket (cable side)

*Guide key position when facing the pin header mating plane.

Product Standard

Rating	Rated current (Note 1)	Number of contacts	AWG#12	AWG#14	AWG#16	Operating temperature range humidity range	-35~85℃(Note 2) 20~80%(Note 3)
		2	20A	18A	15A		
		3	20A	18A	15A	Storage temperature range Storage humidity range	-10~60℃(Note 3) 40~70%
		4	18A	15A	13A		
	5	18A	15A	13A			
Rated voltage	AC/DC/ 1000V						

Item	Standard	Condition
1. Contact resistance	91.5 mW or less (initial)	Measured at 20 mV or less and 1 mA.
2. Insulation resistance	1000 MW or more	Measured at 1 000 V DC.
3. Voltage proof	No flashover or breakdown	2500 V AC, applied for one minute.
4. Unit mechanical force	MIN 0.3N, MAX 5N	Measured with a 1.6 × 0.8 ±0.002 steel pin. / 105 Repeated
5. Mechanical operation	10 mW or less	mechanical operation 30 cycles.
6. Vibration	No electrical discontinuity for 1ms or more	Frequency: 10 Hz to 55 Hz, amplitude of 0.75 mm in 3 directions, 2 h
7. Shock	No electrical discontinuity for 1ms or more	Acceleration of 490 m/s ² , 11 ms duration, sine half-wave waveform, for 3 cycles in 3 directions
8. Damp heat	10 mW or less	Temperature of 40 ±2- C, humidity of 90% to 95%, duration 96 h
9. Rapid change of temperature	10 mW or less	(-55-C: 30 min -> 5-C to 30℃: 5 min -> 85℃: 30 min -> 5℃ to 35℃: 5 min) 5 cycles
10. Resistance to Soldering heat	No deformation in appearance or excessive terminal looseness	Flow: 250℃, 10 sec Soldering iron temperature: 300℃ for 3 s

Note1: The rated current depends on the number of contacts and the wire size used. The rated current of the header is 20 A.

Note2: Includes the temperature rise from current flow.

Note3: The term storage refers to an unused products prior to board mounting that is being kept for a long period.

The operating temperature and humidity ranges are suited to the non-conducting following board assembly.

Note4: The aforementioned specifications are representative of this series. For information on specific parts, confirm with Sales Office.

Material

Product	Part	Material	Color	UL standard
Crimp socket	Insulation	Polyamide resin	(White) natural (Note 1)	UL94V-0
Crimp-type terminal for socket	Terminal	High-conductivity copper alloy	Tinning (Note 2)	—
Header	Insulation	Polyamide resin (glass reinforced),	(Beige) natural (Note 1)	UL94V-0
	Terminal	High-conductivity copper alloy	Tinning (Note 2)	—

Note1: The mating profile standard resin color is black for DF22R and red for DF22L.

Note2: Tinning is free from whiskers.

Product Number Composition

The type name represents a specific product specification.

To order a product, specify the type from pages 3 to 5.

Connector

DF 22 L - 2 S - 7.92 C

① ② ③ ④ ⑤ ⑥ ⑦

① Series name : CB	⑤ Connector type S: Socket P: Pin header
② Series No. : 1	
③ Guide key position:None: Inside (resin: natural color) R: Right side (resin: black) L: Left side (resin: red)	⑥ Contact pitch: 7.92 mm
④ No. of contacts	⑦ termination area / terminal profile C : Crimp case DSA : Straight pin header DS : Right angle pin header

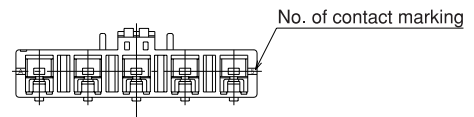
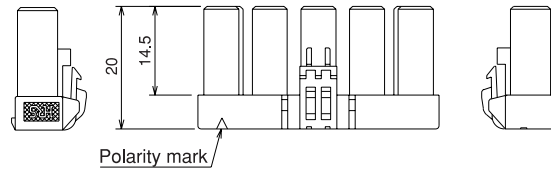
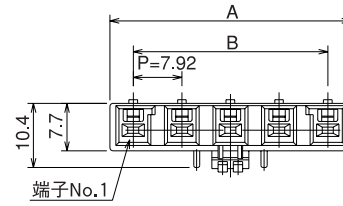
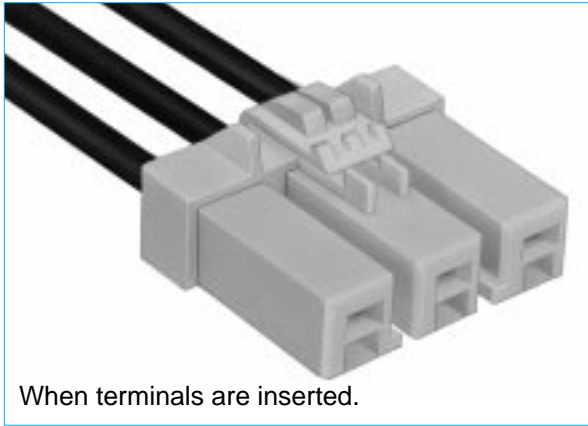
Terminal

DF 22 A - 1416 SCF

① ② ⑧ ⑨ ⑩

⑧ Wire type None: UL1430 A : UL1015
⑨ Applicable wire size 1416 : AWG#14~16 12 : AWG#12
⑩ Type / Packaging SCF : Socket contact reel SC : Socket contact loose piece

■Crimp Socket



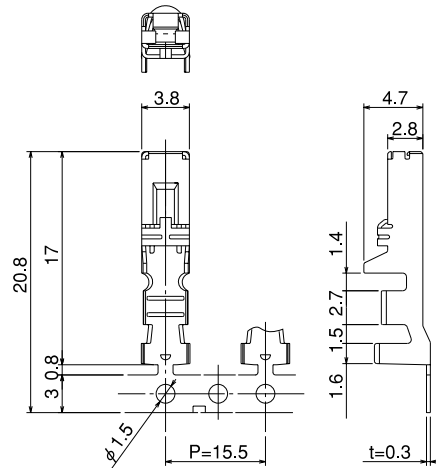
standard type (guide key: inside, resin: natural color)

Product No.	HRS No.	No. of contacts	A	B
DF22-2S-7.92C	CL680-1004-4	2	15.50	7.92
DF22-3S-7.92C	CL680-1005-7	3	23.42	15.84
DF22-4S-7.92C	CL680-1006-0	4	31.34	23.76
DF22-5S-7.92C	CL680-1007-2	5	39.26	31.68

Note: Sold in packages (100 pieces).

Note: Lock profiles are different for some even Nos. of poles.

■Crimp-Type Terminals for Socket



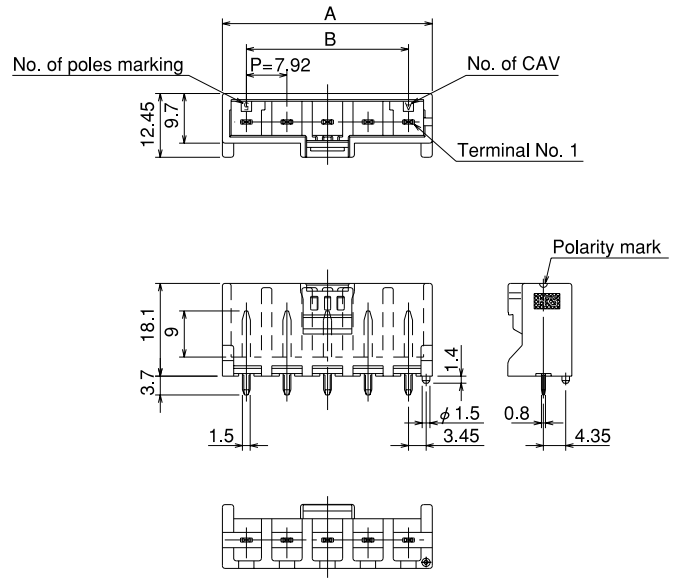
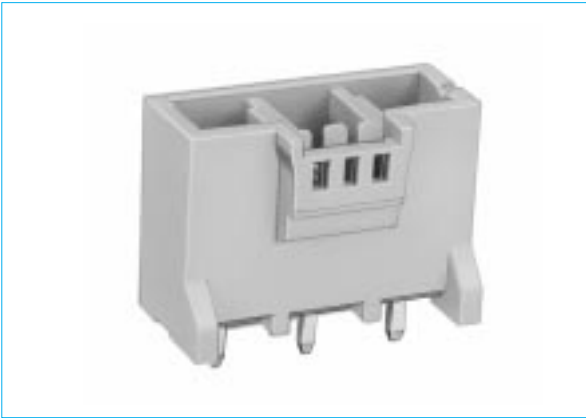
HRS No.	Applicable wire				Packaging	Quantity
	UL style	Sheath diameter	AWG size	Core wire composition		
CL680-1000-3	1430	2.4~3.0	AWG#16 AWG#14	26/0.254 41/0.26	Reel type	2,500
CL680-1001-6					Loose terminals	100
CL680-1002-9	1015	3.0~3.8	AWG#12	65/0.26	Reel type	2,000
CL680-1003-1					Loose terminals	100
CL680-1046-4		3.6~4.3	AWG#12	65/0.26	Reel type	2,000
CL680-1047-7					Loose terminals	100

Note: The applicable wire conductor shall be made of tinned soft copper.

Note: Please contact us when you use wire other than those specified in the Table.

Strip length: 3.5 mm to 4.5 mm

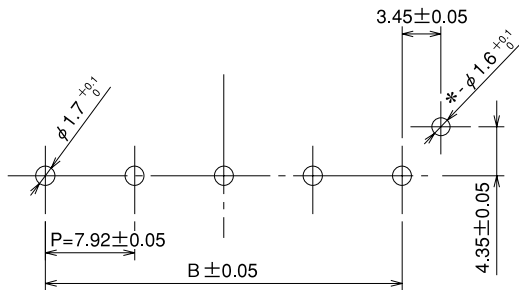
■ Straight Pin Header



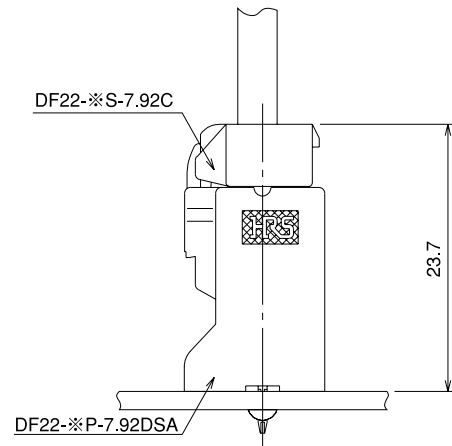
Note: Sold in packages (100 pieces).

Note: Lock profiles are different for some even Nos. of poles.

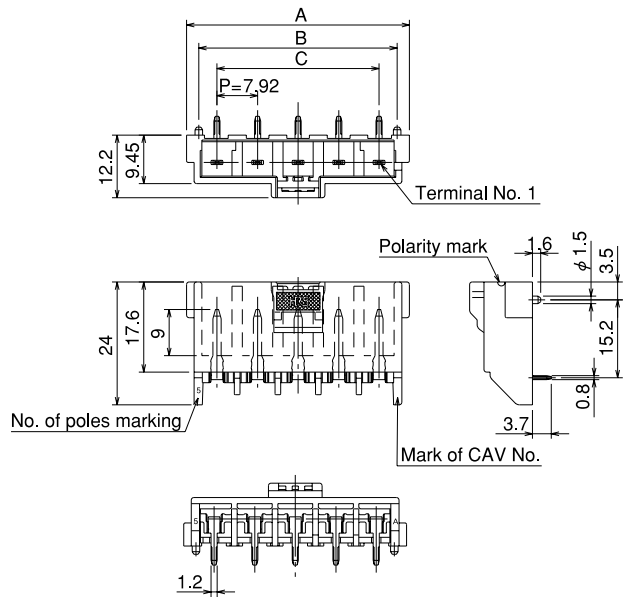
◆ Recommended Board Hole Dimensions (Recommended Board Thickness $t = 1.6 \pm 0.1$)



◆ Application drawing



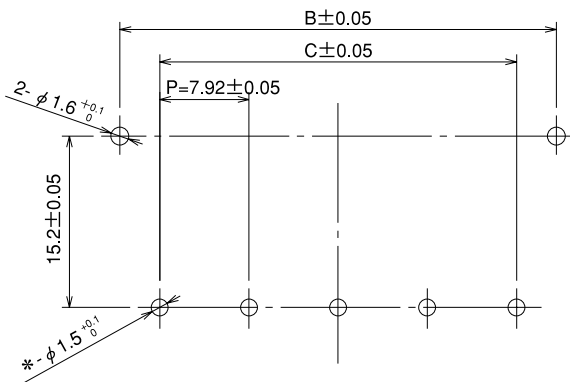
■Straight Pin Header



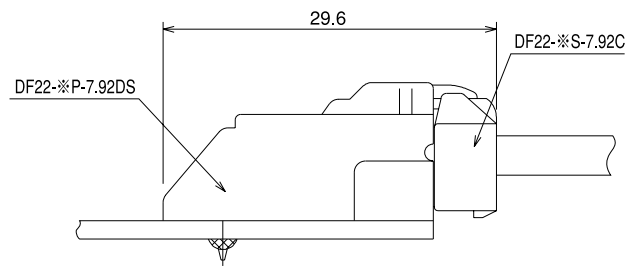
Note: Sold in packages (100 pieces).

Note: Lock profiles are different for some even Nos. of poles.

◆Recommended Board Hole Dimensions (Recommended Board Thickness $t = 1.6 \pm 0.1$)



◆Application drawing



◆Applicable Crimping Tools

Type	Item	Product No.	HRS No.	Applicable terminal
Automatic	Press	CM-105	CL901-0005-4	DF22/DF22A-1416SCF
		CM-107	CL901-6000-3	DF22-12SCF
	Applicator	AP105-DF22-1416S	CL901-4576-7	DF22-1416SCF
		AP105-DF22A-1416S	CL901-4578-2	DF22A-1416SCF
		AP107-DF22A-12SCF	CL901-4582-0	DF22-12SCF
	Domestic manufacturers' automatic crimping machine applicators	AP109A-DF22-1416S	CL901-4579-5	DF22-1416SCF
AP109A-DF22A-1416S		CL901-4580-4	DF22A-1416SCF	
Manual	Manual crimping tool	HT104/DF22-1416S	CL550-0285-0	DF22-1416SC
		HT104/DF22A-1416S	CL550-0286-2	DF22A-1416SC
		HT103/DF22A-12SC	CL550-0287-5	DF22A-12SC

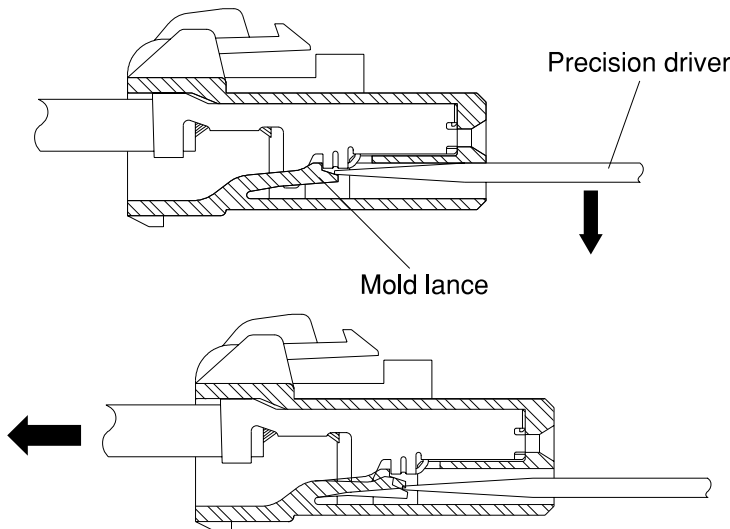
◆Method to pull out terminals

■Terminal pull-out tool: Precision driver (minus driver, blade width 1.4mm)

■Applicable crimp-type terminal: DF

■Method of work

Housing sectional area



1. Press to lower the mold lance at the mating part with a driver. See the illustration.

2. Check that the lance is disengaged. Pull the wire to pull out the crimp-type terminal.



Caution

The projections on crimp-type terminals are sharp. Take care when pulling them out.

◆Precautions on socket use

- Avoid applying excessive force; damage to the connector may result. Lightly push the connector to unlock it, and then pull it out.
- A short and hard wire will deform the terminals when it twists. Avoid twisting the wire when routing wiring.