CW8942

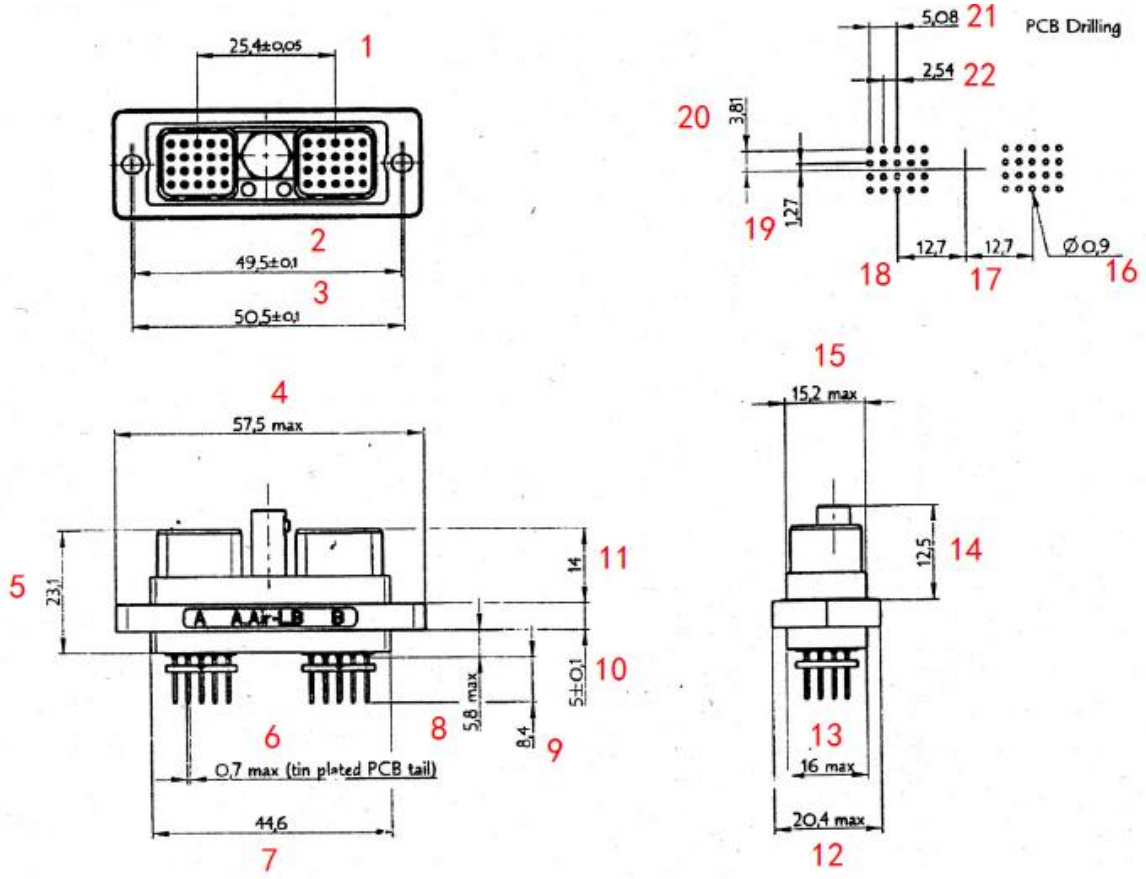
Two cavity straight printed board short flange socket connector

Technical Information

July 2021

1. Interface and shape requirements

User's connector interface and dimensions



	Numb.	DESIGNATION	Qty	Part number	OBSERVATION
23	1	2 Modules short flanged receptacle	1	SIM 2B 45 K	Bright nickel plated
24	2	Polarizing nut (code A)	1	006114 210 01	Mounted in position 1
25	3	Male module size 22 with PCB contacts	2	SIM E 2022 PNP	Delivered mounted
26	4	Panel seal	1	3350 0202 501	Delivered not mounted
27	5	ESD protection cover	2	3350 0899 345	
28	6	ESD protection cover	1	3350 0892 345	

Figure 1 Interface and external dimension requirements

Note: According to the EN4165 standard, the size of No. 14 is wrong. The reason for the error: the lower boundary should point to the insertion boundary.

2. Product description

The CW8942 connector adopts a modular combination design, which can realize the integrated transmission of power, radio frequency, optical, differential, low frequency and other signals to meet the different needs of signal transmission between systems. The socket adopts a flange structure design and is installed on the chassis panel.

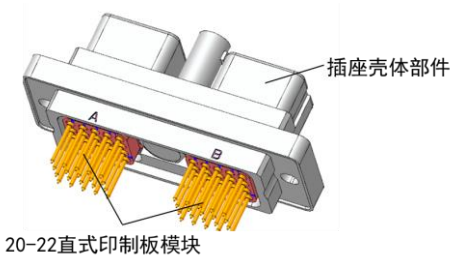


Figure 2 CW8942 two-cavity direct printed board short flange socket connector structure diagram

The CW8942 two-cavity straight printed board short flange socket connector (hereinafter referred to as the two-cavity socket) includes the socket body part and the 20-22 straight printed board pin module.

- Two-cavity socket model composition and its adapting parts:

① CW8942F8A2A1, two-cavity short flange socket, this model only contains plug shell parts, the number of single sockets used: 1 pcs;

② CW8942A20-222NMB2, 20-22 straight pin module, 20-pin/module, including 22# straight pin contacts, the number of single sockets used: 2 pcs.

3. Performance indicators

Working temperature: -55～175℃	Rated current: 5A
Contact resistance: ≤18mΩ	Dielectric withstand voltage: 600V
Salt spray: 96h	Impact: 100g
Random vibration: 0.4G2/Hz	Mechanical life: 500 times

4. Overall dimensions (dimensions not marked with units, the default unit is mm)

1) Dimensions of two-cavity socket:

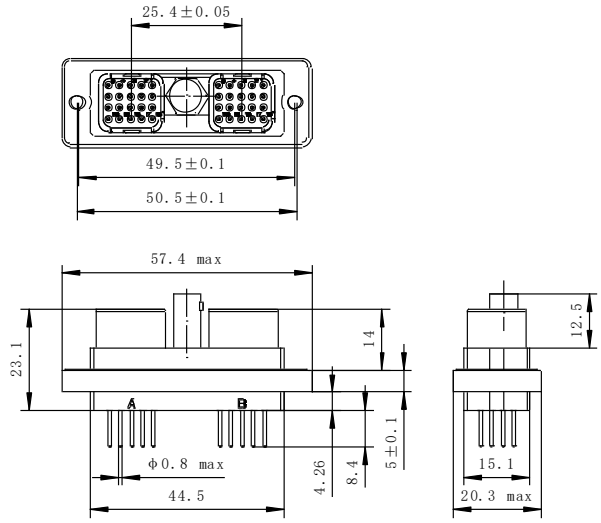


Figure 3 Dimensions of the two-cavity socket

2) Recommended panel installation size

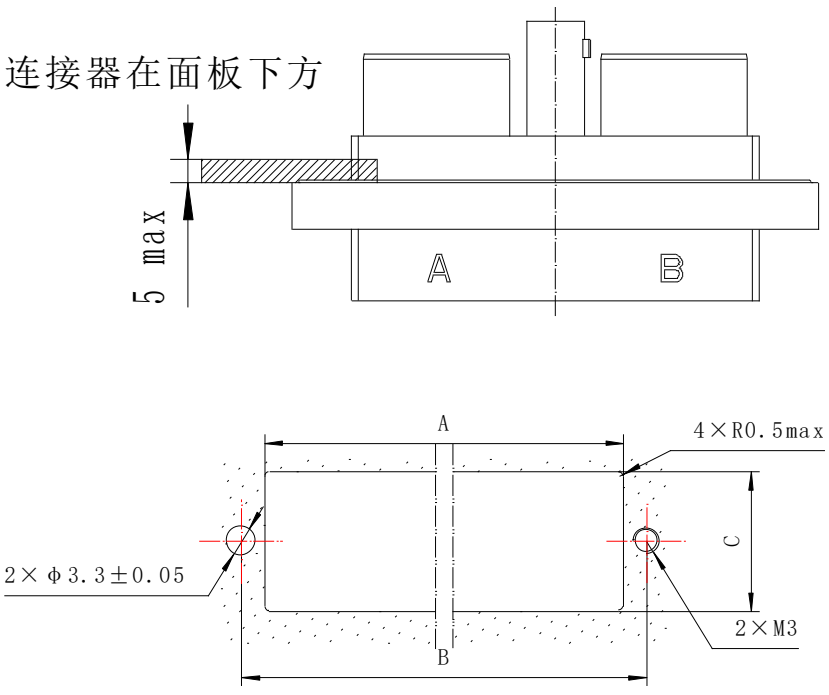


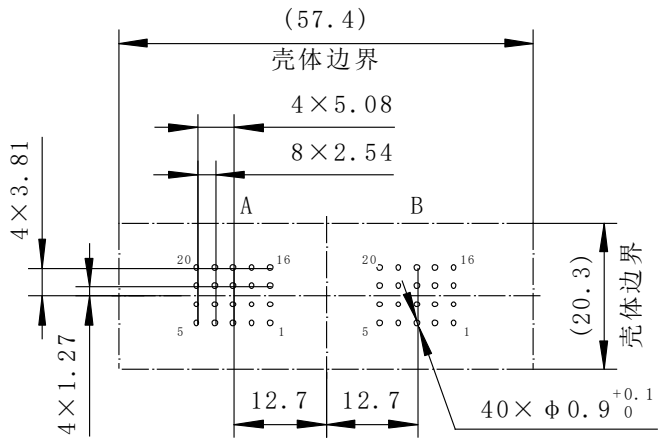
Figure 4 Recommended panel mounting dimensions for two-cavity sockets

Note: The mounting hole can choose 2×Φ3.3±0.05 or 2×M3

Socket type	A（mm）	B（mm）	C（mm）
Two chambers	44.8±0.1	50.0±0.1	15.4±0.1

Note: The recommended panel thickness should not exceed 5mm

3) Recommended opening size of printed board

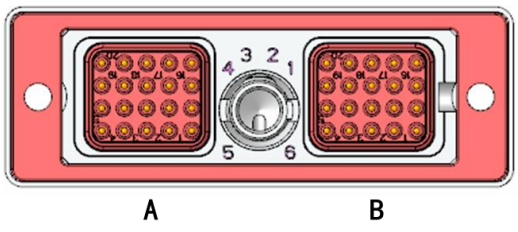
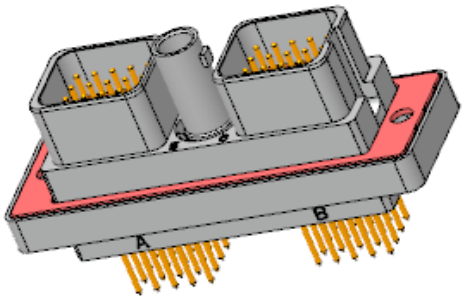


注：未注公差按±0.05

Figure 5 CW8942 two-cavity socket recommended printed board hole size

The contact definition of the module model of each cavity of the two-cavity socket is shown in the following table:

Table 1 Two-cavity socket model composition and assembly schematic

Socket model	CW8942F8A2A1	
Cavity number	A	B
Module model	CW8942A20-222NMB2	CW8942A20-222NMB2
Module contacts Arrangement		
Assembly schematic		

The interface size comparison is as follows:

Table 2 CW8942 Two-cavity socket size comparison table

#	Figure 1 size number	Figure 1 size	CW8942 connector size	Remarks
1	1	25.4±0.05	25.4±0.05	Meet the requirements
2	2	49.5±0.1	49.5±0.1	Meet the requirements
3	3	50.5±0.1	50.5±0.1	Meet the requirements
4	4	57.5 max	57.4 max	Meet the requirements
5	5	23.1	23.1	Meet the requirements
6	6	φ0.7 max Tin-plated PCB tail	φ0.8 max Gold-plated PCB tail	The end of the contact piece is gold-plated, and the user can remove the plating according to the needs, and solder after the tin lining
7	7	44.6	44.5	Comply with EN4165 standard (44.42～44.52)
8	8	5.8 max	4.26	Meet the requirements
9	9	8.4	8.4	Meet the requirements
10	10	5±0.1	5±0.1	Meet the requirements
11	11	14	14	Meet the requirements
12	12	20.4 max	20.3 max	Meet the requirements
13	13	16 max	15.1	Meet the requirements
14	14	12.5 (Marking errors)	12.5	Comply with EN4165 standard
15	15	15.2 max	15.1	Meet the requirements
16	16	φ0.9 (Drilling size)	φ0.9 (0,+0.1)	The recommended finished printed board size is φ0.9(0,+0.1), non-drilled size
17	17	12.7	12.7±0.05	Meet the requirements
18	18	12.7	12.7±0.05	Meet the requirements
19	19	1.27	1.27±0.05	Meet the requirements
20	20	3.81	3.81±0.05	Meet the requirements

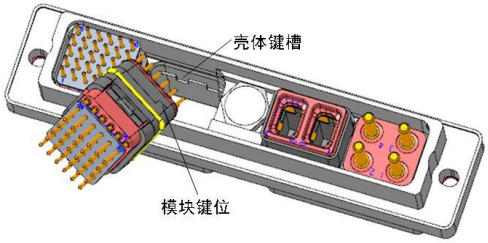
21	21	5.08	5.08±0.05	Meet the requirements
22	22	2.54	2.54±0.05	Meet the requirements
23	23	Bright nickel plated	Nickel plated	The shell is made of aluminum alloy
24	24	Type A guide key, No. 1 key position	Type A guide key, No. 1 key position	Meet the requirements
25	25	No. 22 PCB pin module	Provided in spare parts, not installed	Yes
26	26	Panel seal	Rubber pad, supplied with the product	Yes
27	27	ESD protection cover	Without protective cover	No
28	28	ESD protection cover	Without protective cover	No

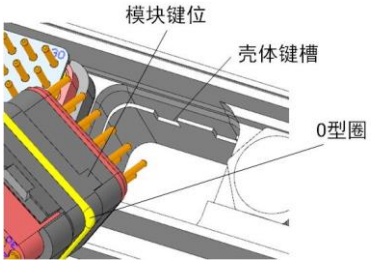
5. Installation and removal of modules and contacts

The power module installation and removal tool is CW8942TN, the installation and removal steps are as shown in the figure:

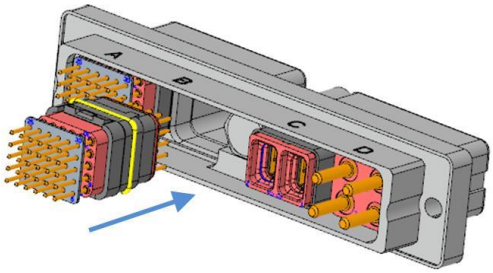
1) The installation of the module:

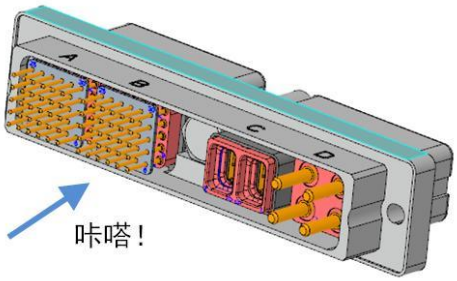
① Before installation, grease must be applied to the module O-ring, and the amount of grease is sufficient to ensure the lubrication between the module and the housing;





② Adjust the relative position of the module and the housing components so that the module key position and the housing keyway are on the same side



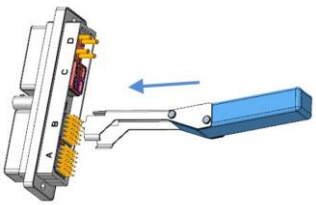


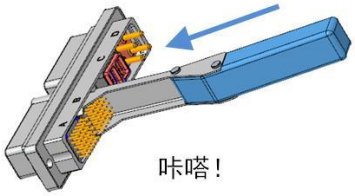
③ Install the module along the cavity, and when you hear a click, it indicates that the module has been installed in place

Figure 6 Module installation

Note: When installing the module, if you encounter obstacles, first check whether the module key position and the shell keyway are on the same side, and secondly check whether the module O-ring is coated with grease. After the two operations are confirmed to be normal, you can slightly adjust the module Posture to ensure smooth module installation channels.

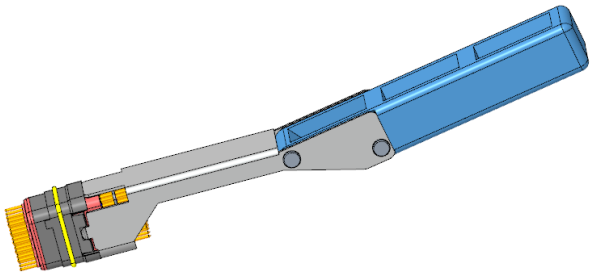
2) The removal of the module:

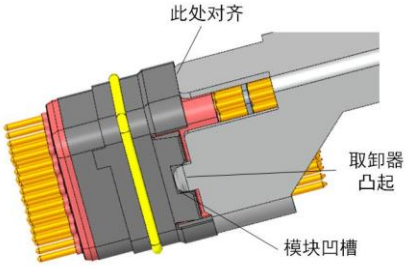




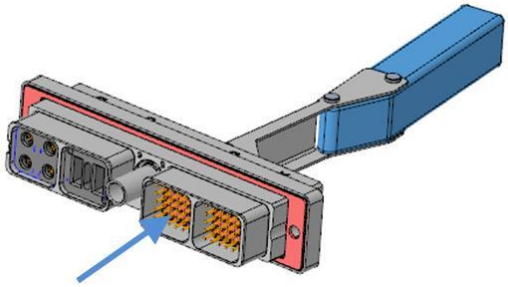
① Put the detacher into the connector, when you hear a click, it indicates that the detacher is

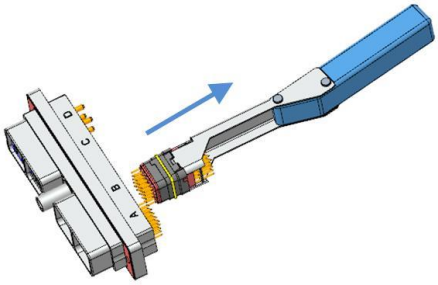
installed in place, and the detacher will not fall off by itself when you let go





② When the remover is installed in place, the relative position of the remover and the module





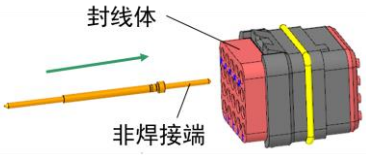
③ Push out the module and remover from the mating end

Figure 7 Removal of the module

Note: When ejecting the module, you can use your fingers or an auxiliary tool with a flat end; for the pin module, you can use the jack module that is compatible with its contact to eject.

3) Installation of contacts

①Insert the non-welded end of the contact piece from the module sealing body end; when a click is heard, it indicates that the contact piece has been installed in place;



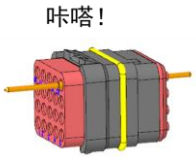
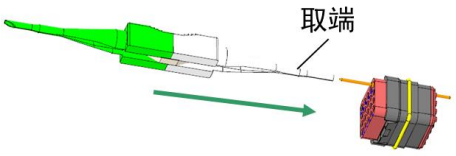


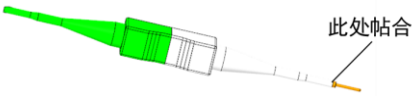
Figure 8 Installation of contacts

4) Removal of contacts

① Load the removal end of the remover into the module;



② When installed in place, the relative relationship between the remover and the contact;



③ Push out the pin from the mating end, pull out the contact piece and the detacher.

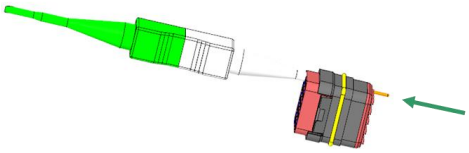


Figure 9 Removal of contacts

6. Ordering instructions

1) Two-cavity short flange mounting socket (model: CW8942F8A2A1), 20-22 straight printed board pin module (model: CW8942A20-222NMB2), module removal tool (model: CW8942TN) need to be ordered separately, not as a whole Order model;

2) The contact can be removed (when it is not welded), use the recommended special removal tool when removing, and the contact removal tool is provided with the module;

3) If there are special requirements for the length of the soldering pins, a new pin module model can be configured.