



Title of Document:	HANDLING MANUAL	Issue No. CHM-1-2170	Rev. 6
Customer:		Issue date: June 18, 2005	
Title subject:	ACH Connector (Normal Type)	Revision date: April 13, 2020	

This handling manual describes the important and required operation points of the ACH connector.
Be sure to read through this manual before using and follow it strictly.
Keep it at the place where you can check and see it anytime when required.

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1. Model Number and Part Name

1-1 Model number

Part name		Circuit No./Wire size	Model No.
Header	Taping product	No.1, 4 & 5	BM**B-ACH()S-A-GAN-ETF (LF)(SN)
		No.2 & 3	BM**B-ACH()S-GAN-ETF (LF)(SN)
	Loose piece product	No.1, 4 & 5	BM**B-ACH()S-A-GAN (LF)(SN)
		No.2 & 3	BM**B-ACH()S-GAN (LF)(SN)
Socket	Housing	No.1, 4 & 5	ACHR**V-A-()
		No.2 & 3	ACHR**V-()
	Contact	Type 003 (Standard type) AWG #28 - #30	SACH-003G-P0.2
		Type 003B (For thin wire) AWG #30 - #32	SACH-003G-P0.2B


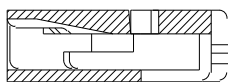
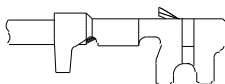
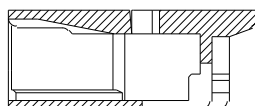
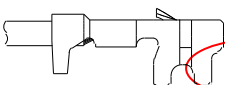
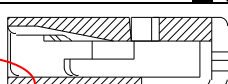
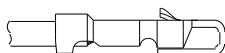
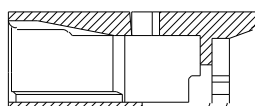
Note₁: 2-digit figures in "**" denotes circuit numbers.

Note₂: An alphabet in "()" denotes the color.

Note₃: The ACH connector is supplied on the embossed-tape (4,500 pcs./reel).

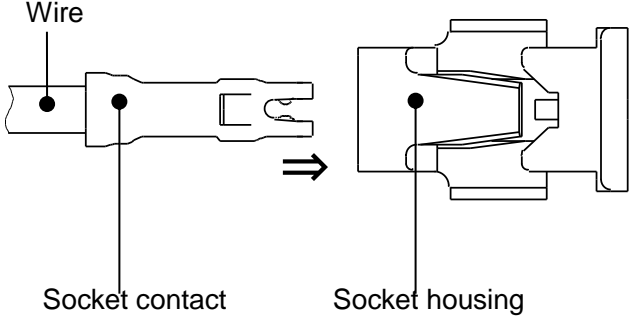
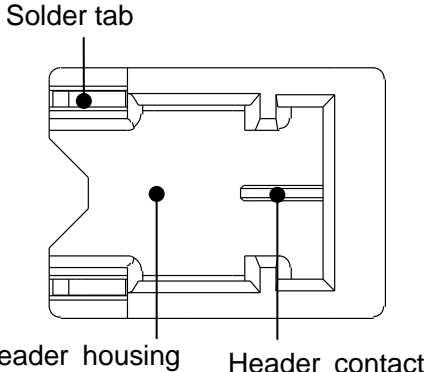
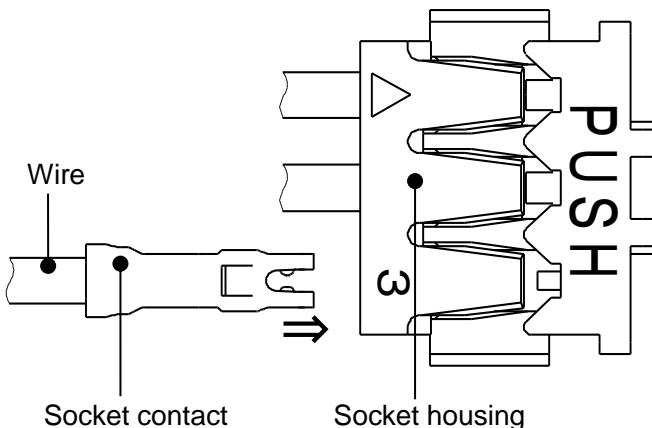
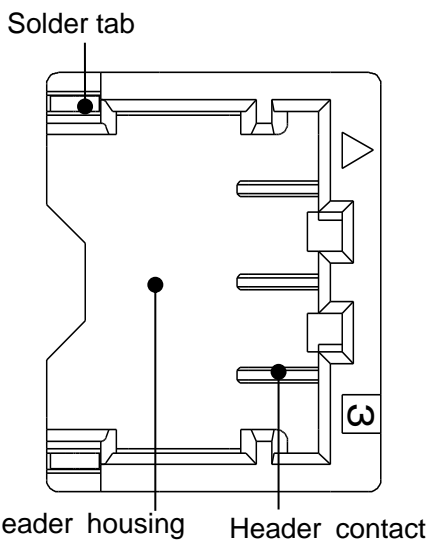
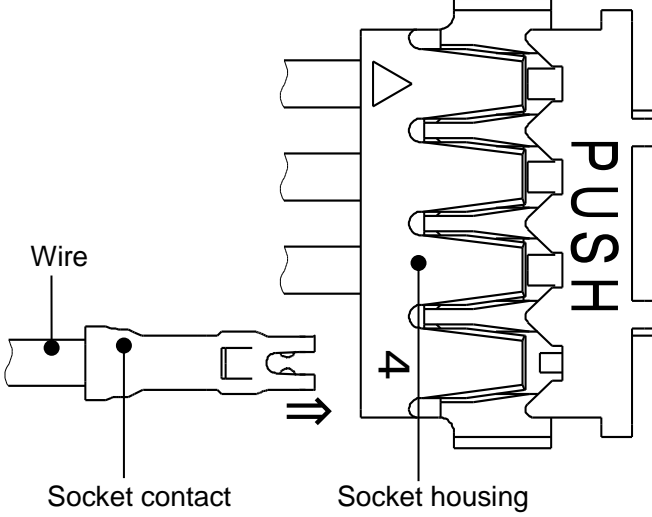
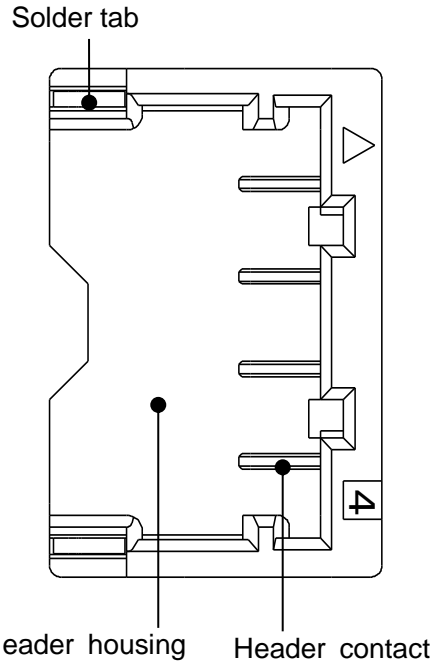
Precautions for connector combination

The ACH connector series have the normal type and the H-type which the mating operation has been improved by spreading the push area. The ACH connector header is sharable between both types. But, please note that the socket contact and the socket housing is not sharable between both types because of the difference in shape.

Combination			Contact	Housing	Use/ Not use
①	Contact	Normal type			○
	Housing	Normal type	SACH-003G-P0.2 SACH-003G-P0.2B	ACHR-**V-()-()	
②	Contact	H-type			○
	Housing	H-type	SACH-003G-P0.2H	ACHR-**V-H-()	
③	Contact	H-type			✕
	Housing	Normal type	The contact hits the wall of the mating entrance, failing to insert in the housing.		
			SACH-003G-P0.2H	ACHR-**V-()-()	
④	Contact	Normal type			✕
	Housing	H-type	*The contact can be inserted in housing but not be retained.		
			SACH-003G-P0.2 SACH-003G-P0.2B	ACHR-**V-H-()	

As shown in the above table, combine the applicable components of the normal type or H-type with each other in using ACH connector series.

1-2 Part name

Circuit	Socket	Header
No.1		
No.2 and 3		
No.4 and 5		

2. PC Board Pattern Layout

Circuit	Layout	Remarks						
No.1		The pattern layout of the solder tab is different from those of the No.2 and 3 circuits.						
No.2 and 3		<table><tr><th>Circuits</th><th>Dimension-A</th></tr><tr><td>2</td><td>1.2</td></tr><tr><td>3</td><td>2.4</td></tr></table> <p>The pattern layout of the solder tab is different from those of the No.1, 4 and 5 circuits.</p>	Circuits	Dimension-A	2	1.2	3	2.4
Circuits	Dimension-A							
2	1.2							
3	2.4							
No.4 And 5		<table><tr><th>Circuits</th><th>Dimension-B</th></tr><tr><td>4</td><td>3.6</td></tr><tr><td>5</td><td>4.8</td></tr></table> <p>The pattern layout of the solder tab is different from those of the No.2 and 3 circuits.</p>	Circuits	Dimension-B	4	3.6	5	4.8
Circuits	Dimension-B							
4	3.6							
5	4.8							

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3. Connector Storage

3-1 Connector storage

Recommended storage condition: Temperature: 5 – 35 °C, Relative humidity 60 % or less
(Under packaging like the state of JST shipment)

Keep off direct sunlight, places exposing to such corrosive gas as industrial gas (generate from a stove and whatnot) and ammonia gas (generate from a toilet and whatnot), dusty place and condensation.

Note that the resin molding part may break due to transportation and handling, such as processing and mating, under dry or low temperature condition.

After unpacking, return products in the original package to store.

4. Precautions for Soldering Operation

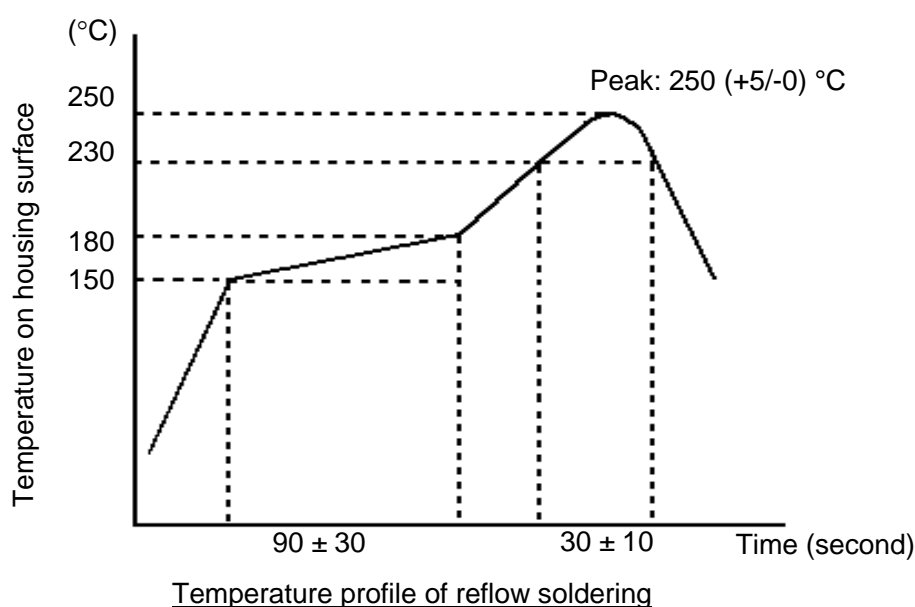
4-1 Reflow soldering method

We recommend reflow soldering at lower temperature than the temperature profile of reflow soldering described below.

As the recommended reflow temperature condition varies depending on the materials, such as solder paste, solder the connector according to the condition of the material.

We recommend using a 0.1 to 0.15 mm -thick metal mask which the blanking part has the same area as a PC board land area.

In case that the metal mask thickness is more than 0.15 mm, adjust the amount (area) of soldering coat by making the opening area smaller than the PC board pad area.



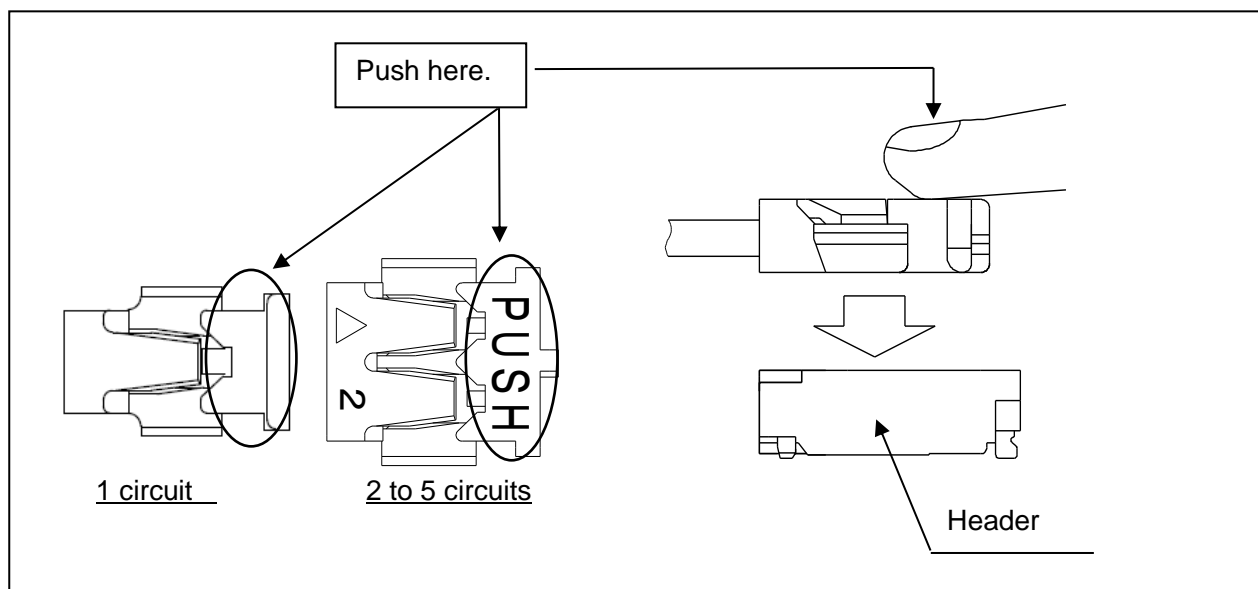
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5. Handling Precautions

5-1 Mating operation

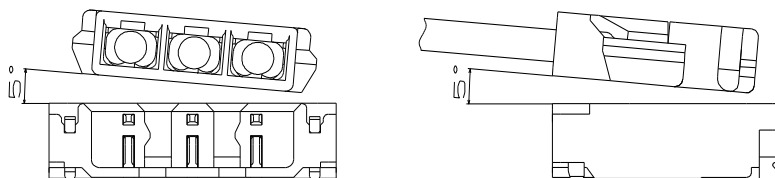
Mate the socket with the header on the mating axis.

Push the "PUSH" part of the socket housing and check secure mating.



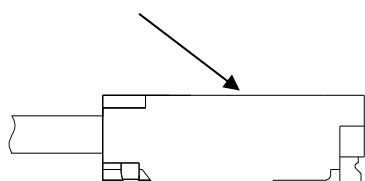
Precautions

- ① Mate the connector with the counterpart as parallel as possible (MAX. 5°).
Do not mate the connectors by force by pushing one end of the socket or prying wires, because the housing may damage or the contact may be deformed.



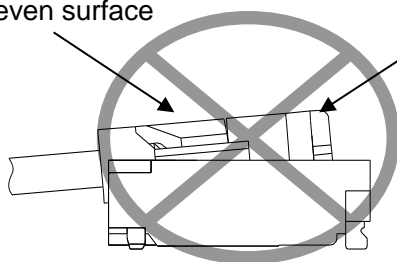
- ② After mating the connectors, check secure mating, referring to the following.
In case of insufficient mating, retry the mating, referring to item 4-2.
(When the socket floats a little from the header due to insufficient mating, push it in without removing.)

No floating between the socket
and the header



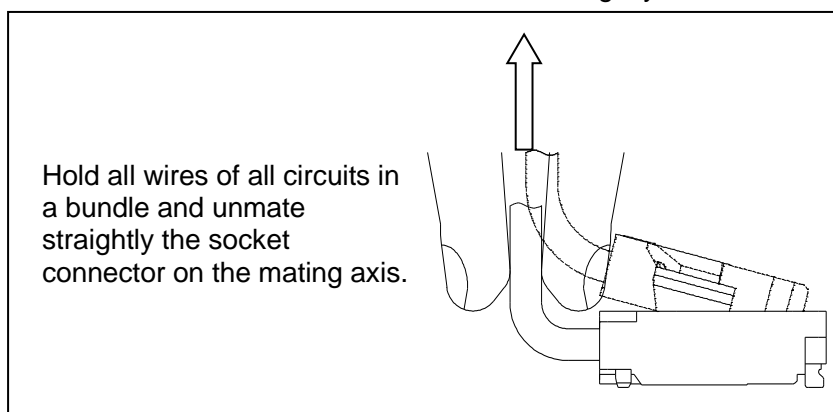
Uneven surface

Floating

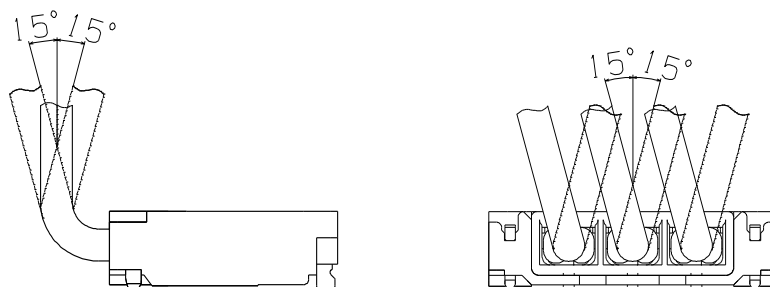


5-2 Unmating operation

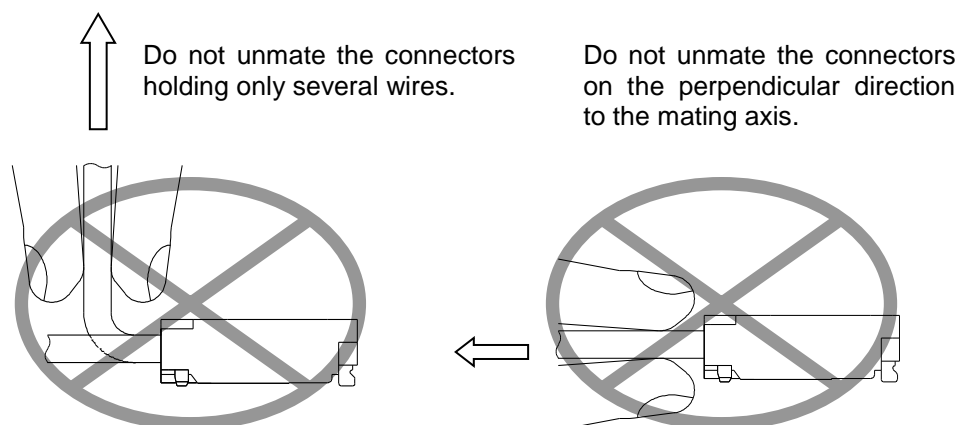
Hold all wires of all circuits in a bundle and unmate straightly the socket connector on the mating axis.



Unmate the connector by holding wires at the angle within 15 degrees to the mating axis.

Precautions

Do not unmate the connectors holding only several wires or on the perpendicular direction to the mating axis because such handling may cause connector troubles such as deformation of the contact or cracks or cuts on the housing.



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5-3 Handling of wire

Handle the wires with care so as not to apply a larger load to the connector than tension due to wire bending.

Keep a space away from the connector and do forming on wires not to apply tension to the connector as below.

