
Traduit par le Service Technique le 16 septembre 2002

1. INTRODUCTION

The positive-lock Micro Quadlock System (M.Q.S) connector range has been designed to provide automobile manufacturers with a small dimension interconnection system with a 2.54 mm pitch while ensuring durable signal and low-current transmission reliability.

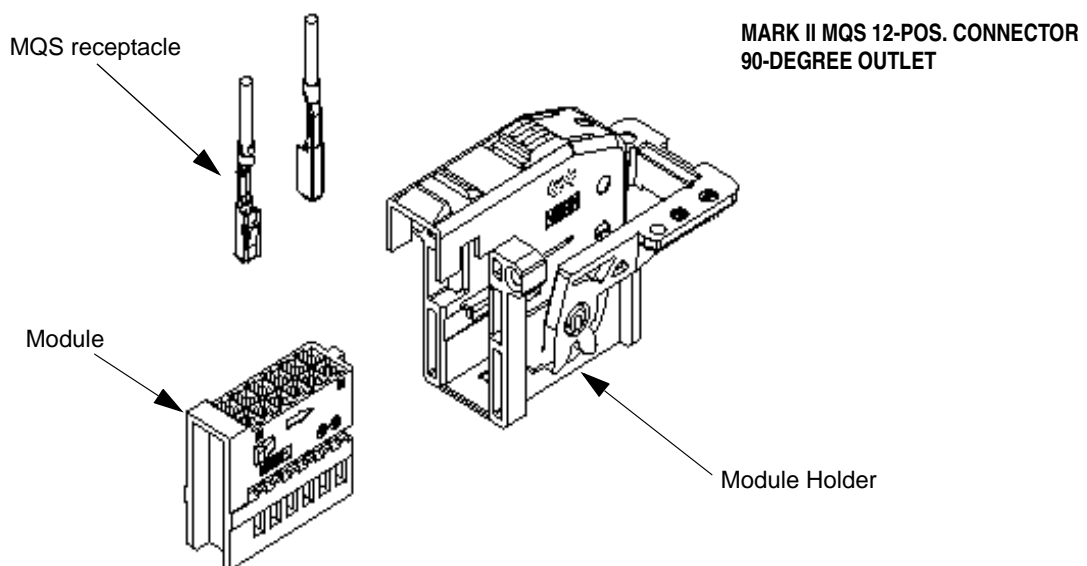
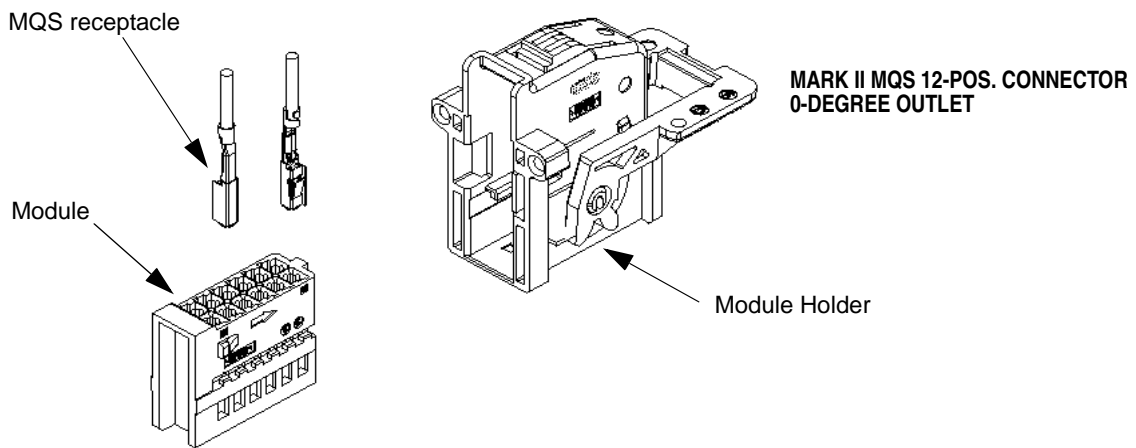
Its design reduces the risks of bad contact locking into the housings as well as installation errors when manufacturing and implementing the cable bundles.

Nevertheless, certain operation and storage recommendations have to be observed for the manufacture and assembly of cable bundles to take place correctly. The purpose of this Instruction Sheet is to define all of these recommendations.

2. PRODUCT REFERENCES

2.1. Housings

Reference	Description	Color
1379095-1	MARK II MQS 12-position Module Holder 0-degree outlet	Brown
1379095-2	MARK II MQS 12-position Module Holder 0-degree outlet	Blue
137996-1	MARK II MQS 12-position Module Holder 90-degree outlet	Brown
1379096-2	MARK II MQS 12-position Module Holder 90-degree outlet	Blue
1379219-1	MARK II MQS 12-position module	Black



2.2. Contacts

Finish	Tin-plated	Gold-plated	Specification
Crimp MQS receptacle, 0.2 to 0.6 mm ²	144969-1	144969-3	108-18030
MQS receptacle, 0.2 to 0.5 mm ²	1379419-1		108-18030
MQS receptacle, 0.6-0.75 mm ²	1379418-1		108-18030

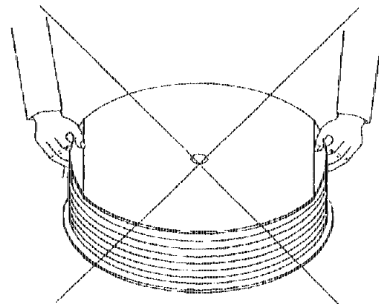
3. CONTACT CRIMP PROCEDURE

Contacts should be crimped using TYCO tools and following the procedures defined in the TYCO crimping specifications and contact layout sheet number two.

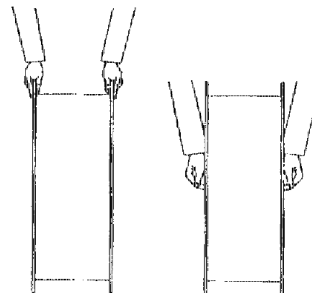
- Application specification 114-15077.
- Application specification 114-18021.

4. STORAGE AND HANDLING INSTRUCTIONS FOR CONTACT REELS

1. Avoid leaving contact reels outside without protecting them e.g. by a vinyl sheet or bag.
2. To lift and carry contact reels, proceed as shown in the figures below in order to avoid damaging the reel flanges, which could result in the misalignment of the contact strip, hence a bad insertion of the contacts into the applicator.⁶



Do not lift by the same flange



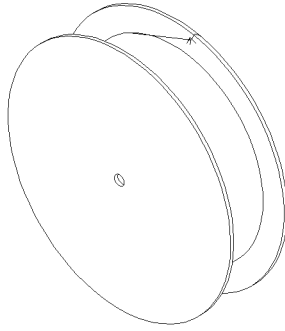
Lift by both flanges or by the center hole

3. Do not store the reels in a humid or dusty area.

Store the reels in a dry, clean area whose temperature shall range between 5 and 35°C and humidity between 45 and 85%.

The reels shall be protected from direct sunlight.

4. When not using the reels for a long period of time, remove them from the machine and attach the end of the contact strip to the edge of the reel with a copper wire as shown on next page.



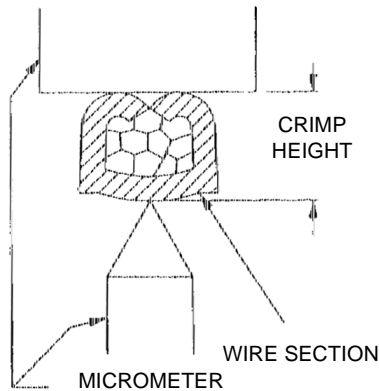
5. WIRE STRIPPING PROCEDURE

When stripping the wires, do not nick, deform or cut the wire strands.

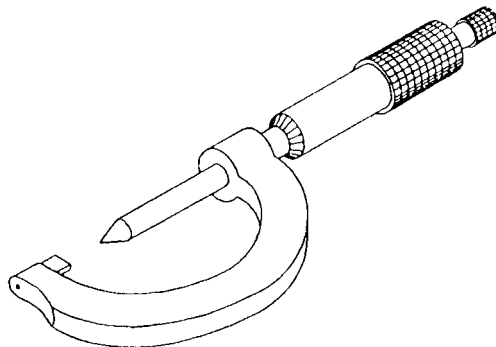
The stripping lengths are given in the crimping procedures and are shown in contact layout sheet number two.

6. CRIMPING HEIGHT MEASUREMENT

1. The crimping height shall be measured with a special-purpose micrometer as shown in the figure below.



2. Special-purpose micrometer for crimping height measurement.



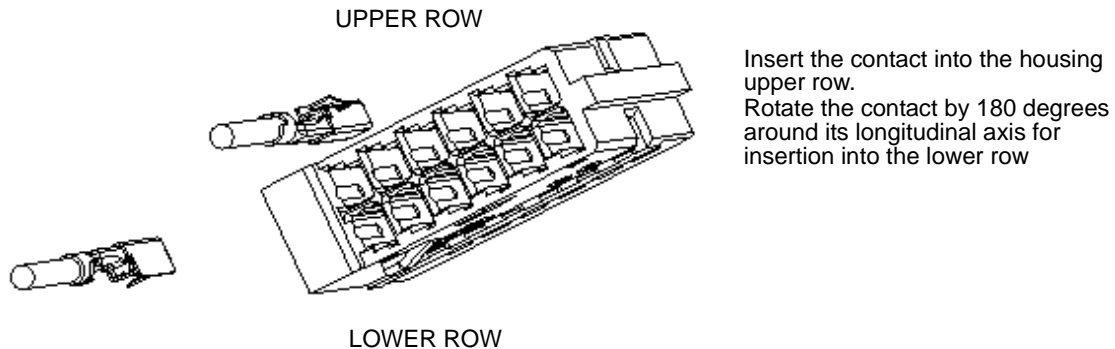
7. STORAGE PROCEDURE FOR CRIMPED PRODUCTS

1. Once crimped, the products shall be stored in a dry, clean area. They shall be covered with a vinyl sheet for protection from any external contamination or stored in containers until they are utilized.
2. The crimped wires shall be put together into bundles containing a hundred or so wires. It is recommended to protect the end of each bundle on the contact side with e.g. a vinyl bag.

3. You should avoid stacking too many crimped wires as this could deform the contacts, which would impair their performance.
4. Do not mate contacts outside of their housings as this might damage them.

8. ASSEMBLY MANUFACTURE PROCEDURE

1. Do make sure that the contacts are not deformed before insertion, as this could impair the performance of the connection. The crimping specifications show the acceptable deformations of the crimping barrels.
2. Inserting the contacts (upper row).

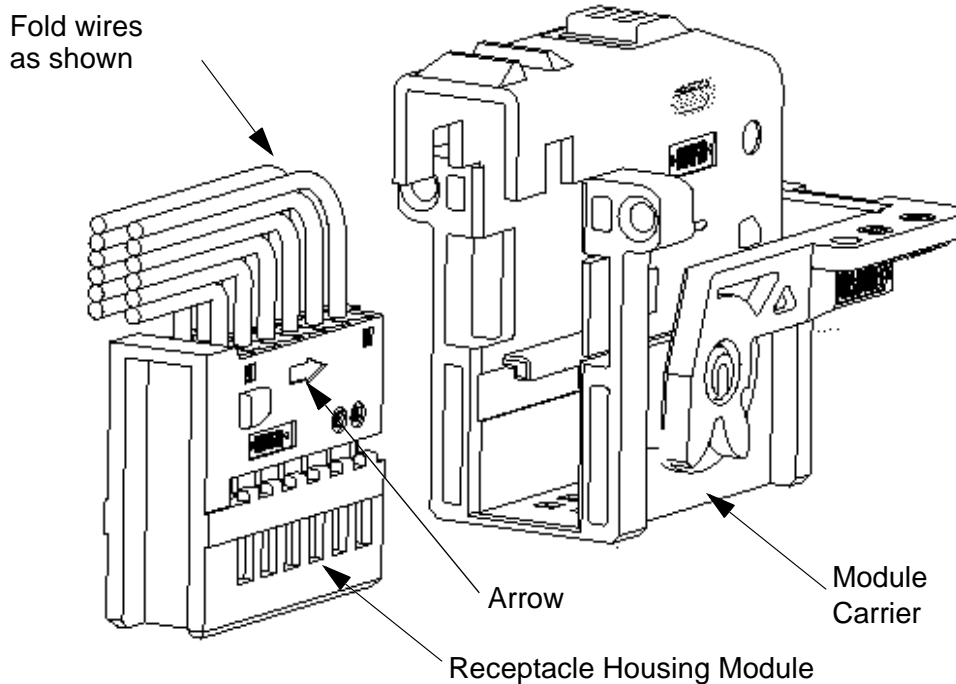


- Contacts are inserted into the lower row the other way round.

REMARK

Once the contact has been inserted into its cavity, gently pull the wire to make sure it is locked into position.
A quick snap can be heard as the contact gets locked.

3. Inserting the module into the module carrier.



Fold the wires then insert the module with the arrow pointing towards the Module Carrier.

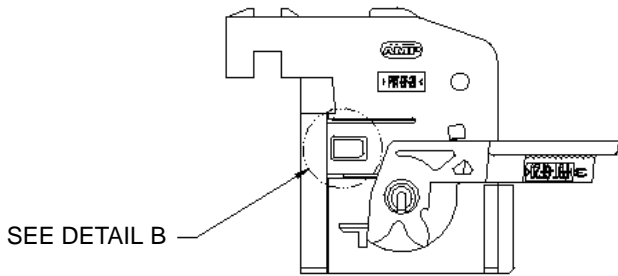
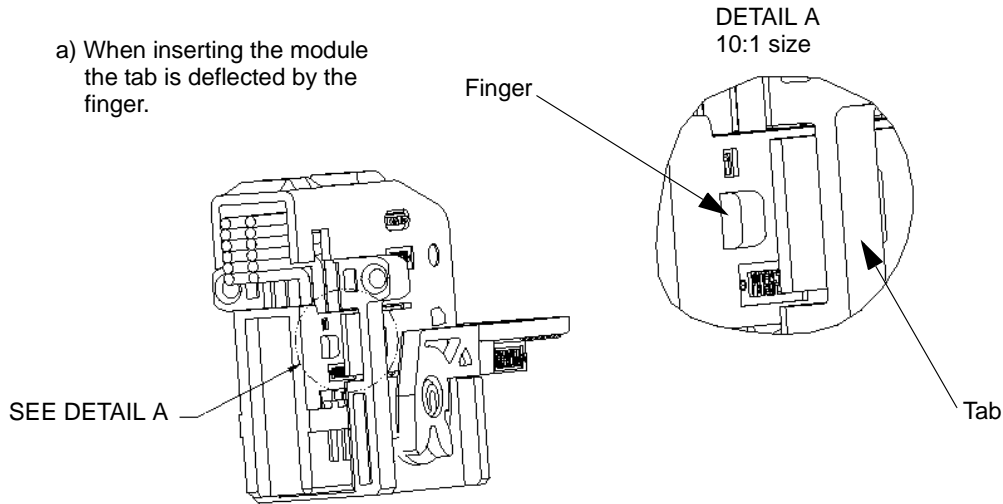
REMARK

If insertion feels difficult, remove the module and make sure the contacts are properly locked. Once you have found out which contact was badly locked, complete and repeat the module assembly operation inside the module carrier.

4. Locking the module.

A finger located on the module snaps onto the module carrier's tab.

a) When inserting the module the tab is deflected by the finger.



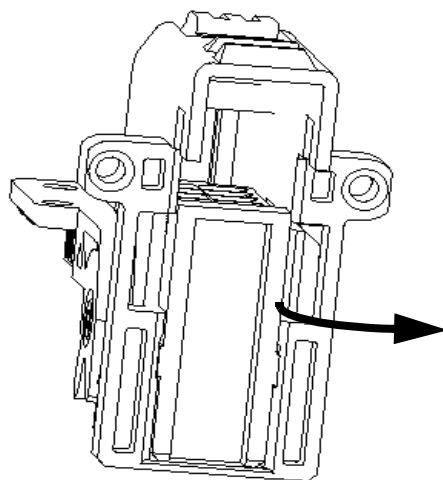
b) A snap can be heard as the module is locked

9. CONTACT REMOVAL PROCEDURE

1. The MQS contacts may be removed from the receptacle housing module and reused.

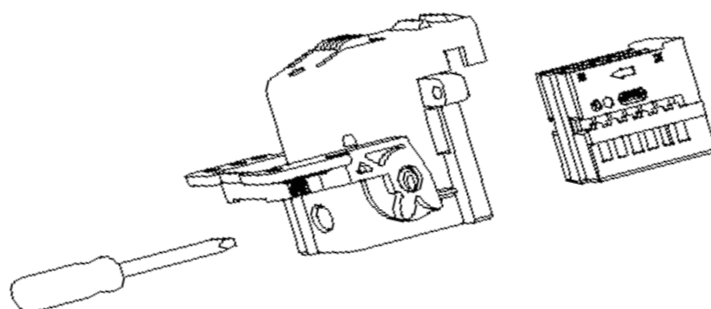
This should be done exclusively using the removal tool P/N 951038-1 supplied by TYCO.

Pull the locking tab away from the module carrier by hand or using a tool (e.g. a screwdriver).

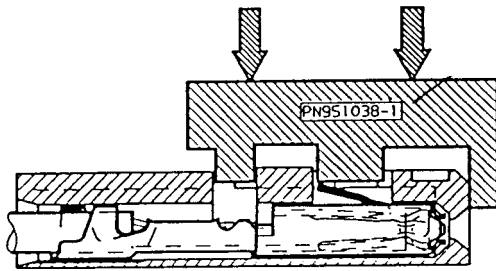


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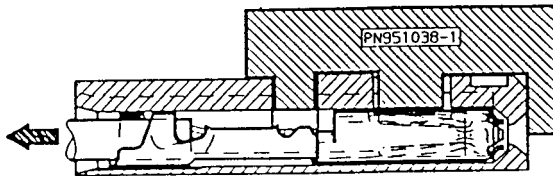
The module must not be removed/reused more than 3 times.



2. Pull the receptacle housing module out of the module carrier by means of a tool (e.g. the tip of a screwdriver) or by pulling the wires.
3. Pull out the contacts exclusively by means of the TYCO tool, P/N 951038-1.



Push the tool P/N 951038-1 towards the receptacle housing module until contact is made.



Pull the cable to remove the contact.

REMARK

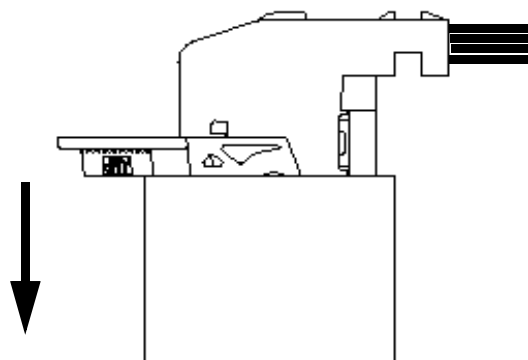
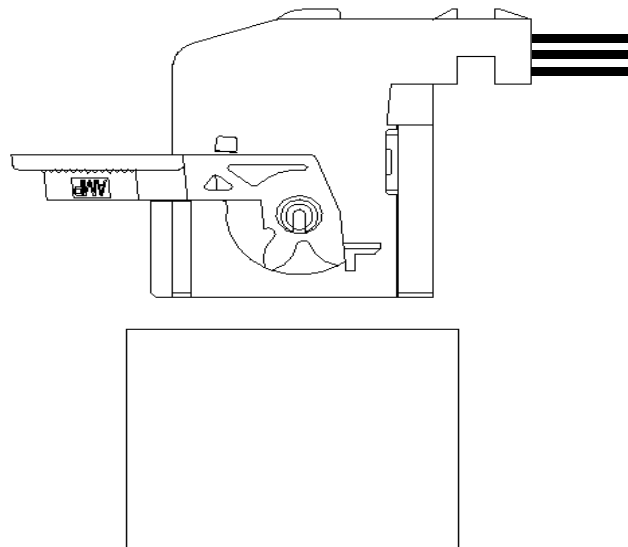
The contacts taken out of the module carrier may be reused. It is advisable not to disassemble an MQS contact more than five times. Beyond that limit, replace the contact.

10. CONNECTOR MATING AND UNMATING PROCEDURE

1. Receptacle housing/header mating

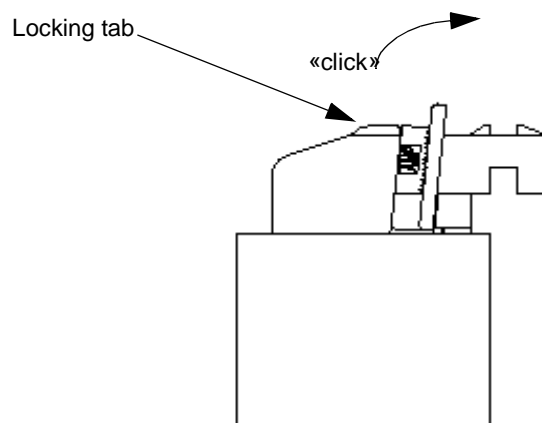
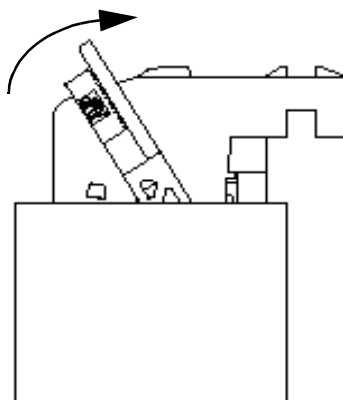
Before starting the receptacle housing/header operation, make sure the components have the same keying devices (color and mechanical)

Pre-insert the receptacle housing into the header.



REMARK

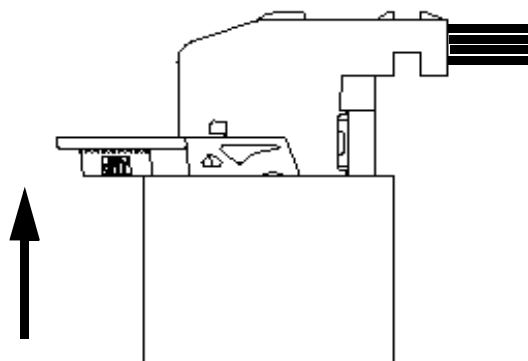
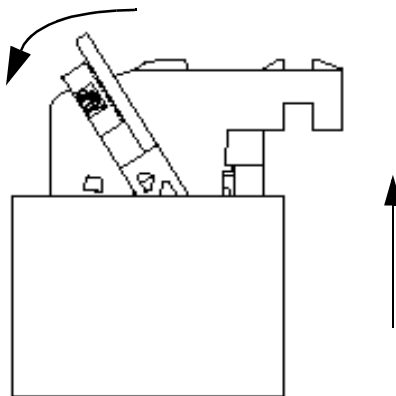
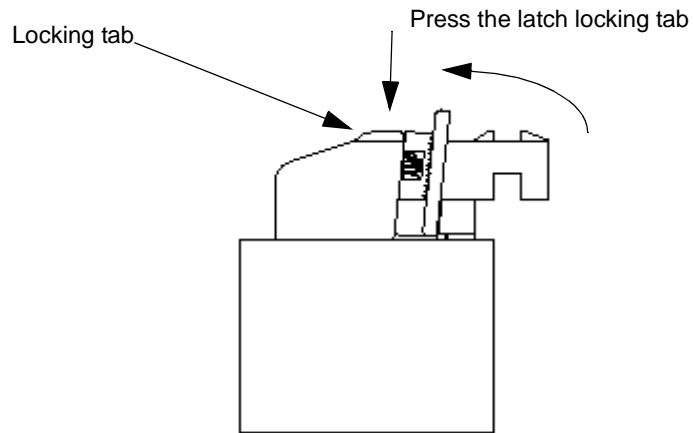
This operation consists of a mini guidance, consequently the electric contact had not been established yet.
Complete the mating operation by setting the latch from the pre-locked position to the final mating position.

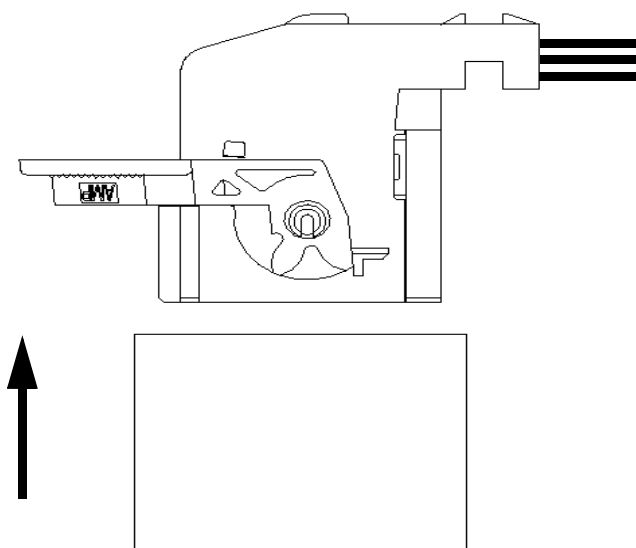


REMARK The latch must be behind the locking tab.

2. Receptacle housing/header unmating

To unmate the receptacle housing from the header, press the locking tab to let the latch through. Set the latch to the pre-locked position





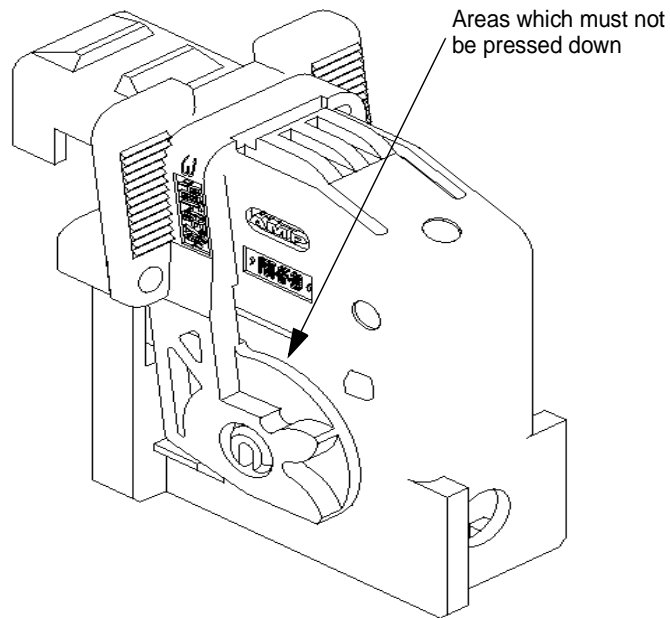
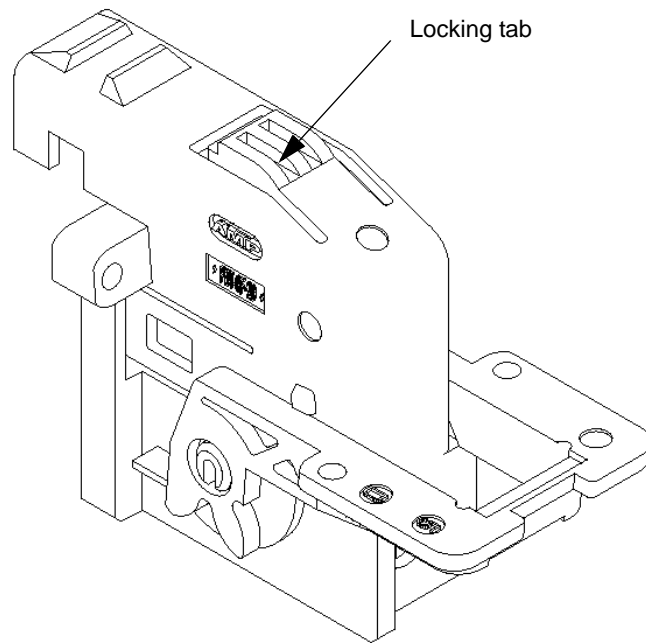
11. DEFINITION OF TEST POINTS

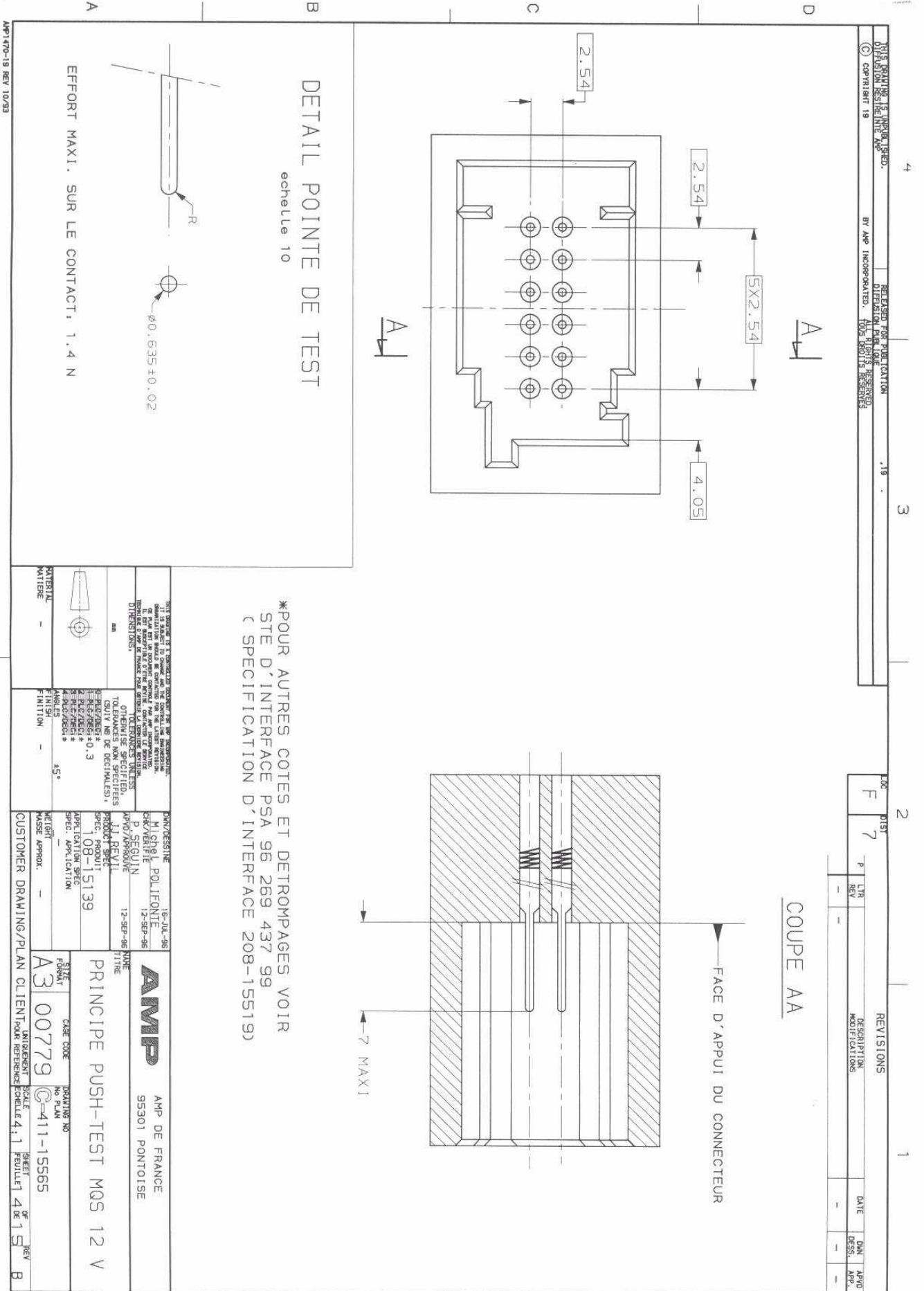
See page 14 identical to Spec. 411-15565 (PUSH-TEST PRINCIPLE, MARK I MQS 12-POSITION).

12. COUNTERPART PRINCIPLE

Please refer to TYCO Interface Plan ref.: 208-15544.

13. HOUSING AREAS WHICH MUST NOT BE PRESSED DOWN





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