ProtoMat S63, S103 Limit switch exchange TechNote



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1 **Purpose of this TechNote**

This document describes how to exchange the limit switches for tool clamp mechanism.

This TechNote contains specific warning messages for particular instruction steps. A detailed documentation for the appropriate system as well as further documentations for the software used can be found in the system documents. Please note that this TechNote does not substitute the detailed documentation for your system.

- Before you start working with the system, read the detailed documentation first.
- To guarantee a safe and trouble-free system operation observe and follow the information, instructions and safety notes in the detailed documentation.

1.1 Target group

This TechNote is solely intended for the target group Staff and customers of the LPKF Laser & Electronics AG.

1.2 Scope

The following table lists the scopes of this TechNote.

General scope	Specific scope
Product scope	RP
System	see further systems
further product scopes and systems (optional)	ProtoMat S63, S103
ProtoMat S63, S103	ProtoMat S63, S103

Table 1: Scope

1.3 Relevant documentations

The following table lists the relevant documentations that are significant for the contents of the TechNote.

Documentation	Order code
ProtoMat S, user manual	10000447

Table 2: Relevant documentations

2 Tools, spare parts and auxiliary supplies

This chapter describes the required tools, spare parts and auxiliary supplies for the described work steps as well as the time required.

Quantity	Name	Order code	Figure
1	Side cutters		
			ACOST ATUE

2.1 Required tools

Quantity	Name	Order code	Figure
1	Wire strippers		
1	Torx screwdriver T10		A CONTRACTOR
1	Torque wrench torx T6 0.31 Nm		C.C.C.M.S. HEILER
2	Limit switch	10040606	
1	Lever for limit switch	10040605	
4	Button head screw M2x10	115379	

Quantity	Name	Order code	Figure
2	Washer M3	126649	6
1	Screw locking paint	116926	CHRAUBEN JICHERUNGMACK



2.2 Estimated time required

Work step	Time required	
Limit switch exchange	30 minutes	

Table 4: Estimated time required

3 Limit switch exchange

Type and source of the hazard!

This warning message indicates a hazard of low risk that can cause minor or moderate injury if not avoided.

Measures to avoid the hazard.

This chapter describes, how to exchange the limit switches for the clamp mechanism of ProtoMat S63 and S103.

Prerequisites

- Wire strippers
- Torx screwdriver T10
- Torque wrench torx T6 0.31 Nm
- Limit switch
- Lever for limit switch
- Button head screw M2x10
- Washer M3
- Screw locking paint

Step 1

Use torx screwdriver T10 to remove the 4 camera screws and place the camera to safe position.



Step 2

Disconnect 2 D-SUB connectors on the head and use torx screwdriver T10 to remove the head cover.



Disconnect the faulty microswitches. Use torx T10 screwdriver to remove both microswitches on the brackets. Use torx T6 to remove the microswitches from the brackets.



Step 4

Cut the blue wire of the limit switch



Step 5

Cut the black and grey wire to length of 130 mm.



Strip the ends of both wires



Step 7

Use 2 torx T10 screws, washers and a torque of 0,2 Nm to mount the microswitch to the bracket



Lock the screws with screw locking paint.



Step 9

Fasten back the limit switch on a bracket



Step 10

Mount the lever to the limit switch



Cut the blue wire of the limit switch



Step 12

Cut the black and grey wire to length of 240 mm.



Step 13

Strip the ends of both wires



Use 2 torx T10 screws, washers and a torque of 0,2 Nm to mount the microswitch to the bracket



Step 15

Lock the screws with screw locking paint.



Step 16

Fasten back the limit switch on a bracket





Check the limit switch operation and adjust the clamp opening mechanism if necessary. Reinstall the cover and reconnect the cables and the camera.

4 Customer service

For technical information contact our LPKF Service. Visit our website for further information: http://www.lpkf.com

Support via contact form or email

If you want to send an email to the LPKF Service, use the contact form on our website:

http://www.lpkf.com/support/contact.htm

Or contact us via email: [Select email address]

Phone support

You can also reach the LPKF Service via phone or fax:

Phone: +49 5131 7095-0

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Germany

In our continuous effort to improve our documentation we are asking you to give us your feedback if you notice any discrepancy when working with the system, or if you have any comments or suggestions for improvement.

5 Appendix

This chapter contains the different navigation elements of the documentation.

5.1 List of tables

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5.2 Revision list

Version	Date	Change	Changed by
1.0	11.12.15	Initial release	M. Zupan

Table 5: Revision list

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Step-by-step instruction for repairing/reconstructing in mounted condition at the milling head.

- 1. Dismount the milling head and remove the head cover
- 2. Remove the original cover from the carbon brushes



3. Lay the connection cable of the carbon brushes above the carbon brushes.



Loosen the connection cable clamped behind the carbon brush.

Carefully remove the connecting lug from the housing.



The connection cable laid behind the carbon brush can now be removed carefully and laid above the carbon brush. Hold the carbon brush while the connection cable is laid.



Afterwards, plug the connecting lug back into the housing.



Responsible: Jan van Aalst



4. Mount the new motor cover.



Sample cover with open dents shows the position of the connection cable and of the carbon brushes.



New	cover.
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5. Remount the head cover and the milling head on the system.

