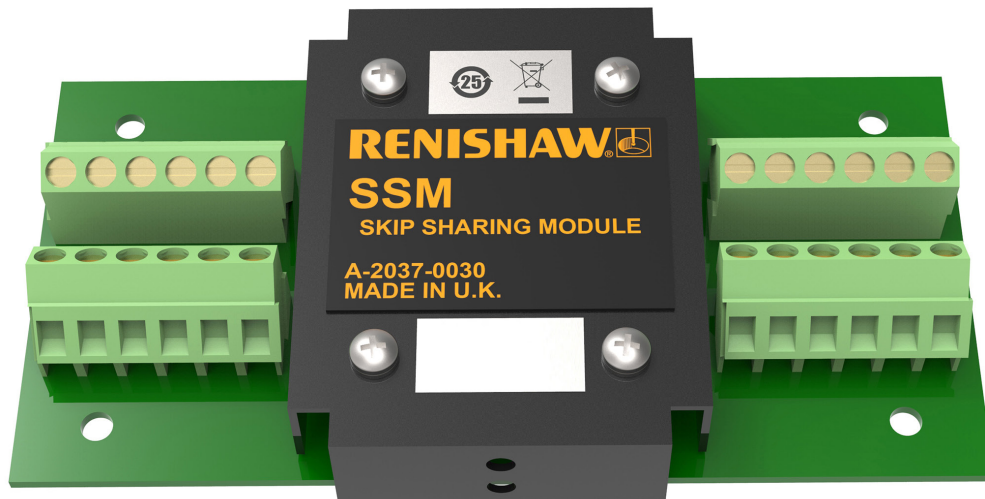


Skip sharing module



Compliance information for this product is available by scanning the QR code or visiting www.renishaw.com/mtpdoc



Contents

Before you begin	1-1
Warranty	1-1
CNC machines	1-1
Care of the probe	1-1
Patents	1-1
Intended use	1-1
Safety	1-2
Information to the machine supplier/ installer	1-2
Information to the equipment installer	1-2
Equipment operation	1-2
Skip sharing module basics	2-1
Introduction	2-1
Uses of the module	2-1
Relay specifications	2-2
Control requirements	2-2
Latching M-code	2-2
User macro outputs	2-2
Pulsed M-codes	2-2
Terminal layout	2-3
NON-LATCHING	2-3
LATCHING	2-3
System installation	3-1
Machine controller giving latched M-code output rising to +24 Vdc	3-1
Machine controller giving latched M-code output pulling down to 0 Vdc	3-2
Machine controller giving pulsed M-code output rising to +24 Vdc	3-2
Machine controller giving pulsed M-code output pulling down to 0 Vdc	3-3
Maintenance	4-1
Parts list	5-1

This page is intentionally left blank.

Before you begin

Warranty

Unless you and Renishaw have agreed and signed a separate written agreement, the equipment and/or software are sold subject to the Renishaw Standard Terms and Conditions supplied with such equipment and/or software, or available on request from your local Renishaw office.

Renishaw warrants its equipment and software for a limited period (as set out in the Standard Terms and Conditions), provided that they are installed and used exactly as defined in associated Renishaw documentation. You should consult these Standard Terms and Conditions to find out the full details of your warranty.

Equipment and/or software purchased by you from a third-party supplier is subject to separate terms and conditions supplied with such equipment and/or software. You should contact your third-party supplier for details.

CNC machines

CNC machine tools must always be operated by fully trained personnel in accordance with the manufacturer's instructions.

Care of the probe

Keep system components clean and treat the probe as a precision tool.

Patents

None applicable.

Intended use

The Skip Sharing Module (SSM) is a relay board used where two probing systems share a single probe input.

Safety

In all applications involving the use of machine tools, eye protection is recommended.

Information to the machine supplier/ installer

It is the machine supplier's responsibility to ensure that the user is made aware of any hazards involved in operation, including those mentioned in Renishaw product literature, and to ensure that adequate guards and safety interlocks are provided.

If the probe fails, the probe signal may falsely indicate a probe seated condition. Do not rely on probe signals to halt the movement of the machine.

Information to the equipment installer

All Renishaw equipment is designed to comply with the relevant UK, EU and FCC regulatory requirements. It is the responsibility of the equipment installer to ensure that the following guidelines are adhered to, in order for the product to function in accordance with these regulations:

- Any interface MUST be installed in a position away from any potential sources of electrical noise, i.e. power transformers, servo drives etc.;
- All 0 V/ground connections should be connected to the machine "star point" (the "star point" is a single point return for all equipment ground and screen cables). This is very important and failure to adhere to this can cause a potential difference between grounds;
- All screens must be connected as outlined in the user instructions;
- Cables must not be routed alongside high current sources, i.e. motor power supply cables etc., or be near high-speed data lines;
- Cable lengths should always be kept to a minimum.

Equipment operation

If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

Skip sharing module basics

Introduction

The Skip sharing module (SSM), (see Figure 1) is a relay board, used where two probing systems share a single probing input.

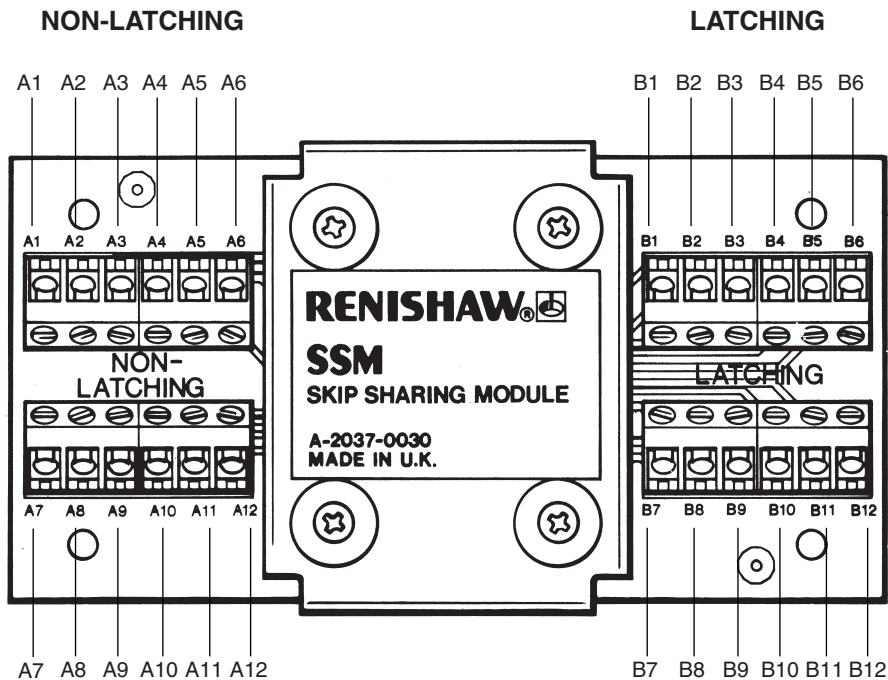


Figure 1

Uses of the module

The SSM has the following functions:

- To change the trigger signals output from two interfaces into one probing input to the CNC controller.
- To switch ON an optical probe (MP10, MP12) by using the spare latching and non-latching contacts to generate a voltage to the optical probe start input.
- When an M-code requires a finish (FIN) signal, the module can be wired so that the spare contact feeds the M-code finish signal input.

Relay specifications

Non-latching relay	
Nominal coil power	200 mW
Contact rating	1A @ 30 Vdc
Coil voltage	16.8 Vdc to 36 Vdc
Latching relay	
Nominal coil power	180 mW
Contact rating	1 A @ 30 V dc
Coil voltage	16.8 Vdc to 36 Vdc

Control requirements

Latching M-code

On receiving an M-code the control either rises or pulls down an output signal until the cancel M-code is commanded.

This type of output must be connected to the NON-LATCHING relay terminals A1 or A2 (see **page 2-3**, "Terminal layout", for more information).

User macro outputs

When a user macro output variable is set to 1, an output signal either rises or pulls down until the macro number is set to 0.

This type of output must be connected to the NON-LATCHING relay terminals A1 or A2 (see **page 2-3**, "Terminal layout", for more information).

Pulsed M-code

On receiving an M-code the control either rises or pulls down an output signal for a set time (< 1 second).

This type of output must be connected to the LATCHING relay.

One M-code must be connected to terminal B2 or B4, the other M-code must be connected to terminal B1 or B5 (see **page 2-3**, "Terminal layout", for more information).

Terminal layout

NON-LATCHING

GND	A7	A1	Coil (negative: 0 Vdc)
N/O contact 3	A8	A2	Coil (positive: +16.8 to +36 Vdc)
N/C contact 3	A9	A3	Screen
Screen	A10	A4	Common 3
N/O contact 4	A11	A5	Common 4
N/C contact 4	A12	A6	Screen

LATCHING

N/O contact 1	B7	B1	Rest coil (negative: 0 Vdc)
N/C contact 1	B8	B2	Start coil (negative: 0 Vdc)
Screen	B9	B3	Screen
N/O contact 2	B10	B4	Start coil (Positive: +16.8 to +36 Vdc)
N/C contact 2	B11	B5	Reset coil (Positive: +16.8 to +36 Vdc)
Common 2	B12	B6	Common 1

This page is intentionally left blank.

System installation

The SSM must be installed in the CNC machine controller cabinet. Take care to avoid potential sources of interference, such as three phase transformers and motor controllers.

The SSM may be fitted using the adhesive feet (supplied) to attach the unit to a clean, dry surface (see Figure 2). Alternatively the 4 × M4 supports (supplied) may be used. Two cable ties are also supplied.

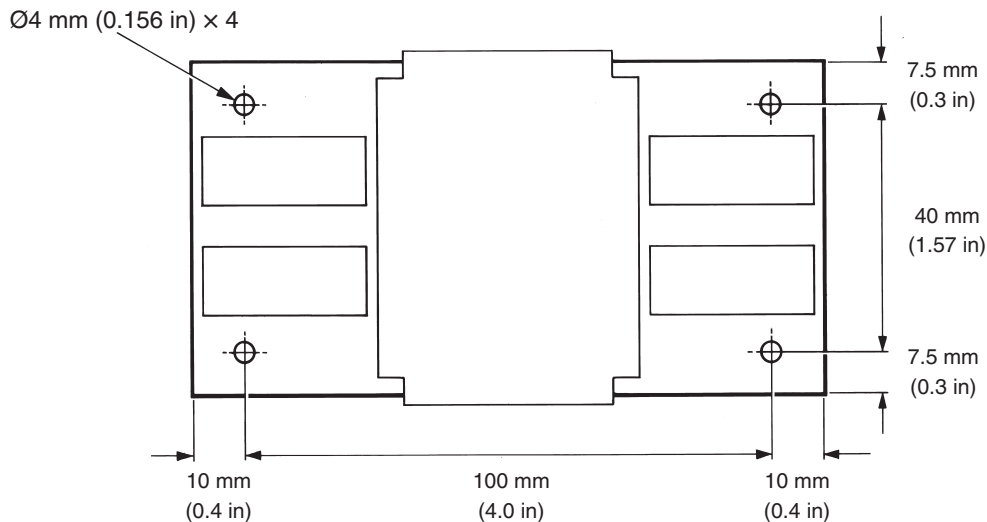
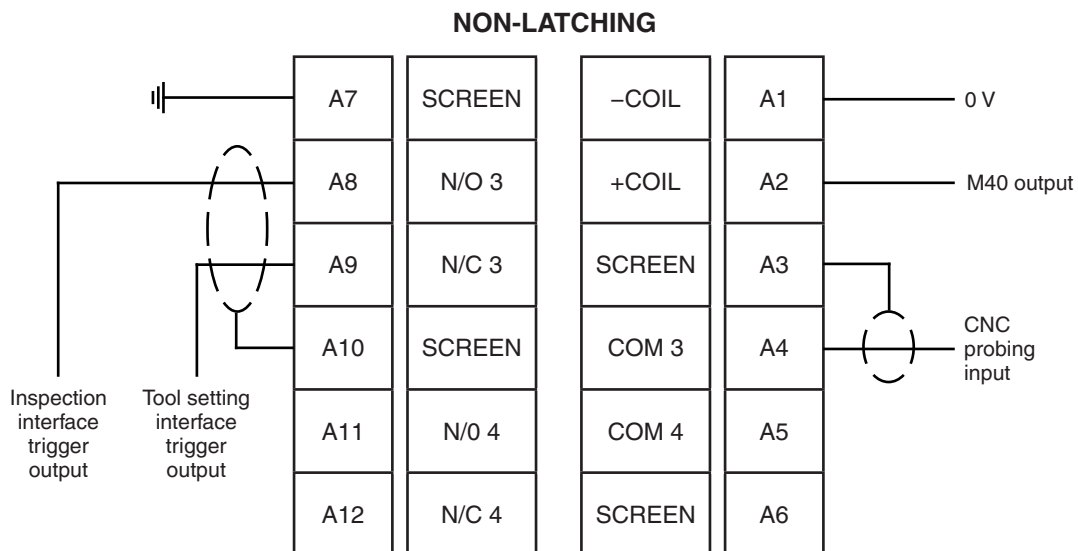


Figure 2

Machine controller giving latched M-code output rising to +24 Vdc

Example: M40 rising to +24 Vdc, M41 cancels M40*.



M40 links inspection system to CNC probing input

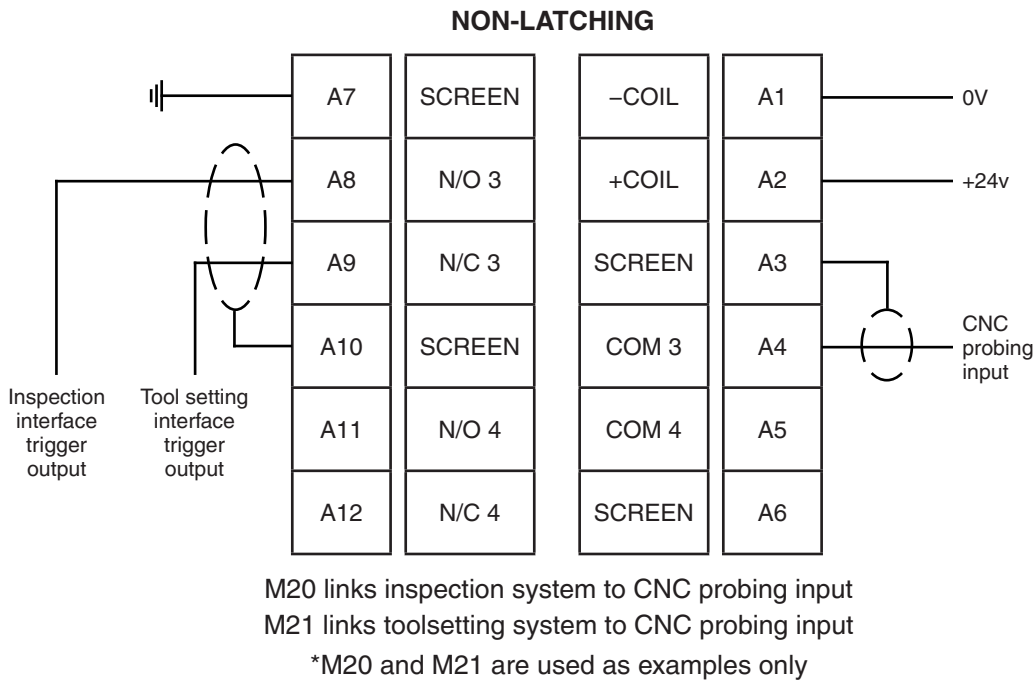
M41 links toolsetting system to CNC probing input

*M40 and M41 are used as examples only

NOTE: Non-latching side uses latched M-codes.

Machine controller giving latched M-code output pulling down to 0 Vdc

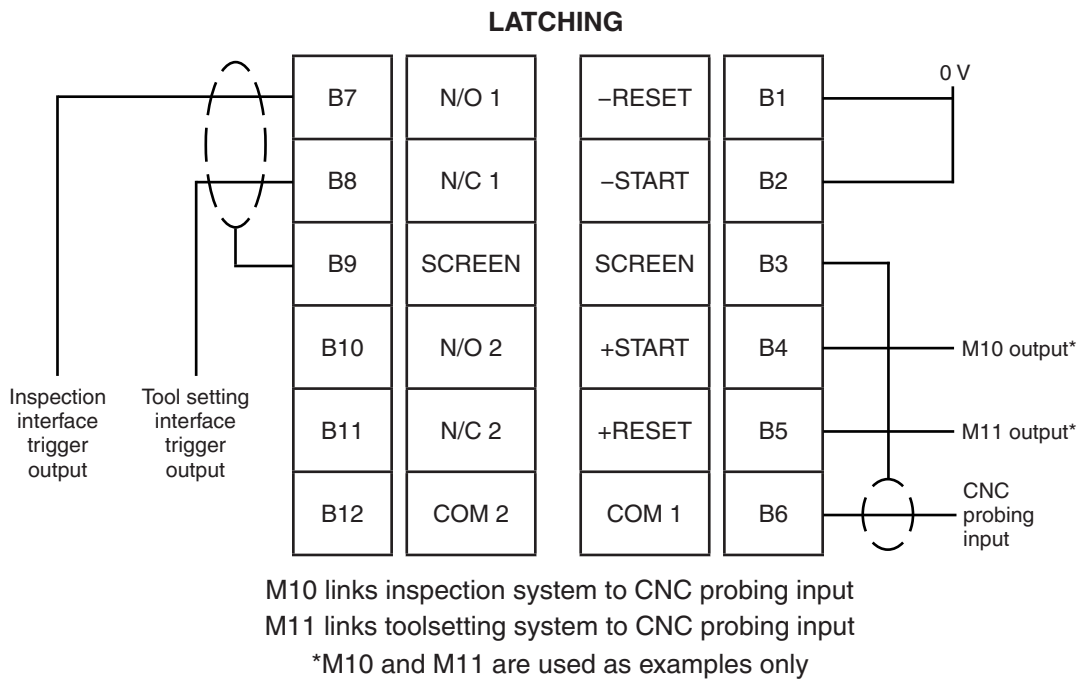
Example: M20 pulling down to 0 Vdc, M21 cancels M20*.



NOTE: Non-latching side uses latched M-codes.

Machine controller giving pulsed M-code output rising to +24 Vdc

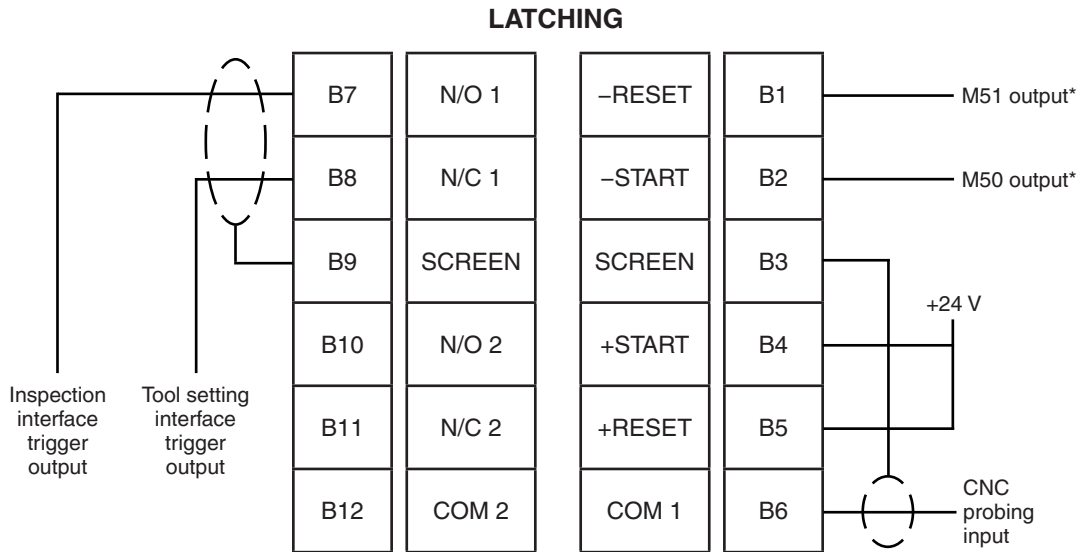
Example: M10 rising to +24 Vdc, M11 rising to +24 Vdc *



NOTE: Latching side uses pulsed M-codes.

Machine controller giving pulsed M-code output pulling down to 0 Vdc

Example: M50 pulling down to 0 Vdc, M51 pulling down to 0 Vdc *



M50 links inspection system to CNC probing input
M51 links toolsetting system to CNC probing input
*M50 and M51 are used as examples only

NOTE: Latching side uses pulsed M-codes.

This page is intentionally left blank.

Maintenance

There are no user serviceable parts in this equipment. The SSM may be wiped using a clean dry lint-free cloth.

This page is intentionally left blank.

Parts list

Type	Part number	Description
SSM	A-2037-0030	Skip sharing module: complete with 4 x M4 supports and 4 x adhesive feet for fixing, 2 cables

www.renishaw.com/mtpdoc



#renishaw

 **+44 (0) 01453 524524**  **UK@renishaw.com**

© 2000–2022 Renishaw plc. All rights reserved. This document may not be copied or reproduced in whole or in part, or transferred to any other media or language by any means, without the prior written permission of Renishaw.

RENISHAW® and the probe symbol are registered trade marks of Renishaw plc. Renishaw product names, designations and the mark 'apply innovation' are trade marks of Renishaw plc or its subsidiaries. Other brand, product or company names are trade marks of their respective owners.

WHILE CONSIDERABLE EFFORT WAS MADE TO VERIFY THE ACCURACY OF THIS DOCUMENT AT PUBLICATION, ALL WARRANTIES, CONDITIONS, REPRESENTATIONS AND LIABILITY, HOWSOEVER ARISING, ARE EXCLUDED TO THE EXTENT PERMITTED BY LAW. RENISHAW RESERVES THE RIGHT TO MAKE CHANGES TO THIS DOCUMENT AND TO THE EQUIPMENT, AND/OR SOFTWARE AND THE SPECIFICATION DESCRIBED HEREIN WITHOUT OBLIGATION TO PROVIDE NOTICE OF SUCH CHANGES.

Renishaw plc. Registered in England and Wales. Company no: 1106260. Registered office: New Mills, Wotton-under-Edge, Glos, GL12 8JR, UK.

Part no.: H-2000-5026-01-B

Issued: 12.2022