Quick-start guide H-6551-8500-01-A







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#### Intended use

The RMI-QE, which acts as a combined radio transceiver and machine interface, converts signals from the radio probe into voltage-free solid state relay (SSR) and driven outputs for transmission to the CNC machine controller.

## Safety

#### Information to the user

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

The RMI-QE has a glass window. Handle with care if broken to avoid injury.

#### 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 during 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 (for example, power transformers, servo drives).
- 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 (for example, motor power supply cables), 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. 3

# Switch settings SW1 and SW2

Factory settings shown are for:

- A-6551-0049
- A-6551-0050



Abbreviations are as follows:

- NO = Normally open
- NC = Normally closed
- NH = Normally high
- NL = Normally low

# Switch SW1 output configuration Switch SW2 output configuration



**CAUTION:** Exercise caution when using error or probe SSR in NO mode as a wiring fault could cause loss of error condition and therefore could result in a non-failsafe condition. See the *RMI-QE radio machine interface* installation guide (Renishaw part no. H-6551-8520).

# Wiring diagram (with output groupings shown)



CAUTION: The power supply 0 V should be terminated at the machine ground ("star point"). A negative supply can be used, when wired appropriately.

#### NOTES:

A switch can be fitted between the machine power supply and the red wire, to aid powering up the RMI-QE when partnering.

It is recommended that both the low battery (SSR) and error (SSR) are connected to provide full system information.

# **RMI-QE visual diagnostics**



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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.

# CE RR

Renishaw plc hereby declares that the RMI-QE is in compliance with the essential requirements and other relevant provisions of:

- · the applicable EU directives
- · the relevant statutory instruments under UK law

The full text of the declaration of conformity is available at:

www.renishaw.com/mtpdoc

Disposal of waste electrical and electronic equipment (WEEE)



The use of this symbol on Renishaw products and/or accompanying documentation indicates that the product should not be mixed with general household waste upon disposal. It is the responsibility of the end user to dispose of this product at a designated collection point for waste electrical and electronic equipment (WEEE) to enable reuse or recycling. Correct disposal of this product will help to save valuable resources and prevent potential negative effects on the environment. For more information, contact your local waste disposal service or Renishaw distributor.

## **REACH** regulation

Information required by Article 33(1) of Regulation (EC) No. 1907/2006 ("REACH") relating to products containing substances of very high concern (SVHCs) is available at: www.renishaw.com/REACH

## China RoHS

For more information on China RoHS visit: www.renishaw.com/mtpchinarohs

# FCC Information to user (USA only)

#### 47 CFR Section 15.19

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1. This device may not cause harmful interference, and
- 2. This device must accept any interference received, including interference that may cause undesired operation.

#### 47 CFR Section 15.21

The user is cautioned that any changes or modifications not expressly approved by Renishaw plc or authorised representative could void the user's authority to operate the equipment.

# Patents

Features of RMI-QE and features of similar products are the subject of one or more of the following patents and/or patent applications:

CN 100466003	JP 4575781
CN 101482402	JP 5238749
EP 1576560	JP 5390719
EP 1931936	KR 1001244
EP 2216761	TW I333052
IN 215787	US 7665219
IN WO2004/057552	US 7821420
	US 9140547

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# 安全须知

### 机床供应商/安装商须知

机床制造商有责任确保用户了解操作中存在的任何危险,包括雷尼绍产品说明书中所述的危险,并应确保提供充 分的防护装置和安全联动装置。

如果测头测量失败,则有误发测头已复位状态信号的可能。切勿单凭测头信号来停止机床运动。

### 设备安装商须知

雷尼绍所有设备的设计均符合相关的EU和FCC监管要求。为使产品按照这些规定工作,设备安装商有责任保证遵守以下指导原则。

- 任何接口的安装位置必须远离任何潜在的电噪声源,如变压器、伺服系统驱动装置等;
- 所有0伏/接地连接都应当连接到机床接地终端上("接地终端"是所有设备地线和屏蔽电缆的单点回路)。这一点 非常重要,不遵守此规定会造成接地之间存在电位差;
- 所有屏蔽装置都必须按使用说明书中所述进行连接;
- 电缆线路不得与电机电源电缆等高电流源并行或靠近高速数据传输线;
- 电缆长度应始终保持最短。

#### 设备操作

如果设备使用方式与制造商要求的方式不符,设备提供的保护功能可能会减弱。

# **Radio approvals**

Argentina:

Australia:

Brazil:



06256-21-02812

Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados.

Canada: IC: 3928A-RMIQE

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1)l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

EU: **CE** India: ETA-SD-20210705221 Indonesia: 75103/SDPPI/2021 Japan:



This device is granted pursuant to the Japanese Radio Law and the Japanese Telecommunications Business Law This device should not be modified (otherwise the granted designation number will become invalid).

Malaysia:



Mexico: RCPRERM21-2678

"La operación de este equipo está sujeta a las siguientes dos condiciones:

(1) es posible que este equipo o dispositivo no cause interferencia perjudicial y

(2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada."

New Zealand:



South Africa:



IDA Standards DA104642

Complies with

South Korea:



Class A Equipment (Industrial Use)

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USA: FCC ID: KQGRMI-QE

Iceland Liechtenstein Montenegro Norway Switzerland The Philippines Turkey

Exempt: China Thailand Vietnam



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For worldwide contact details, visit www.renishaw.com/contact



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