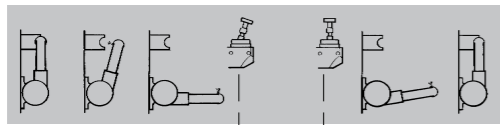
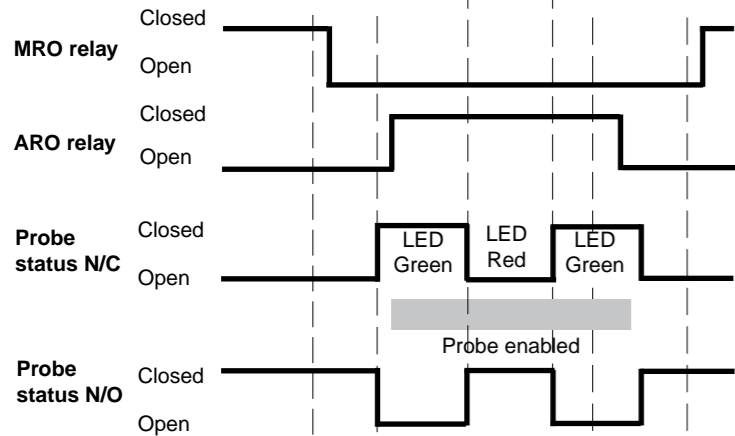
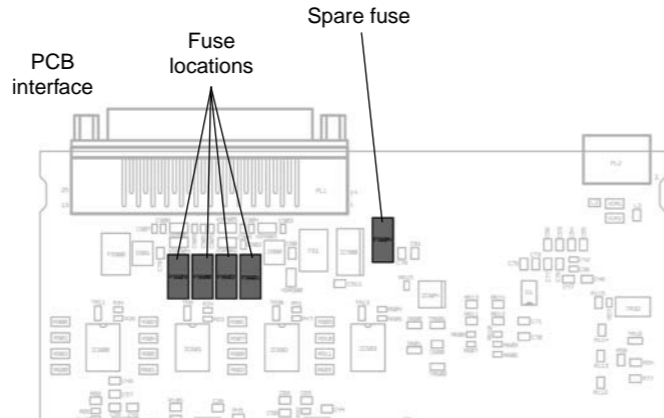


Standard wiring configuration and fuse locations

Outputs



NOTE: See the diagram below for location of the spare fuse.



Type: Inputs are not polarity conscious
Apply voltage of 15 Vdc to 30 Vdc across input to activate

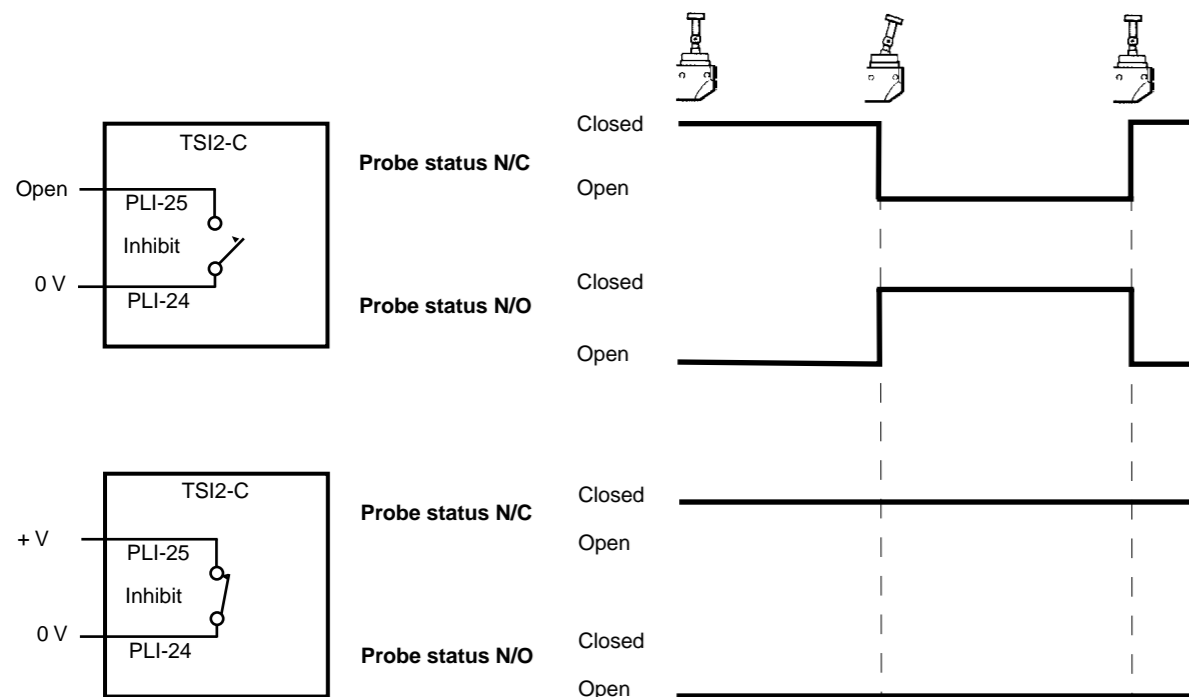
Specification: Input load = 12.5 mA maximum @30 V
Input voltage = 30 V maximum

Outputs: MRO, ARO
Probe status N/O Probe status N/C

All outputs are protected by fuses (f) 50 mA (TE5)
Wickman 3950050
Renishaw P-FS02-0001

Inhibit input

The inhibit input is not polarity conscious. Apply a voltage of 15 Vdc to 30 Vdc across PLI-24 and PLI-25 to activate. Inhibit input presents a load of 12.5 mA max. Probe inhibit disables the probe outputs.



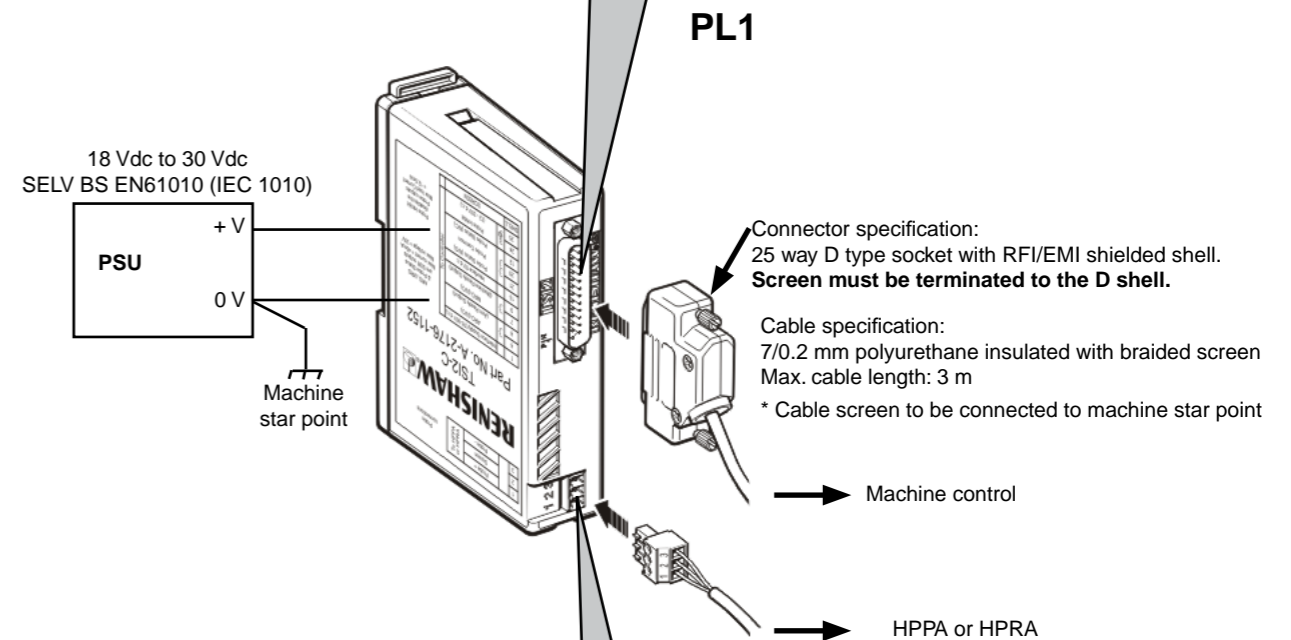
NOTE: Probe status LED will still function when inhibit is active.

TSI2-C connections

NOTE: ARO, MRO and Probe Status outputs are SSR (solid state relay).
Maximum current = 40 mA, maximum voltage = 30 V

The TSI2-C interface unit should be installed in the CNC control cabinet. Where possible, site the unit away from potential sources of interference such as transformers and motor controllers.

1		Interface supply (18 Vdc to 30 Vdc)	To Controller	21		Probe status (N/O)	To Controller
6		ARO (N/O) (arm ready output)		20		Probe common	
8		MRO (N/O) (machine ready output)		12		Probe status (N/C)	
7		MRO (N/O) (machine ready output)		24		Probe inhibit (15 Vdc to 30 Vdc)	
9		Interface 0 Vdc		25			
13		Interface 0 Vdc		Shell		Screen*	



PL2

		HPPA rear exit version		HPPA side exit version		To HPPA or HPRA
				HPPA rear and side exit version		
		Standard	Trigger delay	Standard	Trigger delay	
1	Probe +	Brown	White	Blue	Green	
2	Screen	Blue + screen	Blue + screen	Grey/black	Grey/black	
3	Probe -	White	Brown	Green	Blue	



V_{SS} = (Interface supply) 18 Vdc to 30 Vdc

I_{MAX} = 120 mA

Input power supply protection is provided by self resetting fuses. Reverse polarity protection is provided.

Cable screen must be terminated at the machine star point via the most direct route from the free end of the cable.

Mount interface and route cables away from known sources of EMI.

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Renishaw part no: H-2000-5245-04-A

Issued: 09 2009



Changes to specification

Renishaw plc may modify or change its products or specifications without notice and without obligation.

Warranty

Equipment requiring attention under warranty must be returned to your supplier. No claims will be considered where Renishaw equipment has been misused, or repairs or adjustments have been attempted by unauthorised persons.

Patent notice

The following patents relate to features of the products shown in this user's leaflet and of other similar products (Other patents applied for):

EP 065926 JPw 2002-531,839 US 5,669151

FCC Declaration

FCC 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 call harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

FCC Section 15.105

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference, in which case you will be required to correct the interference at your own expense.

FCC 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.

FCC Section 15.27

The user is also cautioned that any peripheral device installed with this equipment such as a computer, must be connected with a high-quality shielded cable to insure compliance with FCC limits.

EC DECLARATION OF CONFORMITY

Renishaw plc declare that the product: -

Name: TSI2-C
Description: Machine tool interface for HPPA or HPRA

has been manufactured in conformity with the following standards: -

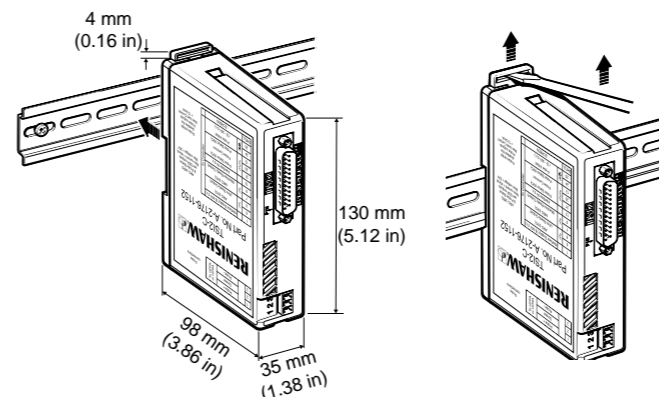
BS EN 61326:1998/ A1:1998/A2:2001 Electrical equipment for measurement, control and laboratory use - EMC requirements.
Immunity to annex A - industrial locations.
Emissions to class A (non-domestic) limits.

and that it complies with the requirements of directives: -

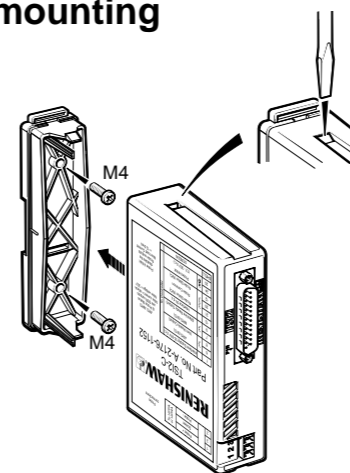
89/336/EEC - Electromagnetic compatibility (EMC)

The above information is summarised from the full EC Declaration of Conformity. A copy is available from Renishaw on request.

TSI2-C installation and dimensions



Alternative mounting



Specification

Power supply: 18 Vdc to 30 Vdc
SELV BS EN61010 (IEC1010)
Maximum load current 140 mA
Note: Reverse polarity protection provided.
Input supply protection is provided by self resetting fuses.
Power supply 0 V **must** be connected to machine star point.

Inputs:
Inhibit: Inhibit input is not polarity conscious
15 Vdc to 30 Vdc across input to activate.
Maximum load 12.5 mA
Probe inhibit disables the probe outputs.

Outputs - voltage free SSR:
Probe status N/C, MRO,
Probe status N/O, ARO: Maximum current 40 mA
Maximum voltage 30 V
Open circuit leakage max. 10 nA
Short circuit load resistance max. 100 ohms (excluding voltage drops across the cable)
Outputs are protected by fuses (TE5) - (f) 50 mA
Wickman 3950050
Renishaw P-FS02-0001

Screen Connect free end of cable screen to machine ground star point

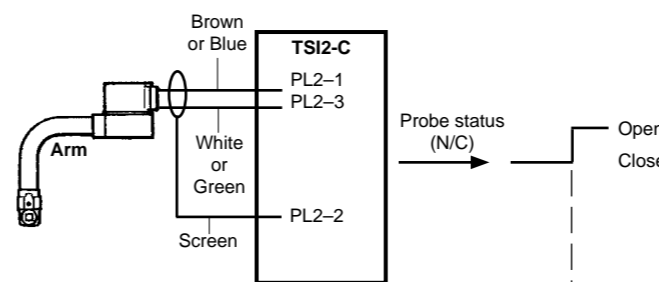
Cable requirements:
Specification: 7/0.2 mm (0.22 mm²) 12 core polyurethane insulated with braided screen
Length: 3 m maximum

Connector requirements: 25 way D socket with EMI/RFI shielded shell - **connector end of screen must be terminated at the D shell**

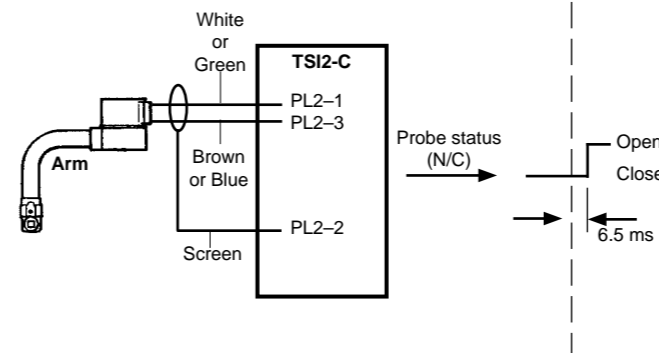
Environmental:
Operating: +5 °C to +60 °C (41 °F to 140 °F)
Storage: 0 °C to +70 °C (32 °F to 158 °F)

Probe trigger delay

Brown/White or Blue/Green (side exit) wire configuration for DELAY OFF. Example below shows normally closed probe status output delay.



Brown/White or Blue/Green (side exit) wire configuration for DELAY ON



TSI2-C



User's leaflet
H-2000-5245-04-A

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