

# NC4+ Blue non-contact tool setting range



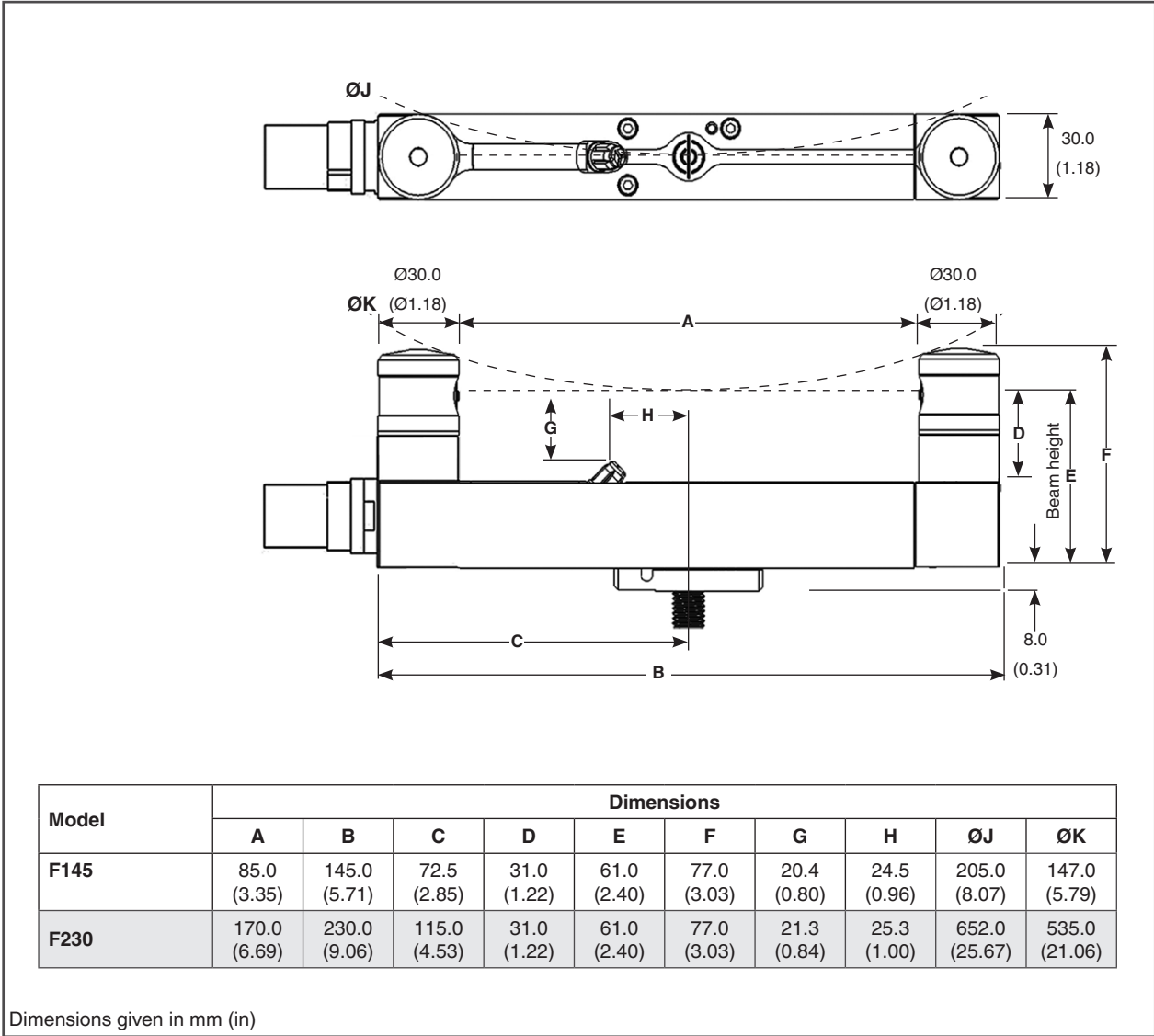
## Specification

<b>Principal application</b>	High-precision, high-speed non-contact tool setting and tool breakage detection on all sizes of vertical and horizontal machining centres, multi-tasking machines and gantry machining centres.	
<b>Transmission type</b>	Hard-wired transmission	
<b>Compatible interfaces</b>	NCi-6	
<b>Repeatability</b>	F115 and F145	±0.5 µm (19.69 µin) 2σ
	F230 and F300	±0.75 µm (29.53 µin) 2σ
<b>Tool setting and tool breakage detection</b> (minimum tool or feature size)	F115 systems	Ø0.03 mm (0.0012 in)
	F145 systems	Ø0.05 mm (0.0020 in)
	F230 systems	Ø0.1 mm (0.0039 in)
	F300 systems	Ø0.2 mm (0.0079 in)
<b>Output signal</b> (from interface unit)	Two voltage-free, solid-state relays (SSR). Each can be either normally open or normally closed (selectable via a switch). Current (maximum) 50 mA, voltage (maximum) ±50 V. The interface contains an auxiliary relay which can be used for switching the output between the NC4+ Blue and a spindle probe. This relay can also be used to control an air blast solenoid (optional).	
<b>Supply voltage</b> (to interface)	11 Vdc to 30 Vdc	
<b>Supply current</b> (to interface)	120 mA @ 12 Vdc, 70 mA @ 24 Vdc	
<b>Supply protection</b>	Resettable fuses in interface. Reset by removing power and cause of fault.	
<b>Electrical connection arrangement</b>	<b>Systems with connector:</b> Connector socket. <b>Hard-wired systems:</b> Cable on the end of the unit. Other configurations are available on request.	
<b>Cable</b> (to interface)	<b>Specification</b>	Ø6.0 mm (0.24 in), two twisted pairs, two individual cores plus screen, each core 18 × 0.1 mm insulated.
	<b>Length</b>	12.5 m (41.01 ft)
	<b>Electrical connection</b>	<b>Systems with connector:</b> cable with bayonet-type plug, connector socket on the end of the unit. <b>Hard-wired systems:</b> cable on the end of the unit. Other configurations are available on request.
<b>NC4+ Blue pneumatic supply</b>	Air supply to the NC4 must conform to BS ISO 8573-1: 2010 Class 1.4.2. 6.0 bar (87.02 psi) maximum. <b>Systems with connector:</b> Ø4.0 mm (0.16 in) × 5.0 m (16.40 ft) <b>Hard-wired systems:</b> Ø3.0 mm (0.12 in) × 5.0 m (16.40 ft)	
<b>Air blast pneumatic supply</b>	Air supply to the air blast must conform to BS ISO 8573-1: 2010 Class 2.9.4. Ø6.0 mm (0.24 in) air pipe × 5.0 m (16.40 ft), 6.0 bar (87.02 psi) maximum.	
<b>Laser type</b>	Class 2 laser product: 1 mW maximum output emitted wavelength 405 nm.  <b>WARNING:</b> Laser radiation. Do not stare into beam.	
<b>Laser beam alignment</b>	The unit is supplied with an adjustable mounting plate on the underside.	
<b>Weight</b> (including 12.5 m (41.01 ft) of cable)	1080 g (2.38 lb) to 2000 g (4.4 lb) depending on configuration.	

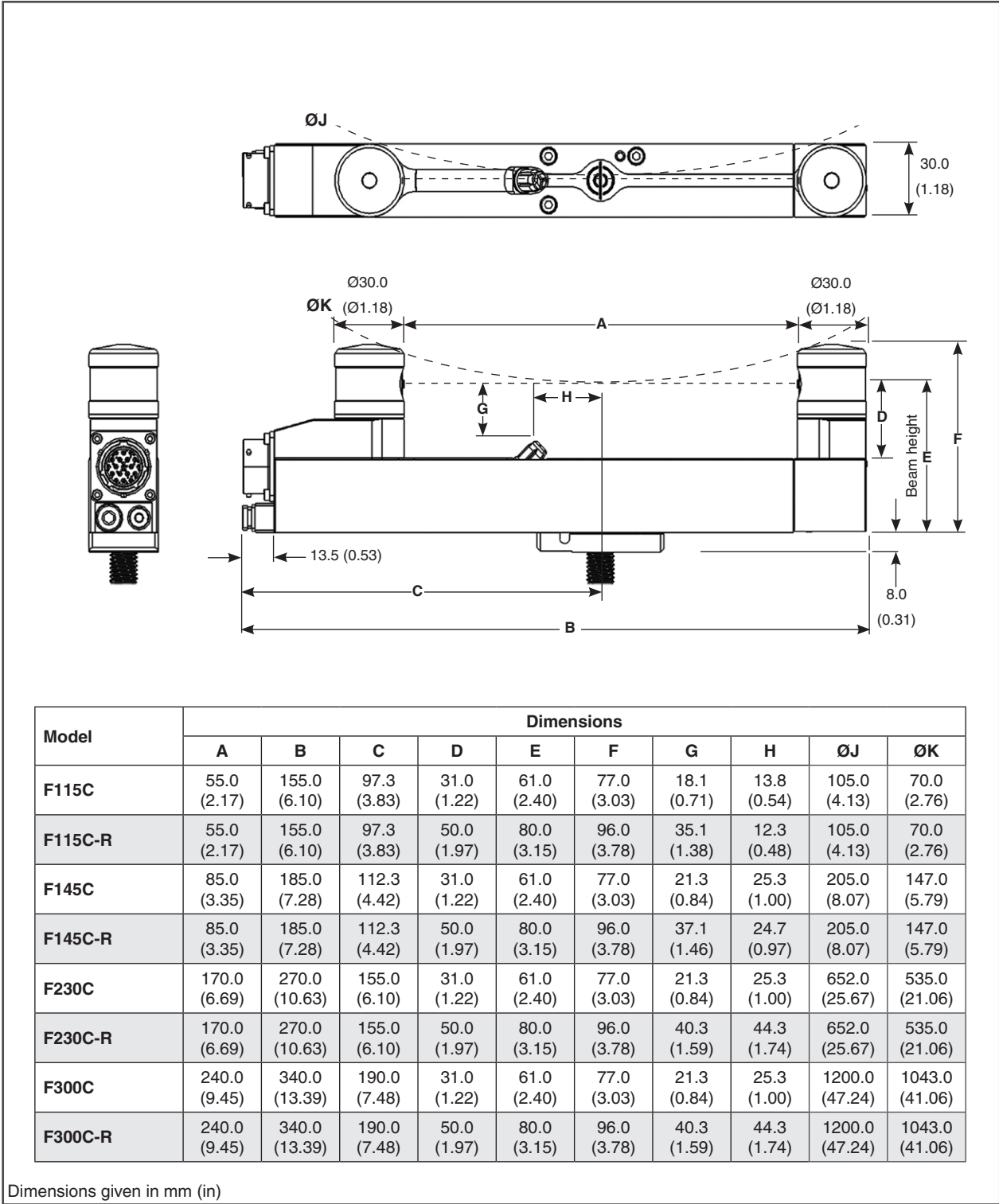
**Specification (continued)**

<b>Mounting</b>	M4 (× 3), M10 (3/8 in) or M12 (1/2 in) bolts for mounting via adjuster plate (not supplied). Other fixing arrangements are available on request.	
<b>Environment</b>	IP rating	IPX6 and IPX8, BS EN 60529:1992+A2:2013 (IEC 60529:1989+A1:1999+A2:2013)
	Storage temperature	-25 °C to +70 °C (-13 °F to +158 °F)
	Operating temperature	+5 °C to +55 °C (+41 °F to +131 °F)

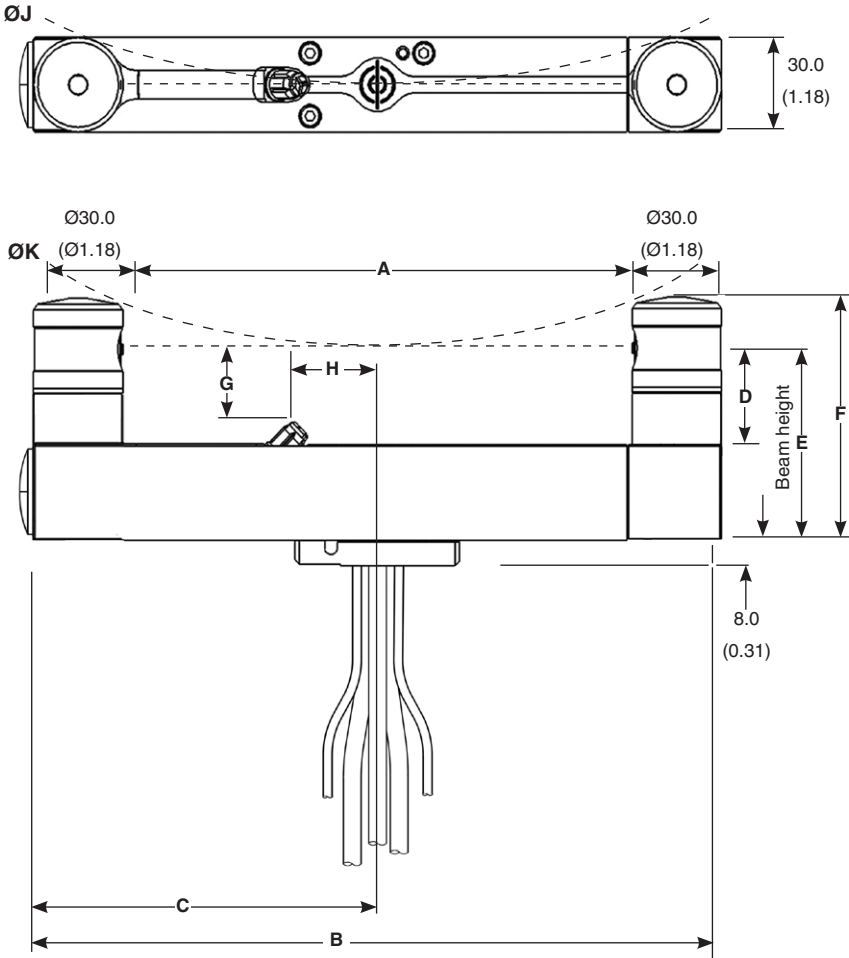
**NC4+ Blue hard-wired system dimensions**



**NC4+ Blue with connector dimensions**



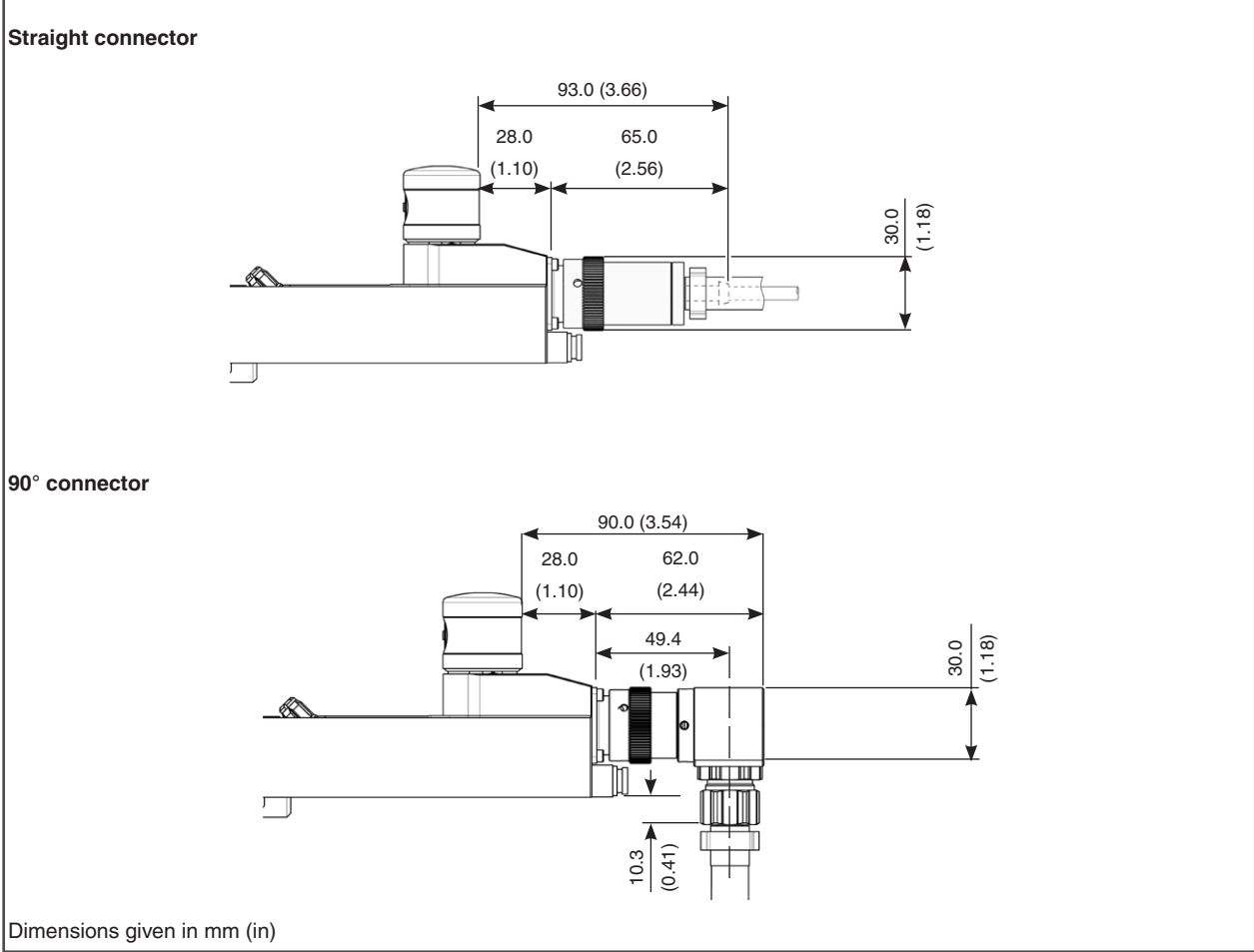
**NC4+ Blue bottom exit system dimensions**



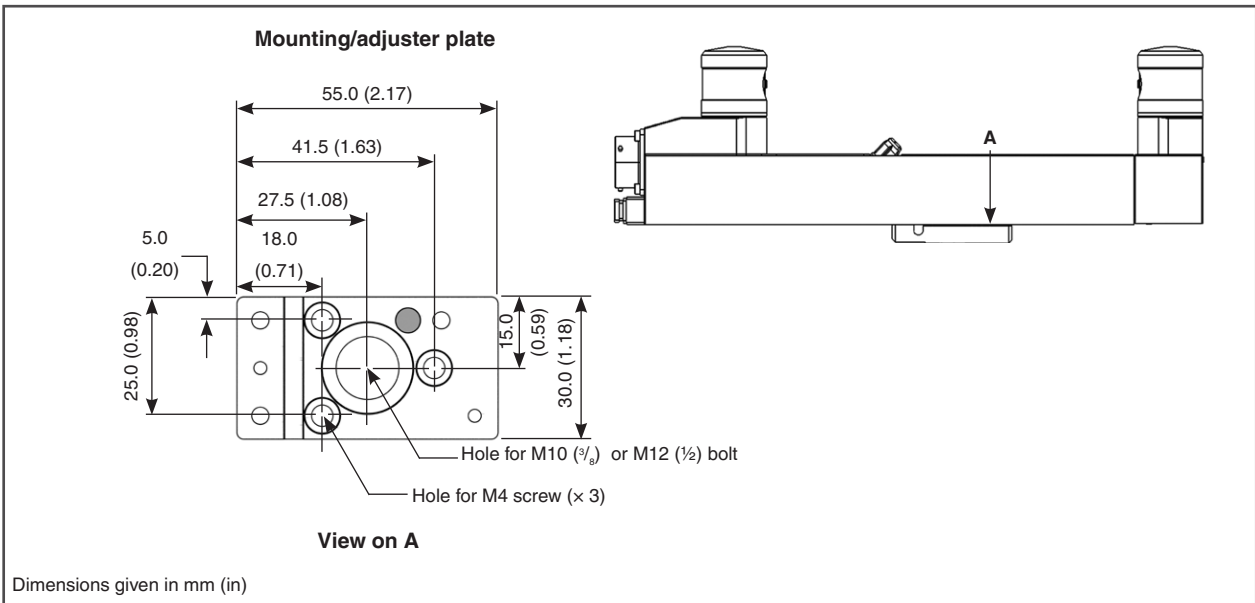
Model	Dimensions									
	A	B	C	D	E	F	G	H	ØJ	ØK
<b>F145</b>	85.0 (3.35)	145.0 (5.71)	72.5 (2.85)	31.0 (1.22)	61.0 (2.40)	77.0 (3.03)	20.4 (0.80)	24.5 (0.96)	205.0 (8.07)	147.0 (5.79)
<b>F230</b>	170.0 (6.69)	230.0 (9.06)	115.0 (4.53)	31.0 (1.22)	61.0 (2.40)	77.0 (3.03)	21.3 (0.84)	25.3 (1.00)	652.0 (25.67)	535.0 (21.06)

Dimensions given in mm (in)

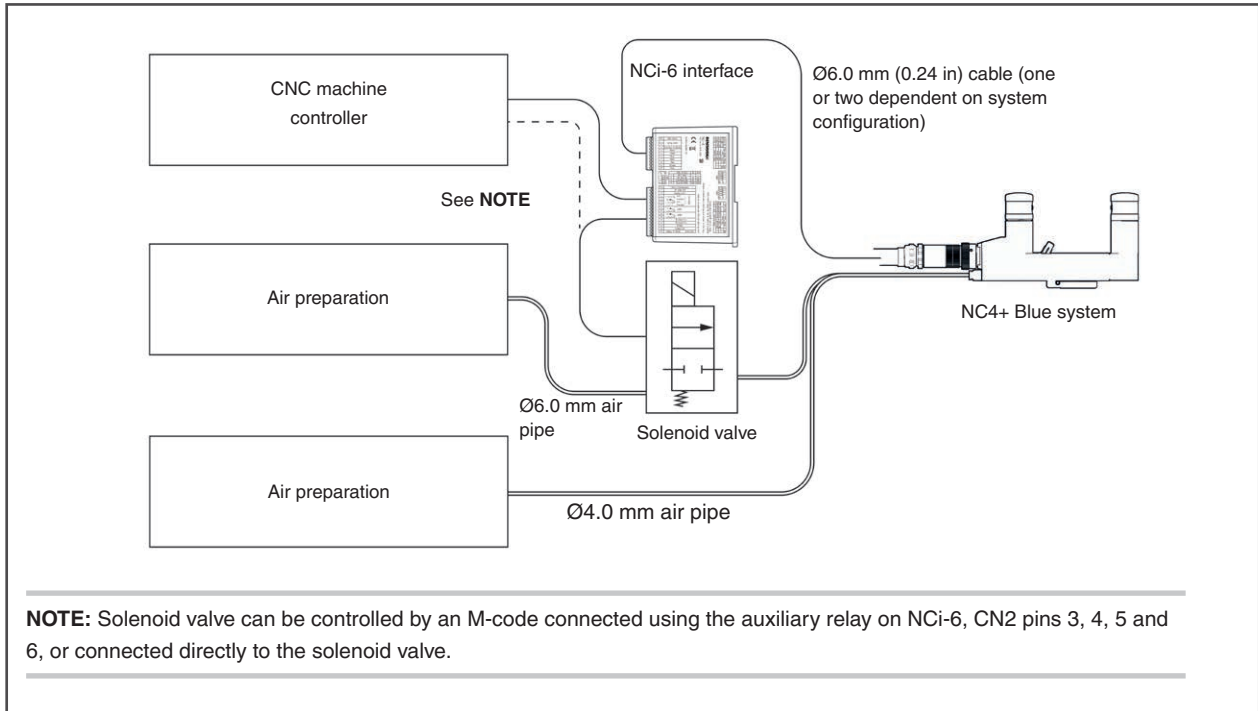
**NC4+ Blue straight connector dimensions**



**NC4+ Blue adjuster plate mounting and dimensions**



## Electro-pneumatic integration



## Spare parts and accessories

A full range of spare parts and accessories is available. Contact Renishaw for a full list.

[www.renishaw.com/nc4](http://www.renishaw.com/nc4)

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