

NC4+ Blue non-contact tool setting range



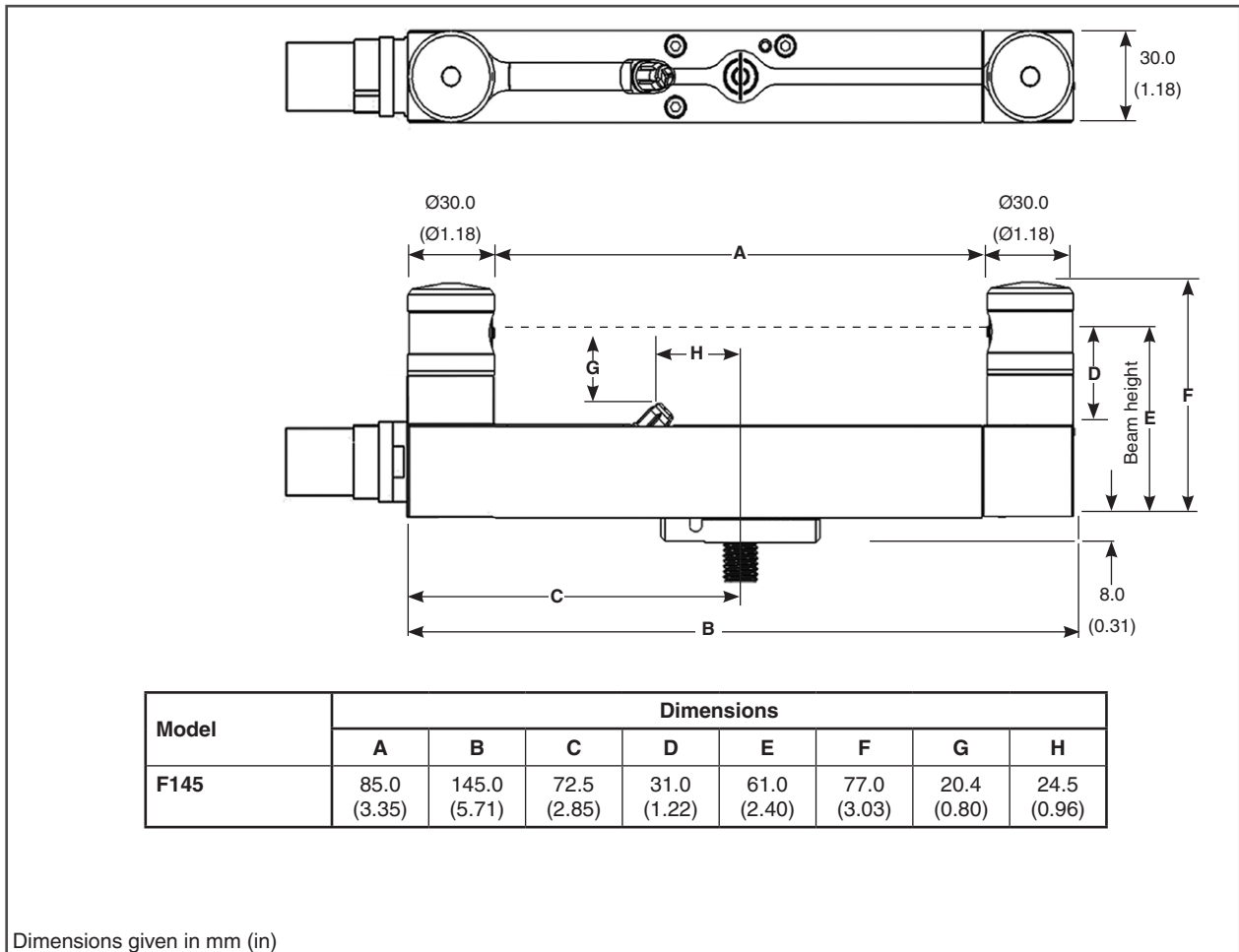
Specification

Principal application	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.	
Transmission type	Hard-wired transmission	
Compatible interfaces	NCi-6	
Repeatability	F115 and F145	$\pm 0.5 \mu\text{m}$ (19.69 μin) 2σ
	F230 and F300	$\pm 0.75 \mu\text{m}$ (29.53 μin) 2σ
Tool setting and tool breakage detection (minimum tool or feature size)	F115 systems	$\text{Ø}0.03 \text{ mm}$ (0.0012 in)
	F145 systems	$\text{Ø}0.05 \text{ mm}$ (0.0020 in)
	F230 systems	$\text{Ø}0.1 \text{ mm}$ (0.0039 in)
	F300 systems	$\text{Ø}0.2 \text{ mm}$ (0.0079 in)
Output signal (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) $\pm 50 \text{ V}$. 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).	
Supply voltage (to interface)	11 Vdc to 30 Vdc	
Supply current (to interface)	120 mA @ 12 Vdc, 70 mA @ 24 Vdc	
Supply protection	Resettable fuses in interface. Reset by removing power and cause of fault.	
Electrical connection arrangement	Systems with connector: Connector socket. Hard-wired systems: Cable on the end of the unit. Other configurations are available on request.	
Cable (to interface)	Specification	$\text{Ø}6.0 \text{ mm}$ (0.24 in), two twisted pairs, two individual cores plus screen, each core $18 \times 0.1 \text{ mm}$ insulated.
	Length	12.5 m (41.01 ft)
	Electrical connection	Systems with connector: cable with bayonet-type plug, connector socket on the end of the unit. Hard-wired systems: cable on the end of the unit. Other configurations are available on request.
NC4+ Blue pneumatic supply	Air supply to the NC4 must conform to BS ISO 8573-1: 2010 Class 1.4.2. 6.0 bar (87.02 psi) maximum. Systems with connector: $\text{Ø}4.0 \text{ mm}$ (0.16 in) $\times 5.0 \text{ m}$ (16.40 ft). Hard-wired systems: $\text{Ø}3.0 \text{ mm}$ (0.12 in) $\times 5.0 \text{ m}$ (16.40 ft).	
Air blast pneumatic supply	Air supply to the air blast must conform to BS ISO 8573-1: 2010 Class 2.9.4. $\text{Ø}6.0 \text{ mm}$ (0.24 in) air pipe $\times 5.0 \text{ m}$ (16.40 ft), 6.0 bar (87.02 psi) maximum.	
Laser type	Class 2 laser product: 1 mW maximum output emitted wavelength 405 nm. WARNING: Laser radiation. Do not stare into beam.	
Laser beam alignment	The unit is supplied with an adjustable mounting plate on the underside.	
Weight (including 12.5 m (41.01 ft) of cable)	1080 g (2.38 lb) to 2000 g (4.4 lb) depending on configuration.	

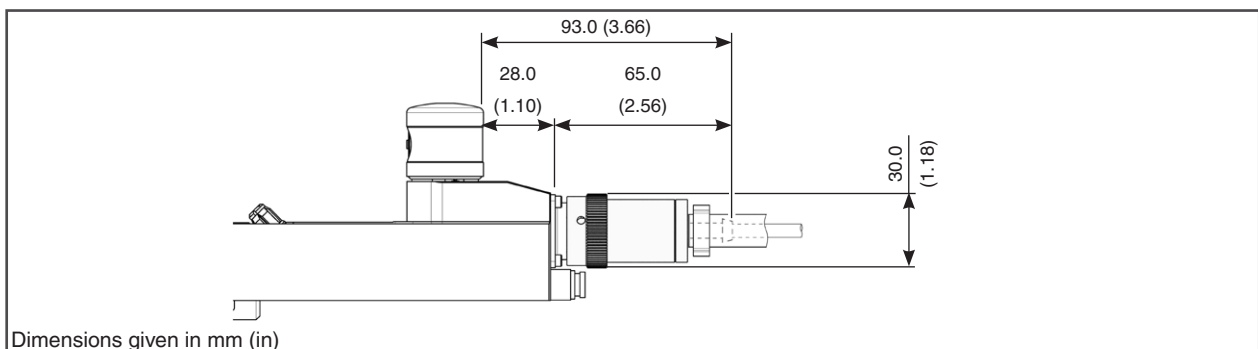
Specification (continued)

Mounting	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.	
Environment	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)

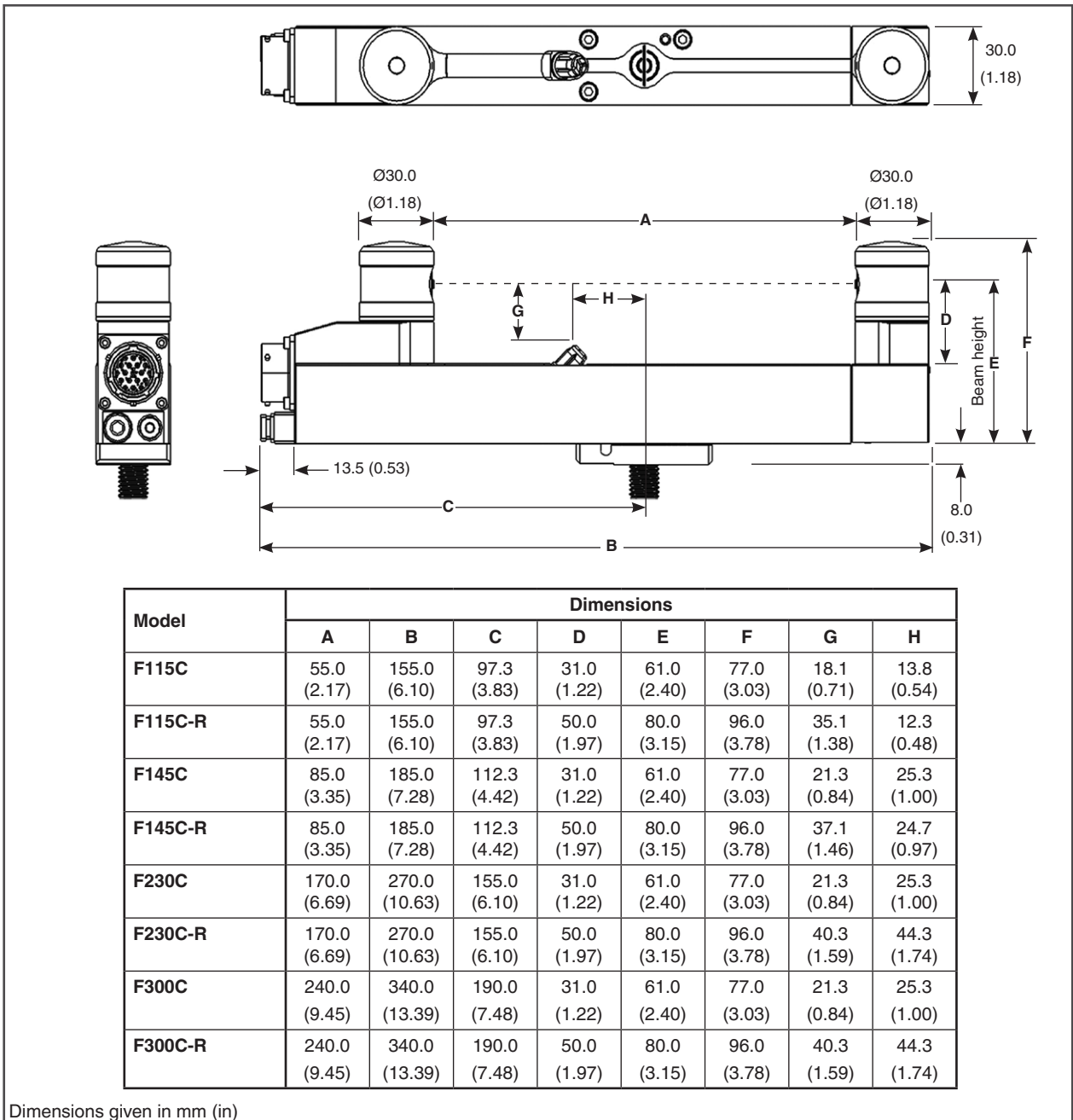
NC4+ Blue hard-wired system dimensions



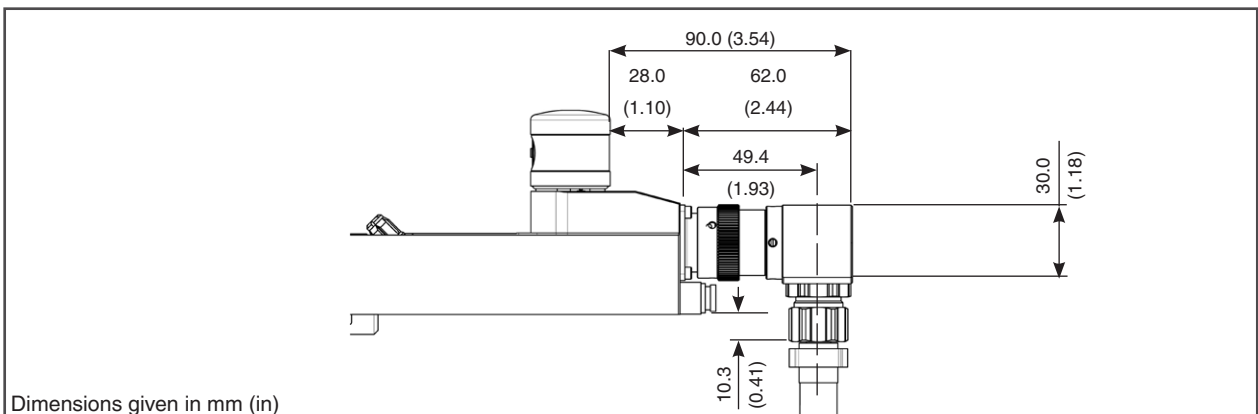
NC4+ Blue straight connector dimensions



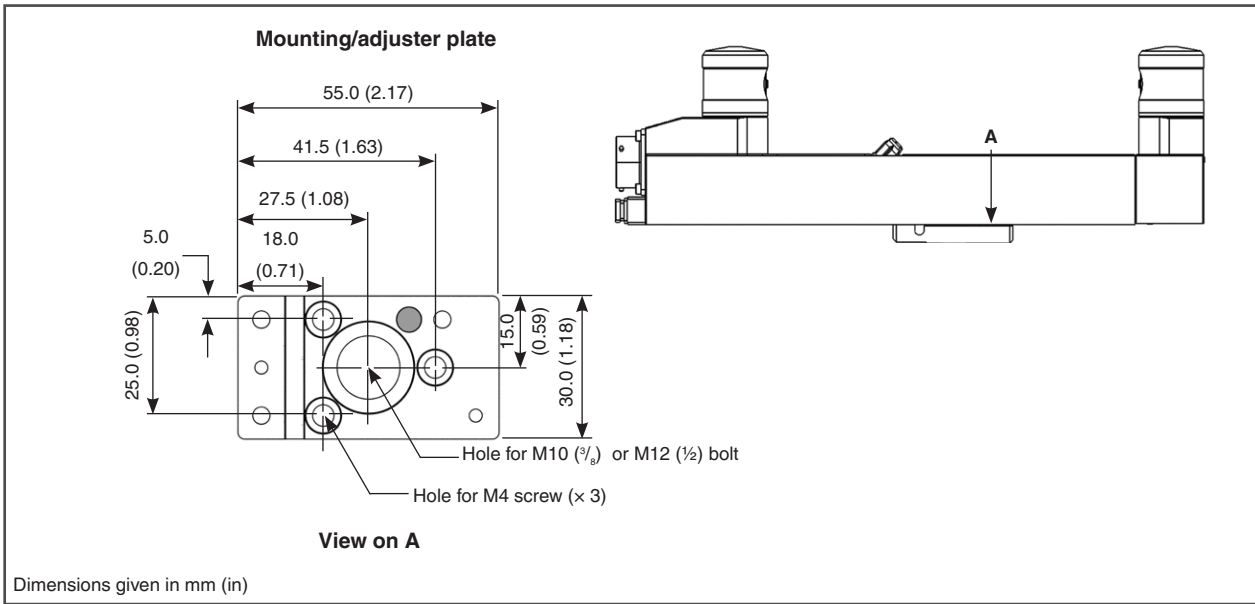
NC4+ Blue with connector dimensions



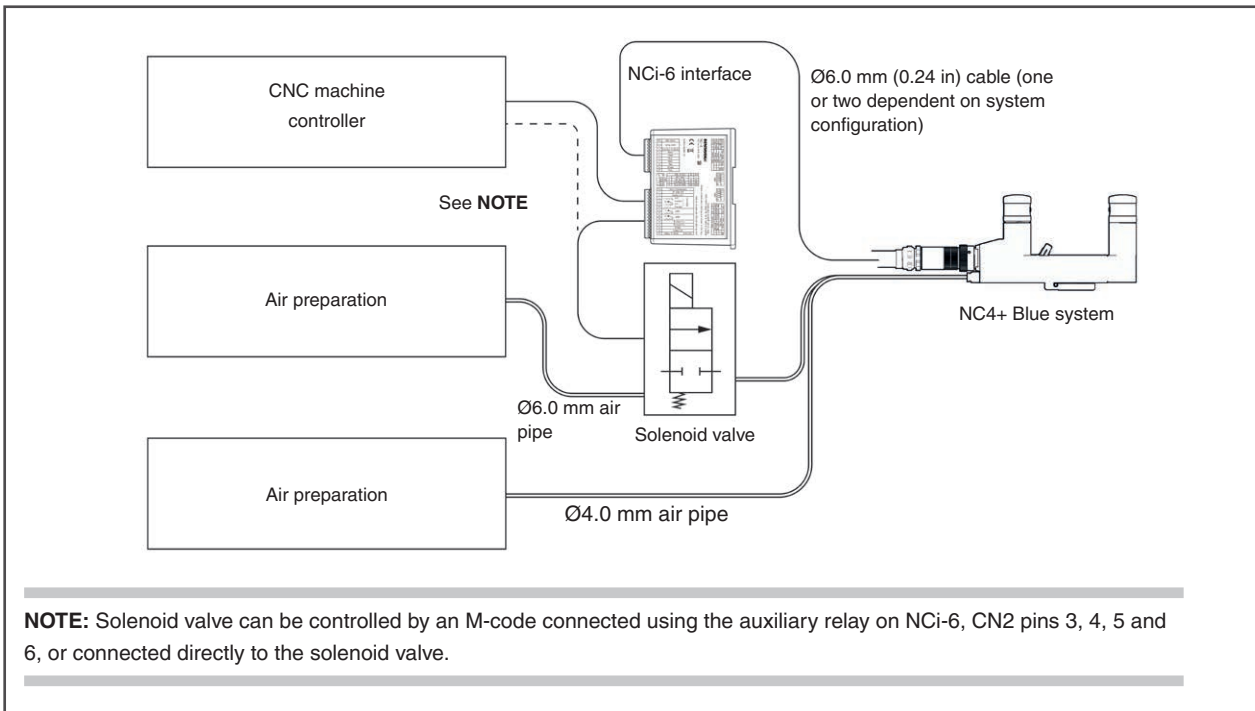
NC4+ Blue 90° connector dimensions



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

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