



 Beam Detection	Fireray One	Fireray 5000
	[EN]: 6010-100 [UL]: 6010-300	[EN] 50m (164 ft): 5000-101, 100m (328ft): 5000-102; [NF] 50m (164 ft): 5000-112, 100m (328 ft): 5000-113; [UL] 50m (164 ft): 5000-103, 100m (328 ft): 5000-104
MECHANICAL SPECIFICATION		
Dimensions	Detector: 181(h) x 130(w) x 134(d)mm; Single reflector: 100(h) x 100(w) x 9(d)mm; Four reflectors: 200(h) x 200(w) x 9(d)mm (Detector: 7"(h) x 5"(w) x 5¼"(d); Single reflector: 4"(h) x 4"(w) x ½"(d); Four reflectors: 8"(h) x 8"(w) x ½"(d))	Detector: 131(h) x 134(w) x 134(d)mm; System Controller: 230(h) x 202(w) x 87(d)mm; Reflector: 100(h) x 100(w) x 10(d)mm (Detector: 5¼"(h) x 5¼"(w) x 5.2¼"(d); System Controller: 9"(h) x 8"(w) x 3½"(d); Reflector: 4"(h) x 4"(w) x ½"(d))
Weight	Detector: 0.7 kg (1½ lb); Reflector: 0.1 kg (¼ lb)	System controller: 1.0 kg (2¼ lbs); Detector: 0.5 kg (1 lbs); Reflector: 0.1 kg (¼ lbs)
Operation range	5 m to 50 m (16½ ft to 164 ft) from Detector to Reflector (Prism); 50 m to 120 m (164 ft to 394 ft) with Reflective Long Range Kit	5000-101 8 m to 50 m (26¼ ft to 160 ft) from Detector to Reflector; 5000-102 50 m to 100 m (160 ft to 328 ft) from the Detector to Reflector
Beam path clearance	1 m (3¼ ft) in diameter from centre line between Detector and Reflector (Prism)	1 m (3¼ ft) in diameter from centre line between Detector and Reflector (Prism)
Optical wavelength – smoke detection	850nm	850nm
Signal output	Individual alarm and fault relays (VFCO) 2 A @ 30 Vdc	Individual alarm and fault relays (VFCO) 2 A @ 30 Vdc
Cable gauge and type	2 core, dedicated, 0.5 to 1.6 mm (1/100" to 6/100") (24 to 14 AWG) System compatible with fireproof and non-fireproof cable meeting local installation standards	2 core, dedicated, 0.5 to 1.6 mm (1/100" to 6/100") (24 to 14 AWG) 100 m in length from System Controller to Detector
Cable entry	3 knock-out locations capable of accepting M20, ½" or ¾" glands 4 drill-out locations capable of accepting glands up to 21 mm (¾") diameter	7 x 20 mm (¾") cable gland knock-outs on system controller
ELECTRICAL SPECIFICATION		
Operating voltage	14 to 36 Vdc	14 to 36 Vdc
Operating current all operational modes	5mA to 33mA (constant)	5 mA to 6 mA for 1 Detector; 7.5 mA to 8.5 mA for 2 Detectors; 35 mA to 37 mA for alignment modes with 1 or 2 Detectors
Contact voltage – fire & fault relays (VFCO)	VFCO, 2 A at 30 Vdc resistive	VFCO, 2 A at 30 Vdc resistive
Contact current –fire & fault relays (VFCO)	10 mA at 20 mV (min) 1 A at 30 Vdc (max)	VFCO, 2 A at 30 Vdc resistive
PROGRAMMABLE USER SETTINGS		
Alarm response threshold levels	25% / 1.25 dB – Fastest response to smoke. 35% / 1.87 dB – Default value 55% / 3.46 dB – High immunity to false alarms, slow response to smoke 85% / 8.23 dB – Highest immunity to false alarms, slowest response to smoke. Configured via the integrated user interface	35% (default) 10% / 0.45 dB (min) – Fastest response to smoke 60% / 3.98 dB (max) – Highest immunity to false alarms, slowest response to smoke
Delay to alarm/fault	10 seconds for momentary partial obstruction of the beam path	10 seconds (default); 2 seconds (min); 30 seconds (max)
USER FEATURES		
Alignment aid/tool	Laser	Laser
System status indication	Green LED = normal operation; Red LED = alarm condition; Yellow LED = fault condition	Green LED = normal operation; Red LED = alarm condition; Yellow LED = fault condition
ENVIRONMENTAL SPECIFICATIONS		
Operating temperature	-20°C to +55°C (-4°F to +131°F)	-10°C to +55°C (+14°F to +131°F)
Storage temperature	-40°C to +85°C (-40°F to +185°F)	-40°C to +85°C (-40°F to +185°F)
Relative humidity (non-condensing)	0 to 93%	0 to 93%
OPTICAL SPECIFICATIONS		
Fault level / rapid obscuration ($\Delta \leq 2$ seconds)	$\geq 85\%$	$\geq 87\%$
Maximum angular alignment range	$\pm 4.5^\circ$ – Detector ($\pm 70^\circ$ with adjustment bracket accessory)	$\pm 3.5^\circ$ – Detector
Maximum angular misalignment	$\pm 0.5^\circ$ – Detector	$\pm 0.41^\circ$ – Detector
Maximum angular misalignment of Reflector (Prism)	$\pm 5^\circ$	$\pm 5^\circ$



 Beam Detection	Fireray 3000 [ENJ]: 3000-101 [UL]: 3000-103		Fireray 3000 Ex d 3000-115			
	MECHANICAL SPECIFICATION					
Dimensions	System Controller: 124(h) x 203(w) x 71.5(d)mm; Transmitter & Receiver: 77(h) x 78(w) x 161(d)mm (System Controller: 5"(h) x 8"(w) x 2¾"(d); Transmitter & Receiver: 3"(h) x 3"(w) x 6¼"(d))		System Controller: 124(h) x 203(w) x 71.50(d)mm; Transmitter & Receiver: 172(h) x 149(w) x 190(d)mm (System Controller: 5"(h) x 8"(w) x 2¾"(d); Transmitter & Receiver: 6¾"(h) x 6"(w) x 7½"(d))			
Weight	System controller: 606 g (1¼ lbs); Transmitter & Receiver: 207 g (½ lbs)		System controller: 606 g (21½ oz); Transmitter & Receiver including brackets: 3.7 kg (8¼ lb 2½ oz)			
Operation range	5 m to 120 m (16½ ft to 393 ft) from Transmitter and Receiver		10 m to 80 m (33 ft to 262 ft) from Transmitter and Receiver			
Beam path clearance	60 cm (2 ft) in diameter from centre line between Transmitter and Receiver		60 cm (2 ft) in diameter from centre line between Transmitter and Receiver			
Optical wavelength – smoke detection	850nm		850nm			
Signal output	Individual alarm and fault relays (VFCO) 2 A @ 30 Vdc		Individual alarm and fault relays (VFCO) 2 A @ 30 Vdc			
Cable gauge and type	2 core, dedicated, 0.5 to 1.6 mm (1/100" to 6/100") (24 to 14 AWG) 100 m (328 ft) in length from System Controller to Detector		2 core, dedicated, 0.5 to 1.6 mm (1/100" to 6/100") (24 to 14 AWG) 100m/328 ft in length from System Controller to Detector			
Cable entry	10 x 20 mm (¾") cable gland knock-outs on system controller		10 x 20mm (¾") cable gland knock-outs on system controller			
ELECTRICAL SPECIFICATION						
Operating voltage	12 to 36 Vdc +/- 10%		12 to 36 Vdc +/- 10%			
Operating current all operational modes	14 mA (constant) with 1 or 2 Receivers 8 mA per Transmitter		14 mA (constant) with 1 or 2 Receivers 8 mA per Transmitter			
Contact voltage – fire & fault relays (VFCO)	VFCO 2 A at 30 Vdc resistive		VFCO, 2 A at 30 Vdc resistive			
Contact current – fire & fault relays (VFCO)	10 mA at 20 mV (min) 1 A at 30 Vdc (max)		10 mA at 20 mV (min) 1 A at 30 Vdc (max)			
PROGRAMMABLE USER SETTINGS						
Alarm response threshold levels	1 min (min) 5 min (typical) 59 min (max) – Laser time-out 5% (min) 60% (typical) – Response sensitivity/threshold		1 min (min) 5 min (typical) 59 min (max) – Laser time-out 25% (min) 35% (typical) 60% (max) – Response sensitivity/threshold			
Delay to alarm/fault	10 seconds (default); 2 seconds (min); 30 seconds (max)		10 seconds (default); 2 seconds (min); 30 seconds (max)			
USER FEATURES						
Alignment aid/tool	Laser		Laser			
System status indication	Red LED = fire (control unit); Amber LED = fault (control unit) Green LED = system OK (control unit)		Red LED = fire (control unit); Amber LED = fault (control unit) Green LED = system OK (control unit)			
ENVIRONMENTAL SPECIFICATIONS						
Operating temperature	UL -20°C to +55°C (-4°F to +131°F) EN54 -10°C to +55°C (+14°F to +131°F)	IP rating	IP54 (Controller)	-10°C to +55°C (+14°F to +131°F) IP rating	IP54 (Controller). IP66 (Transmitter/Receiver)	
Storage temperature	-40°C to +85°C (-40°F to +185°F)	Housing flammability rating	UL94 V2 PC	-40°C to +85°C (-40°F to +185°F)	Housing flammability rating	UL94 V2 PC
Relative humidity (non-condensing)	0 to 93%		0 to 93%			
OPTICAL SPECIFICATIONS						
Fault level / rapid obscuration (Δ ≤ 2 seconds)	≥85%		≥85%			
Maximum angular alignment range	±10° – Receiver and Transmitter		±10° – Receiver and Transmitter			
Maximum angular misalignment	±0.7° – Transmitter. ±2.5° – Receiver		±0.7° – Transmitter. ±2.5° – Receiver			
Maximum angular misalignment of Reflector (Prism)	N/A		N/A			