Rating/Performance

Fiber Units

Through-beam fiber unit

Item \ Type/application		Long distance, general purpose, Thin fiber, side view	Flexible (break-resistant)	Chemical resistant	
			E32-T11, E32-T21, E32-T22B	E32-T12F, E32-T14F	E32-T81F
Ambient temperature	Operation	-40°C to 70°C (with no icing or condensation)			-40° to 200°C (with no icing or condensation)
	Storage				-40° to 110°C (with no icing or condensation)
Ambient humidity		Operating: 35% to 85% RH, Storage: 35% to 95% RH (with no icing or condensation)			
Admissible bending radius		25 mm min. (10 mm min. for 1 mm dia. fiber)	4 mm min.	40 mm min.	10 mm min.
Fiber sheath material		Black polyethylene	Vinyl chloride	Teflon (*) covered	
Protective structure		IEC 60529 IP67			

* Teflon is a registered trademark of the Dupont Company and the Mitsui Dupont Chemical Company for their fluoride resin.

Item \ Type/application		Flexible					
		E32-T12R	E32-T22R	E32-T16WR	E32-T16JR E32-T16PR	E32-T24R	E32-T14LR E32-ET11R E32-ET21R
Ambient temperature	Operation	-40° to 70°C (with no icing or condensation)		-25°C to 55°C (with no icing or condensation)	-40° to 70°C (with no icing or condensation)		
	Storage	-40° to 70°C (with no condensation)					
Ambient humidity		Operating: 35% to 85% RH, Storage: 35% to 95% RH (with no icing or condensation)					
Admissible bending radius		1 mm min.					
Fiber sheath material		Mixed vinyl chloride	Black polyethylene	Mixed vinyl chloride		Black polyethylene	Mixed vinyl chloride
Protective structure		IEC 60529 IP67		IEC 60529 IP50		IEC 60529 IP67	

Item \ Type/application		Heat resistant				
		300 °C	200°C		150°C	
		E32-T61-S	E32-T84S	E32-T81R-S	E32-ET51	E32-T54
Ambient temperature	Operation	-40° to 300°C *1 (with no icing or condensation)	-40° to 200°C (with no icing or condensation)	-40° to 200°C (with no icing or condensation)	-40° to 150°C *2 (with no incing or condensation)	
	Storage	-40° to 110°C (with no icing or condensation)				
Ambient humidity		Operating: 35% to 85% RH, Storage: 35% to 95% RH (with no icing or condensation)				
Admissible bending radius		25 mm min.		10 mm min.	35 mm min.	
Fiber sheath material		SUS303		Fluororesin		
Protective structure		IEC 60529 IP67				

*1 Since the heat resistance changes depending on the fiber area, refer to the external dimensions.
*2 For continuous operation, use the products within a temperature range of -40°C to 130°C

Item \ Type/application		Slot Sensor	Narrow vision field	Area sensing			
		E32-G14	E32-T22S E32-T24S	E32-T16W	E32-T16J	E32-T16	E32-T16P
Ambient temperature	Operation	-40° to 70°C (with no icing or condensation)		-25°C to 55°C (with no icing or condensation)	-40° to 70°C (with no icing or condensation)		
	Storage	-40° to 70°C (with no icing or condensation)					
Ambient humidity		Operating: 35% to 85% RH, storage: 35% to 95% RH (with no icing or condensation)					
Admissible bending radius		25 mm min.		10 mm min. (25 mm max. for E32-T16 only)			
Fiber sheath material		Black polyethylene	Mixed vinyl chloride	Vinyl chloride (black polyethylene for E32-T16 only)			
Protective structure		IEC 60529 IP67		IEC 60529 IP50 (IP67 for E32-T16 only)			

Item \ Type/application		Mapping Sensor	
		E32-A03	E32-A04
Ambient temperature	Operation	-40° to 70°C (with no icing or condensation)	
	Storage		
Ambient humidity		Operating: 35% to 85% RH, storage: 35% to 95% RH (with no icing or condensation)	
Admissible bending radius		1 mm min.	10 mm min.
Fiber sheath material		Black polyethylene	
Protective structure		IEC 60529 IP50	

Fiber Units with Reflective Sensor

Item \ Type/application		Long distance, general purpose, thin fiber, side view	Coaxial				Flexible (resists breaking)
			E32-EC31	E32-EC41	E32-C42	E32-D32	E32-D11, E32-D21, E32-D21B, E32-D22B
Differential distance		20% max. of sensing distance					
Ambient temperature	Operation	-40°C to 70°C (with no icing or condensation)					
	Storage						
Ambient humidity	Operation	35% to 85%RH (with no condensation)					
	Storage	35% to 95%RH (with no condensation)					
Admissible bending radius		25 mm min. (10 mm min. for 1 mm dia. fiber)	25 mm min.				4 mm min.
Fiber sheath material		Black polyethylene					Vinyl chloride
Protective structure		IEC 60529 IP67					

Item \ Type/application		Flexible			
		E32-D12R	E32-D22R, E32-D24R	E32-D14LR, E32-ED11R	E32-ED21R
Differential distance		20% max. of sensing distance			
Ambient temperature	Operation	-40°C to 70°C (with no icing or condensation)			
	Storage				
Ambient humidity	Operation	35% to 85%RH (with no condensation)			
	Storage	35% to 95%RH (with no condensation)			
Admissible bending radius		1 mm min.			
Fiber sheath material		Mixed vinyl chloride	Black polyethylene	Mixed vinyl chloride	Black polyethylene
Protective structure		IEC 60529 IP67			

Type/application / Item		Chemical resistance	Heat resistance			
		E32-D12F	150°C	200°C	300 °C	400 °C
			E32-ED51	E32-D81R	E32-D61	E32-D73
Differential distance		20% max. of sensing distance				
Ambient temperature	Operation	-30°C to 70°C (with no incing or condensation)	-40° to 150°C *1(with no incing or condensation)	-40° to 200°C (with no icing or condensation)	-40° to 300°C *2(with no icing or condensation)	-40° to 400°C (with no incing or condensation)
	Storage	-30°C to 70°C (with no incing or condensation)	-40° to 110°C (with no icing or condensation)			
Ambient humidity		Operating: 35% to 85% RH, Storage: 35% to 95% RH (with no icing or condensation)				
Admissible bending radius		40 mm min.	35 mm min.	10 mm min.	25 mm min.	
Fiber sheath material		Teflon (*3) covered	Fluororesin		SUS	
Protective structure		IEC 60529 IP67				

*1 For continuous operation, use the products within a temperature range of -40°C to 130°C
*2 Since the heat resistance changes depending on the fiber area, refer to the external dimensions on page AB- for details.
*3 Teflon is a registered trademark of the Dupont Company and the Mitsui Dupont Chemical Company for their fluoride resin.

Type/application / Item		Retroreflective		Limited reflective		Area sensing
		E32-R21	E32-R16	E32-L25, E32-L25A	E32-L25L, E32-L24L	E32-D36P1
Differential distance		20% max. of sensing distance			5% max. of sensing distance	20% max. of sensing distance
Ambient temperature	Operation	-40° to 70°C (with no icing or condensation)	-25°C to 55°C (with no incing or condensation)	-40° to 70°C (with no icing or condensation)	-40°C to 105°C * (with no incing or condensation)	-40° to 70°C (with no icing or condensation)
	Storage	-40° to 70°C (with no icing or condensation)			-40°C to 95°C (with no incing or condensation)	-40° to 70°C (with no incing or condensation)
Ambient humidity		Operating: 35% to 85% RH, Storage: 35% to 95% RH (with no icing or condensation)				
Admissible bending radius		10 mm min.				25 mm min.
Fiber sheath material		Black polyethylene			Reinforced polyethylene	Black polyethylene
Protective structure		IEC 60529 IP67	IEC 60529 IP66	IEC 60529 IP50		---

* For continuous operation, use the products within a temperature range of -40°C to 90°C.

Type/application / Item / Model		Limited reflective
		E32-L56E1/E32-L56E2
Standard sensing object		Soda glass (SCG) having 7% reflection factor T=0.7 end face radius chamfering
Work inclination		2°
Sensing position accuracy		+0.1/-0.3
Differential distance		20% max. of sensing distance
Ambient temperature	Operation	0°C to 70°C *
	Storage	-40° to 70°C
Ambient humidity	Operation	35% to 85%
	Storage	35% to 95%
Protective structure		IEC 60529 IP40
Material	Case	Aluminum
	Cover	SPCC steel sheet
	Lens	Glass (BK7)
	Fiber cladding	Fluororesin

* +200°C for short-time use.