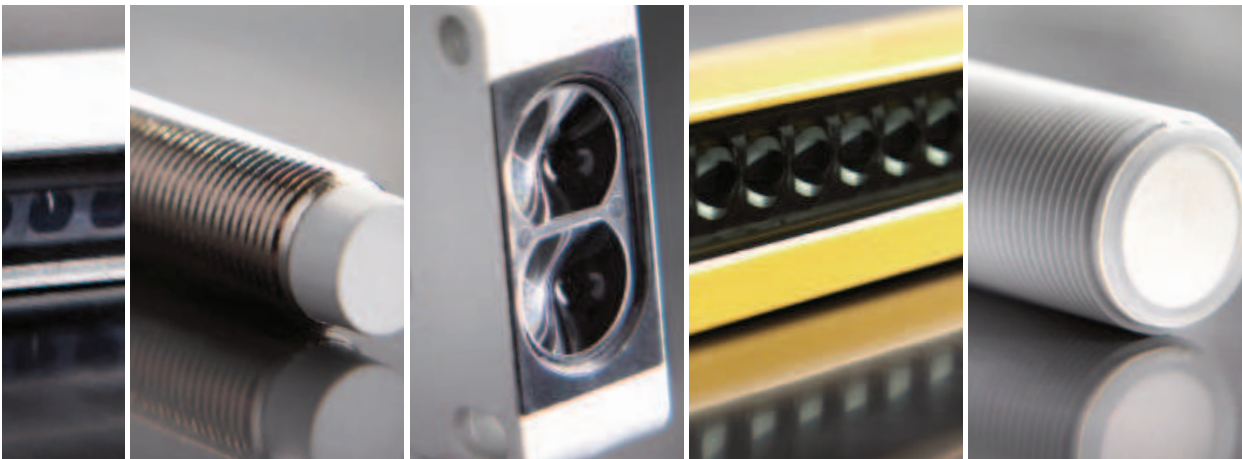




Micro Detectors

Italian Sensors Technology




short form
Catalogue













Photoelectric Sensors

- Cylindrical
- M18 short housing
- IP69K
- Cubic
- With remote amplifier
- Amplifiers for optical fibers
- Special

Cylindrical

		H8	HE	DG	DM
					
dimensions		M8	M8	ø 10 mm	M12
background suppression		—	—	—	—
diffuse short distance		—	—	—	100 mm / 200 mm
diffuse long distance		—	—	—	300 mm
retroreflective		—	—	—	—
polarized		—	—	—	2 m
retroreflective for transparents		—	—	—	—
through beam		80 mm (50 kHz)	0...1 m (10 kHz) 0...2 m (1 kHz)	2 m	4 m
laser		—	—	—	—
axial optic		●	●	●	●
90° optic		—	—	—	—
supply voltage	Vdc	●	●	●	●
	Vac	—	—	—	—
output type	NPN - NO	—	●	●	—
	NPN - NC	—	●	●	—
	PNP - NO	●	●	●	—
	PNP - NC	—	●	●	—
	NPN - NO / NC	—	—	—	●
	PNP - NO / NC	—	—	—	●
	NPN - NO + NC	—	—	—	—
	PNP - NO + NC	—	—	—	—
	DECOUT®	—	—	—	—
	relay	—	—	—	—
SCR	—	—	—	—	
temperature range		-25°C...+70°C	-25°C...+70°C	-25°C...+70°C	-25°C...+70°C
protection degree		IP67	IP67	IP67	IP67
housing material		stainless steel	stainless steel	plastic	nickel plated brass
active head material		PMMA	PMMA	PC	PMMA
output	cable	●	●	●	●
	plug	—	—	—	●
	pig-tail	—	—	—	—
ATEX		—	—	—	II3GD
other certifications		CE	CE	CE	UL US LISTED CE





	FA	FA	FAL	FAL	SS/SP
					
	M18 axial	M18 90°	M18 axial	M18 90°	M18
	30...130 mm	—	—	—	50 mm / 100 mm
	100 mm	100 mm	400 mm	300 mm	100 mm
	400 mm / 1 m	400 mm / 800 mm	—	—	400 mm / 800 mm
	4 m	4 m	—	—	4 m
	3 m	2 m	30 m (RL201)	30 m (RL201)	3 m
	100...1,000 mm	100...1,000 mm	—	—	—
	20 m	15 m	50 m	50 m	14 m
	—	—	●	●	—
	●	—	●	—	●
	—	●	—	●	●
	●	●	●	●	●
	—	—	—	—	—
	—	—	—	—	●
	—	—	—	—	●
	—	—	—	—	●
	—	—	●	—	●
	—	—	●	—	●
	●	●	●	●	—
	●	●	●	●	—
	—	—	—	—	—
	—	—	—	—	—
	—	—	—	—	—
	-25°C...+70°C	-25°C...+70°C	-15°C...+55°C	-25°C...+70°C	-25°C...+70°C
	IP67	IP67	IP67	IP67	IP67
	plastic / metallic	plastic / metallic	plastic / metallic	plastic / metallic	plastic / metallic
	PC/PMMA	PC/PMMA	glass	glass	PMMA
	●	●	●	●	●
	●	●	●	●	●
	—	—	—	—	—
	II3GD	II3GD	II3GD	II3GD	II3GD
					

Cylindrical





		MS/MP	SA	MV/MQ
				
dimensions		M18	M18	M18
background suppression		50 mm / 100 mm	—	50 mm / 100 mm
diffuse short distance		100 mm / 200 mm	150 mm	100 mm / 200 mm
diffuse long distance		400 mm	400 mm	400 mm / 800 mm
retroreflective		4 m	6 m	4 m
polarized		3 m	3 m	3 m
retroreflective for transparents		—	—	—
through beam		16 m / 32 m	—	16 m / 32 m
laser		—	—	—
axial optic		•	•	•
90° optic		•	—	•
supply voltage	Vdc	•	•	—
	Vac	—	—	•
output type	NPN - NO	—	—	—
	NPN - NC	—	—	—
	PNP - NO	—	—	—
	PNP - NC	—	—	—
	NPN - NO / NC	—	•	—
	PNP - NO / NC	—	•	—
	NPN - NO + NC	—	—	—
	PNP - NO + NC	—	—	—
	DECOUT®	•	—	—
	relay	—	—	—
SCR	—	—	•	
temperature range		-25°C...+70°C	-25°C...+70°C	-25°C...+70°C
protection degree		IP67	IP65	IP67
housing material		plastic / metallic	plastic / metallic	plastic
active head material		PMMA	PMMA	PMMA
output	cable	•	•	•
	plug	•	•	•
	pig-tail	—	—	—
ATEX		II3GD	—	—
other certifications				








M18 short housing		IP69K
FQ	FF	
		
M18	M18	
—	30...130 mm	
100 mm	100 mm	
0,4 / 1,2 m (1m-90°)	400 mm / 800 mm	
5 m	—	
4 m	4 m	
100...1,000 mm	100...1,000 mm	
20 m (16 m - 90°)	20 m	
—	—	
•	•	
•	—	
•	—	
—	—	
—	—	
—	—	
—	—	
—	—	
—	•	
—	•	
•	•	
•	•	
—	—	
—	—	
—	—	
-25°C...+70°C	-25°C...+80°C	
IP67	IP68/IP69K	
plastic / metallic	stainless steel AISI 316L	
PMMA/PC	PMMA	
•	—	
•	•	
—	—	
—	I13GD	
CE	Diversey ECOLAB cUL US LISTED CE	

Photoelectric Sensors


Cubic

		QM	FE	QX	PS
					
		New model QMRG			
dimensions		21x12,8x31,2 mm	11x20x31 mm	15x23x40 mm	15x26x49 mm
background suppression		—	15...500 mm	—	—
diffuse short distance		100 mm	—	—	100 mm / 200 mm
diffuse long distance		400 mm / 1,000 mm	800 mm	300 mm	—
retroreflective		—	—	4 m	2 m
polarized		5 m	4 m	2,5 m	—
retroreflective for transparents		0.4... 4 m 0.05... 1.5 m	—	—	—
through beam		20 m	12 m	8 m	4 m
laser		—	—	—	—
axial optic		—	—	•	—
90° optic		•	•	•	•
supply voltage	Vdc	•	•	•	•
	Vac	—	—	—	—
output type	NPN - NO	—	—	•	•
	NPN - NC	—	—	•	•
	PNP - NO	—	—	•	•
	PNP - NC	—	—	•	•
	NPN - NO / NC	•	•	—	•
	PNP - NO / NC	•	•	—	•
	NPN - NO + NC	—	—	—	—
	PNP - NO + NC	—	—	—	—
	DECOUT®	—	—	—	—
	relay	—	—	—	—
SCR	—	—	—	—	
temperature range		-25°C...+70°C	-25°C...+55°C	-25°C...+70°C	-25°C...+70°C
protection degree		IP67	IP67	IP65	IP65
housing material		plastic	plastic	ABS	plastic
active head material		PMMA	PC	acrylic	PMMA
output	cable	•	•	•	•
	M12 plug	•	•	•	•
	M12 pig-tail	(pig-tail)	—	—	—
ATEX		—	—	—	—
other certifications		CE	CE	CE	CE



	BS	BV	Q5	FG	RX
					
	15x37x70 mm	15x37x70 mm	18x50x50 mm	20x43x65 mm	26x50x80 mm
	—	—	—	90...310 mm 110...600 mm	50...300 mm 250...1,000 mm
	100 mm / 200 mm	100 mm / 200 mm	300 mm	—	—
	400 mm / 1,600 mm	400 mm / 1,600 mm	—	—	1,000 mm / 2,000 mm
	8 m	8 m	6 m	—	12 m
	—	—	4 m	9 m	6 m
	—	—	—	—	—
	—	—	10 m	20 m	16 m / 32 m
	—	—	—	—	—
	—	—	•	•	•
	•	•	—	•	—
	•	—	•	•	•
	—	•	•	•	•
	—	—	—	—	—
	—	—	—	—	—
	—	—	—	—	—
	—	—	—	•	—
	—	—	—	•	—
	—	—	—	—	—
	—	—	•	—	—
	•	—	•	—	•
	—	—	—	•	•
	—	•	•	—	—
	-25°C...+70°C	-25°C...+70°C	-25°C...+55°C	-25°C...+55°C	-25°C...+70°C
	IP65	IP65	IP64	IP67	IP65
	ABS	ABS	ABS	Plastic	PC
	acrylic	acrylic	PMMA	PC	PMMA
	•	•	•	•	—
	•	•	—	•	•
	—	—	—	—	—
	—	—	—	—	—
	CE	CE	CE	CE	CE

With remote amplifier




		UR	DG
			
dimensions		32x67x90 mm	ø 10 mm / M12
relay output amplifier		●	—
plastic fibers amplifier		—	—
glass fibers amplifier		—	—
DIN rail amplifier		—	—
temporizzazioni uscita		●	—
teach-in		—	—
sensing distance		—	fino a 75 m
supply voltage	Vdc	●	—
	Vda	●	—
output type	relay	●	—
	PNP - NO / NC	—	—
	NPN - NO / NC	—	—
temperature range		-10°C...+50°C	-20°C...+60°C
protection degree		IP20	IP67
housing material		plastic	plastic / metallic
optic material		—	PC - glass
uscita	cable	—	●
	M12 plug	—	—
	M8 plug	—	—
ATEX		—	—
other certifications		CE	CE






Amplifiers for optical fibers

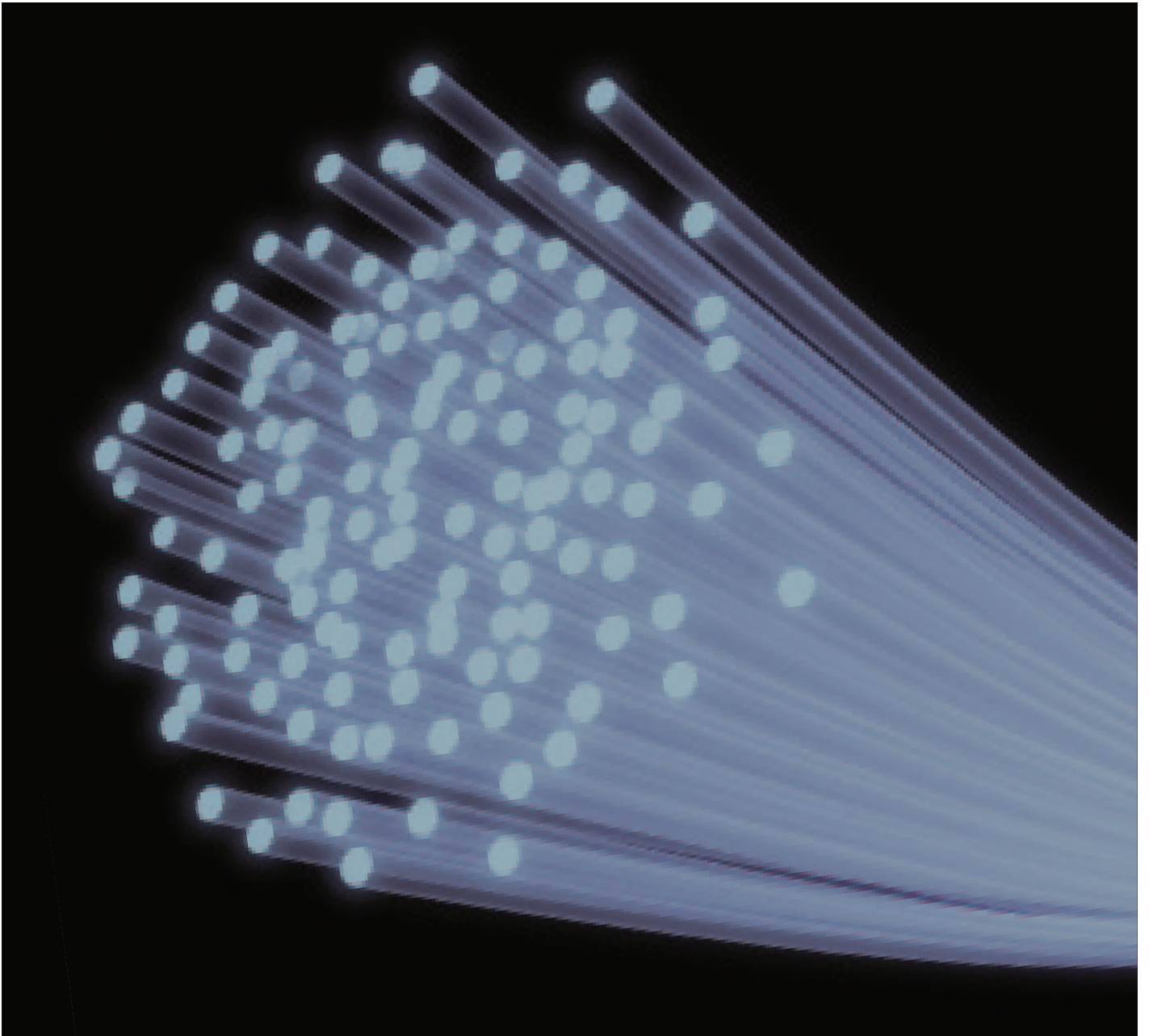
SSF	FS1	FX3	FX4	F1/F2	F6
					
M18	15x26x66 mm	10x31x60 mm	10x31x60 mm	10x32x70 mm	10x32x70 mm
—	—	—	—	—	—
•	•	•	•	•	•
•	•	•	•	•	•
—	—	•	•	•	•
—	—	—	•	—	•
•	—	—	•	—	•
depending on the used fiber	depending on the used fiber	depending on the used fiber	depending on the used fiber	depending on the used fiber	depending on the used fiber
—	—	•	•	•	•
—	—	—	—	—	—
•	•	—	—	—	—
•	•	•	•	•	•
•	•	•	•	•	•
-25°C...+70°C	-25°C...+70°C	-25°C...+55°C	-25°C...+55°C	-25°C...+55°C	-25°C...+55°C
IP67	IP65	IP64	IP64	IP50	IP50
plastic / metallic	PA	PBT	PBT	PBT / PC	PBT / PC
plastic fibers, glass fibers	plastic fibers, glass fibers	plastic fibers, glass fibers	plastic fibers, glass fibers	plastic fibers, glass fibers	plastic fibers, glass fibers
•	•	•	•	•	•
•	•	—	—	—	—
—	—	•	•	—	—
—	—	—	—	—	—
					

Special

		LTB	LDLU	LDLV
				
dimensions		M18	M18	M30
contrast scanner		•	—	—
luminiscent scanner		—	•	•
colour sensor		—	—	—
slot sensor for edge detection		—	—	—
sensing distance		12 mm (STF12) 25 mm (STF25)	12 mm (STF12) 25 mm (STF25)	30 mm
supply voltage	Vdc	•	•	•
	Vac	—	—	—
output type	NPN / PNP NO / NC	—	—	—
	4x NPN / PNP NO / NC	—	—	—
	NPN - NO / NC	•	•	•
	PNP - NO / NC	•	•	•
	DECOUT®	—	—	—
	SCR	—	—	—
temperature range		-5°C...+55°C	-5°C...+55°C	-5°C...+55°C
protection degree		IP65	IP65	IP65
housing material		PBT	PBT	nickel plated brass
head material		plexiglass	plexiglass	glass
output	cable	•	•	—
	M12 plug	•	•	•
ATEX		—	—	—
other certifications		CE	CE	CE



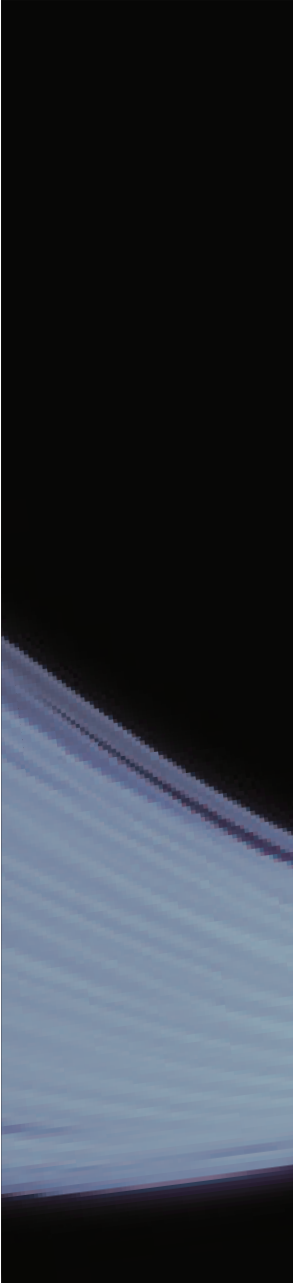
	LC5	FC3	FC4 New Model
			
	26x61x115 mm	26x75x90 mm	26x83x162 mm
	—	—	—
	—	—	—
	•	—	—
	—	•	•
	18 mm (FPCF) 50 mm (FPCP)	h = 38 mm	h = 43 mm
	•	•	•
	—	—	—
	•	—	—
	•	—	—
	—	—	—
	—	—	•
	—	—	—
	—	•	—
	0°C...+40°C	-25°C...+50°C	-25°C...+55°C
	IP67	IP64	IP67
	PC	PCB	PC
	—	PCB	PC
	—	—	•
	•	•	pig-tail
	—	—	—
	CE	CE	CE





Optical fibers

- CF plastic optical fibers
- AF modular optical fibers
- CV glass optical fibers up to 200°C
- Accessories for optical fibers CF
- CV glass optical fibers up to 250°C
- Accessories for optical fibers CV



CF plastic optical fibers

model (1)	type	SSF (EX.G.=1)	FS1 (EX.G.=1)	FX3 (EX.G.=1)	FX4 (EX.G.=1)	∅ optical fiber core	cuttable	lunghezza (2)	head shape	lenses
CF / CA1 - 20	scanner	60 mm	60 mm	140 mm	140 mm	0,5	yes	2 m	M5	yes
CF / CA2 - **	scanner	15 mm	15 mm	70 mm	110 mm	0,5	no	0,5 - 1 m	M4	no
CF / CA4 - **	scanner	15 mm	15 mm	60 mm	80 mm	0,5	no	0,5 - 1 m	M4+slieve	no
CF / RA4 - **	P/R	30 mm	30 mm	150 mm	250 mm	0,5	no	0,5 - 1 m	M4+slieve	no
CF / RA7 - **	P/R	30 mm	30 mm	150 mm	250 mm	0,5	no	0,5 - 1 m	M3	no
CF / CB1 - **	scanner	50 mm	50 mm	200 mm	300 mm	1	yes	1 - 2 m	M6	no
CF / CB3 - **	scanner	50 mm	50 mm	200 mm	300 mm	1	yes	1 - 2 m	M6	no
CF / CB3 - **	scanner	50 mm	50 mm	200 mm	300 mm	1	yes	1 - 2 m	M6+slieve	no
CF / RB3 - 20	P/R	120 mm	120 mm	700 mm	700 mm	1	yes	2 m	M4	no
CF / RB4 - **	P/R	120 mm	120 mm	600 mm	900 mm	1	yes	1 - 2 m	M4+slieve	no
CF / RB6 - **	P/R	120 mm	120 mm	600 mm	900 mm	1	yes	1 - 2 m	M4	no
CF / RB9 - **	P/R	1,200 mm	1,200 mm	8,000 mm	10,000 mm	1	yes	1 - 2 m	∅ 6 mm	no
CF / RBA - **	P/R	1,200 mm	1,200 mm	8,000 mm	10,000 mm	1	yes	1 - 2 m	M7	no
CF / CC1 - 20	scanner	15 mm	15 mm	70 mm	100 mm	1	no	2 m	M6	yes
CF / CRC6 - 20	P/R	100 mm	100 mm	500 mm	500 mm	1	no	2 m	M4	no
CF / CRC9 - 20	P/R	1,000 mm	1,000 mm	6,000 mm	8,000 mm	1	no	2 m	∅ 6 mm	yes
CF / RCA - 20	P/R	1,000 mm	1,000 mm	6,000 mm	8,000 mm	1	no	2 m	M7	yes

(1) = The last two bits of the code show the fiber length (in dm) (2) = Standard length. Special lengths available on request

model	F1		F2		F6	
	ON 90%	OFF 90%	ON 90%	OFF 90%	ON 90%	OFF 90%
CF - CA1	0	0	0	0	0	0
CF - CA2	40 mm	47 mm	15 mm	18 mm	100 mm	115 mm
CF - CA4	40 mm	47 mm	15 mm	18 mm	100 mm	115 mm
CF - RA4	100 mm	130 mm	60 mm	68 mm	300 mm	350 mm
CF - RA7	100 mm	130 mm	60 mm	68 mm	300 mm	350 mm
CF - CB1	150 mm	180 mm	70 mm	90 mm	300 mm	345 mm
CF - CB3	150 mm	180 mm	70 mm	90 mm	300 mm	345 mm
CF - RB3	410 mm	500 mm	200 mm	240 mm	800 mm	925 mm
CF - RB4	410 mm	500 mm	200 mm	240 mm	800 mm	925 mm
CF - RB6	410 mm	500 mm	200 mm	240 mm	800 mm	925 mm
CF - RB9	> 4,000 mm	> 4,000 mm	2,400 mm	2,800 mm	> 4,000 mm EX.G.=12	> 4,000 mm EX.G.=12
CF - RBA	> 4,000 mm	> 4,000 mm	2,400 mm	2,800 mm	> 4,000 mm EX.G.=12	> 4,000 mm EX.G.=12
CF - CC1	50 mm	58 mm	20 mm	25 mm	90 mm	115 mm
CF - RC6	350 mm	400 mm	190 mm	220 mm	600 mm	690 mm
CF - RC9	2,200 mm	2,600 mm	1,600 mm	1,900 mm	> 4,000 mm EX.G.=3	> 4,000 mm EX.G.=3
CF - RCA	2,200 mm	2,600 mm	1,600 mm	1,900 mm	> 4,000 mm EX.G.=3	> 4,000 mm EX.G.=3

Optical fibers

AF modular optical fibers

model	type	accessory type	SSF (EX.G.=1)	FS1 (EX.G.=1)	FX3 (EX.G.=1)	FX4 (EX.G.=1)	∅ optical fiber core	fiber model	head shape	lenses
AF / C	—	cutter	—	—	—	—	1	—	—	—
AF / 15	—	cuttable fibers	—	—	—	—	1	—	—	—
AF / ER4	P / R	collimated lenses	600 mm	600 mm	2,000 mm	3,000 mm	1	AF/15	—	yes
AF / ER5	P / R	collimated lenses	1,000 mm	1,000 mm	3,000 mm	5,000 mm	1	AF/15	—	yes
AF / ER6	P / R	collimated lenses	3,500 mm	3,500 mm	6,000 mm	8,000 mm	1	AF/15	—	yes
AF / ER7	P / R	collimated lenses	1,000 mm	1,000 mm	6,000 mm	8,000 mm	1	AF/15	—	yes

model	F1		F2		F6	
	Sn		Sn		Sn	
AF / ER4	1,500 mm		700 mm		3,000 mm	
AF / ER5	2,200 mm		1,000 mm		4,500 mm	
AF / ER6	4,500 mm		2,000 mm		6,000 mm	
AF / ER7	4,500 mm		2,000 mm		6,000 mm	

CV glass optical fibers up to 200°C

model (1)	type	SSF (EX.G.=1)	FS1 (EX.G.=1)	FX3 (EX.G.=1)	FX4 (EX.G.=1)	∅ optical fiber core	cuttable	length (2)	head shape	lenses
CV / CB1- **	scanner	50 mm	50 mm	150 mm	150 mm	1	no	1 - 2 m	M4	no
CV / CB3- **	scanner	50 mm	50 mm	150 mm	150 mm	1	no	1 - 2 m	M4+sleeve	no
CV / RB4- **	P / R	90 mm	90 mm	600 mm	900 mm	1	no	1 - 2 m	M4+sleeve	no
CV / RB6- **	P / R	90 mm	90 mm	600 mm	900 mm	1	no	1 - 2 m	M4	no

(1) = The last two bits of the code show the fiber length (in dm) (2) = Standard length. Special lengths available on request

model	F1		F2		F6	
	ON 90%	OFF 90%	ON 90%	OFF 90%	ON 90%	OFF 90%
CV / CB1	**	**	70 mm	90 mm	**	**
CV / CB3	**	**	70 mm	90 mm	**	**
CV / RB4	410 mm	500 mm	200 mm	240 mm	800 mm	925 mm
CV / RB6	410 mm	500 mm	200 mm	240 mm	800 mm	925 mm

Optical fibers

Accessories for optical fibers CF

model	F1	F1	F1	fiber model
	Sn	Sn	Sn	
AF / ER9	400 mm	200 mm	800 mm	CF - RB3 - 20
ST28	1,500 mm	1,000 mm	3,000 mm	CF - RBA-**. CF - RCA - 20

CV glass optical fibers up to 250°C

model (1)	type	SSF (EX.G.=1)	FS1 (EX.G.=1)	FX3 (EX.G.=1)	FX4 (EX.G.=1)	o optical fiber core	cuttable	length (2)	head shape	lenses
CV / CB1- **ME	scanner	50 mm	50 mm	150 mm	150 mm	1	no	1 - 2 m	M4	no
CV / CB3- **ME	scanner	50 mm	50 mm	150 mm	150 mm	1	no	1 - 2 m	M4+slave	no
CV / RB4- **ME	P/R	90 mm	90 mm	600 mm	900 mm	1	no	1 - 2 m	M4+slave	no
CV / RB6- **ME	P/R	90 mm	90 mm	600 mm	900 mm	1	no	1 - 2 m	M4	no

(1) = The last two bits of the code show the fiber length (in dm)

(2) = Standard length. Special lengths available on request

Optical fibers

Accessories for optical fibers CV

model (1)	type	accessory type	SSF (EX.G.=1)	FS1 (EX.G.=1)	FX3 (EX.G.=1)	FX4 (EX.G.=1)	∅ optical fiber core	fiber model	head shape	lenses
AF/FC1	scanner	focusing device	25 mm	25 mm	30 mm	30 mm	1	CV/CB1-**	∅ 6.5 mm	yes
AF/FC2	scanner	focusing device	45 mm	45 mm	50 mm	50 mm	1	CV/CB1-**	∅ 6.5 mm	yes
AF/ER1	P/R	additional lens	1,000 mm	1,000 mm	4,000 mm	4,000 mm	1	CV/RB6-**	∅ 5 mm	yes
AF/ER2	P/R	additional lens	3,000 mm	3,000 mm	8,000 mm	10,000 mm	1	CV/RB6-**	∅ 8.5 mm	yes
AF/ER3	P/R	additional lens	3,000 mm	3,000 mm	14,000 mm	16,000 mm	1	CV/RB6-**	13x13 mm	yes

model	F1	F2	F6
	Sn	Sn	Sn
AF / FC1	**	20 mm	**
AF / FC2	**	30 mm	**
AF / ER1	3,000 mm	2,000 mm	6,000 mm
AF / ER2	4,000 mm	3,000 mm	8,000 mm
AF / ER3	10,000 mm	8,000 mm	14,000 mm