

Product Discontinuation

Name of Category

Model F3SG-□RA□□□□-14

Model F3SG-□RA□□□□-30

Model F3SG-□RE□□□□□14

Model F3SG-□RE□□□□□30



Recommended Replacement

Name of Category

Model F3SG-□SR□□□□□-14(-□)

Model F3SG-□SR□□□□□-25(-□)

Model F3SG-□SR□□□□□-14(-□)

Model F3SG-□SR□□□□□-25(-□)

[Final order entry date]

The end of March, 2026

[Date of The Last Shipping]

The end of May, 2026

[Scheduled date of maintenance close]

The end of March, 2026

[Caution on recommended replacement]

The output type of the recommended replacement product changes depending on the connection destination of the power line.

When wiring the recommended replacement product, please wire according to the output type of the discontinued product.

[Difference from discontinued product]

Recommended replacement Model	Body Color	Dimensions	Wire connection	Mounting Dimensions	Characteristics	Operation ratings	Operation methods
F3SG-□SR□□□□□-14(-□)	**	--	*	--	--	*	*
F3SG-□SR□□□□□-25(-□)	**	--	*	--	--	*	*

** : Compatible

* : The change is a little/Almost compatible

-- : Not compatible

- : No corresponding specification

[Product Discontinuation and recommended replacement]

Product discontinuation	Recommended replacement
F3SG-4RA0160-14	F3SG-4SRA0160-14
	F3SG-4SRA0200-14-F
	F3SG-4SRB0160-14
	F3SG-4SRB0200-14-F
F3SG-4RA0190-30	F3SG-4SRA0160-25
	F3SG-4SRA0200-25-F
	F3SG-4SRB0160-25
	F3SG-4SRB0200-25-F
F3SG-4RA0240-14	F3SG-4SRA0240-14
	F3SG-4SRA0280-14-F
	F3SG-4SRB0240-14
	F3SG-4SRB0280-14-F
F3SG-4RA0270-30	F3SG-4SRA0240-25
	F3SG-4SRA0280-25-F
	F3SG-4SRB0240-25
	F3SG-4SRB0280-25-F
F3SG-4RA0320-14	F3SG-4SRA0320-14
	F3SG-4SRA0360-14-F
	F3SG-4SRB0320-14
	F3SG-4SRB0360-14-F
F3SG-4RA0350-30	F3SG-4SRA0320-25
	F3SG-4SRA0360-25-F
	F3SG-4SRB0320-25
	F3SG-4SRB0360-25-F
F3SG-4RA0400-14	F3SG-4SRA0400-14
	F3SG-4SRA0440-14-F
	F3SG-4SRB0400-14
	F3SG-4SRB0440-14-F
F3SG-4RA0430-30	F3SG-4SRA0400-25
	F3SG-4SRA0440-25-F
	F3SG-4SRB0400-25
	F3SG-4SRB0440-25-F
F3SG-4RA0480-14	F3SG-4SRA0480-14
	F3SG-4SRA0520-14-F
	F3SG-4SRB0480-14
	F3SG-4SRB0520-14-F

Product discontinuation	Recommended replacement
F3SG-4RA0510-30	F3SG-4SRA0480-25
	F3SG-4SRA0520-25-F
	F3SG-4SRB0480-25
	F3SG-4SRB0520-25-F
F3SG-4RA0560-14	F3SG-4SRA0560-14
	F3SG-4SRA0600-14-F
	F3SG-4SRB0560-14
	F3SG-4SRB0600-14-F
F3SG-4RA0590-30	F3SG-4SRA0560-25
	F3SG-4SRA0600-25-F
	F3SG-4SRB0560-25
	F3SG-4SRB0600-25-F
F3SG-4RA0640-14	F3SG-4SRA0640-14
	F3SG-4SRA0680-14-F
	F3SG-4SRB0640-14
	F3SG-4SRB0680-14-F
F3SG-4RA0670-30	F3SG-4SRA0640-25
	F3SG-4SRA0680-25-F
	F3SG-4SRB0640-25
	F3SG-4SRB0680-25-F
F3SG-4RA0720-14	F3SG-4SRA0720-14-F
	F3SG-4SRA0760-14-F
	F3SG-4SRB0720-14-F
	F3SG-4SRB0760-14-F
F3SG-4RA0750-30	F3SG-4SRA0720-25
	F3SG-4SRA0760-25-F
	F3SG-4SRB0720-25
	F3SG-4SRB0760-25-F
F3SG-4RA0800-14	F3SG-4SRA0800-14
	F3SG-4SRA0840-14-F
	F3SG-4SRB0800-14
	F3SG-4SRB0840-14-F
F3SG-4RA0830-30	F3SG-4SRA0800-25
	F3SG-4SRA0840-25-F
	F3SG-4SRB0800-25
	F3SG-4SRB0840-25-F
F3SG-4RA0880-14	F3SG-4SRA0880-14-F
	F3SG-4SRA0920-14-F

Product discontinuation	Recommended replacement
	F3SG-4SRB0880-14-F
	F3SG-4SRB0920-14-F
F3SG-4RA0910-30	F3SG-4SRA0880-25
	F3SG-4SRA0920-25-F
	F3SG-4SRB0880-25
	F3SG-4SRB0920-25-F
F3SG-4RA0960-14	F3SG-4SRA0960-14-F
	F3SG-4SRA1000-14
	F3SG-4SRB0960-14-F
	F3SG-4SRB1000-14
F3SG-4RA0990-30	F3SG-4SRA0960-25
	F3SG-4SRA1000-25-F
	F3SG-4SRB0960-25
	F3SG-4SRB1000-25-F
F3SG-4RA1040-14	F3SG-4SRA1000-14
	F3SG-4SRA1200-14
	F3SG-4SRB1000-14
	F3SG-4SRB1200-14
F3SG-4RA1070-30	F3SG-4SRA1040-25
	F3SG-4SRA1120-25
	F3SG-4SRB1040-25
	F3SG-4SRB1120-25
F3SG-4RA1120-14	F3SG-4SRA1200-14
	F3SG-4SRB1200-14
F3SG-4RA1150-30	F3SG-4SRA1120-25
	F3SG-4SRA1200-25
	F3SG-4SRB1120-25
	F3SG-4SRB1200-25
F3SG-4RA1200-14	F3SG-4SRA1200-14
	F3SG-4SRB1200-14
F3SG-4RA1230-30	F3SG-4SRA1200-25
	F3SG-4SRA1280-25
	F3SG-4SRB1200-25
	F3SG-4SRB1280-25
F3SG-4RA1280-14	F3SG-4SRA1200-14
	F3SG-4SRA1400-14
	F3SG-4SRB1200-14
	F3SG-4SRB1400-14

Product discontinuation	Recommended replacement
F3SG-4RA1310-30	F3SG-4SRA1280-25
	F3SG-4SRA1360-25
	F3SG-4SRB1280-25
	F3SG-4SRB1360-25
F3SG-4RA1360-14	F3SG-4SRA1400-14
	F3SG-4SRB1400-14
F3SG-4RA1390-30	F3SG-4SRA1360-25
	F3SG-4SRA1440-25
	F3SG-4SRB1360-25
	F3SG-4SRB1440-25
F3SG-4RA1440-14	F3SG-4SRA1600-14
	F3SG-4SRB1600-14
F3SG-4RA1470-30	F3SG-4SRA1440-25
	F3SG-4SRA1520-25
	F3SG-4SRB1440-25
	F3SG-4SRB1520-25
F3SG-4RA1520-14	F3SG-4SRA1600-14
	F3SG-4SRB1600-14
F3SG-4RA1550-30	F3SG-4SRA1600-25
	F3SG-4SRB1600-25
F3SG-4RA1600-14	F3SG-4SRA1600-14
	F3SG-4SRB1600-14
F3SG-4RA1630-30	F3SG-4SRA1680-25
	F3SG-4SRB1680-25
F3SG-4RA1680-14	F3SG-4SRA1800-14
	F3SG-4SRB1800-14
F3SG-4RA1710-30	F3SG-4SRA1760-25
	F3SG-4SRB1760-25
F3SG-4RA1760-14	F3SG-4SRA1800-14
	F3SG-4SRB1800-14
F3SG-4RA1790-30	F3SG-4SRA1840-25
	F3SG-4SRA1920-25
	F3SG-4SRB1840-25
	F3SG-4SRB1920-25
F3SG-4RA1840-14	F3SG-4SRA2000-14
	F3SG-4SRB2000-14
F3SG-4RA1870-30	F3SG-4SRA1840-25
	F3SG-4SRA1920-25

Product discontinuation	Recommended replacement
	F3SG-4SRB1840-25
	F3SG-4SRB1920-25
F3SG-4RA1920-14	F3SG-4SRA2000-14
	F3SG-4SRB2000-14
F3SG-4RA1950-30	F3SG-4SRA1920-25
	F3SG-4SRA2080-25
	F3SG-4SRB1920-25
	F3SG-4SRB2080-25
F3SG-4RA2000-14	F3SG-4SRA2000-14
	F3SG-4SRB2000-14
F3SG-4RA2030-30	F3SG-4SRA2080-25
	F3SG-4SRB2080-25
F3SG-4RA2080-14	F3SG-4SRA2000-14
	F3SG-4SRB2000-14
F3SG-4RA2110-30	F3SG-4SRA2080-25
	F3SG-4SRA2280-25
	F3SG-4SRB2080-25
	F3SG-4SRB2280-25
F3SG-4RA2190-30	F3SG-4SRA2280-25
	F3SG-4SRB2280-25
F3SG-4RA2270-30	F3SG-4SRA2280-25
	F3SG-4SRB2280-25
F3SG-4RA2350-30	F3SG-4SRA2480-25
	F3SG-4SRB2480-25
F3SG-4RA2430-30	F3SG-4SRA2480-25
	F3SG-4SRB2480-25
F3SG-4RA2510-30	F3SG-4SRA2480-25
	F3SG-4SRB2480-25
F3SG-4RE0160N14	F3SG-4SRA0160-14
	F3SG-4SRA0200-14-F
	F3SG-4SRB0160-14
	F3SG-4SRB0200-14-F
F3SG-4RE0160P14	F3SG-4SRA0160-14
	F3SG-4SRA0200-14-F
	F3SG-4SRB0160-14
	F3SG-4SRB0200-14-F
F3SG-4RE0190N30	F3SG-4SRA0160-25
	F3SG-4SRA0200-25-F

Product discontinuation	Recommended replacement
	F3SG-4SRB0160-25
	F3SG-4SRB0200-25-F
F3SG-4RE0190P30	F3SG-4SRA0160-25
	F3SG-4SRA0200-25-F
	F3SG-4SRB0160-25
	F3SG-4SRB0200-25-F
F3SG-4RE0240N14	F3SG-4SRA0240-14
	F3SG-4SRA0280-14-F
	F3SG-4SRB0240-14
	F3SG-4SRB0280-14-F
F3SG-4RE0240P14	F3SG-4SRA0240-14
	F3SG-4SRA0280-14-F
	F3SG-4SRB0240-14
	F3SG-4SRB0280-14-F
F3SG-4RE0270N30	F3SG-4SRA0240-25
	F3SG-4SRA0280-25-F
	F3SG-4SRB0240-25
	F3SG-4SRB0280-25-F
F3SG-4RE0270P30	F3SG-4SRA0240-25
	F3SG-4SRA0280-25-F
	F3SG-4SRB0240-25
	F3SG-4SRB0280-25-F
F3SG-4RE0320N14	F3SG-4SRA0320-14
	F3SG-4SRA0360-14-F
	F3SG-4SRB0320-14
	F3SG-4SRB0360-14-F
F3SG-4RE0320P14	F3SG-4SRA0320-14
	F3SG-4SRA0360-14-F
	F3SG-4SRB0320-14
	F3SG-4SRB0360-14-F
F3SG-4RE0350N30	F3SG-4SRA0320-25
	F3SG-4SRA0360-25-F
	F3SG-4SRB0320-25
	F3SG-4SRB0360-25-F
F3SG-4RE0350P30	F3SG-4SRA0320-25
	F3SG-4SRA0360-25-F
	F3SG-4SRB0320-25
	F3SG-4SRB0360-25-F

Product discontinuation	Recommended replacement
F3SG-4RE0400N14	F3SG-4SRA0400-14
	F3SG-4SRA0440-14-F
	F3SG-4SRB0400-14
	F3SG-4SRB0440-14-F
F3SG-4RE0400P14	F3SG-4SRA0400-14
	F3SG-4SRA0440-14-F
	F3SG-4SRB0400-14
	F3SG-4SRB0440-14-F
F3SG-4RE0430N30	F3SG-4SRA0400-25
	F3SG-4SRA0440-25-F
	F3SG-4SRB0400-25
	F3SG-4SRB0440-25-F
F3SG-4RE0430P30	F3SG-4SRA0400-25
	F3SG-4SRA0440-25-F
	F3SG-4SRB0400-25
	F3SG-4SRB0440-25-F
F3SG-4RE0480N14	F3SG-4SRA0480-14
	F3SG-4SRA0520-14-F
	F3SG-4SRB0480-14
	F3SG-4SRB0520-14-F
F3SG-4RE0480P14	F3SG-4SRA0480-14
	F3SG-4SRA0520-14-F
	F3SG-4SRB0480-14
	F3SG-4SRB0520-14-F
F3SG-4RE0510N30	F3SG-4SRA0480-25
	F3SG-4SRA0520-25-F
	F3SG-4SRB0480-25
	F3SG-4SRB0520-25-F
F3SG-4RE0510P30	F3SG-4SRA0480-25
	F3SG-4SRA0520-25-F
	F3SG-4SRB0480-25
	F3SG-4SRB0520-25-F
F3SG-4RE0560N14	F3SG-4SRA0560-14
	F3SG-4SRA0600-14-F
	F3SG-4SRB0560-14
	F3SG-4SRB0600-14-F
F3SG-4RE0560P14	F3SG-4SRA0560-14
	F3SG-4SRA0600-14-F

Product discontinuation	Recommended replacement
	F3SG-4SRB0560-14
	F3SG-4SRB0600-14-F
F3SG-4RE0590N30	F3SG-4SRA0560-25
	F3SG-4SRA0600-25-F
	F3SG-4SRB0560-25
	F3SG-4SRB0600-25-F
F3SG-4RE0590P30	F3SG-4SRA0560-25
	F3SG-4SRA0600-25-F
	F3SG-4SRB0560-25
	F3SG-4SRB0600-25-F
F3SG-4RE0640N14	F3SG-4SRA0640-14
	F3SG-4SRA0680-14-F
	F3SG-4SRB0640-14
	F3SG-4SRB0680-14-F
F3SG-4RE0640P14	F3SG-4SRA0640-14
	F3SG-4SRA0680-14-F
	F3SG-4SRB0640-14
	F3SG-4SRB0680-14-F
F3SG-4RE0670N30	F3SG-4SRA0640-25
	F3SG-4SRA0680-25-F
	F3SG-4SRB0640-25
	F3SG-4SRB0680-25-F
F3SG-4RE0670P30	F3SG-4SRA0640-25
	F3SG-4SRA0680-25-F
	F3SG-4SRB0640-25
	F3SG-4SRB0680-25-F
F3SG-4RE0720N14	F3SG-4SRA0720-14-F
	F3SG-4SRA0760-14-F
	F3SG-4SRB0720-14-F
	F3SG-4SRB0760-14-F
F3SG-4RE0720P14	F3SG-4SRA0720-14-F
	F3SG-4SRA0760-14-F
	F3SG-4SRB0720-14-F
	F3SG-4SRB0760-14-F
F3SG-4RE0750N30	F3SG-4SRA0720-25
	F3SG-4SRA0760-25-F
	F3SG-4SRB0720-25
	F3SG-4SRB0760-25-F

Product discontinuation	Recommended replacement
F3SG-4RE0750P30	F3SG-4SRA0720-25
	F3SG-4SRA0760-25-F
	F3SG-4SRB0720-25
	F3SG-4SRB0760-25-F
F3SG-4RE0800N14	F3SG-4SRA0800-14
	F3SG-4SRA0840-14-F
	F3SG-4SRB0800-14
	F3SG-4SRB0840-14-F
F3SG-4RE0800P14	F3SG-4SRA0800-14
	F3SG-4SRA0840-14-F
	F3SG-4SRB0800-14
	F3SG-4SRB0840-14-F
F3SG-4RE0830N30	F3SG-4SRA0800-25
	F3SG-4SRA0840-25-F
	F3SG-4SRB0800-25
	F3SG-4SRB0840-25-F
F3SG-4RE0830P30	F3SG-4SRA0800-25
	F3SG-4SRA0840-25-F
	F3SG-4SRB0800-25
	F3SG-4SRB0840-25-F
F3SG-4RE0880N14	F3SG-4SRA0880-14-F
	F3SG-4SRA0920-14-F
	F3SG-4SRB0880-14-F
	F3SG-4SRB0920-14-F
F3SG-4RE0880P14	F3SG-4SRA0880-14-F
	F3SG-4SRA0920-14-F
	F3SG-4SRB0880-14-F
	F3SG-4SRB0920-14-F
F3SG-4RE0910N30	F3SG-4SRA0880-25
	F3SG-4SRA0920-25-F
	F3SG-4SRB0880-25
	F3SG-4SRB0920-25-F
F3SG-4RE0910P30	F3SG-4SRA0880-25
	F3SG-4SRA0920-25-F
	F3SG-4SRB0880-25
	F3SG-4SRB0920-25-F
F3SG-4RE0960N14	F3SG-4SRA0960-14-F
	F3SG-4SRA1000-14

Product discontinuation	Recommended replacement
	F3SG-4SRB0960-14-F
	F3SG-4SRB1000-14
F3SG-4RE0960P14	F3SG-4SRA0960-14-F
	F3SG-4SRA1000-14
	F3SG-4SRB0960-14-F
	F3SG-4SRB1000-14
F3SG-4RE0990N30	F3SG-4SRA0960-25
	F3SG-4SRA1000-25-F
	F3SG-4SRB0960-25
	F3SG-4SRB1000-25-F
F3SG-4RE0990P30	F3SG-4SRA0960-25
	F3SG-4SRA1000-25-F
	F3SG-4SRB0960-25
	F3SG-4SRB1000-25-F
F3SG-4RE1040N14	F3SG-4SRA1000-14
	F3SG-4SRA1200-14
	F3SG-4SRB1000-14
	F3SG-4SRB1200-14
F3SG-4RE1040P14	F3SG-4SRA1000-14
	F3SG-4SRA1200-14
	F3SG-4SRB1000-14
	F3SG-4SRB1200-14
F3SG-4RE1070N30	F3SG-4SRA1040-25
	F3SG-4SRA1120-25
	F3SG-4SRB1040-25
	F3SG-4SRB1120-25
F3SG-4RE1070P30	F3SG-4SRA1040-25
	F3SG-4SRA1120-25
	F3SG-4SRB1040-25
	F3SG-4SRB1120-25
F3SG-4RE1120N14	F3SG-4SRA1200-14
	F3SG-4SRB1200-14
F3SG-4RE1120P14	F3SG-4SRA1200-14
	F3SG-4SRB1200-14
F3SG-4RE1150N30	F3SG-4SRA1120-25
	F3SG-4SRA1200-25
	F3SG-4SRB1120-25
	F3SG-4SRB1200-25

Product discontinuation	Recommended replacement
F3SG-4RE1150P30	F3SG-4SRA1120-25
	F3SG-4SRA1200-25
	F3SG-4SRB1120-25
	F3SG-4SRB1200-25
F3SG-4RE1200N14	F3SG-4SRA1200-14
	F3SG-4SRB1200-14
F3SG-4RE1200P14	F3SG-4SRA1200-14
	F3SG-4SRB1200-14
F3SG-4RE1230N30	F3SG-4SRA1200-25
	F3SG-4SRA1280-25
	F3SG-4SRB1200-25
	F3SG-4SRB1280-25
F3SG-4RE1230P30	F3SG-4SRA1200-25
	F3SG-4SRA1280-25
	F3SG-4SRB1200-25
	F3SG-4SRB1280-25
F3SG-4RE1280N14	F3SG-4SRA1200-14
	F3SG-4SRA1400-14
	F3SG-4SRB1200-14
	F3SG-4SRB1400-14
F3SG-4RE1280P14	F3SG-4SRA1200-14
	F3SG-4SRA1400-14
	F3SG-4SRB1200-14
	F3SG-4SRB1400-14
F3SG-4RE1310N30	F3SG-4SRA1280-25
	F3SG-4SRA1360-25
	F3SG-4SRB1280-25
	F3SG-4SRB1360-25
F3SG-4RE1310P30	F3SG-4SRA1280-25
	F3SG-4SRA1360-25
	F3SG-4SRB1280-25
	F3SG-4SRB1360-25
F3SG-4RE1360N14	F3SG-4SRA1400-14
	F3SG-4SRB1400-14
F3SG-4RE1360P14	F3SG-4SRA1400-14
	F3SG-4SRB1400-14
F3SG-4RE1390N30	F3SG-4SRA1360-25
	F3SG-4SRA1440-25

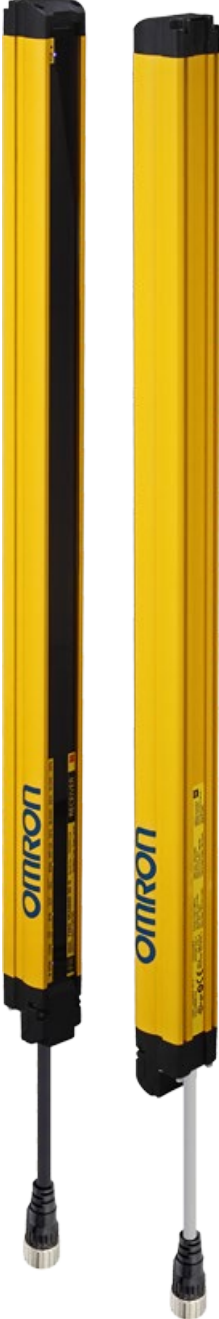
Product discontinuation	Recommended replacement
	F3SG-4SRB1360-25
	F3SG-4SRB1440-25
F3SG-4RE1390P30	F3SG-4SRA1360-25
	F3SG-4SRA1440-25
	F3SG-4SRB1360-25
	F3SG-4SRB1440-25
F3SG-4RE1440N14	F3SG-4SRA1600-14
	F3SG-4SRB1600-14
F3SG-4RE1440P14	F3SG-4SRA1600-14
	F3SG-4SRB1600-14
F3SG-4RE1470N30	F3SG-4SRA1440-25
	F3SG-4SRA1520-25
	F3SG-4SRB1440-25
	F3SG-4SRB1520-25
F3SG-4RE1470P30	F3SG-4SRA1440-25
	F3SG-4SRA1520-25
	F3SG-4SRB1440-25
	F3SG-4SRB1520-25
F3SG-4RE1520N14	F3SG-4SRA1600-14
	F3SG-4SRB1600-14
F3SG-4RE1520P14	F3SG-4SRA1600-14
	F3SG-4SRB1600-14
F3SG-4RE1550N30	F3SG-4SRA1600-25
	F3SG-4SRB1600-25
F3SG-4RE1550P30	F3SG-4SRA1600-25
	F3SG-4SRB1600-25
F3SG-4RE1600N14	F3SG-4SRA1600-14
	F3SG-4SRB1600-14
F3SG-4RE1600P14	F3SG-4SRA1600-14
	F3SG-4SRB1600-14
F3SG-4RE1630N30	F3SG-4SRA1680-25
	F3SG-4SRB1680-25
F3SG-4RE1630P30	F3SG-4SRA1680-25
	F3SG-4SRB1680-25
F3SG-4RE1680N14	F3SG-4SRA1800-14
	F3SG-4SRB1800-14
F3SG-4RE1680P14	F3SG-4SRA1800-14
	F3SG-4SRB1800-14

Product discontinuation	Recommended replacement
F3SG-4RE1710N30	F3SG-4SRA1760-25
	F3SG-4SRB1760-25
F3SG-4RE1710P30	F3SG-4SRA1760-25
	F3SG-4SRB1760-25
F3SG-4RE1760N14	F3SG-4SRA1800-14
	F3SG-4SRB1800-14
F3SG-4RE1760P14	F3SG-4SRA1800-14
	F3SG-4SRB1800-14
F3SG-4RE1790N30	F3SG-4SRA1840-25
	F3SG-4SRA1920-25
	F3SG-4SRB1840-25
	F3SG-4SRB1920-25
F3SG-4RE1790P30	F3SG-4SRA1840-25
	F3SG-4SRA1920-25
	F3SG-4SRB1840-25
	F3SG-4SRB1920-25
F3SG-4RE1840N14	F3SG-4SRA2000-14
	F3SG-4SRB2000-14
F3SG-4RE1840P14	F3SG-4SRA2000-14
	F3SG-4SRB2000-14
F3SG-4RE1870N30	F3SG-4SRA1840-25
	F3SG-4SRA1920-25
	F3SG-4SRB1840-25
	F3SG-4SRB1920-25
F3SG-4RE1870P30	F3SG-4SRA1840-25
	F3SG-4SRA1920-25
	F3SG-4SRB1840-25
	F3SG-4SRB1920-25
F3SG-4RE1920N14	F3SG-4SRA2000-14
	F3SG-4SRB2000-14
F3SG-4RE1920P14	F3SG-4SRA2000-14
	F3SG-4SRB2000-14
F3SG-4RE1950N30	F3SG-4SRA1920-25
	F3SG-4SRA2080-25
	F3SG-4SRB1920-25
	F3SG-4SRB2080-25
F3SG-4RE1950P30	F3SG-4SRA1920-25
	F3SG-4SRA2080-25

Product discontinuation	Recommended replacement
	F3SG-4SRB1920-25
	F3SG-4SRB2080-25
F3SG-4RE2000N14	F3SG-4SRA2000-14
	F3SG-4SRB2000-14
F3SG-4RE2000P14	F3SG-4SRA2000-14
	F3SG-4SRB2000-14
F3SG-4RE2030N30	F3SG-4SRA2080-25
	F3SG-4SRB2080-25
F3SG-4RE2030P30	F3SG-4SRA2080-25
	F3SG-4SRB2080-25
F3SG-4RE2080N14	F3SG-4SRA2000-14
	F3SG-4SRB2000-14
F3SG-4RE2080P14	F3SG-4SRA2000-14
	F3SG-4SRB2000-14
F3SG-4RE2110N30	F3SG-4SRA2080-25
	F3SG-4SRA2280-25
	F3SG-4SRB2080-25
	F3SG-4SRB2280-25
F3SG-4RE2110P30	F3SG-4SRA2080-25
	F3SG-4SRA2280-25
	F3SG-4SRB2080-25
	F3SG-4SRB2280-25
F3SG-4RE2190N30	F3SG-4SRA2280-25
	F3SG-4SRB2280-25
F3SG-4RE2190P30	F3SG-4SRA2280-25
	F3SG-4SRB2280-25
F3SG-4RE2270N30	F3SG-4SRA2280-25
	F3SG-4SRB2280-25
F3SG-4RE2270P30	F3SG-4SRA2280-25
	F3SG-4SRB2280-25
F3SG-4RE2350N30	F3SG-4SRA2480-25
	F3SG-4SRB2480-25
F3SG-4RE2350P30	F3SG-4SRA2480-25
	F3SG-4SRB2480-25
F3SG-4RE2430N30	F3SG-4SRA2480-25
	F3SG-4SRB2480-25
F3SG-4RE2430P30	F3SG-4SRA2480-25
	F3SG-4SRB2480-25

Product discontinuation	Recommended replacement
F3SG-4RE2510N30	F3SG-4SRA2480-25
	F3SG-4SRB2480-25
F3SG-4RE2510P30	F3SG-4SRA2480-25
	F3SG-4SRB2480-25

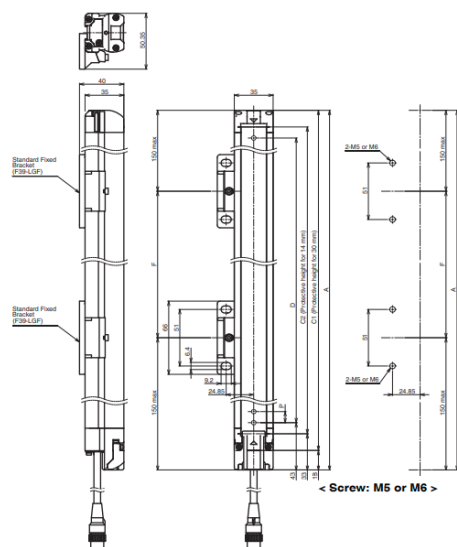
[Body color]

Product discontinuation Model F3SG-□RA□□□□-14 Model F3SG-□RA□□□□-30 Model F3SG-□RE□□□□□14 Model F3SG-□RE□□□□□30		Recommendable replacement Model F3SG-□SR□□□□□-14(-□) Model F3SG-□SR□□□□□-25(-□) Model F3SG-□SR□□□□□-14(-□) Model F3SG-□SR□□□□□-25(-□)
Table body style1 Yellow & Black 	Table body style1 Yellow & Black 	Table body style1 Yellow & Black 

[Dimensions & Mounting dimensions]

Product discontinuation
Model F3SG-□RA□□□□-14
Model F3SG-□RA□□□□-30

Backside Mounting



F3SG-□RA□□□□-30 Series

Dimension A	C1+18
Dimension C1	4-digit number of the type name (Protective height)
Dimension D	C1-50
Dimension P	20

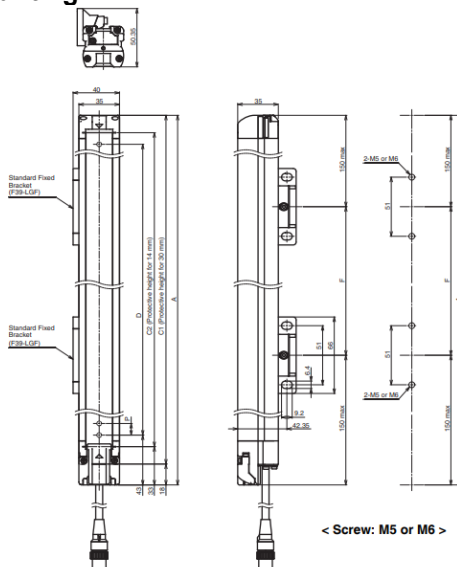
Protective height (C1)	Number of Standard Fixed Brackets *1	Dimension F
0190 to 1230	2 *2	1000 mm max.
1310 to 2270	3	1000 mm max.
2350 to 2510	4	1000 mm max.

F3SG-□RA□□□□-14 Series

Dimension A	C2+48
Dimension C2	4-digit number of the type name (Protective height)
Dimension D	C2-20
Dimension P	10

Protective height (C2)	Number of Standard Fixed Brackets *1	Dimension F
0160 to 1200	2 *2	1000 mm max.
1280 to 2080	3	1000 mm max.

Side Mounting



F3SG-□RA□□□□-30 Series

Dimension A	C1+18
Dimension C1	4-digit number of the type name (Protective height)
Dimension D	C1-50
Dimension P	20

Protective height (C1)	Number of Standard Fixed Brackets *1	Dimension F
0190 to 1230	2 *2	1000 mm max.
1310 to 2270	3	1000 mm max.
2350 to 2510	4	1000 mm max.

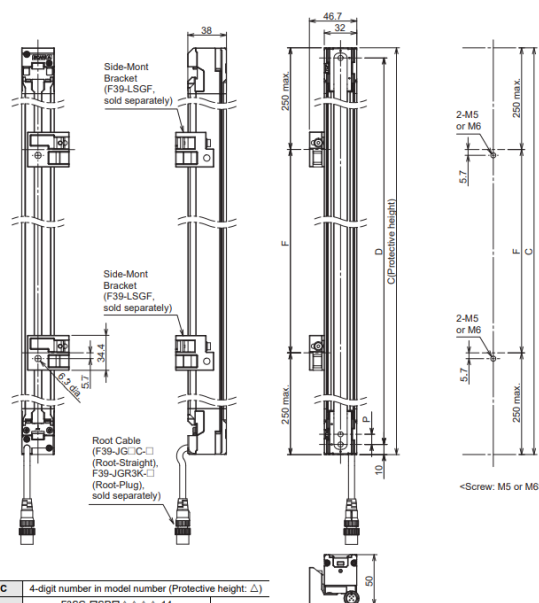
F3SG-□RA□□□□-14 Series

Dimension A	C2+48
Dimension C2	4-digit number of the type name (Protective height)
Dimension D	C2-20
Dimension P	10

Protective height (C2)	Number of Standard Fixed Brackets *1	Dimension F
0160 to 1200	2 *2	1000 mm max.
1280 to 2080	3	1000 mm max.

Recommendable replacement
Model F3SG-□SR□□□□□-14(-□)
Model F3SG-□SR□□□□□-25(-□)

Backside Mounting

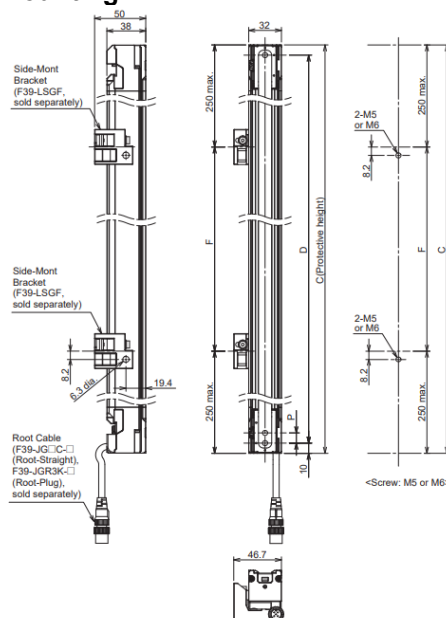


Dimension C	4-digit number in model number (Protective height: Δ)	
F3SG-DSRDΔΔΔΔ-14		C-20
F3SG-DSRDΔΔΔΔ-25		
F3SG-DSRDΔΔΔΔ-45		C-40
F3SG-DSRDΔΔΔΔ-85		
F3SG-DSRDΔΔΔΔ-14		10
F3SG-DSRDΔΔΔΔ-25		20
F3SG-DSRDΔΔΔΔ-45		40
F3SG-DSRDΔΔΔΔ-85		80

Protective height (Dimension C)	Number of Side-Mount Brackets *	Dimension F
0160 to 1440	2	1000 mm max.
1520 to 2480	3	1000 mm max.

* The number of brackets required to mount each unit (emitter, receiver).

Side Mounting



Dimension C	4-digit number in model number (Protective height: Δ)	
F3SG-DSRDΔΔΔΔ-14		C-20
F3SG-DSRDΔΔΔΔ-25		
F3SG-DSRDΔΔΔΔ-45		C-40
F3SG-DSRDΔΔΔΔ-85		
F3SG-DSRDΔΔΔΔ-14		10
F3SG-DSRDΔΔΔΔ-25		20
F3SG-DSRDΔΔΔΔ-45		40
F3SG-DSRDΔΔΔΔ-85		80

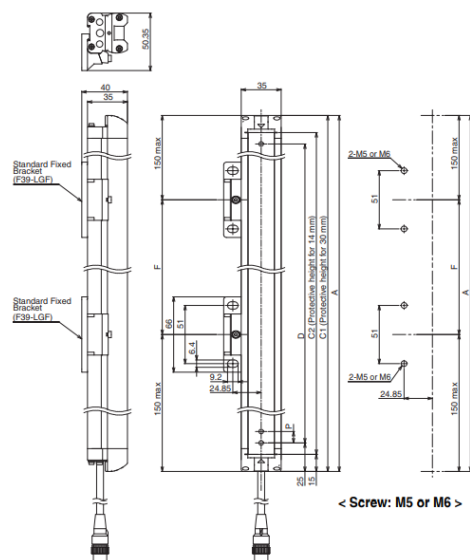
Protective height (Dimension C)	Number of Side-Mount Brackets *	Dimension F
0160 to 1440	2	1000 mm max.
1520 to 2480	3	1000 mm max.

* The number of brackets required to mount each unit (emitter, receiver).

[Dimensions & Mounting dimensions]

Product discontinuation
Model F3SG-□RE□□□□□14
Model F3SG-□RE□□□□□30

Backside Mounting



F3SG-4RE□□□□30 Series

Dimension A	C1
Dimension C1	4-digit number of the type name(Protective height)
Dimension D	C1-50
Dimension P	20

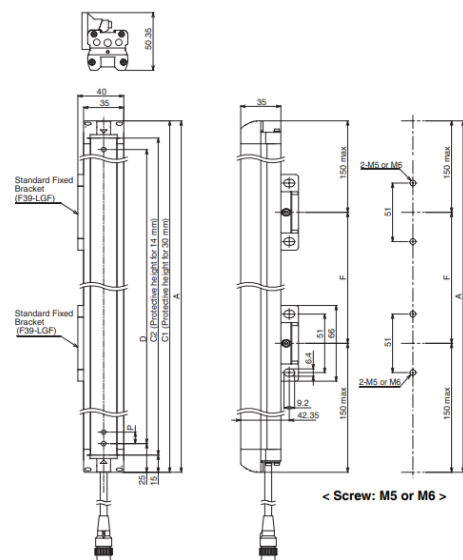
Protective height (C1)	Number of Standard Fixed Brackets *1	Dimension F
0190 to 1230	2 *2	1000 mm max.
1310 to 2270	3	1000 mm max.
2350 to 2510	4	1000 mm max.

F3SG-4RE□□□□14 Series

Dimension A	C2+30
Dimension C2	4-digit number of the type name(Protective height)
Dimension D	C2-20
Dimension P	10

Protective height (C2)	Number of Standard Fixed Brackets *1	Dimension F
0160 to 1200	2 *2	1000 mm max.
1280 to 2080	3	1000 mm max.

Side Mounting



F3SG-4RE□□□□30 Series

Dimension A	C1
Dimension C1	4-digit number of the type name (Protective height)
Dimension D	C1-50
Dimension P	20

Protective height (C1)	Number of Standard Fixed Brackets *1	Dimension F
0190 to 1230	2 *2	1000 mm max.
1310 to 2270	3	1000 mm max.
2350 to 2510	4	1000 mm max.

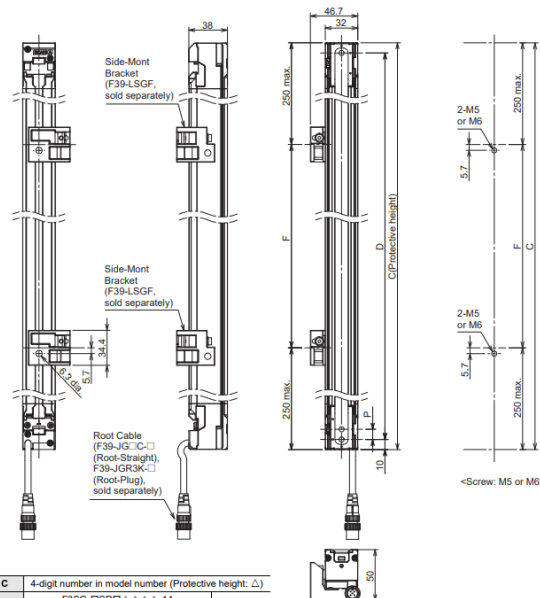
F3SG-4RE□□□□□14 Series

Dimension A	C2+30
Dimension C2	4-digit number of the type name (Protective height)
Dimension D	C2-20
Dimension P	10

Protective height (C2)	Number of Standard Fixed Brackets *1	Dimension F
0160 to 1200	2 *2	1000 mm max.
1280 to 2080	3	1000 mm max.

Recommendable replacement
Model F3SG-□SR□□□□-14(-□)
Model F3SG-□SR□□□□-25(-□)

Backside Mounting

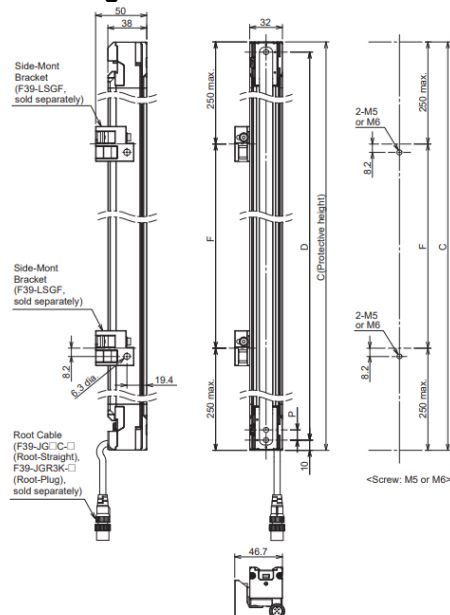


Dimension C	4-digit number in model number (Protective height: Δ)	
Dimension D	F3SG-DSR $\Delta\Delta\Delta\Delta$ -14	C-20
	F3SG-DSR $\Delta\Delta\Delta\Delta$ -25	
	F3SG-DSR $\Delta\Delta\Delta\Delta$ -45	C-40
	F3SG-DSR $\Delta\Delta\Delta\Delta$ -85	
Dimension P	F3SG-DSR $\Delta\Delta\Delta\Delta$ -14	10
	F3SG-DSR $\Delta\Delta\Delta\Delta$ -25	20
	F3SG-DSR $\Delta\Delta\Delta\Delta$ -45	40
	F3SG-DSR $\Delta\Delta\Delta\Delta$ -85	80

Protective height (Dimension C)	Number of Side-Mount Brackets *	Dimension F
0160 to 1440	2	1000 mm max.
1520 to 2480	3	1000 mm max.

* The number of brackets required to mount each unit (emitter, receiver)

Side Mounting



Dimension C	4-digit number in model number (Protective height: △)	
Dimension D	F3SG-DSR□△△△△-14	C-20
	F3SG-DSR□△△△△-25	
	F3SG-DSR□△△△△-45	C-40
Dimension P	F3SG-DSR□△△△△-85	
	F3SG-DSR□△△△△-14	10
	F3SG-DSR□△△△△-25	20
	F3SG-DSR□△△△△-45	40
	F3SG-DSR□△△△△-85	80

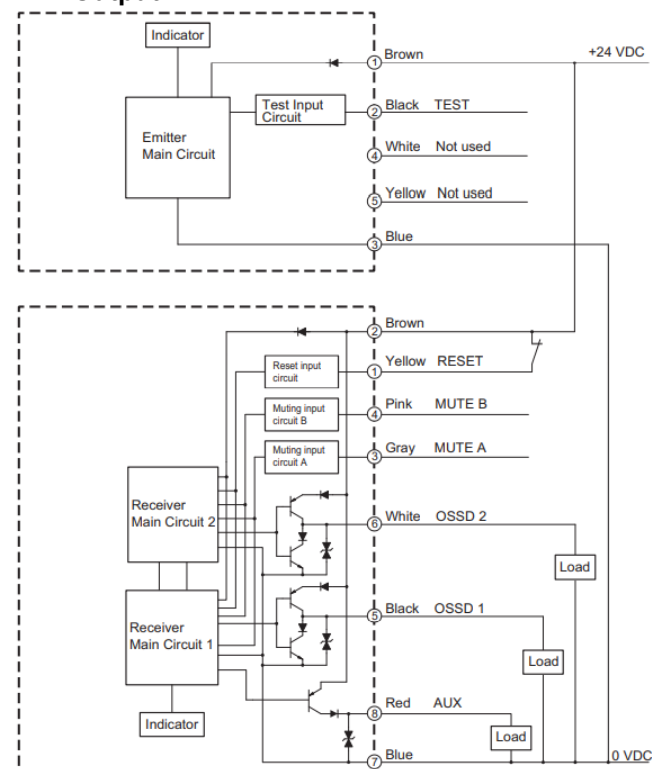
Protective height (Dimension C)	Number of Side-Mount Brackets *	Dimension F
0160 to 1440	2	1000 mm max
1520 to 2480	3	1000 mm max

* The number of brackets required to mount each unit (emitter, receiver).

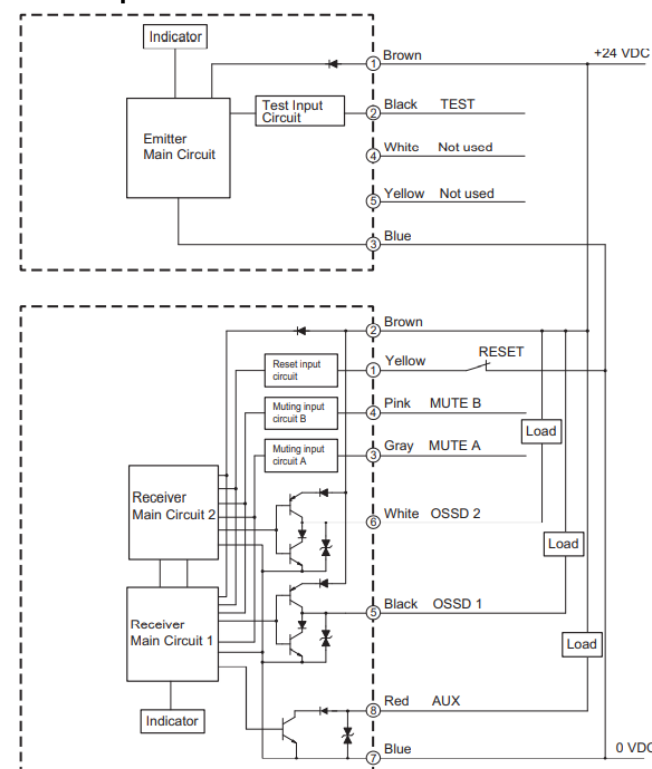
[Wire connection]

Product discontinuation
Model F3SG-□RA□□□□-14
Model F3SG-□RA□□□□-30

PNP Output

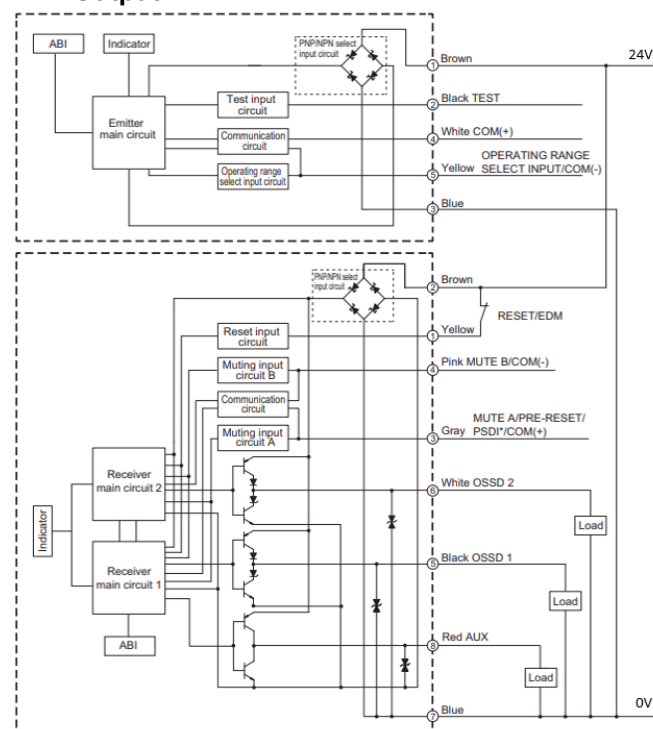


NPN Output

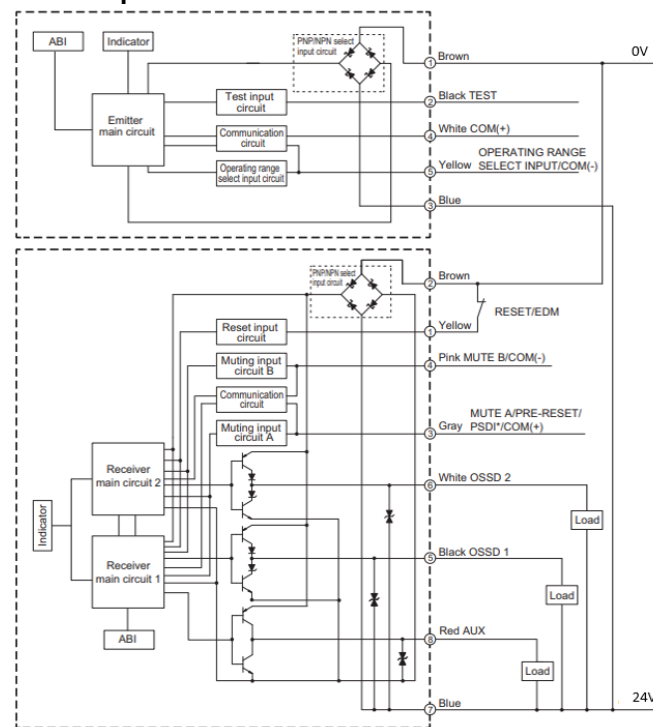


Recommendable replacement
Model F3SG-□SR□□□□□-14(-□)
Model F3SG-□SR□□□□□-25(-□)

PNP Output



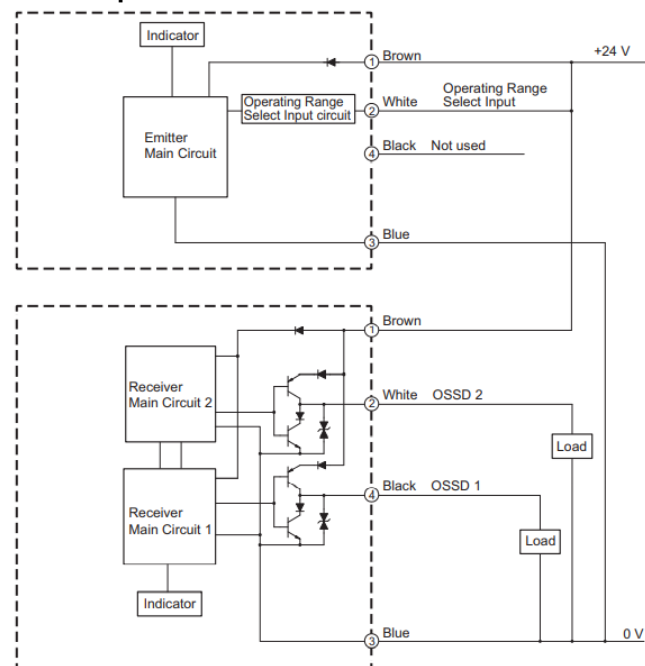
NPN Output



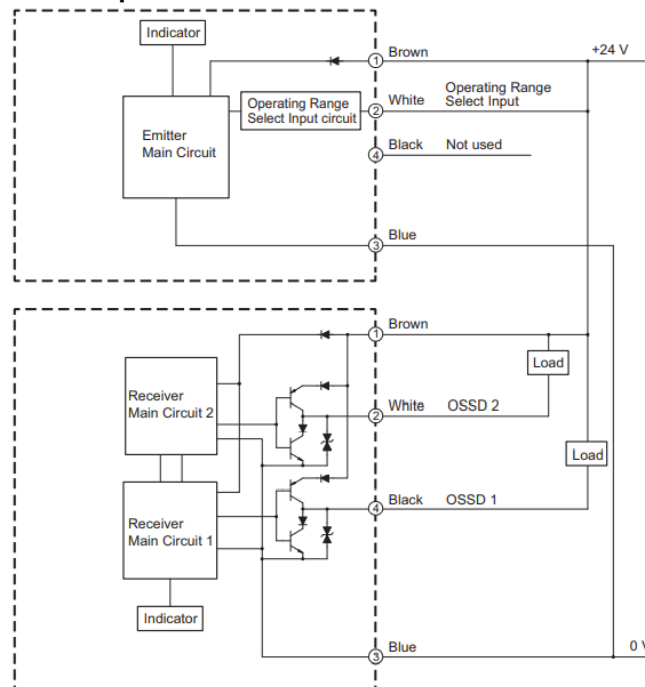
[Wire connection]

Product discontinuation
Model F3SG-□RE□□□□□14
Model F3SG-□RE□□□□□30

PNP Output

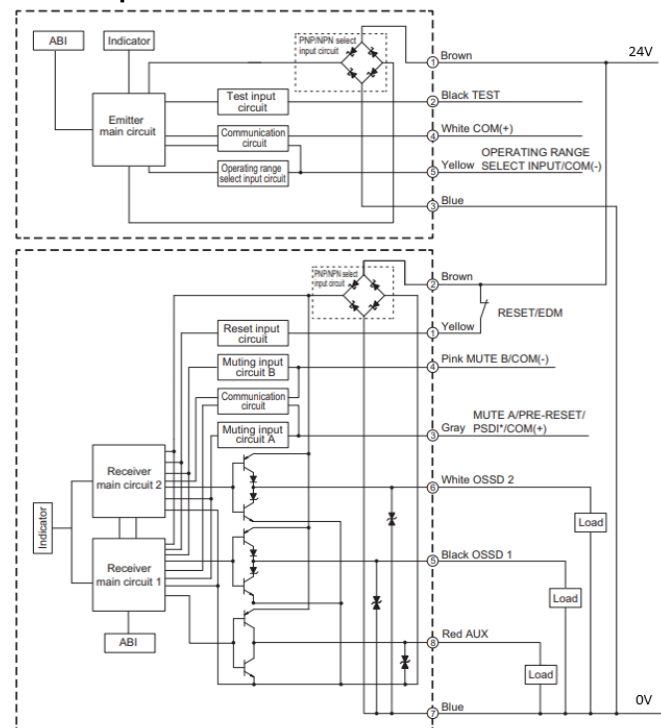


NPN Output

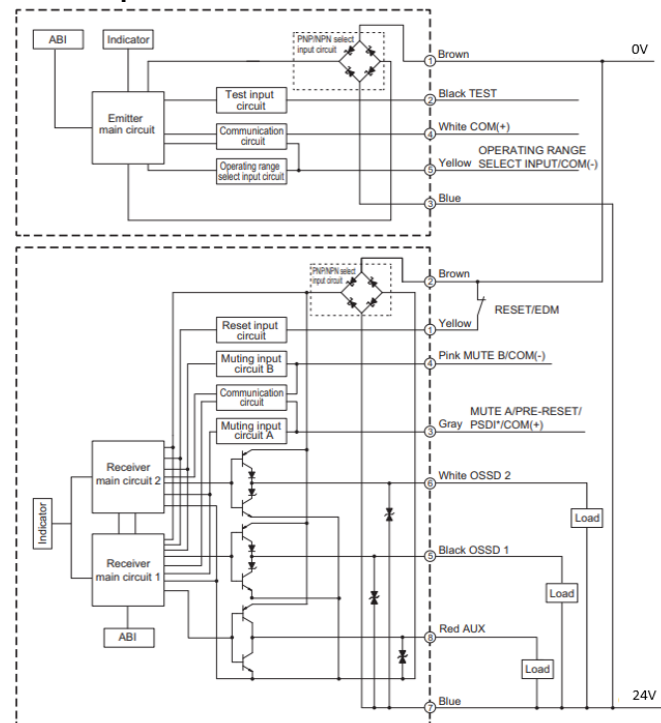


Recommendable replacement
Model F3SG-□SR□□□□□-14(-□)
Model F3SG-□SR□□□□□-25(-□)

PNP Output



NPN Output



[Characteristics]

Item	Product discontinuation Model F3SG-□RA□□□□-14	Recommendable replacement Model F3SG-□SR□□□□□□-14(-□)
Object Resolution (Detection Capability)	Opaque objects 14-mm dia.	Opaque objects 14-mm dia.
Beam Gap	10 mm	10 mm
Number of Beams	15 to 207	15 to 199
Lens Size	5.2 × 3.4 (W × H) mm	4.4 × 3.4 (W × H) mm
Protective Height	160 to 2,080 mm	160 to 2,000 mm
Operating range	- Long : 0.3 to 10.0 m - Short : 0.3 to 3.0 m	- Long : 0.3 to 10.0 m - Short : 0.3 to 3.0 m
Response time (Normal mode)	- ON → OFF Optical synchronization : 8 to 18ms - OFF → ON Optical synchronization : 40 to 90ms	- ON → OFF Optical synchronization : 8 to 18ms Wired synchronization : 10 to 21ms - OFF → ON Optical synchronization : 40 to 90ms Wired synchronization : 50 to 105ms
Effective Aperture Angle (EAA) (IEC 61496-2)	Type 4 ±2.5° max., emitter and receiver at operating range of 3 m or greater	Type 4 ±2.5° max. , emitter and receiver at operating range of 3 m or greater
Light Source	Infrared LEDs, Wavelength: 870 nm	Infrared LEDs, Wavelength: 870 nm
Startup Waiting Time	2 s max.	3 s max.
Power Supply Voltage (Vs)	SELV/PELV 24 VDC±20% (ripple p-p 10% max.)	SELV/PELV 24 VDC±20% (ripple p-p 10% max.)
Current Consumption	- Emitter 40mA to 110mA - Receiver 75mA to 125mA	- Emitter 68mA to 212mA - Receiver 97mA to 233mA
Safety Outputs (OSSD)	Two PNP or NPN transistor outputs (PNP or NPN is selectable by DIP Switch.)	Two PNP or NPN transistor outputs (PNP or NPN is selectable by wiring of power supply.)
	- Load current of 300 mA max. - Residual voltage of 2 V max. (except for voltage drop due to cable extension) - Capacitive load of 1 μF max. - Inductive load of 2.2 H max. - Leakage current of 1 mA max. (PNP), 2 mA max. (NPN)	- Load current: 300 mA max. - Residual voltage: 2 V max. (except for voltage drop due to cable extension), - Capacitive load: 1 μF max. - Inductive load: 2.2 H max. - Leakage current: 1 mA max.(PNP), 2 mA max.(NPN)
Auxiliary Output	One PNP or NPN transistor output (PNP or NPN is selectable by DIP Switch.)	One PNP or NPN transistor output (PNP or NPN is selectable by wiring of power supply.)
	- Load current of 100 mA max. - Residual voltage of 2 V max.	- Load current: 100 mA max. - Residual voltage: 2 V max. * * The residual voltage is 3 V max. when the Intelligent Tap is connected to the sensor
Output Operation Mode	Safety Output Light-ON (Safety output is enabled when the receiver receives an emitting signal.)	Safety Output Light-ON (Safety outputs are turned to the ON state when the receiver receives an emitting signal.)
	Auxiliary Output Safety output (Inverted signal output:Enable) (default) (Configurable by Configuration Tool)	Auxiliary Output Safety output (Inverted signal output: Enable) (default) (Configurable by SD Manager 3)

Item	Product discontinuation Model F3SG-□RA□□□□-14	Recommendable replacement Model F3SG-□SR□□□□-14(-□)
Input Voltage (RESET / EDM)	PNP ON voltage: Vs-3 V to Vs (short circuit current: approx. 6.5 mA) OFF voltage: 0 V to 1/2 Vs, or open (short circuit current: approx. 8.0 mA)	PNP ON voltage: Vs-3 V to Vs (short circuit current: approx. 9.5 mA) OFF voltage: 0 V to 1/2 Vs, or open (short circuit current: approx. 13.0 mA)
	NPN ON voltage: 0 to 3 V (short circuit current: approx. 8.0 mA) OFF voltage: 1/2 Vs to Vs, or open (short circuit current: approx. 6.5 mA)	NPN ON voltage: 0 to 3 V (short circuit current: approx. 13.0 mA) OFF voltage: 1/2 Vs to Vs, or open (short circuit current: approx. 9.5 mA)
Input Voltage (MUTE A/B)	PNP ON voltage: Vs-3 V to Vs (short circuit current: approx. 3.0 mA) OFF voltage: 0 V to 1/2 Vs, or open (short circuit current: approx. 5.0 mA)	PNP ON voltage: Vs-3 V to Vs (short circuit current: approx. 4.5 mA) OFF voltage: 0 V to 1/2 Vs, or open (short circuit current: approx. 7.0 mA)
	NPN ON voltage: 0 to 3 V (short circuit current: approx. 5.0 mA) OFF voltage: 1/2 Vs to Vs, or open (short circuit current: approx. 3.0 mA)	NPN ON voltage: 0 to 3 V (short circuit current: approx. 7.0 mA) OFF voltage: 1/2 Vs to Vs, or open (short circuit current: approx. 4.5 mA)
Input Voltage (TEST)	24 V Active ON voltage: 9 V to Vs (short circuit current: approx. 2.5mA) OFF voltage: 0 to 3 V, or open (short circuit current: approx. 2.0 mA)	Light emission stops when connected to 24 VDC ON voltage: Vs-3 V to Vs (short circuit current: approx. 5.0 mA) OFF voltage: 0 V to 1/2 Vs, or open (short circuit current: approx. 6.0 mA)
	0 V Active ON voltage: 0 to 3 V (short circuit current: approx. 2.0 mA) OFF voltage: 9 V to Vs, or open (short circuit current: approx. 2.5 mA)	Light emission stops when connected to 0 V ON voltage: 0 to 3 V (short circuit current: approx. 6.0 mA) OFF voltage: 1/2 Vs to Vs, or open (short circuit current: approx. 5.0 mA)
Input Voltage (OPERATING RANGE SELECT INPUT)	-	Long: 12 V to Vs (short circuit current: approx. 4.2 mA) or open
		Short: 0 to 3 V (short circuit current: approx. 4.2 mA)
Overvoltage Category (IEC 60664-1)	II	II
Protective Circuit	Output short protection, Power supply reverse polarity protection	Output short-circuit protection
Insulation Resistance	20 M Ω or higher (500 VDC megger)	20 M Ω or higher (500 VDC megger)
Dielectric Strength	1,000 VAC, 50/60 Hz (1 min)	1,000 VAC, 50/60 Hz (1 min)
Mutual Interference Prevention	•Optical synchronization by Scan Code: in up to 2 sets	•Optical synchronization by Scan Code: in up to 2 sets •Wired synchronization: in up to 3 sets
Cascade Connection	Number of cascaded segments: 3 max. Total number of beams: 255 max. Cable length between sensors: 10 m max. (not including cascading cable (F39-JGR2W) and power cable)	Number of cascaded segments: 3 max. Total number of beams: 255 max.

Item	Product discontinuation Model F3SG-□RA□□□□-14	Recommendable replacement Model F3SG-□SR□□□□-14(-□)
Test Function	Self-test (at power-on, and during operation) External test (light emission stop function by test input)	Self-test (at power-on, and during operation) External test (light emission stop function by test input)
Safety-Related Functions	Interlock External device monitoring (EDM) Pre-reset Fixed blanking/Floating blanking Reduced resolution Muting/Override PNP/NPN selection Response time adjustment Scan code selection	Interlock External Device Monitoring (EDM) Pre-Reset Fixed Blanking/Floating Blanking Reduced Resolution Muting/Override PNP/NPN Selection Response Time Adjustment Mutual Interference Prevention PSDI
Ambient Temperature	Operating: -10 to 55°C (14 to 131°F) (non-icing)	Operating: -30 to 55 °C (non-icing)
	Storage: -25 to 70°C (-13 to 158°F)	Storage: -30 to 70 °C
Ambient Humidity	Operating: 35% to 85% (non-condensing)	Operating: 35% to 85% (non-condensing)
	Storage: 35% to 95%	Storage: 35% to 95%
Ambient Illuminance	Incandescent lamp: 3,000 lx max. on receiver surface Sunlight: 10,000 lx max. on receiver surface	Incandescent lamp: 3,000 lx max. on receiver surface Sunlight: 10,000 lx max. on receiver surface
Degree of Protection (IEC 60529)	IP65 and IP67	IEC 60529: IP65 and IP67 JIS C 0920 Annex 1: IP67G
Vibration Resistance (IEC 61496-1)	10 to 55 Hz, Multiple amplitude of 0.7 mm, 20 sweeps for all 3 axes	10 to 55 Hz, Multiple amplitude of 0.7 mm, 20 sweeps for all 3 axes
Shock Resistance (IEC 61496-1)	100 m/s ² , 1000 shocks for all 3 axes	100 m/s ² , 1000 shocks for all 3 axes
Pollution Degree (IEC 60664-1)	Pollution Degree 3	Pollution Degree 3
Type of connection of Root cable	To sensors: N/A, To external: M12 connector type (5-pin emitter and 8-pin receiver) or cables prewired to the sensors IP67 rated when mated.	To sensors: dedicated connector, To external: M12 connector type (5-pin emitter and 8-pin receiver) or open-ended type IP67 and IP67G rated when mated.
Number of wires of Root cable	Emitter: 5, Receiver: 8	Emitter: 5, Receiver: 8
Cable length of Root cable	0.3 m	•Root-Plug Cable for Extended: 0.3m •Root-Straight Cable: 3m to 10m
Cable diameter of Root cable	6 mm	6 mm
Minimum bending radius of Root cable	R5 mm	R5 mm
Type of connection of Cascading cable	To sensors: N/A, To cascading sensors: M12 connector type (5-pin emitter and 8-pin receiver) IP67 rated when mated.	To sensors: dedicated connector, To cascading sensors: M12 connector type (5-pin emitter and 8-pin receiver) or dedicated connector IP67 and IP67G (JIS C 0920 Annex 1) rated when mated.
Number of wires of Cascading cable	Emitter: 5, Receiver: 8	Emitter: 5, Receiver: 8

Item	Product discontinuation Model F3SG-□RA□□□□-14	Recommendable replacement Model F3SG-□SR□□□□-14(-□)
Cable length of Cascading cable	0.2 m	0.3m
Cable diameter of Cascading cable	6 mm	6 mm
Minimum bending radius of Cascading cable	R5 mm	R5 mm
Type of connection of Extension cable	M12 connector type (5-pin emitter and 8-pin receiver), IP67 rated when mated	M12 connector type (5-pin emitter and 8-pin receiver), IP67 rated when mated
Number of wires of Extension cable	Emitter: 5, Receiver: 8	Emitter: 5, Receiver: 8
Cable length of Extension cable	•Single-Ended Cable(F39-JG□□A-□ series):3m to 20m •Double-Ended Cable(F39-JG□□B-□ series):0.5m to 20m	•Single-Ended Cable(F39-JG□□A-□ series):3m to 20m •Double-Ended Cable(F39-JG□□B-□ series):0.5m to 20m
Cable diameter of Extension cable	6.6 mm	6.6 mm
Minimum bending radius of Extension cable	R36 mm	R36 mm
Extension of Root Cable	100 m max.(Emitter/Receiver)	100 m max.(Emitter/Receiver)
Material	Housing: Aluminium alloy Cap: PBT resin Front window: Acrylic resin FE plate: Stainless steel Cable: Oil resistant PVC resin Standard Fixed Bracket (F39-LGF): Zinc alloy	Housing: Aluminum alloy Cap: PBT resin Front window: Acrylic resin FE plate: Stainless steel
Weight	Net : 0.7kg to 5.7kg Packaged : 2.0kg to 9.5kg	Net : 0.4kg to 5.1kg Packaged : 0.8kg to 6.1kg
Included Accessories	Safety Precautions Quick Installation Manual Troubleshooting Guide Sticker Warning Zone Label Standard Fixed Bracket*1 *1. The quantity of Standard Fixed Brackets included varies depending on the protective height. [F3SG-□RA□□□□-14] - Protective height of 0160 to 1200: 2 sets - Protective height of 1280 to 2080: 3 sets	Instruction Sheet Quick Installation Manual Troubleshooting Guide Sticker Warning Zone Label End Cap (for switching Scan Code Selection function)
Type of ESPE (IEC 61496-1)	Type4	Type4
Performance Level (PL)/Safety category	PL e/Category 4 (EN ISO 13849-1:2015)	PL e/Category 4 (EN ISO 13849-1:2015)
PFH _D	1.1 × 10 ⁻⁸ (IEC 61508)	1.1×10 ⁻⁸ max. (IEC 61508)
Proof test interval T _M	Every 20 years (IEC 61508)	Every 20 years (IEC 61508)
SFF	99% (IEC 61508)	99% (IEC 61508)
HFT	1 (IEC 61508)	1 (IEC 61508)
Classification	Type B (IEC 61508-2)	Type B (IEC 61508-2)

[Characteristics]

Item	Product discontinuation Model F3SG-□RA□□□□-30	Recommendable replacement Model F3SG-□SR□□□□-25(-□)
Object Resolution (Detection Capability)	Opaque objects 30-mm dia.	Opaque objects 25-mm dia.
Beam Gap	20 mm	20 mm
Number of Beams	8 to 124	8 to 124
Lens Size	7-mm dia.	6.7 × 4.5 (W × H) mm
Protective height	190 to 2,510 mm	160 to 2,480 mm
Operating range	- Long : 0.3 to 20.0 m - Short : 0.3 to 7.0 m	- Long : 0.3 to 20.0 m - Short : 0.3 to 7.0 m
Response time (Normal mode)	- ON → OFF Optical synchronization : 8 to 18ms - OFF → ON Optical synchronization : 40 to 90ms	- ON → OFF Optical synchronization : 8 to 13ms Wired synchronization : 10 to 17ms - OFF → ON Optical synchronization : 40 to 65ms Wired synchronization : 50 to 85ms
Effective Aperture Angle (EAA) (IEC 61496-2)	Type 4 ±2.5° max., emitter and receiver at operating range of 3 m or greater	Type 4 ±2.5° max. , emitter and receiver at operating range of 3 m or greater
Light Source	Infrared LEDs, Wavelength: 870 nm	Infrared LEDs, Wavelength: 870 nm
Startup Waiting Time	2 s max.	3 s max.
Power Supply Voltage (Vs)	SELV/PELV 24 VDC±20% (ripple p-p 10% max.)	SELV/PELV 24 VDC±20% (ripple p-p 10% max.)
Current Consumption	- Emitter 35mA to 90mA - Receiver 75mA to 100mA	- Emitter 61mA to 219mA - Receiver 96mA to 238mA
Safety Outputs (OSSD)	Two PNP or NPN transistor outputs (PNP or NPN is selectable by DIP Switch.)	Two PNP or NPN transistor outputs (PNP or NPN is selectable by wiring of power supply.)
	- Load current of 300 mA max. - Residual voltage of 2 V max. (except for voltage drop due to cable extension) - Capacitive load of 1 μF max. - Inductive load of 2.2 H max. - Leakage current of 1 mA max. (PNP), 2 mA max. (NPN)	- Load current: 300 mA max. - Residual voltage: 2 V max. (except for voltage drop due to cable extension), - Capacitive load: 1 μF max. - Inductive load: 2.2 H max. - Leakage current: 1 mA max.(PNP), 2 mA max.(NPN)
Auxiliary Output	One PNP or NPN transistor output (PNP or NPN is selectable by DIP Switch.)	One PNP or NPN transistor output (PNP or NPN is selectable by wiring of power supply.)
	- Load current of 100 mA max. - Residual voltage of 2 V max.	- Load current: 100 mA max. - Residual voltage: 2 V max. * * The residual voltage is 3 V max. when the Intelligent Tap is connected to the sensor
Output Operation Mode	Safety Output Light-ON (Safety output is enabled when the receiver receives an emitting signal.)	Safety Output Light-ON (Safety outputs are turned to the ON state when the receiver receives an emitting signal.)
	Auxiliary Output Safety output (Inverted signal output:Enable) (default) (Cofigurable by Configuration Tool)	Auxiliary Output Safety output (Inverted signal output: Enable) (default) (Configurable by SD Manager 3)

Item	Product discontinuation Model F3SG-□RA□□□□-30	Recommendable replacement Model F3SG-□SR□□□□-25(-□)
Input Voltage (RESET / EDM)	PNP ON voltage: Vs-3 V to Vs (short circuit current: approx. 6.5 mA) OFF voltage: 0 V to 1/2 Vs, or open (short circuit current: approx. 8.0 mA)	PNP ON voltage: Vs-3 V to Vs (short circuit current: approx. 9.5 mA) OFF voltage: 0 V to 1/2 Vs, or open (short circuit current: approx. 13.0 mA)
	NPN ON voltage: 0 to 3 V (short circuit current: approx. 8.0 mA) OFF voltage: 1/2 Vs to Vs, or open (short circuit current: approx. 6.5 mA)	NPN ON voltage: 0 to 3 V (short circuit current: approx. 13.0 mA) OFF voltage: 1/2 Vs to Vs, or open (short circuit current: approx. 9.5 mA)
Input Voltage (MUTE A/B)	PNP ON voltage: Vs-3 V to Vs (short circuit current: approx. 3.0 mA) OFF voltage: 0 V to 1/2 Vs, or open (short circuit current: approx. 5.0 mA)	PNP ON voltage: Vs-3 V to Vs (short circuit current: approx. 4.5 mA) OFF voltage: 0 V to 1/2 Vs, or open (short circuit current: approx. 7.0 mA)
	NPN ON voltage: 0 to 3 V (short circuit current: approx. 5.0 mA) OFF voltage: 1/2 Vs to Vs, or open (short circuit current: approx. 3.0 mA)	NPN ON voltage: 0 to 3 V (short circuit current: approx. 7.0 mA) OFF voltage: 1/2 Vs to Vs, or open (short circuit current: approx. 4.5 mA)
Input Voltage (TEST)	24 V Active ON voltage: 9 V to Vs (short circuit current: approx. 2.5mA) OFF voltage: 0 to 3 V, or open (short circuit current: approx. 2.0 mA)	Light emission stops when connected to 24 VDC ON voltage: Vs-3 V to Vs (short circuit current: approx. 5.0 mA) OFF voltage: 0 V to 1/2 Vs, or open (short circuit current: approx. 6.0 mA)
	0 V Active ON voltage: 0 to 3 V (short circuit current: approx. 2.0 mA) OFF voltage: 9 V to Vs, or open (short circuit current: approx. 2.5 mA)	Light emission stops when connected to 0 V ON voltage: 0 to 3 V (short circuit current: approx. 6.0 mA) OFF voltage: 1/2 Vs to Vs, or open (short circuit current: approx. 5.0 mA)
Input Voltage (OPERATING RANGE SELECT INPUT)	-	Long: 12 V to Vs (short circuit current: approx. 4.2 mA) or open
		Short: 0 to 3 V (short circuit current: approx. 4.2 mA)
Overvoltage Category (IEC 60664-1)	II	II
Protective Circuit	Output short protection, Power supply reverse polarity protection	Output short-circuit protection
Insulation Resistance	20 M□ or higher (500 VDC megger)	20 MΩ or higher (500 VDC megger)
Dielectric Strength	1,000 VAC, 50/60 Hz (1 min)	1,000 VAC, 50/60 Hz (1 min)
Mutual Interference Prevention	•Optical synchronization by Scan Code: in up to 2 sets	•Optical synchronization by Scan Code: in up to 2 sets •Wired synchronization: in up to 3 sets
Cascade Connection	Number of cascaded segments: 3 max. Total number of beams: 255 max. Cable length between sensors: 10 m max. (not including cascading cable (F39-JGR2W) and power cable)	Number of cascaded segments: 3 max. Total number of beams: 255 max.

Item	Product discontinuation Model F3SG-□RA□□□□-30	Recommendable replacement Model F3SG-□SR□□□□-25(-□)
Test Function	Self-test (at power-on, and during operation) External test (light emission stop function by test input)	Self-test (at power-on, and during operation) External test (light emission stop function by test input)
Safety-Related Functions	Interlock External device monitoring (EDM) Pre-reset Fixed blanking/Floating blanking Reduced resolution Muting/Override PNP/NPN selection Response time adjustment Scan code selection	Interlock External Device Monitoring (EDM) Pre-Reset Fixed Blanking/Floating Blanking Reduced Resolution Muting/Override PNP/NPN Selection Response Time Adjustment Mutual Interference Prevention PSDI
Ambient Temperature	Operating: -10 to 55°C (14 to 131°F) (non-icing)	Operating: -30 to 55 °C (non-icing)
	Storage: -25 to 70°C (-13 to 158°F)	Storage: -30 to 70 °C
Ambient Humidity	Operating: 35% to 85% (non-condensing)	Operating: 35% to 85% (non-condensing)
	Storage: 35% to 95%	Storage: 35% to 95%
Ambient Illuminance	Incandescent lamp: 3,000 lx max. on receiver surface Sunlight: 10,000 lx max. on receiver surface	Incandescent lamp: 3,000 lx max. on receiver surface Sunlight: 10,000 lx max. on receiver surface
Degree of Protection (IEC 60529)	IP65 and IP67	IEC 60529: IP65 and IP67 JIS C 0920 Annex 1: IP67G
Vibration Resistance (IEC 61496-1)	10 to 55 Hz, Multiple amplitude of 0.7 mm, 20 sweeps for all 3 axes	10 to 55 Hz, Multiple amplitude of 0.7 mm, 20 sweeps for all 3 axes
Shock Resistance (IEC 61496-1)	100 m/s ² , 1000 shocks for all 3 axes	100 m/s ² , 1000 shocks for all 3 axes
Pollution Degree (IEC 60664-1)	Pollution Degree 3	Pollution Degree 3
Type of connection of Root cable	To sensors: N/A, To external: M12 connector type (5-pin emitter and 8-pin receiver) or cables prewired to the sensors IP67 rated when mated.	To sensors: dedicated connector, To external: M12 connector type (5-pin emitter and 8-pin receiver) or open-ended type IP67 and IP67G rated when mated.
Number of wires of Root cable	Emitter: 5, Receiver: 8	Emitter: 5, Receiver: 8
Cable length of Root cable	0.3 m	•Root-Plug Cable for Extended: 0.3m •Root-Straight Cable: 3m to 10m
Cable diameter of Root cable	6 mm	6 mm
Minimum bending radius of Root cable	R5 mm	R5 mm
Type of connection of Cascading cable	To sensors: N/A, To cascading sensors: M12 connector type (5-pin emitter and 8-pin receiver) IP67 rated when mated.	To sensors: dedicated connector, To cascading sensors: M12 connector type (5-pin emitter and 8-pin receiver) or dedicated connector IP67 and IP67G (JIS C 0920 Annex 1) rated when mated.
Number of wires of Cascading cable	Emitter: 5, Receiver: 8	Emitter: 5, Receiver: 8

Item	Product discontinuation Model F3SG-□RA□□□□-30	Recommendable replacement Model F3SG-□SR□□□□-25(-□)
Cable length of Cascading cable	0.2 m	0.3m
Cable diameter of Cascading cable	6 mm	6 mm
Minimum bending radius of Cascading cable	R5 mm	R5 mm
Type of connection of Extension cable	M12 connector type (5-pin emitter and 8-pin receiver), IP67 rated when mated	M12 connector type (5-pin emitter and 8-pin receiver), IP67 rated when mated
Number of wires of Extension cable	Emitter: 5, Receiver: 8	Emitter: 5, Receiver: 8
Cable length of Extension cable	•Single-Ended Cable(F39-JG□□A-□ series):3m to 20m •Double-Ended Cable(F39-JG□□B-□ series):0.5m to 20m	•Single-Ended Cable(F39-JG□□A-□ series):3m to 20m •Double-Ended Cable(F39-JG□□B-□ series):0.5m to 20m
Cable diameter of Extension cable	6.6 mm	6.6 mm
Minimum bending radius of Extension cable	R36 mm	R36 mm
Extension of Root Cable	100 m max.(Emitter/Receiver)	100 m max.(Emitter/Receiver)
Material	Housing: Aluminium alloy Cap: PBT resin Front window: Acrylic resin FE plate: Stainless steel Cable: Oil resistant PVC resin Standard Fixed Bracket (F39-LGF): Zinc alloy	Housing: Aluminum alloy Cap: PBT resin Front window: Acrylic resin FE plate: Stainless steel
Weight	Net : 0.6kg to 6.7kg Packaged : 2.1kg to 10.8kg	Net : 0.4kg to 6.3kg Packaged : 0.8kg to 7.4kg
Included Accessories	Safety Precautions Quick Installation Manual Troubleshooting Guide Sticker Warning Zone Label Standard Fixed Bracket*1*2 *1. The quantity of Standard Fixed Brackets included varies depending on the protective height. [F3SG-□RA□□□□-30] - Protective height of 0190 to 1230: 2 sets - Protective height of 1310 to 2270: 3 sets - Protective height of 2350 to 2510: 4 sets *2. Standard Fixed Bracket is not included with the F3SG-□RA□-30-A1 series.	Instruction Sheet Quick Installation Manual Troubleshooting Guide Sticker Warning Zone Label End Cap (for switching Scan Code Selection function)
Type of ESPE (IEC 61496-1)	Type4	Type4
Performance Level (PL)/Safety category	PL e/Category 4 (EN ISO 13849-1:2015)	PL e/Category 4 (EN ISO 13849-1:2015)
PFH _D	1.1 × 10 ⁻⁸ (IEC 61508)	1.1×10 ⁻⁸ max. (IEC 61508)
Proof test interval T _M	Every 20 years (IEC 61508)	Every 20 years (IEC 61508)
SFF	99% (IEC 61508)	99% (IEC 61508)
HFT	1 (IEC 61508)	1 (IEC 61508)

Item	Product discontinuation Model F3SG-□RA□□□□-30	Recommendable replacement Model F3SG-□SR□□□□-25(-□)
Classification	Type B (IEC 61508-2)	Type B (IEC 61508-2)

[Characteristics]

Item	Product discontinuation Model F3SG-□RE□□□□□14	Recommendable replacement Model F3SG-□SR□□□□□-14(-□)
Object Resolution (Detection Capability)	Opaque objects 14-mm dia.	Opaque objects 14-mm dia.
Beam Gap	10 mm	10 mm
Number of Beams	15 to 207	15 to 199
Lens Size	5.2 × 3.4 (W × H) mm	4.4 × 3.4 (W × H) mm
Protective Height	160 to 2,080 mm	160 to 2,000 mm
Operating range	•Long : 0.3 to 10.0 m •Short : 0.3 to 3.0 m	•Long : 0.3 to 10.0 m •Short : 0.3 to 3.0 m
Response time (Normal mode)	•ON → OFF Optical synchronization : 5 to 15ms •OFF → ON Optical synchronization : 25 to 75ms	•ON → OFF Optical synchronization : 8 to 18ms Wired synchronization : 10 to 21ms •OFF → ON Optical synchronization : 40 to 90ms Wired synchronization : 50 to 105ms
Effective Aperture Angle (EAA) (IEC 61496-2)	•Type 4 ±2.5° max., emitter and receiver at operating range of 3 m or greater	•Type 4 ±2.5° max. , emitter and receiver at operating range of 3 m or greater
Light Source	Infrared LEDs, Wavelength: 870 nm	Infrared LEDs, Wavelength: 870 nm
Startup Waiting Time	2 s max.	3 s max.
Power Supply Voltage (Vs)	SELV/PELV 24 VDC±20% (ripple p-p 10% max.)	SELV/PELV 24 VDC±20% (ripple p-p 10% max.)
Current Consumption	•Emitter 45mA to 115mA •Receiver 50mA to 105mA	•Emitter 68mA to 212mA •Receiver 97mA to 233mA
Safety Outputs (OSSD)	•F3SG-□RE□□□□P□□: Two PNP transistor outputs •F3SG-□RE□□□□N□□: Two NPN transistor outputs	•Two PNP or NPN transistor outputs (PNP or NPN is selectable by wiring of power supply.)
	•Load current of 300 mA max. •Residual voltage of 2 V max. (except for voltage drop due to cable extension) •Capacitive load of 1 μF max. •Inductive load of 2.2 H max. •Leakage current of 1 mA max. (PNP), 2 mA max. (NPN)	•Load current: 300 mA max. •Residual voltage: 2 V max. (except for voltage drop due to cable extension), •Capacitive load: 1 μF max. •Inductive load: 2.2 H max. •Leakage current: 1 mA max.(PNP), 2 mA max.(NPN)
Auxiliary Output	-	•One PNP or NPN transistor output (PNP or NPN is selectable by wiring of power supply.)
		•Load current: 100 mA max. •Residual voltage: 2 V max. * * The residual voltage is 3 V max. when the Intelligent Tap is connected to the sensor
Output Operation Mode	•Safety Output Light-ON (Safety output is enabled when the receiver receives an emitting signal.)	•Safety Output Light-ON (Safety outputs are turned to the ON state when the receiver receives an emitting signal.)
	-	•Auxiliary Output

Item	Product discontinuation Model F3SG-□RE□□□□□14	Recommendable replacement Model F3SG-□SR□□□□□-14(-□)
		Safety output (Inverted signal output: Enable) (default) (Configurable by SD Manager 3)
Input Voltage (RESET / EDM)	-	PNP ON voltage: Vs-3 V to Vs (short circuit current: approx. 9.5 mA) OFF voltage: 0 V to 1/2 Vs, or open (short circuit current: approx. 13.0 mA)
		NPN ON voltage: 0 to 3 V (short circuit current: approx. 13.0 mA) OFF voltage: 1/2 Vs to Vs, or open (short circuit current: approx. 9.5 mA)
Input Voltage (MUTE A/B)	-	PNP ON voltage: Vs-3 V to Vs (short circuit current: approx. 4.5 mA) OFF voltage: 0 V to 1/2 Vs, or open (short circuit current: approx. 7.0 mA)
		NPN ON voltage: 0 to 3 V (short circuit current: approx. 7.0 mA) OFF voltage: 1/2 Vs to Vs, or open (short circuit current: approx. 4.5 mA)
Input Voltage (TEST)	-	Light emission stops when connected to 24 VDC ON voltage: Vs-3 V to Vs (short circuit current: approx. 5.0 mA) OFF voltage: 0 V to 1/2 Vs, or open (short circuit current: approx. 6.0 mA)
		Light emission stops when connected to 0 V ON voltage: 0 to 3 V (short circuit current: approx. 6.0 mA) OFF voltage: 1/2 Vs to Vs, or open (short circuit current: approx. 5.0 mA)
Input Voltage (OPERATING RANGE SELECT INPUT)	Long: 9 V to Vs (short circuit current: approx. 2.5 mA) or open	Long: 12 V to Vs (short circuit current: approx. 4.2 mA) or open
	Short: 0 to 1.5 V (short circuit current: approx. 2.0 mA)	Short: 0 to 3 V (short circuit current: approx. 4.2 mA)
Overvoltage Category (IEC 60664-1)	II	II
Protective Circuit	Output short protection, Power supply reverse polarity protection	Output short-circuit protection
Insulation Resistance	20 M□ or higher (500 VDC megger)	20 M□ or higher (500 VDC megger)
Dielectric Strength	1,000 VAC, 50/60 Hz (1 min)	1,000 VAC, 50/60 Hz (1 min)
Mutual Interference Prevention	-	- Optical synchronization by Scan Code: in up to 2 sets - Wired synchronization: in up to 3 sets
Cascade Connection	-	Number of cascaded segments: 3 max. Total number of beams: 255 max.

Item	Product discontinuation Model F3SG-□RE□□□□□14	Recommendable replacement Model F3SG-□SR□□□□□-14(-□)
Test Function	Self-test (at power-on, and during operation)	Self-test (at power-on, and during operation) External test (light emission stop function by test input)
Safety-Related Functions	-	Interlock External Device Monitoring (EDM) Pre-Reset PSDI Fixed Blanking/Floating Blanking Reduced Resolution Muting/Override Mutual Interference Prevention PNP/NPN Selection Response Time Adjustment
Ambient Temperature	Operating: -10 to 55°C (14 to 131°F) (non-icing)	Operating: -30 to 55 °C (non-icing)
	Storage: -25 to 70°C (-13 to 158°F)	Storage: -30 to 70 °C
Ambient Humidity	Operating: 35% to 85% (non-condensing)	Operating: 35% to 85% (non-condensing)
	Storage: 35% to 95%	Storage: 35% to 95%
Ambient Illuminance	Incandescent lamp: 3,000 lx max. on receiver surface Sunlight: 10,000 lx max. on receiver surface	Incandescent lamp: 3,000 lx max. on receiver surface Sunlight: 10,000 lx max. on receiver surface
Degree of Protection (IEC 60529)	IP65 and IP67	IEC 60529: IP65 and IP67 JIS C 0920 Annex 1: IP67G
Vibration Resistance (IEC 61496-1)	10 to 55 Hz, Multiple amplitude of 0.7 mm, 20 sweeps for all 3 axes	10 to 55 Hz, Multiple amplitude of 0.7 mm, 20 sweeps for all 3 axes
Shock Resistance (IEC 61496-1)	100 m/s ² , 1000 shocks for all 3 axes	100 m/s ² , 1000 shocks for all 3 axes
Pollution Degree (IEC 60664-1)	Pollution Degree 3	Pollution Degree 3
Type of connection of Root cable	To sensors: N/A, To external: M12 connector type (4-pin) or cables prewired to the sensors IP67 rated when mated.	To sensors: dedicated connector, To external: M12 connector type (5-pin emitter and 8-pin receiver) or open-ended type IP67 and IP67G rated when mated.
Number of wires of Root cable	Emitter: 4, Receiver: 4	Emitter: 5, Receiver: 8
Cable length of Root cable	0.3 m	•Root-Plug Cable for Extended: 0.3m •Root-Straight Cable: 3m to 10m
Cable diameter of Root cable	6 mm	6 mm
Minimum bending radius of Root cable	R5 mm	R5 mm
Type of connection of Cascading cable	-	To sensors: dedicated connector, To cascading sensors: M12 connector type (5-pin emitter and 8-pin receiver) or dedicated connector IP67 and IP67G (JIS C 0920 Annex 1) rated when mated.

Item	Product discontinuation Model F3SG-□RE□□□□□14	Recommendable replacement Model F3SG-□SR□□□□□-14(-□)
Number of wires of Cascading cable	-	Emitter: 5, Receiver: 8
Cable length of Cascading cable	-	0.3m
Cable diameter of Cascading cable	-	6 mm
Minimum bending radius of Cascading cable	-	R5 mm
Model name of Extension cable	•Single-Ended Cable: XS5F-D421-□ 80-F series •Double-Ended Cable: XS5W-D421-□ 81-F series	•Single-Ended Cable: F39-JG□□A-□ series •Double-Ended Cable: F39-JG□□B-□ series
Extension of Root Cable	100 m max.(Emitter/Receiver)	100 m max.(Emitter/Receiver)
Material	Housing: Aluminium alloy Cap: PBT resin Front window: Acrylic resin FE plate: Stainless steel Cable: Oil resistant PVC resin Standard Fixed Bracket (F39-LGF): Zinc alloy	Housing: Aluminum alloy Cap: PBT resin Front window: Acrylic resin FE plate: Stainless steel
Weight	Net : 0.6kg to 5.6kg Packaged : 1.9kg to 9.4kg	Net : 0.4kg to 5.1kg Packaged : 0.8kg to 6.1kg
Included Accessories	Safety Precautions Quick Installation Manual Troubleshooting Guide Sticker Standard Fixed Bracket*1 *1. The quantity of Standard Fixed Brackets included varies depending on the protective height. [F3SG-□RE□□□□□14] - Protective height of 0160 to 1200: 2 sets - Protective height of 1280 to 2080: 3 sets	Instruction Sheet Quick Installation Manual Troubleshooting Guide Sticker Warning Zone Label End Cap (for switching Scan Code Selection function)
Type of ESPE (IEC 61496-1)	Type4	Type4
Performance Level (PL)/Safety category	PL e/Category 4 (EN ISO 13849-1:2015)	PL e/Category 4 (EN ISO 13849-1:2015)
PFH _D	9.1×10 ⁻⁹ (IEC 61508)	1.1×10 ⁻⁸ max. (IEC 61508)
Proof test interval T _M	Every 20 years (IEC 61508)	Every 20 years (IEC 61508)
SFF	99% (IEC 61508)	99% (IEC 61508)
HFT	1 (IEC 61508)	1 (IEC 61508)
Classification	Type B (IEC 61508-2)	Type B (IEC 61508-2)

[Characteristics]

Item	Product discontinuation Model F3SG-□RE□□□□□30	Recommendable replacement Model F3SG-□SR□□□□□-25(-□)
Object Resolution (Detection Capability)	Opaque objects 30-mm dia.	Opaque objects 25-mm dia.
Beam Gap	20 mm	20 mm
Number of Beams	8 to 124	8 to 124
Lens Size	7-mm dia.	6.7 × 4.5 (W × H) mm
Protective height	190 to 2,510 mm	160 to 2,480 mm
Operating range	•Long : 0.3 to 20.0 m •Short : 0.3 to 7.0 m	•Long : 0.3 to 20.0 m •Short : 0.3 to 7.0 m
Response time (Normal mode)	•ON → OFF Optical synchronization : 5 to 15ms •OFF → ON Optical synchronization : 25 to 75ms	•ON → OFF Optical synchronization : 8 to 13ms Wired synchronization : 10 to 17ms •OFF → ON Optical synchronization : 40 to 65ms Wired synchronization : 50 to 85ms
Effective Aperture Angle (EAA) (IEC 61496-2)	•Type 4 ±2.5° max., emitter and receiver at operating range of 3 m or greater	•Type 4 ±2.5° max. , emitter and receiver at operating range of 3 m or greater
Light Source	Infrared LEDs, Wavelength: 870 nm	Infrared LEDs, Wavelength: 870 nm
Startup Waiting Time	2 s max.	3 s max.
Power Supply Voltage (Vs)	SELV/PELV 24 VDC±20% (ripple p-p 10% max.)	SELV/PELV 24 VDC±20% (ripple p-p 10% max.)
Current Consumption	•Emitter 40mA to 100mA •Receiver 50mA to 80mA	•Emitter 61mA to 219mA •Receiver 96mA to 238mA
Safety Outputs (OSSD)	•F3SG-□RE□□□□P□□: Two PNP transistor outputs •F3SG-□RE□□□□N□□: Two NPN transistor outputs	•Two PNP or NPN transistor outputs (PNP or NPN is selectable by wiring of power supply.)
	•Load current of 300 mA max. •Residual voltage of 2 V max. (except for voltage drop due to cable extension) •Capacitive load of 1 μF max. •Inductive load of 2.2 H max. •Leakage current of 1 mA max. (PNP), 2 mA max. (NPN)	•Load current: 300 mA max. •Residual voltage: 2 V max. (except for voltage drop due to cable extension), •Capacitive load: 1 μF max. •Inductive load: 2.2 H max. •Leakage current: 1 mA max.(PNP), 2 mA max.(NPN)
Auxiliary Output	-	•One PNP or NPN transistor output (PNP or NPN is selectable by wiring of power supply.)
		•Load current: 100 mA max. •Residual voltage: 2 V max. * * The residual voltage is 3 V max. when the Intelligent Tap is connected to the sensor

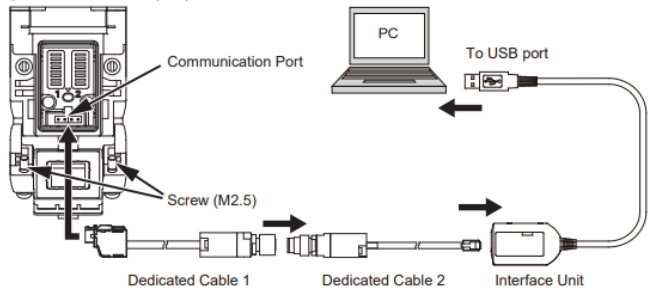
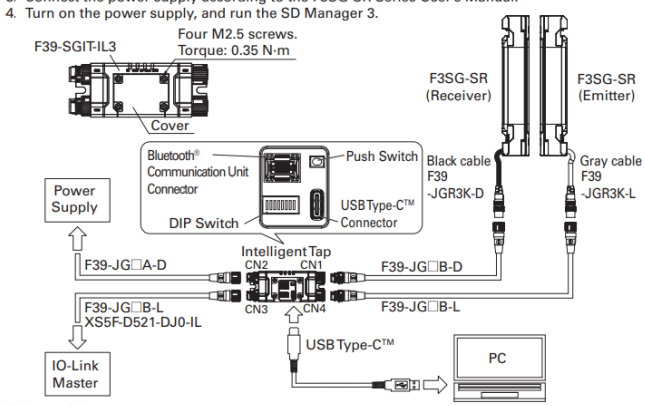
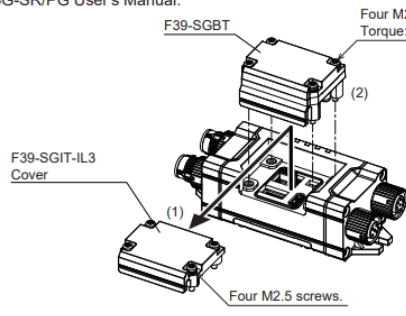
Item	Product discontinuation Model F3SG-□RE□□□□□30	Recommendable replacement Model F3SG-□SR□□□□□-25(-□)
Output Operation Mode	• Safety Output Light-ON (Safety output is enabled when the receiver receives an emitting signal.)	• Safety Output Light-ON (Safety outputs are turned to the ON state when the receiver receives an emitting signal.)
	-	• Auxiliary Output Safety output (Inverted signal output: Enable) (default) (Configurable by SD Manager 3)
Input Voltage (RESET / EDM)		PNP ON voltage: Vs-3 V to Vs (short circuit current: approx. 9.5 mA) OFF voltage: 0 V to 1/2 Vs, or open (short circuit current: approx. 13.0 mA)
		NPN ON voltage: 0 to 3 V (short circuit current: approx. 13.0 mA) OFF voltage: 1/2 Vs to Vs, or open (short circuit current: approx. 9.5 mA)
Input Voltage (MUTE A/B)		PNP ON voltage: Vs-3 V to Vs (short circuit current: approx. 4.5 mA) OFF voltage: 0 V to 1/2 Vs, or open (short circuit current: approx. 7.0 mA)
		NPN ON voltage: 0 to 3 V (short circuit current: approx. 7.0 mA) OFF voltage: 1/2 Vs to Vs, or open (short circuit current: approx. 4.5 mA)
Input Voltage (TEST)		Light emission stops when connected to 24 VDC ON voltage: Vs-3 V to Vs (short circuit current: approx. 5.0 mA) OFF voltage: 0 V to 1/2 Vs, or open (short circuit current: approx. 6.0 mA)
		Light emission stops when connected to 0 V ON voltage: 0 to 3 V (short circuit current: approx. 6.0 mA) OFF voltage: 1/2 Vs to Vs, or open (short circuit current: approx. 5.0 mA)
Input Voltage (OPERATING RANGE SELECT INPUT)	Long: 9 V to Vs (short circuit current: approx. 2.5 mA) or open	Long: 12 V to Vs (short circuit current: approx. 4.2 mA) or open
	Short: 0 to 1.5 V (short circuit current: approx. 2.0 mA)	Short: 0 to 3 V (short circuit current: approx. 4.2 mA)
Overvoltage Category (IEC 60664-1)	II	II
Protective Circuit	Output short protection, Power supply reverse polarity protection	Output short-circuit protection
Insulation Resistance	20 MΩ or higher (500 VDC megger)	20 MΩ or higher (500 VDC megger)
Dielectric Strength	1,000 VAC, 50/60 Hz (1 min)	1,000 VAC, 50/60 Hz (1 min)

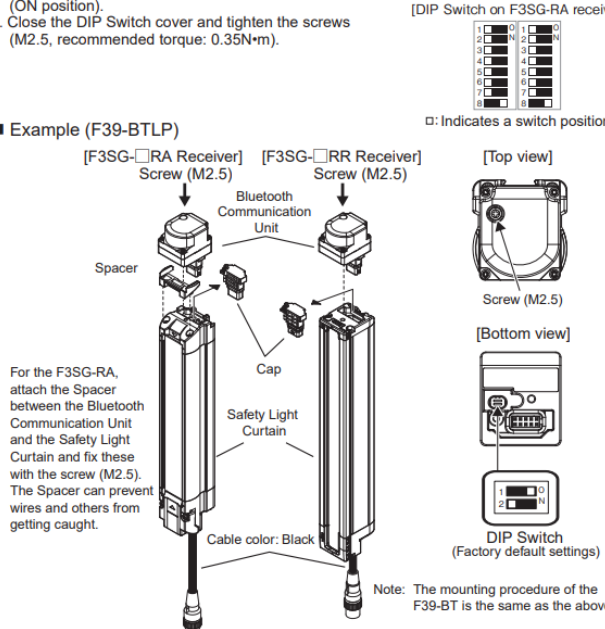
Item	Product discontinuation Model F3SG-□RE□□□□□30	Recommendable replacement Model F3SG-□SR□□□□□-25(-□)
Mutual Interference Prevention	-	- Optical synchronization by Scan Code: in up to 2 sets - Wired synchronization: in up to 3 sets
Cascade Connection	-	Number of cascaded segments: 3 max. Total number of beams: 255 max.
Test Function	Self-test (at power-on, and during operation)	Self-test (at power-on, and during operation) External test (light emission stop function by test input)
Safety-Related Functions	-	Interlock External Device Monitoring (EDM) Pre-Reset PSDI Fixed Blanking/Floating Blanking Reduced Resolution Muting/Override Mutual Interference Prevention PNP/NPN Selection Response Time Adjustment
Ambient Temperature	Operating: -10 to 55°C (14 to 131°F) (non-icing)	Operating: -30 to 55 °C (non-icing)
	Storage: -25 to 70°C (-13 to 158°F)	Storage: -30 to 70 °C
Ambient Humidity	Operating: 35% to 85% (non-condensing)	Operating: 35% to 85% (non-condensing)
	Storage: 35% to 95%	Storage: 35% to 95%
Ambient Illuminance	Incandescent lamp: 3,000 lx max. on receiver surface Sunlight: 10,000 lx max. on receiver surface	Incandescent lamp: 3,000 lx max. on receiver surface Sunlight: 10,000 lx max. on receiver surface
Degree of Protection (IEC 60529)	IP65 and IP67	IEC 60529: IP65 and IP67 JIS C 0920 Annex 1: IP67G
Vibration Resistance (IEC 61496-1)	10 to 55 Hz, Multiple amplitude of 0.7 mm, 20 sweeps for all 3 axes	10 to 55 Hz, Multiple amplitude of 0.7 mm, 20 sweeps for all 3 axes
Shock Resistance (IEC 61496-1)	100 m/s ² , 1000 shocks for all 3 axes	100 m/s ² , 1000 shocks for all 3 axes
Pollution Degree (IEC 60664-1)	Pollution Degree 3	Pollution Degree 3
Type of connection of Root cable	To sensors: N/A, To external: M12 connector type (4-pin) or cables prewired to the sensors IP67 rated when mated.	To sensors: dedicated connector, To external: M12 connector type (5-pin emitter and 8-pin receiver) or open-ended type IP67 and IP67G rated when mated.
Number of wires of Root cable	Emitter: 4, Receiver: 4	Emitter: 5, Receiver: 8
Cable length of Root cable	0.3 m	- Root-Plug Cable for Extended: 0.3m - Root-Straight Cable: 3m to 10m
Cable diameter of Root cable	6 mm	6 mm

Item	Product discontinuation Model F3SG-□RE□□□□□30	Recommendable replacement Model F3SG-□SR□□□□□-25(-□)
Minimum bending radius of Root cable	R5 mm	R5 mm
Type of connection of Cascading cable	-	To sensors: dedicated connector, To cascading sensors: M12 connector type (5-pin emitter and 8-pin receiver) or dedicated connector IP67 and IP67G (JIS C 0920 Annex 1) rated when mated.
Number of wires of Cascading cable	-	Emitter: 5, Receiver: 8
Cable length of Cascading cable	-	0.3m
Cable diameter of Cascading cable	-	6 mm
Minimum bending radius of Cascading cable	-	R5 mm
Model name of Extension cable	•Single-Ended Cable:XS5F-D421-□80-F series •Double-Ended Cable:XS5W-D421-□81-F series	•Single-Ended Cable:F39-JG□□A-□ series •Double-Ended Cable:F39-JG□□B-□ series
Extension of Root Cable	100 m max.(Emitter/Receiver)	100 m max.(Emitter/Receiver)
Material	Housing: Aluminium alloy Cap: PBT resin Front window: Acrylic resin FE plate: Stainless steel Cable: Oil resistant PVC resin Standard Fixed Bracket (F39-LGF): Zinc alloy	Housing: Aluminum alloy Cap: PBT resin Front window: Acrylic resin FE plate: Stainless steel
Weight	Net : 0.6kg to 6.7kg Packaged : 2.1kg to 10.8kg	Net : 0.4kg to 6.3kg Packaged : 0.8kg to 7.4kg
Included Accessories	Safety Precautions Quick Installation Manual Troubleshooting Guide Sticker Standard Fixed Bracket*1*2 *1. The quantity of Standard Fixed Brackets included varies depending on the protective height. [F3SG-□RE□□□□□30] - Protective height of 0190 to 1230: 2 sets - Protective height of 1310 to 2270: 3 sets - Protective height of 2350 to 2510: 4 sets *2. Standard Fixed Bracket is not included with the F3SG-□RA□-30-A1 series.	Instruction Sheet Quick Installation Manual Troubleshooting Guide Sticker Warning Zone Label End Cap (for switching Scan Code Selection function)
Type of ESPE (IEC 61496-1)	Type4	Type4
Performance Level (PL)/Safety category	PL e/Category 4 (EN ISO 13849-1:2015)	PL e/Category 4 (EN ISO 13849-1:2015)
PFH _D	9.1×10 ⁻⁹ (IEC 61508)	1.1×10 ⁻⁸ max. (IEC 61508)
Proof test interval T _M	Every 20 years (IEC 61508)	Every 20 years (IEC 61508)
SFF	99% (IEC 61508)	99% (IEC 61508)

Item	Product discontinuation Model F3SG-□RE□□□□□30	Recommendable replacement Model F3SG-□SR□□□□□-25(-□)
HFT	1 (IEC 61508)	1 (IEC 61508)
Classification	Type B (IEC 61508-2)	Type B (IEC 61508-2)

[Operation methods/Wiring connection method with peripheral devices]

Product discontinuation Model F3SG-□RA□□□□□14 Model F3SG-□RA□□□□□30 Wiring connection method with F39-GIF ■ How to Connect 1. Make sure that the F3SG is powered off. Unscrew the screws (M2.5) of the DIP Switch cover of the F3SG receiver and open the cover. 2. Connect the Dedicated Cables 1 and 2 and Interface Unit as shown below. 3. Insert the connected cables to the USB port of the PC and the Communication Port of the F3SG receiver. 4. Turn on the power of the F3SG. 5. Run the SD Manager 2. F3SG Receiver (DIP Switch cover is open.)  When attaching the cover, tightly fasten the screws (M2.5, recommended torque: 0.35 N·m). ■ Wiring of F3SG Refer to wiring diagrams in the F3SG-R Series User's Manual. ■ How to Disconnect 1. Quit the SD Manager 2. 2. Turn OFF the F3SG. 3. Disconnect the product from the F3SG and the PC. 4. Close the DIP Switch cover and tighten the screws (M2.5).	Recommendable replacement Model F3SG-□SR□□□□□-14(-□) Model F3SG-□SR□□□□□-25(-□) Wiring connection method with F39-SGIT-IL3 ■ How to Install Driver The driver is installed automatically(*1) when the SD Manager 3 is installed. Download the SD Manager 3 from the website. For details, refer to your local Omron website. *1. Do not connect the F39-SGIT-IL3 with a PC until the installation of the SD Manager 3 is complete. Otherwise it may cause an error. ■ Wiring 1. Make sure that the F39-SGIT-IL3 is powered off. Loosen the M2.5 screws and disconnect the cover from the F39-SGIT-IL3. 2. Connect the F39-SGIT-IL3, the F3SG-SR, PC and IO-Link master(*2) as shown below. Attach the XS5Z-11 or XS2Z-11 Waterproof Cover to the connector that is not connected with the cable. Tighten the XS2Z-11 by an XY2F-0004 Torque Wrench. (Recommended torque: 0.39 to 0.49 N·m) *2. If you use the IO-Link master, see an instruction manual of the IO-Link master you use for more information. 3. Connect the power supply according to the F3SG-SR Series User's Manual. 4. Turn on the power supply, and run the SD Manager 3.  ■ How to Disconnect 1. Quit the SD Manager 3. 2. Turn off the F39-SGIT-IL3 and the F3SG-SR. 3. Disconnect the USB cable from the F39-SGIT-IL3 and the PC. 4. Attach the cover to the F39-SGIT-IL3 and tighten the M2.5 screws. (recommended torque: 0.35 N·m)
Wiring connection method with F39-BT and F39-BTLP	Wiring connection method with F39-SGBT (1) Make sure the power is off, remove the screws (M2.5) from the cover of the F39-SGIT-IL3, and open the cover. (Fig. 1(1)) (2) Connect the F39-SGIT-IL3 to the F39-SGBT. (Fig. 1(2)) (3) Tighten the screws (M2.5) that are included with the F39-SGBT. (Tightening torque: 0.35 N·m) (4) Make sure the power is off, and connect the F39-SGIT-IL3 to the F39-SR/PG. For the connection method, refer to the instructions for the F39-SGIT-IL3. (5) Pair the F39-SGBT with the PC or smartphone on which SD Manager 3 or SD Manager 3 Mobile APP is installed. For details on the pairing method, refer to the F3SG-SR/PG User's Manual.  (Fig. 1)

Product discontinuation Model F3SG-□RA□□□□□14 Model F3SG-□RA□□□□□30	Recommendable replacement Model F3SG-□SR□□□□□-14(-□) Model F3SG-□SR□□□□□-25(-□)
1. Make sure that the Safety Light Curtain is powered off. Remove the Cap (terminal connector) from the socket of the receiver body of the Safety Light Curtain. Then insert the connector of the product to the socket. 2. Securely tighten the screw (M2.5, recommended torque: 0.35N·m). To change the settings of the F3SG-RA with SD Manager 2, also perform the steps 3 to 5 below. When you use the F3SG-RA only for monitoring statuses or checking logs or use the F3SG-RR, the steps 3 to 5 below are not necessary. 3. Unscrew the screws (M2.5) of the DIP Switch cover of the F3SG-RA receiver and open the cover. 4. Make sure the Position 8 of the F3SG-RA's DIP Switch is set to Configuration Tool Enabled (ON position). [DIP Switch on F3SG-RA receiver] 5. Close the DIP Switch cover and tighten the screws (M2.5, recommended torque: 0.35N·m). □: Indicates a switch position. ■ Example (F39-BTLP)  For the F3SG-RA, attach the Spacer between the Bluetooth Communication Unit and the Safety Light Curtain and fix these with the screw (M2.5). The Spacer can prevent wires and others from getting caught. Cable color: Black Note: The mounting procedure of the F39-BT is the same as the above.	

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