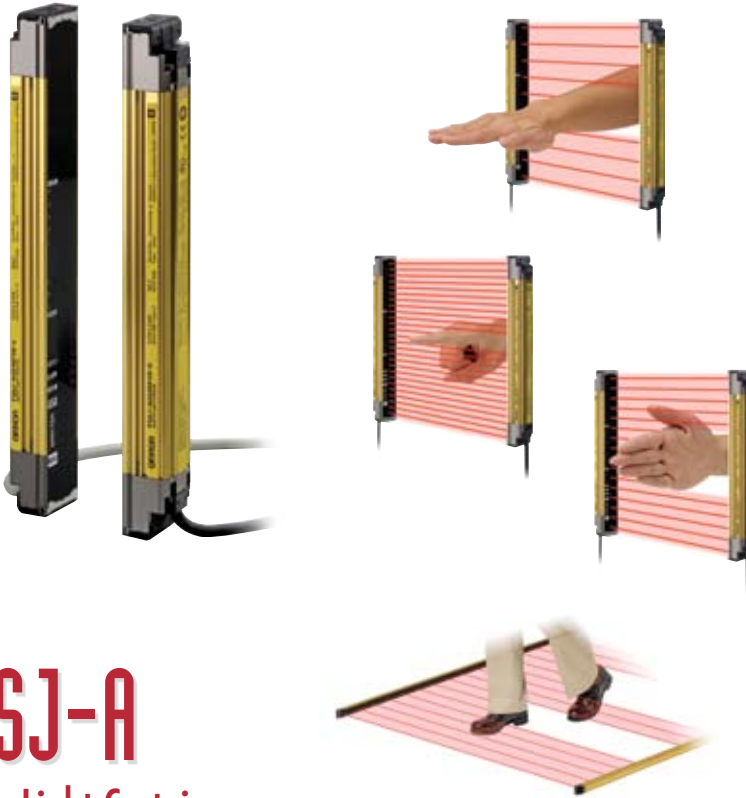




## F3SJ-A

### Safety Light Curtain

- Resolution: 14 mm (0.55 in.), 20 mm (0.79 in.), 30 mm (1.18 in.), or 55 mm (2.17 in.)
- Range: 7 m (23 ft.) or 9 m (29.5 ft.) dependent on minimum object resolution and protected height
- Protected heights: 14 mm protected heights from 245 to 1631 mm (9.6 to 64 in.), 20 mm and 30 mm protected heights from 245 to 2495 mm (9.6 to 98 in.), 55 mm from 270 to 2470 mm (10.6 to 97 in.)
- Very compact size – 30 x 24 mm (1.18 x 0.94 in.)
- Cascaded designs possible – 4 segments, up to 400 beams
- Warning zone function
- Partial muting
- Position detection muting
- Fixed blanking
- Floating blanking – up to four beams
- External Device Monitoring
- Two PNP safety outputs
- One NPN auxiliary output
- Cross-talk prevention
- Range selection

#### Options

- Handheld setting console
- SD manager programming software
- F3SP/F3SX Safety Controller
- Weld shields
- IP67 enclosures
- Multiple mounting options

#### Description

The F3SJ-A system is a full-featured safety light curtain that meets demanding and complex guarding requirements.

Inside its compact housing the F3SJ-A combines several features which allow it to be used in a variety of ways. These features include a warning zone function, as well as fixed and floating blanking. Also included is a valuable feature known as “partial muting”.

For complete safety, External Device Monitoring (EDM) is included and cross-talk prevention features are standard.

For ease of use, the F3SJ-A can be configured by using either a handheld setting console or by connecting to a computer running the convenient and comprehensive SD Manager programming software.



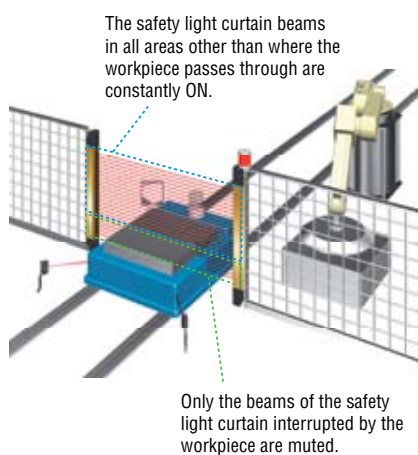
**Go to the Engineering Guide**  
For in-depth information on safety standards and use.



## Muting Functions

Muting temporarily disables the F3SJ-A when an object must pass through the detection zone, such as when supplying a workpiece to your equipment.

Partial muting increases the level of safety by only muting the beams of the safety light curtain where the workpiece passes through, while preventing muting in all other areas.



Position detection muting is used in applications where the workpiece is set in position each time by an operator, and a turntable or positioning robot then moves the workpiece to the area where the work is performed. A limit switch or other means is used to detect when the robot is in a safe position and muting is then applied.

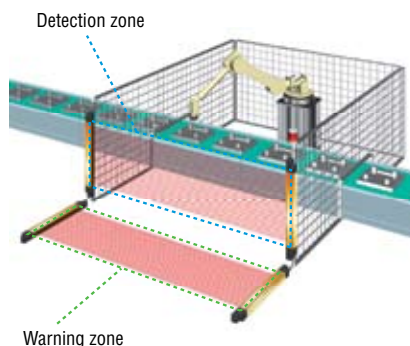


## Warning Zone Function

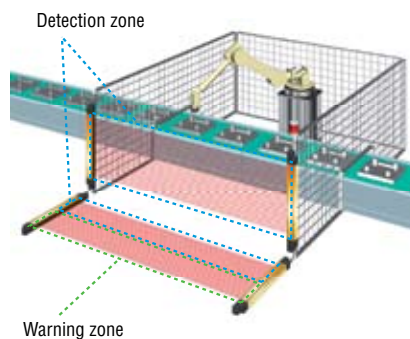
With the F3SJ-A part of the detection zone can be used as warning zone to generate an alarm when someone approaches the danger zone. If the person then enters the danger zone the F3SJ-A will send a stop signal to the guarded machine. In addition, the auxiliary output can be used to activate a flashing lamp to alert the person in the warning zone.

The detection zone for a single F3SJ-A can be divided into two zones or set a single warning zone for multiple, cascaded F3SJ-A units.

### Dividing the zone between series-connected sensors

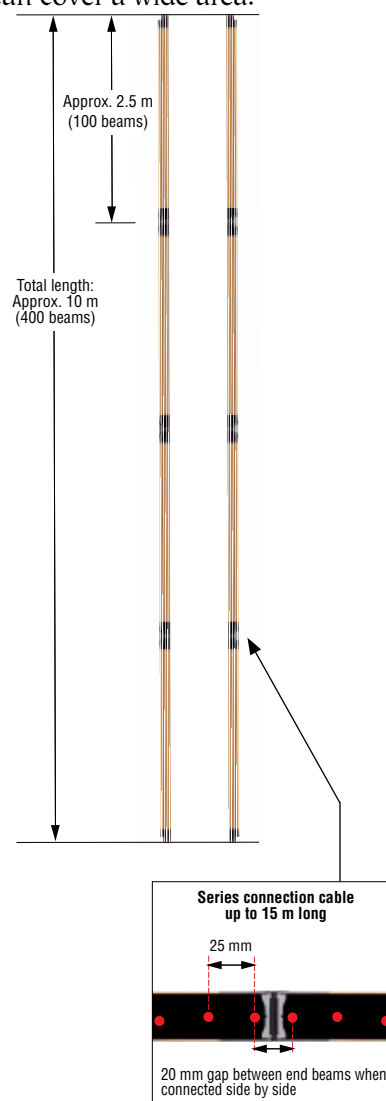


### A single sensor can also be divided



## Convenient Serial Connection

Sensors with protected heights of almost 2.5 m are available. If you want to make changes in the future, you can always extend the protective height with series connections. Up to four sets (400 beams) can be series connected and with series-connection cables up to 15 m in length, applications can cover a wide area.



D

safety light curtains

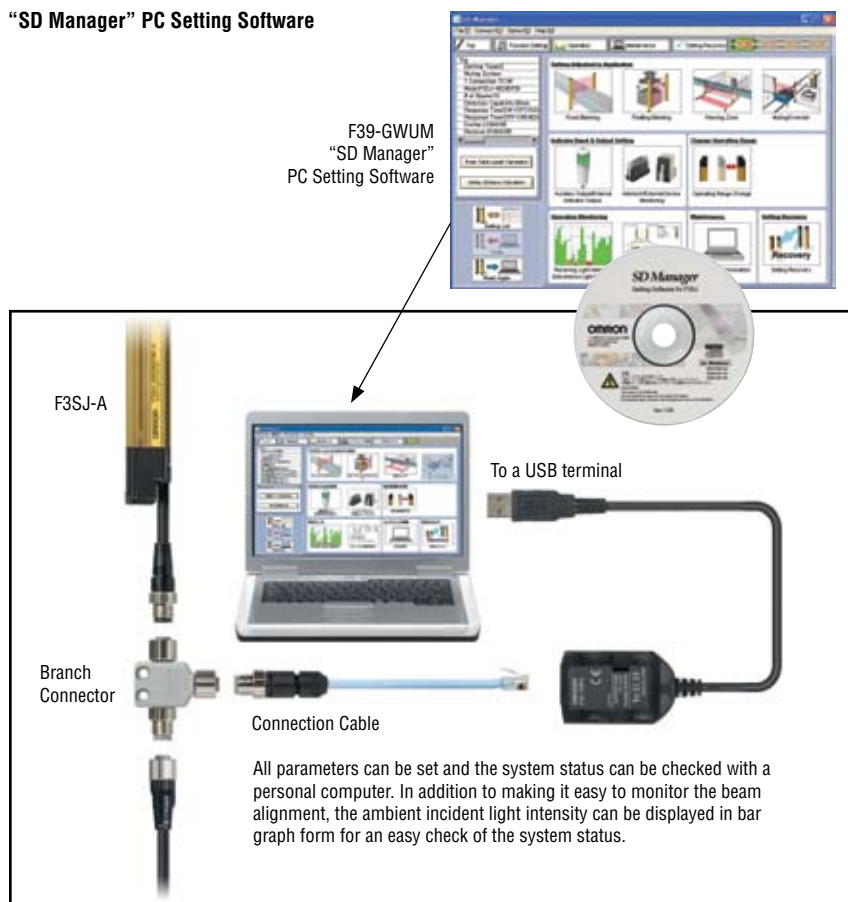
## ■ Description (continued)

### Programming Options

Using the SD Manager software, all features of the F3SJ-A can be set and checked. Features include:

- Display of system specifications:
  - Model
  - Number of beams
  - Minimum object resolution
  - Response time
- Settings for:
  - Fixed blanking
  - Floating blanking
  - Warning zone configuration
  - Muting – Both partial and position detection
  - External indicator function
  - Auxiliary outputs
  - EDM parameters
  - Operating range
- Monitoring of received and ambient light intensity
- Maintenance information:
  - Power on time
  - OSSD switching frequency
- Recovery of settings
- Safety distance calculations based on parameters for connected system

“SD Manager” PC Setting Software



When you don't want to take a computer into the field with you the F39-MC21 setting console is a convenient way to set parameters and check the system status.

Setting Console



**A** Go to the Engineering Guide  
For in-depth information on safety standards and use.

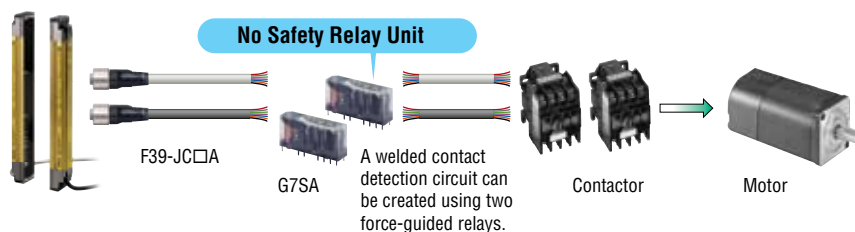
## ■ Applications

With built-in muting and blanking functions, the F3SJ-A is can be employed in a wide variety of applications from robotic work cells to small machines. The potential for cascaded design and a broad selection of minimum object resolutions adds to this versatility.

### Selecting the Best Configuration

#### Space Efficient and Low Cost

The built-in external device monitoring function eliminates the need for a safety relay unit.

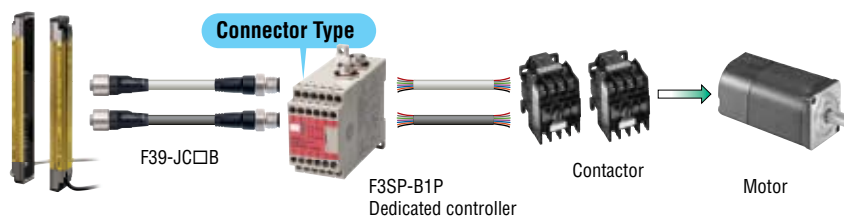


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safety light curtains

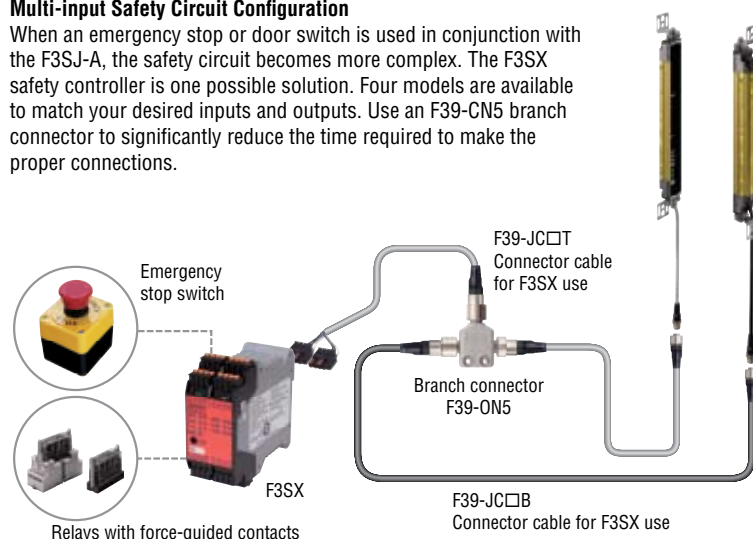
#### Reduced Wiring and Easy Maintenance

Cables with connectors on both ends simplify connections and prevent wiring errors.



#### Multi-input Safety Circuit Configuration

When an emergency stop or door switch is used in conjunction with the F3SJ-A, the safety circuit becomes more complex. The F3SX safety controller is one possible solution. Four models are available to match your desired inputs and outputs. Use an F39-CN5 branch connector to significantly reduce the time required to make the proper connections.

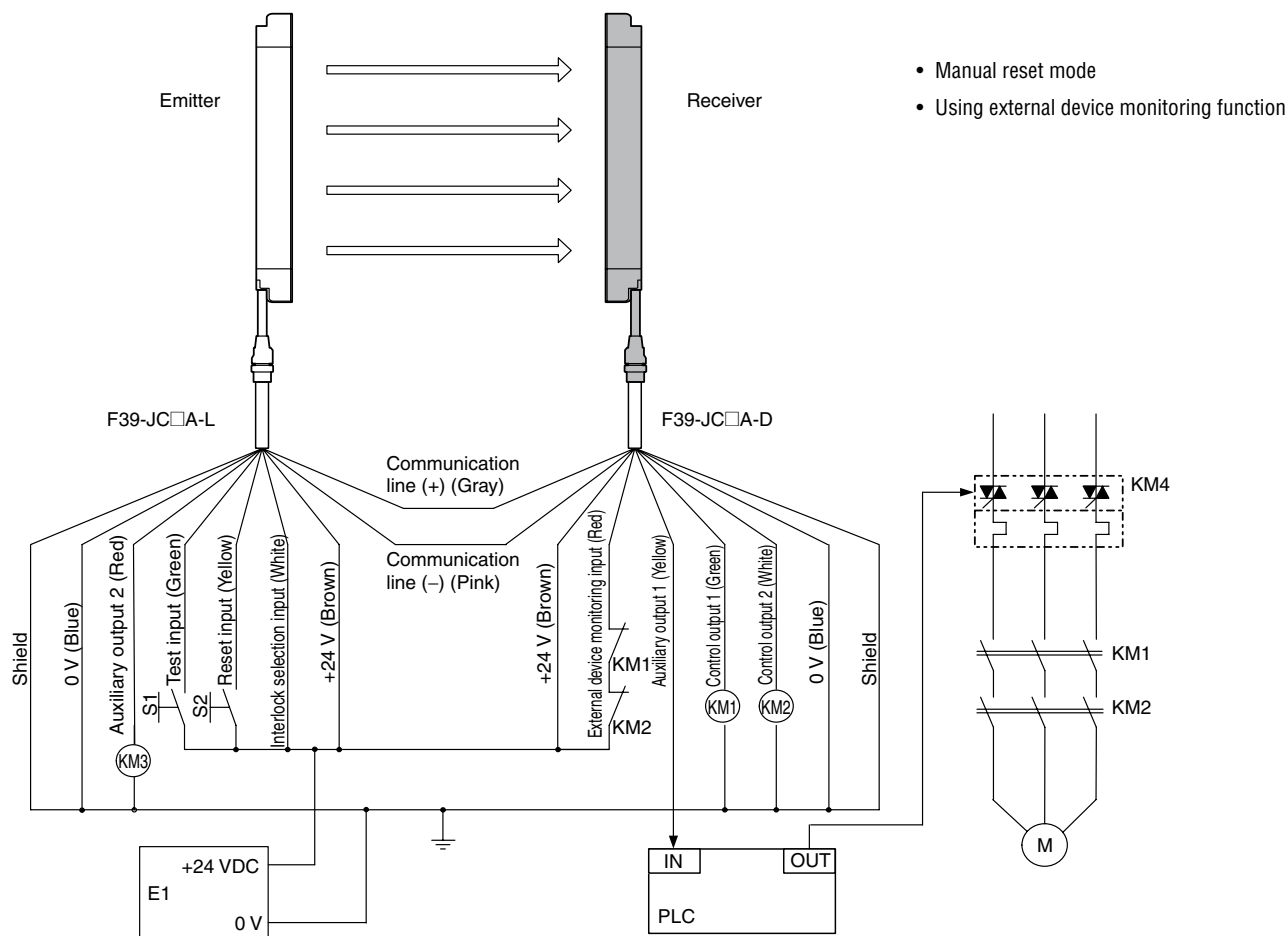


## ■ Wiring

### Wiring for Single F3SJ-A Application

Detection of a welded relay contact is possible without a controller relay unit.

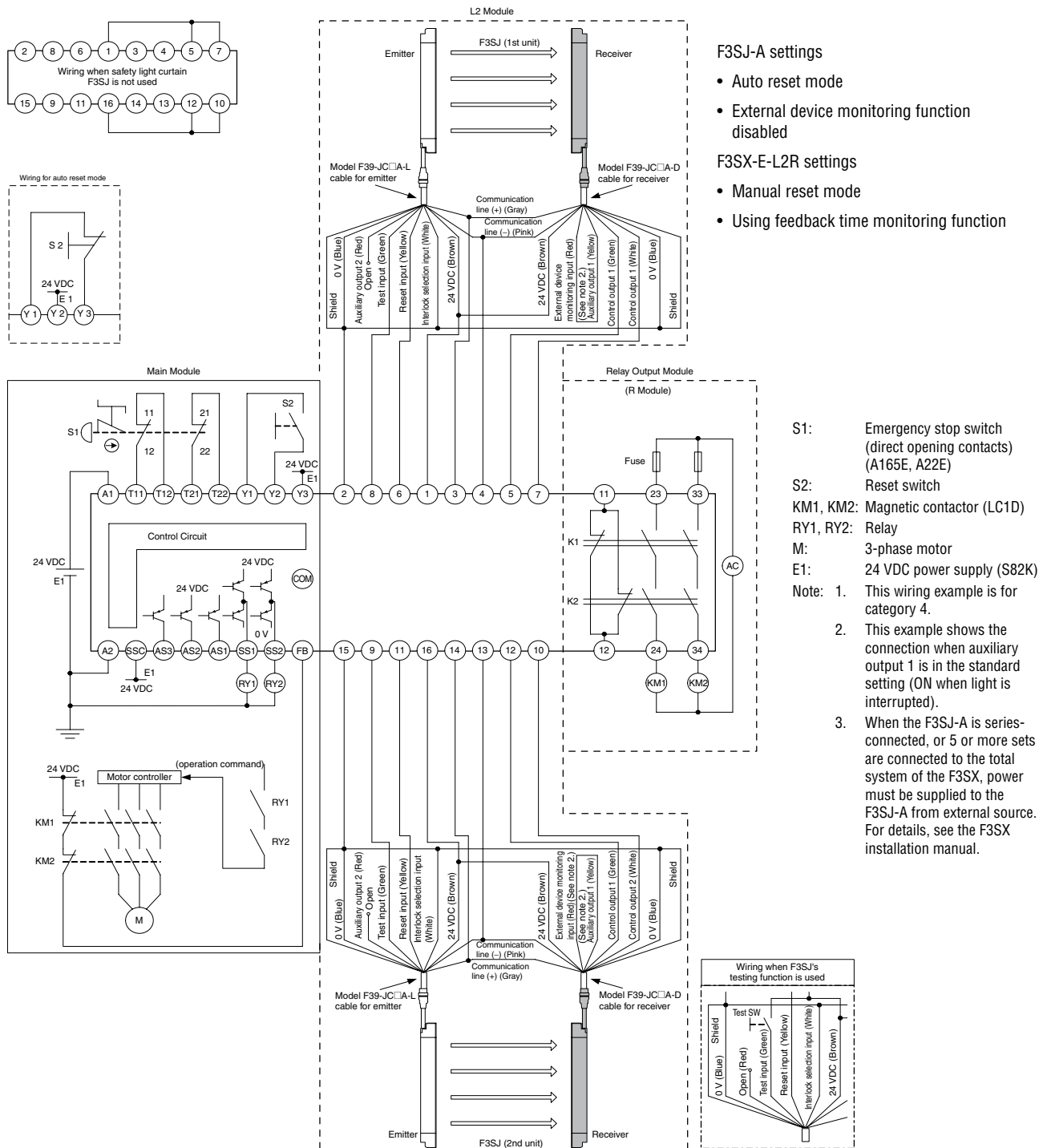
D  
safety light curtains



**A** Go to the Engineering Guide  
For in-depth information on  
safety standards and use.

## Wiring Connection with an F3SX-E-L2R Controller (Category 4)

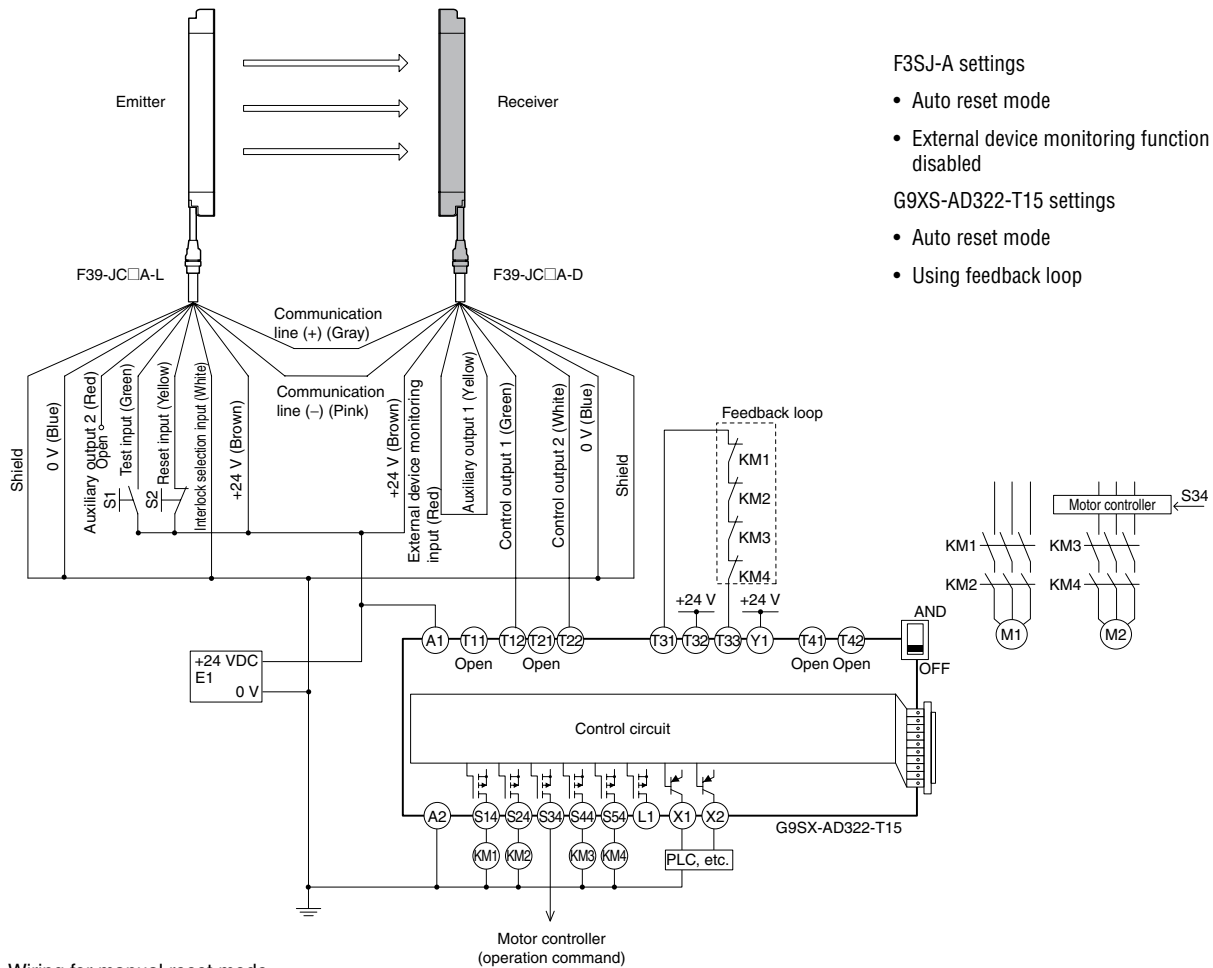
An emergency stop switch, door switch, two-hand control, single beam or relay unit can be used in conjunction with the F3SX. Various settings can be changed and input/output terminals can be monitored using the setting support software for F3SX.



## ■ Wiring (continued)

### Wiring Connection with a G9SX-AD322-T15 Controller (Category 4)

D safety light curtains



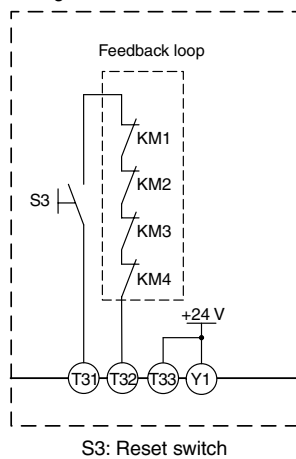
F3SJ-A settings

- Auto reset mode
- External device monitoring function disabled

G9XS-AD322-T15 settings

- Auto reset mode
- Using feedback loop

#### Wiring for manual reset mode



- S1: External test switch (connect to 0 V if the switch is not necessary)
- S2: Lockout reset switch (connect 24 V if the switch is not necessary)
- KM1 to KM4: Magnetic contactor
- M1, M2: 3-phase motor
- E1: 24 VDC power supply (S82K)
- PLC: Programmable controller (used for monitoring, not related to safety system)



**Go to the Engineering Guide**  
For in-depth information on safety standards and use.

## ■ Specifications

|                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Performance</b>                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Resolution:</b>                                 | 14 mm, 20 mm, 30 mm, 55 mm                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Protected Height:</b>                           | 14 mm – 245 to 1631 mm (9.6 to 64.2 in.)<br>20 mm and 30 mm – 245 to 2495 mm (9.6 to 98.2 in.)<br>55 mm – 270 to 2470 mm (10.6 to 97.2 in.)                                                                                                                                                                                                                                                                                                                     |
| <b>Operating Range:</b>                            | 0.2 to 9 m for: 14 mm (all protected heights)<br>20 mm resolution up to 1505 mm (59.3 in.) protected height<br>30 mm and 55 mm resolution up to 1620 mm (63.8 in.) protected height<br>0.2 to 7 m for: 20 mm resolution 1655 to 2495 mm (65.2 to 98.2 in.) protected height<br>30 mm resolution 1745 to 2495 mm (68.7 to 98.2 in.) protected height<br>55 mm resolution 1670 to 2470 mm (65.7 to 97.2 in.) protected height                                     |
| <b>Effective Aperture Angle:</b>                   | ±2.5° maximum, transmitter and receiver at operating range greater than 3 m (9.8 ft.)                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Response Time:</b>                              | For 14 mm resolution systems up to 983 mm (38.7 in.) protected height ≤17.5 ms<br>For 14 mm resolution systems above 983 mm (38.7 in.) protected height ≤25 ms<br>For 20 mm resolution systems up to 1205 mm (47.4 in.) protected height ≤15 ms<br>For 20 mm resolution systems above 1205 mm (47.4 in.) protected height ≤22.5ms<br>For 30 mm resolution systems, all protected heights ≤17.5 ms<br>For 55 mm resolution systems, all protected heights ≤13 ms |
| <b>Safety Output Rating:</b>                       | Two PNP outputs sourcing 300 mA max.                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Auxiliary (Non-Safety) Output Ratings:</b>      | One PNP output sourcing 300 mA max.                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Light Source:</b>                               | Infrared LED, 870 nm                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Light Source Life:</b>                          | NA                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Indicators:</b>                                 | Transmitter: 5 LED Light Level Indicators, 3 LED Error Indicators, Power, Interlock, EDM, Blanking/Test<br>Receiver: 5 LED Light Level Indicators, 3 LED Error Indicators, Machine Run, Machine Stop                                                                                                                                                                                                                                                            |
| <b>Mechanical</b>                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Enclosure:</b>                                  | Anodized aluminum housing                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Cable Length:</b>                               | Optional cables are available up to 20 m(65.6 ft.) in length                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Transmitter and Receiver Cable Connections:</b> | M12, 8-pin                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Electrical</b>                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Power Supply:</b>                               | 24 VDC                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Environmental</b>                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Protection Rating:</b>                          | IP65                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Operating Temperature:</b>                      | -10 to 55°C (14 to 131°F)                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Storage Temperature:</b>                        | -30 to 70°C (-22 to 158°F)                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Relative Humidity:</b>                          | 35 to 85% non-condensing                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Vibration:</b>                                  | 10 to 55 Hz, double amplitude of 0.7 mm, 20 sweeps in X, Y, and Z directions                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Shock:</b>                                      | 100 m/s <sup>2</sup> , 1000 times each in X, Y and Z directions                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Conformity/Approvals</b>                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Approvals:</b>                                  | All F3SJ-A systems have been EC type examined to the requirements of IEC 61496-1, -2 for a Type 4 ESPE                                                                                                                                                                                                                                                                                                                                                          |
| <b>Conforming to Standards:</b>                    | ANSI/RIA R15.06-1999; ANSI B11.19-2003; OSHA 1910.217(c); OSHA 1910.212.A                                                                                                                                                                                                                                                                                                                                                                                       |

Specifications are subject to change without notice.

D

safety light curtains

## ■ Specifications (continued)

### Control Unit

|                                                                                    |
|------------------------------------------------------------------------------------|
| <b>Power Supply Voltage:</b> 24 VDC $\pm 10\%$                                     |
| <b>Power Consumption:</b> DC1.7 W max (not including sensor's current consumption) |
| <b>Operation Time:</b> 100 ms max. (not including the sensor's response time)      |
| <b>Response Time:</b> 10 ms max. (not including the sensor's response time)        |
| <b>Relay Output</b>                                                                |
| <b>Number of Contacts:</b> 3 N/O + 1 N/C                                           |
| <b>Rated Load:</b> 25 VAC 5 A ( $\cos = 1$ ); 30 VDC 5 A L/R = 0 ms                |
| <b>Rated Current:</b> 5 A                                                          |
| <b>Connection Type</b>                                                             |
| <b>Between Sensors:</b> M12 connector (8-pin)                                      |
| <b>Others:</b> Terminal block                                                      |
| <b>Weight:</b> Approx. 280 g (9.9 oz.)                                             |

Specifications are subject to change without notice.



**Go to the Engineering Guide**  
For in-depth information on  
safety standards and use.



Technical drawing of the M12 Waterproof connector, showing side, front, and detail views with dimensions and labels.

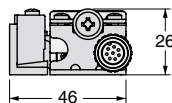
**Labels:**

- 2-Top/bottom mounting brackets
- 2-Mounting holes
- Intermediate mounting bracket
- C (Protective height)
- Beam
- 4-Mounting holes
- 2-Mounting holes
- M12 Waterproof connector
- Mounting Screw Holes

**Dimensions (mm):**

- Top/bottom mounting brackets: 30
- Mounting holes (top): 5.5, 16.5, 20, 13.75
- Intermediate mounting bracket: 24
- Protective height (C): 37
- Beam: 31, 22, 7, 5.5, 53, 42
- Mounting holes (middle): 2
- Mounting holes (bottom): 4, 6.5, 9
- Bottom connector: 15 dia., 43, 6 dia., 300
- Detail view: 4-M5, 2-M5, 22, 42, 20

E = see chart below



\*Use E = 530 or less when none of the E values shown above are used.



|               |    |      |                        |     |      |               |    |      |               |    |      |
|---------------|----|------|------------------------|-----|------|---------------|----|------|---------------|----|------|
| F3SJ-A0745P30 | 30 | 745  | F3SJ-A1245P30          | 50  | 1245 | F3SJ-A0570P55 | 12 | 570  | F3SJ-A1570P55 | 32 | 1570 |
| F3SJ-A0770P30 | 31 | 770  | F3SJ-A1270P30          | 51  | 1270 | F3SJ-A0620P55 | 13 | 620  | F3SJ-A1620P55 | 33 | 1620 |
| F3SJ-A0795P30 | 32 | 795  | F3SJ-A1295P30          | 52  | 1295 | F3SJ-A0670P55 | 14 | 670  | F3SJ-A1670P55 | 34 | 1670 |
| F3SJ-A0820P30 | 33 | 820  | F3SJ-A1395P30          | 56  | 1395 | F3SJ-A0720P55 | 15 | 720  | F3SJ-A1720P55 | 35 | 1720 |
| F3SJ-A0845P30 | 34 | 845  | F3SJ-A1495P30          | 60  | 1495 | F3SJ-A0770P55 | 16 | 770  | F3SJ-A1770P55 | 36 | 1770 |
| F3SJ-A0870P30 | 35 | 870  | F3SJ-A1620P30          | 65  | 1620 | F3SJ-A0820P55 | 17 | 820  | F3SJ-A1820P55 | 37 | 1820 |
| F3SJ-A0895P30 | 36 | 895  | F3SJ-A1745P30          | 70  | 1745 | F3SJ-A0870P55 | 18 | 870  | F3SJ-A1870P55 | 38 | 1870 |
| F3SJ-A0920P30 | 37 | 920  | F3SJ-A1870P30          | 75  | 1870 | F3SJ-A0920P55 | 19 | 920  | F3SJ-A1920P55 | 39 | 1920 |
| F3SJ-A0945P30 | 38 | 945  | F3SJ-A1995P30          | 80  | 1995 | F3SJ-A0970P55 | 20 | 970  | F3SJ-A1970P55 | 40 | 1970 |
| F3SJ-A0970P30 | 39 | 970  | F3SJ-A2120P30          | 85  | 2120 | F3SJ-A1020P55 | 21 | 1020 | F3SJ-A2020P55 | 41 | 2020 |
| F3SJ-A0995P30 | 40 | 995  | F3SJ-A2245P30          | 90  | 2245 | F3SJ-A1070P55 | 22 | 1070 | F3SJ-A2070P55 | 42 | 2070 |
| F3SJ-A1020P30 | 41 | 1020 | F3SJ-A2370P30          | 95  | 2370 | F3SJ-A1120P55 | 23 | 1120 | F3SJ-A2120P55 | 43 | 2120 |
| F3SJ-A1045P30 | 42 | 1045 | F3SJ-A2495P30          | 200 | 2495 | F3SJ-A1170P55 | 24 | 1170 | F3SJ-A2170P55 | 44 | 2170 |
| F3SJ-A1070P30 | 43 | 1070 | <b>F3SJ-A55 Series</b> |     |      | F3SJ-A1220P55 | 25 | 1220 | F3SJ-A2220P55 | 45 | 2220 |
| F3SJ-A1095P30 | 44 | 1095 | F3SJ-A0270P55          | 6   | 270  | F3SJ-A1270P55 | 26 | 1270 | F3SJ-A2270P55 | 46 | 2270 |
| F3SJ-A1120P30 | 45 | 1120 | F3SJ-A0320P55          | 7   | 320  | F3SJ-A1320P55 | 27 | 1320 | F3SJ-A2320P55 | 47 | 2320 |
| F3SJ-A1145P30 | 46 | 1145 | F3SJ-A0370P55          | 8   | 370  | F3SJ-A1370P55 | 28 | 1370 | F3SJ-A2370P55 | 48 | 2370 |
| F3SJ-A1170P30 | 47 | 1170 | F3SJ-A0420P55          | 9   | 420  | F3SJ-A1420P55 | 29 | 1420 | F3SJ-A2420P55 | 49 | 2420 |
| F3SJ-A1195P30 | 48 | 1195 | F3SJ-A0470P55          | 10  | 470  | F3SJ-A1470P55 | 30 | 1470 | F3SJ-A2470P55 | 50 | 2470 |
| F3SJ-A1220P30 | 49 | 1220 | F3SJ-A0520P55          | 11  | 520  | F3SJ-A1520P55 | 31 | 1520 |               |    |      |

\*The suffix "-TS" is attached to the model number of models with fixed auto reset.

## Accessories

### Model Description

#### Single-End Connector Cable (2 cables per set, for emitter and receiver)

For wiring with safety circuit such as single safety relay, safety relay unit, and safety controller

|           |                                        |
|-----------|----------------------------------------|
| F39-JC3A  | M12 connector (8-pin), 3 m (9.8 ft.)   |
| F39-JC7A  | M12 connector (8-pin), 7 m (23.0 ft.)  |
| F39-JC10A | M12 connector (8-pin), 10 m (32.8 ft.) |
| F39-JC15A | M12 connector (8-pin), 15 m (49.2 ft.) |
| F39-JC20A | M12 connector (8-pin), 20 m (65.6 ft.) |

#### Double-End Connector Cable (2 cables per set, for emitter and receiver)

For connection with F3SP-B1P control unit, and for extension when series-connected. Note: To extend the cable length under series connection, use F39-JJR3W and F39-JC□B in combination.

|           |                                        |
|-----------|----------------------------------------|
| F39-JCR5B | M12 connector (8-pin), 0.5 m (1.6 ft.) |
| F39-JC1B  | M12 connector (8-pin), 1 m (3.3 ft.)   |
| F39-JC3B  | M12 connector (8-pin), 3 m (9.8 ft.)   |
| F39-JC5B  | M12 connector (8-pin), 5 m (16.4 ft.)  |
| F39-JC7B  | M12 connector (8-pin), 7 m (23.0 ft.)  |
| F39-JC10B | M12 connector (8-pin), 10 m (32.8 ft.) |
| F39-JC15B | M12 connector (8-pin), 15 m (49.2 ft.) |
| F39-JC20B | M12 connector (8-pin), 20 m (65.6 ft.) |

#### Series Connection Cable (2 cables per set, for emitter and receiver)

|            |                                                                                                                                                                     |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| F39-JJR3W  | Series connection cable <sup>3</sup> or when using water-resistant case <sup>4</sup> , 0.3 m (1.0 ft.)                                                              |
| F39-JC□B   | Extension cable, 0.5 to 15 m (1.6 to 49.2 ft.)<br>To change series connection length in combination with F39-JJR3W                                                  |
| F39-JJR06L | Side-by-side series connection cable, 0.06 m (2.4 in.)<br>Dedicated series connection cable with minimum length, used in place of the sensor's cable with connector |
| F39-JJR15L | Side-by-side series connection cable, 0.15 m (5.9 in.)<br>Dedicated series connection cable with minimum length, used in place of the sensor's cable with connector |

<sup>3</sup>Total cable length of series connection is 0.6 m to connect to connector cable of the main sensor unit. For series connection with minimum length, use the F39-JJR06L or F39-JJR15L.

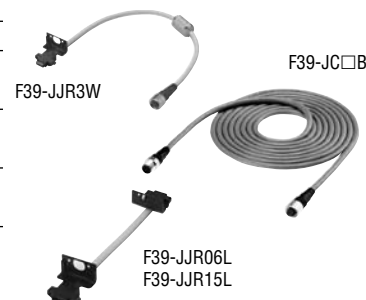
<sup>4</sup>When using the F39-EJ□□□□□□-L/D water-resistant case in series connection configurations, use the special series connection cables for the water-resistant case.



F39-JC7A



F39-JC15B



F39-JC□B

F39-JJR3W

F39-JJR06L  
F39-JJR15L

## ■ Ordering (continued)

### Accessories (continued)

| Model                                                   | Description                                                                               |
|---------------------------------------------------------|-------------------------------------------------------------------------------------------|
| <b>Safety Controller</b>                                |                                                                                           |
| F3SX-EL2                                                | Can connect 2 sets of F3SJ-As and emergency stop switch<br>DC semiconductor safety output |
| F3SX-E-L2L2                                             | Can connect 4 sets of F3SJ-As and emergency stop switch<br>DC semiconductor safety output |
| F3SX-N-L2R                                              | Can connect 2 sets of F3SJ-As and emergency stop switch<br>Relay output (2 N/O + 2 N/C)   |
| F3SX-N-L2L2R                                            | Can connect 4 sets of F3SJ-As and emergency stop switch<br>Relay output (2 N/O + 2 N/C)   |
| <b>Connection Cable for F3SX (F3SX to F39-CN5)</b>      |                                                                                           |
| F39-JC1T                                                | F3SX connection cable, 1 m (3.3 ft.)                                                      |
| F39-JC3T                                                | F3SX connection cable, 3 m (9.8 ft.)                                                      |
| F39-JC5T                                                | F3SX connection cable, 5 m (16.4 ft.)                                                     |
| F39-JC7T                                                | F3SX connection cable, 7 m (23.0 ft.)                                                     |
| F39-JC10T                                               | F3SX connection cable, 10 m (32.8 ft.)                                                    |
| F39-JC15T                                               | F3SX connection cable, 15 m (49.2 ft.)                                                    |
| <b>Branch Connector for F3SX (F39-JC□T to F39-JC□B)</b> |                                                                                           |
| F39-CN5                                                 | Branch connector for F3SX                                                                 |



F3SX

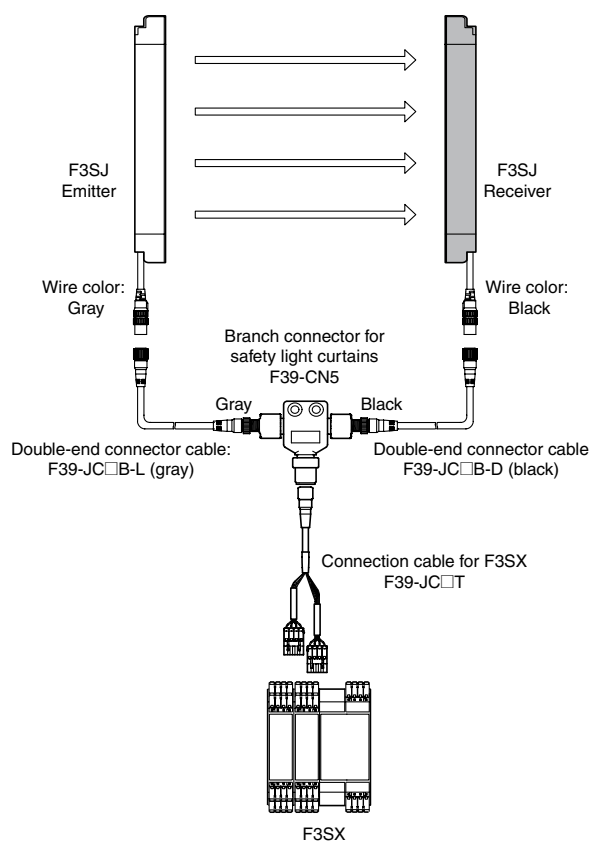


F39-JC-10T



F39-CN5

#### Accessory connection example



**Go to the Engineering Guide**  
For in-depth information on  
safety standards and use.

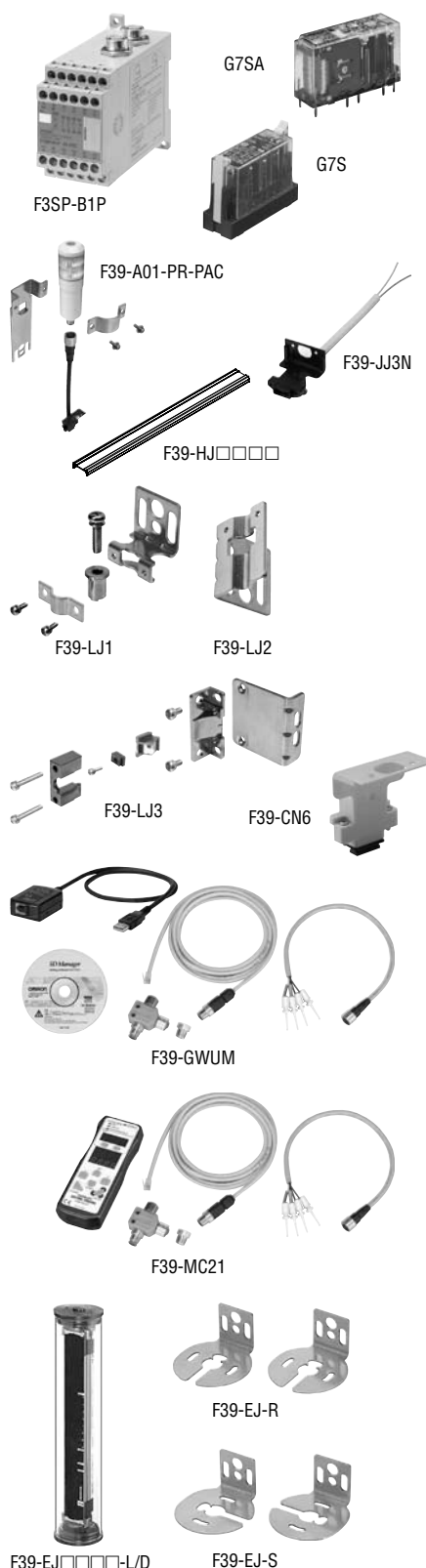


## Accessories (continued)

| Model                                                                                         | Description                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Control Unit</b>                                                                           |                                                                                                                                                                                                                                         |
| F3SP-B1P                                                                                      | Relay, 3 N/O + 1 N/C output, for connection with F3SJ-A, use an F39-JC□□B double-end connector cable                                                                                                                                    |
| <b>Force-Guided Relays</b>                                                                    |                                                                                                                                                                                                                                         |
| G7SA-2A2B                                                                                     | 4 contacts, 2 N/O + 2 N/C, Rated switch load: 250 VAC 6 A, 30 VDC 6 A                                                                                                                                                                   |
| G7SA-3A1B                                                                                     | 4 contacts, 3 N/O + 1 N/C, Rated switch load: 250 VAC 6 A, 30 VDC 6 A                                                                                                                                                                   |
| G7S-4A2B-E                                                                                    | 6 contacts, 4 N/O + 2 N/C, Rated switch load: 250 VAC 10 A, 30 VDC 10 A                                                                                                                                                                 |
| G7S-3A3B-E                                                                                    | 6 contacts, 3 N/O + 3 N/C, Rated switch load: 250 VAC 10 A, 30 VDC 10 A                                                                                                                                                                 |
| <b>Dedicated External Indicator Set</b> (Can be connected to either an emitter or a receiver) |                                                                                                                                                                                                                                         |
| F39-A01PR-PAC                                                                                 | Indicator (red), mounting bracket (1 set), and dedicated connection cable (0.1 m)                                                                                                                                                       |
| F39-A01PG-PAC                                                                                 | Indicator (green), mounting bracket (1 set), and dedicated connection cable (0.1 m)                                                                                                                                                     |
| F39-A01PY-PAC                                                                                 | Indicator (yellow), mounting bracket (1 set), and dedicated connection cable (0.1 m)                                                                                                                                                    |
| <b>General External Indicator Cable</b>                                                       |                                                                                                                                                                                                                                         |
| F39-JJ3N                                                                                      | Cable to connect top of the main unit and an off-the-shelf external indicator (2-wire), 3 m (9.8 ft.)                                                                                                                                   |
| <b>Splatter Protection Cover</b>                                                              |                                                                                                                                                                                                                                         |
| F39-HJ□□□□                                                                                    | For F3SJ-A series sensor, reduces operating range by 10%, includes two pieces for emitter and receiver                                                                                                                                  |
| <b>Sensor Mounting Brackets</b> (sold separately)                                             |                                                                                                                                                                                                                                         |
| F39-LJ1                                                                                       | Standard mounting bracket (for top/bottom), included with main unit, 2 for emitter and 2 for receiver (total of 4 per set)                                                                                                              |
| F39-LJ2                                                                                       | Flat side mounting bracket, Use these small-sized brackets when performing side mounting with standard mounting brackets so that they do not protrude from the detection surface, 2 for emitter and 2 for receiver (total of 4 per set) |
| F39-LJ3                                                                                       | Free-location mounting bracket (also used as standard intermediate bracket), Use these brackets for mounting any place without using standard bracket, 1 set with 2 pieces                                                              |
| <b>Key Cap for Muting</b>                                                                     |                                                                                                                                                                                                                                         |
| F39-CN6                                                                                       | Cap attaches to the main unit to enable muting function, attach to either an emitter or a receiver, orange case                                                                                                                         |
| <b>Setting Tools<sup>5</sup></b>                                                              |                                                                                                                                                                                                                                         |
| F39-GWUM                                                                                      | "SD Manager" Setting Support Software for the F3SJ-A<br>Accessories: SD Manager CD-ROM, F39-CN1 Branch Connector, Connector Cap, 2 m Dedicated Cable, 0.3 m Dedicated Cable with Plug, Instruction Manual                               |
| F39-MC21                                                                                      | Setting Console<br>Accessories: F39-CN1 Branch Connector, Connector Cap, 2 m Dedicated Cable, 0.3 m Dedicated Cable with Plug, Instruction Manual                                                                                       |
| <b>Water-Resistant Case</b> (Set of 1 tube, packing, and dedicated connector cable)           |                                                                                                                                                                                                                                         |
| When using for both emitter and receiver, order two sets.                                     |                                                                                                                                                                                                                                         |
| F39-EJ□□□□-L                                                                                  | Water-resistant case for emitter, includes gray cable for emitter                                                                                                                                                                       |
| F39-EJ□□□□-D                                                                                  | Water-resistant case for receiver, includes black cable for receiver                                                                                                                                                                    |
| F39-EJ-R <sup>6</sup>                                                                         | Rear mounting brackets, top/bottom 1 each, total of 2                                                                                                                                                                                   |
| F39-EJ-S <sup>6</sup>                                                                         | Side mounting brackets, top/bottom 1 each, total of 2                                                                                                                                                                                   |
| F39-JJR3WE-L                                                                                  | Series connection cable for emitter, purchase additionally for series connection when using the water-resistant case                                                                                                                    |
| F39-JJR3WE-D                                                                                  | Series connection cable for receiver, purchase additionally for series connection when using the water-resistant case                                                                                                                   |

<sup>5</sup> The setting tools described above can be connected only to F3SJ-A models with built-in software of Ver. 2 or later. Note that the setting tools cannot be used with products shipped prior to December 2005. The setting tools cannot be used for setting parameters on the F3SJ-A□-TS series, but the monitoring function can be used.

<sup>6</sup> Be sure to purchase brackets with the case to match the mounting direction (rear or side).



D

safety light curtains