

Distance setting photoelectric sensor in metal housing

# E3S-CL

- High water, oil and detergent resistance
- Minimal black/white error for highest reliability detecting different colored objects (E3S-CL1)



## Features

### Eliminates Background Influences with a Hysteresis of Only 2% max. (E3S-CL1)

The hysteresis is the industry's minimum 2% max. (E3S-CL1). As a triangulation measuring is used, objects behind the setting distance cannot be detected. The sensor is insensitive to the influence of background objects of high reflectivity, and stable detects works on a conveyor from above. The hysteresis of the E3S-CL2 is 10% max. of the detecting distance (5% max. for white paper).



### What Is Distance Setting? (Differences from other detecting system)

#### Distance-setting

Features	When the sensing object moves in direction A, the center position of the reflected light moves in direction B. This is received by the 2-split photodiode and the place where the incident levels are the same on the N and F sides is defined as the setting distance. The object is detected by the incident circuit processing only when N > F, and is not detected when N < F. Therefore, detection is stable without being influenced by the work type and background objects.
Structure	

#### Diffuse-reflective

Features	Since the level of the reflected light is judged for detection, the sensing distance varies with the color, material and/or size of the work. A malfunction may occur if there is any object of high reflectivity in the background.
Structure	

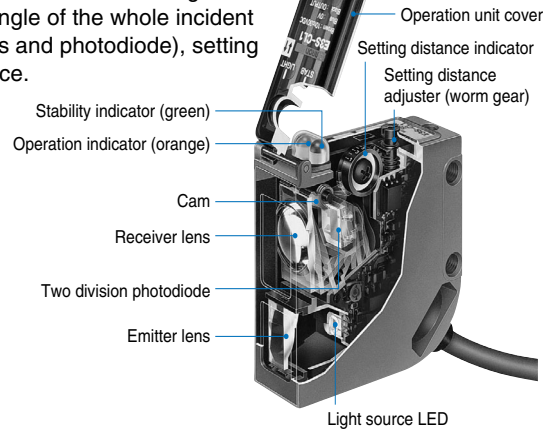
### 6-turn adjuster with indicator

- The 6-turn adjuster with indicator ensures ease of distance setting.
- Fine distance setting is possible.



### Optical Technology of E3S-CL

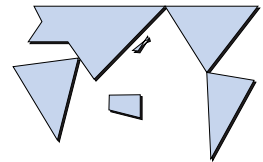
By turning the distance setting adjuster (worm gear), the rotation of the gear moves the cam to change the incident angle of the whole incident block (lens and photodiode), setting the distance.



- NPN/PNP Output Selectable.
- Light-ON/Dark-ON is also switch selectable.

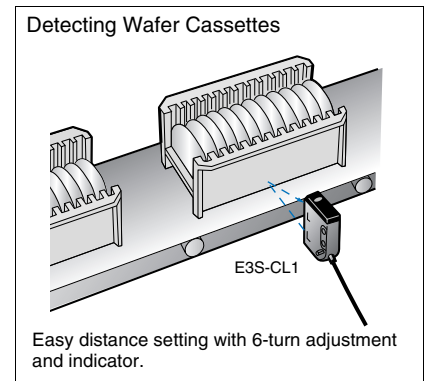
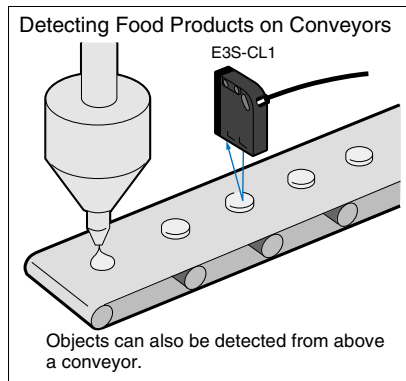
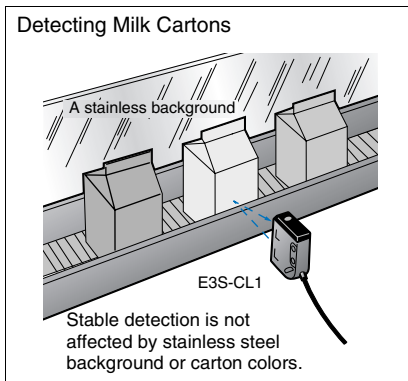
### Conforms to Applicable EN/IEC Standards

- The sensors satisfy the electrical safety (IEC947-5-2), noise resistance (IEC947-5-2, IEC801-2/3/4) and noise radiation restrictions (EN500 81-2, EN55011) required for photoelectric sensors.



## Application

#### E3S-CL1



#### E3S-CL2

