Classification

(1) Classification by Sensing Method

For information on the configuration of each method, refer to the sensing distance reference diagram in *Definition of Terms*.

(1) Slot Sensors	Slot Sensors are suitable for applications using a thin sensing object, or "dog," that require a highly precise sensing position. Setup is easy because no optical axis adjustment is needed. There are many product variations. The necessary configuration, connection method, and other items can be selected from a wide array of models.
(2) Through-beam Sensors	Through-beam Sensors are suitable for applications that require relatively long sensing distances.
(3) Retroreflective Sensors	Retroreflective Sensors are suitable for applications that require relatively long sensing distances. They have the advantage of requiring less work for wiring and optical axis adjustment when compared to Through-beam Sensors.
(4) Diffuse-reflective Sensors	Diffuse-reflective Sensors are suitable for applications where the sensing object is thick and won't fit into the slot of a Slot Sensor.
(5) Limited-reflective Sensors	Limited-reflective Sensors are basically the same as Diffuse-reflective Sensors, but they are suitable when background objects are present. (With Diffuse-reflective Sensors, the presence of a background object with a higher reflectivity than the sensing object (e.g., metals with mirror finishing) may cause sensing instability.)

(2) Considerations when Choosing a Sensing Method

(1) Slot Sensors	· Shape, slot width, connection (pre-wired/connector) · Presence or absence of external light interference (non-modulated light/modulated light) · Output configuration (Light-ON/Dark-ON, NPN/PNP) · Indicator (Light-ON/Dark-ON)
(2) Through-beam Sensors	· Shape (built-in Amplifier, optical fiber), sensing distance · Output configuration (Light-ON/Dark-ON)
(3) Retroreflective Sensors	· Sensing distance · Output configuration (Light-ON/Dark-ON)
(4) Diffusive/Limited-reflective Sensors	· Shape (built-in Amplifier, optical fiber), sensing distance · Presence or absence of background objects (Diffuse-reflective/Limited-reflective Sensors) · External light interference (non-modulated light/modulated light) · Output configuration (Light-ON/Dark-ON)