



Vision systems IDL

IDL-500E20



Model Name > [IDL-500E20](#)
Part No. > [1057708](#)



The IDL system for item detection performs an analysis of letters and parcels on continuous belts, tilt trays and cross belt conveyor systems. The IDL system provides information about the number of items, their position and other characteristics used to increase throughput by reducing missorts and optimizing the off load process. Reliable operation of the sorter requires adequate distance between packages and the detection of packages that are on top of each other. IDL provides accurate singulation verification and classifies packages as singles or doubles. A strength of IDL is its use of both 3D shape and 2D grayscale imaging. Using laser triangulation for 3D imaging is ideal for small- to medium-sized items. Items as small as 2 mm high can be accurately analyzed, increasing efficiency in product streams that contain both flats and packages. By measuring position, volume, occupied area and product overhang, the IDL system increases throughput and efficiency of the sorter.

At a glance

- Detection and counting of items of heights down to 2 mm
- Accurate measurement of item position on belt or tray
- Doubles detection including side-by-side, product spacing (too close), touching and piggy-back conditions
- Pre-calibrated measurement head in IP 65 housing
- Full-range item characteristics in 3D in up to 3 m/s
- Classify items by height measurement

Your benefits

- Sorting center throughput is maximized
- Position measurement enables additional sort destinations with existing sort footprint
- Minimized recirculation results in reduced package handling and minimized costs for damage
- Handling costs are decreased due to decreased missorts
- Classification of items into correct price category
- Easy and inexpensive integration by simple installation over-the-belt and easy connection to sorter protocols

Features

Type of system:	Item detection system
Applications:	Doubles detection, footprint position and volume, object classification

System features:	Full-range item characteristics in 3D down to 2 mm height
Field of view width:	500 mm ... 1,550 mm
Working distance:	280 mm ... 1,280 mm
Laser class:	2M
Light source ¹⁾ :	Laser, red, 660 nm
Maximum height range:	1,000 mm

¹⁾ ± 15 nm

Performance

Transport speed:	≤ 3 m/s
Detectable object shape:	All shapes, singulated or piggy-backs
Minimum object size:	50 mm x 50 mm x 2 mm
Maximum object size:	2,500 mm x 750 mm x 750 mm (depends on the configuration)
Output data:	Singulation type, separation distance, length, width, height, area, volume, X-, Y- and Z-position of item center, overhang

Interfaces

Ethernet:	✓
Operator interface:	Ranger Studio, IDL, SOPAS
Serial (RS-232, RS-422):	✓
PROFIBUS:	✓
Encoder interface:	HTL
Maximum encoder frequency:	30 kHz

Mechanics/electronics

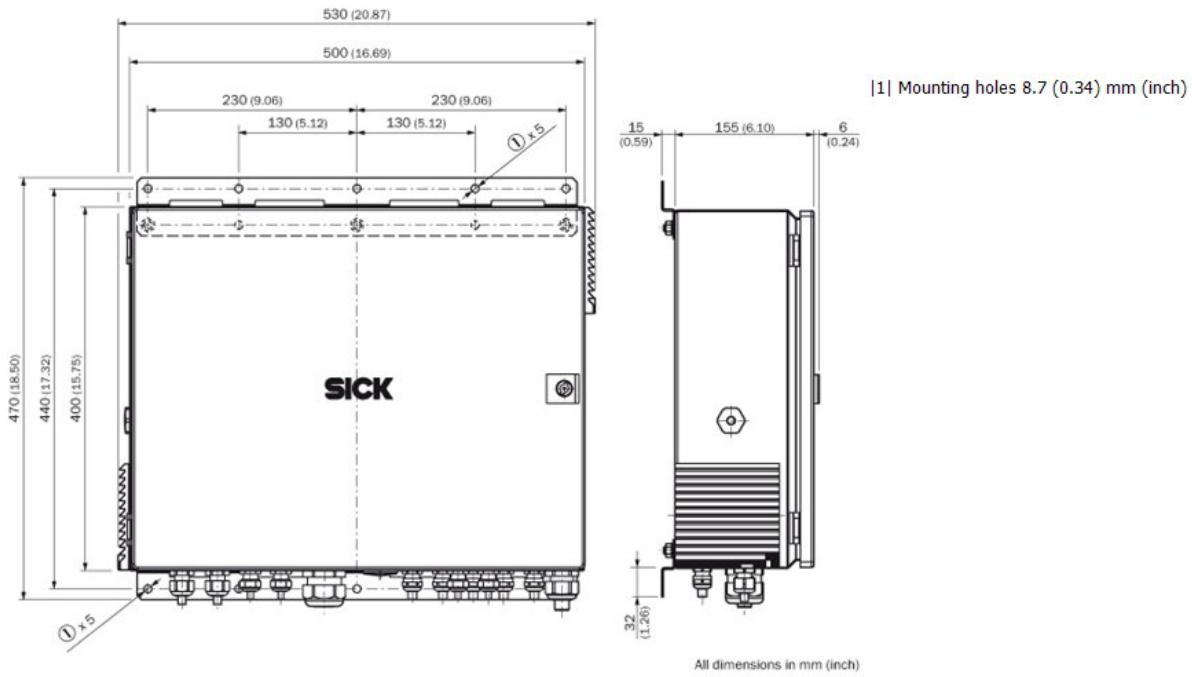
Supply voltage:	AC 100 V ... 240 V +/- 15%
Weight:	7 kg
Enclosure rating:	IP 65
Dimensions (L x W x H):	420 mm x 107 mm x 163 mm
Housing material:	Aluminum
Housing color:	Gray, varnished
Connectors:	Encoder: socket M12, 8-pin, Heating: connector M12, 4-pin
Ethernet connection:	-
Power I/O connection:	Connector M12, 8-pin
Connector material:	Ethernet: thermoplast/anodized aluminum, M12: nickel-plated brass
Window material:	AR-coated, float glass

Ambient data

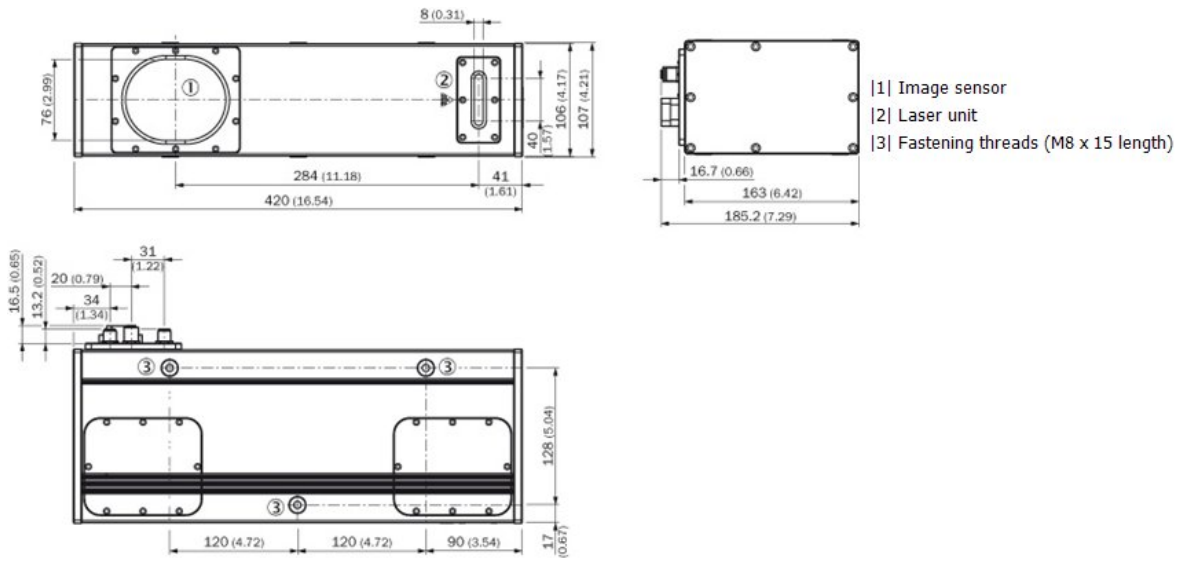
Ambient operating temperature ¹⁾ :	0 °C ... 40 °C
Ambient storage temperature ²⁾ :	-30 °C ... 70 °C
Shock load:	15 g, 3 x 6 directions
Vibration load:	5 g, 58 Hz ... 150 Hz

^{1) 2)} Non-condensing

Dimensional drawing



Dimensional drawing



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