LP352 Pick-to-Light

A robust, flexible Pick-to-Light System for industrial applications

- Guidance systems for quality assurance in the picking of materials
- Speeds up and streamlines order picking
- Quick and easy installation with standard modules

BINAR

Improving your productivity

LP352 Pick-to-Light

Production by the manufacturing industry is often based on customer demands and the production flow therefore contains a variety of product variants. This makes it a real challenge to do everything correctly from the start. Incorrect assembly and wrong sequence delivery result in high costs due to production stops and repairs. In the worst case scenario, the incorrect product is delivered to the customer which, besides involving high cost for quality defects, also risks damaging the company's reputation.

Binar Electronik AB has many years of experience in the quality assurance of assemblies. Instead of the assembly personnel gathering parts themselves, it becomes more and more common materials are delivered in finished batches to the assembly sites. The batches of material are put together at an earlier stage in the supply chain, at so-called "supermarkets".

A re-pick is frequently done at logistics departments when picking parts from pallets, picking a plastic box over to the sequence trailer, or sequence container. Having previously handled the full and half pallets, operators must now pick and repack at the part level. An operator often handles a large number of parts and this handling is important to the quality assured so as not to cause major disruptions during the actual installation.

Binar's picking system LP352 is designed specifically to meet this need. With a mounting rail that is mounted on the front edge of the shelves, concealed cables, and lamps that indicated the material that belongs to a specific sequence. The operator acknowledge that the picking is done on a sensor in the lamp itself. The order picking is speeded up, paper charts can be completely abolished, while ensuring quality.

▼ **Ensures quality in picking**

▼ **Speeds up order picking**

▼ **Touch free detection**

▼ **Can display different colors,RGB and quantity**

▼ **Only 30 mm high, which fits on most shelfs forefront**

▼ **No visible cables on the shelfs**

▼ **Can be combined with electronic instructions**

System Overview

The system is based on the BPS Poka Yoke software that can run visible on a panel PC or as a service on a server. To get access to the pick list or materials list per assembly station a connection can be made to the ERP. The start of order picking are often made using the barcode scanner to scan a sequence, or a recipe. The recipe contains the parts to be picked, how many of each, and what color the picking sensor will show. The system can also be used for replenishment of materials, then the lamp lights up for one item at a time, and then possibly also with a different color such as blue.

The picking sensors are mounted on a mounting rail that runs on a shelf forefront. Then a bus cable is connected between the picking sensors and the cover is mounted between the sensors. To simplify installation, the cover is available in pre cut lengths (100/200 / 300mm). The indicator light may show different colors, but the most common is the use of Green light. The picking is detected, touch- free, directly below the sensor up to about 10 cm. The sensor detects when the operator sweeping his hand over the sensor and the light goes off automatically.

The software BPS ELIN Client also has the ability to display information on the screen. This may involve assembly instructions, drawings or other important information that is automatically presented as the operator picks new material. Contact Binar for further information.

Connections, Left

IDC cable

M12 cable socket conn.

M12 cable pin connector

IDC connection, Left
For connecting IDC cables (cable with 6-pole flat cable connectors (IDC)).
Part no. 50372

M12 connection, Pin, Left
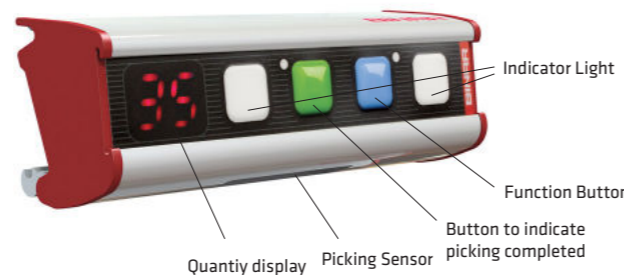For connecting M12 socket connector, angled or straight.
Part no. 50370

M12 connection, Socket, Left
For connecting M12 pin connector, angled or straight.
Part no. 50375

Termination
The bus cabling should always be terminated with a terminating resistor.
Part no. 50390

Picking Sensor

The Picking Sensors combine a Picking Sensor and an indication light.

A green indication shows which components are to be picked. It also has a display that shows the quantity to pick.

The Picking Sensor then detects that picking is complete. If more than one detail are to be picked the picking is completed when the Green button is pushed.

If you by mistake try to pick the wrong component, a red light alerts you to the error.

The Function Button function is user defined. It can for example be used to set of Andon alarm or to order new material.

LP352
Picking Sensor with quantity display, reset key och function key.
Art.nr: 50352

Indicator Light

Function Button

Button to indicate picking completed

Quantiy display Picking Sensor

Covers

Covers intended to fill the gap between the LP352-units. In the space behind the covers the "slack" of the internal cabling is located.

The covers are delivered as piece goods or in fixed sizes.

Slots where labels can be inserted

Gateway & Cables

The Picking Sensors are connected to a Gateway via a field bus (CAN). The Gateway communicate with a master system either via Ethernet.

External bus cabling
Between the Gateway and material racks, as well as between different material racks, a bus cable with M12 connectors is used.

Between shelves (mounting rails) either M12 cabling or IDC cabling (cabling with flat cable connectors (IDC)) is used.
The minimum permitted bend radius for M12 cabling is 67 mm. If a smaller bend radius is required, IDC cabling must be used.

Internal bus cabling
The internal bus cabling connects units that are installed on the same mounting rail and consist of double-twisted flat cable with 6-pole flat cable connectors (so-called IDC connectors).

Connections, Right

IDC connection, Right
For connecting IDC cables (cable with 6-pole flat cable connectors (IDC)).
Part no. 50362

M12 connection, Pin, Right
For connecting M12 socket connectors, angled or straight.
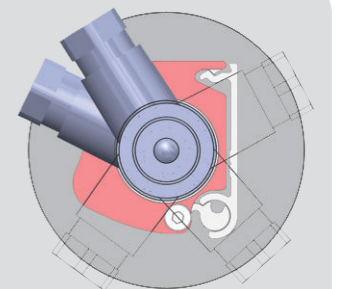Part no. 50360

M12 connection, Socket, Right
For connecting M12 pin connectors, angled or straight.
Part no. 50355

Termination
The bus cabling should always be terminated with a terminating resistor.
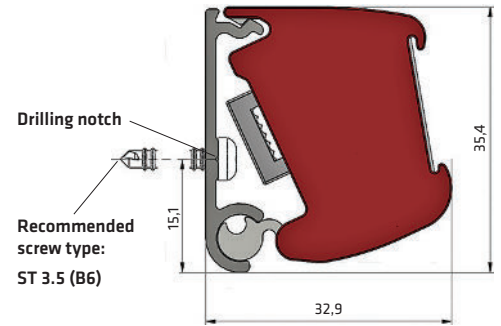Part no. 50390

Mounting rail

LP352 modules are snapped onto a rail that is installed on or connected to a shelf edge.

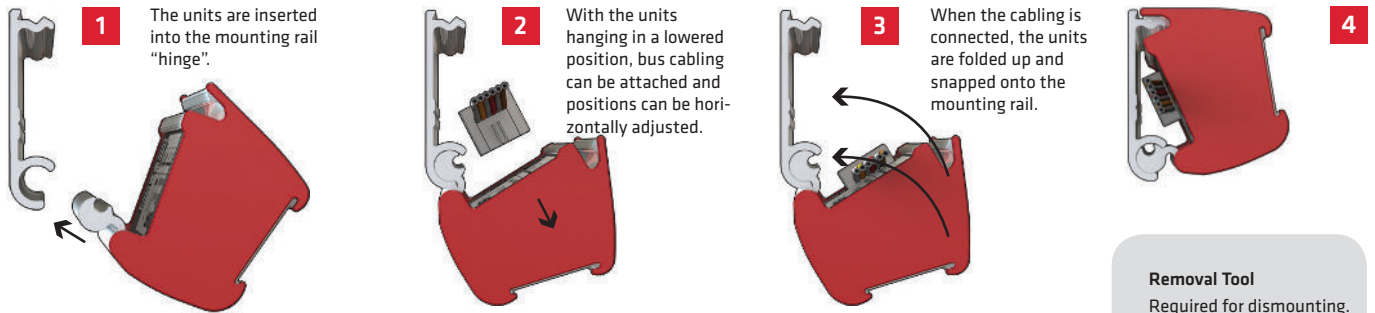The mounting rails are delivered as piece goods or in fixed sizes.

The M12 connection plug can be rotated. A connected M12 plug can therefore be angled arbitrarily within the green area as shown in the picture above. By doing this, the outgoing cable can be located at a suitable direction.

TECHNICA DATA LP352

Indicate picking complete	touch-free or with button
Picking Sensor	IR sensor. Sensing distance appr. 10 cm.
Indication colors	Green, Red, Yellow, Blue, White, Turquoise & Purple
Quantiy display	1-99
Max. No. of Picking Sensors	about 90pcs per bus
Dimensions	b100 x h35.4 x d32.9 (mounted)
Communication Gateway	Ethernet

Drilling notch

Recommended screw type:
ST 3.5 (B6)

35.4
15.1
32,9

Quick and easy installation

1 The units are inserted into the mounting rail "hinge".

2 With the units hanging in a lowered position, bus cabling can be attached and positions can be horizontally adjusted.

3 When the cabling is connected, the units are folded up and snapped onto the mounting rail.

4

Removal Tool
Required for dismounting.
Art.nr: 35472

Installation example

The picture shows a configuration for a material rack with 3pcs 1.5m wide shelves and 5 evenly distributed boxes per shelf.

M12 connection to central unit

A	3	Mounting rails	F	1	Termination
B	15	Picking Sensor LP352	G	9	Cover
C	1	M12 connection, pin, left	H	5	Cover
D	2	IDC connection, right	I	1	Cover
E	2	IDC connection, left	J	3	Internal bus cabling

K	2	IDC cable (between shelves)
	1	M12 cable (to Gateway)
	1	Gateway
	1	Power supply for Gateway
	1	Termination for Gateway

ISO 9001
ISO 14001

BINAR
Improving your productivity