LANDSCAN LSP RANGE OF MOUNTINGS AND ACCESSORIES

The following information is intended as a guide to the extensive range of optional mountings and accessories available to ensure that you get the best possible service from the investment you have made when specifying Landscan LSP infrared linescanning systems to monitor and control your manufacturing process. The tables below illustrate a range of possible arrangements for typical industrial applications encountered - ranging from light industrial to hostile environments such as the steel and glass works.

For specific recommendations on the choice of protection housing, mounting assemblies, water cooling, air purging and cabling requirements to suit your specific industry or installation, contact Land Instruments International for further advice before ordering.

TYPICAL APPLICATIONS

Light Industrial - General Purpose

Heavy Industrial - Hostile Environments

SPECIAL APPLICATIONS

Glass Float Line

Other examples include: kiln scanning, and torpedo car and ladle safety, and conveyor belt monitoring. For information on these applications contact Land Instruments International for further information.

KEY

- Right-angle Mounting plate
- Water-cooled, air purged base plate
- Float line mounting assembly with cover
- Float line mounting service panel
- Cable assemblies See separate table
- Basic Mounting Plate
- Water-cooled, air purged base plate with sides
- Plate mounted blower unit
- Mini service panel
The right angle mounting plate is a simple design intended for basic LSP linescanner head mounting. It is pre-drilled to accept either the basic mounting plate or the water cooled, air purged base plate. All fixings are supplied with the plate.

Can be used with:

![Diagram of right angle mounting plate]

**Right angle mounting plate**

- **Stainless steel**
- All dimensions in mm/in
- Scanner mounting face
- Hole Ø8.5/0.34 to accept M8 screws

Dimensions:

- 240/9.45
- 152/5.98
- 222/8.74
- 52/2.05
The basic base plate is used in applications where an LSP linescanner head is to be installed in light industrial environments where the ambient temperatures is within the recommended operating range of the instrument and the atmosphere is relatively free from dust and airborne particles.

The basic base plate provides a quick release mounting arrangement for the scanner, making realignment a simple and easy operation.

Can be used with:

Basic mounting plate

Hole Ø8.5/0.34 to accept M8 screws
The water cooled, air purged base plate is used in applications where an LSP scanner is to be installed into environments where the ambient temperatures are in the range of 60 to 100°C/140 to 212°F.

This accessory is ideally suited to general industrial applications.

The air purge facility should be utilized where the operating environment is dusty and airborne particles could contaminate the scanner viewing window.

The base plate is fitted with hose connectors suitable for 9.5mm/3/8in bore reinforced PVC water hose.

The water flow rate required depends upon each individual application, however 1l/min/0.26GPM is an absolute minimum at 30°C/86°F maximum water temperature.

The base plate is fitted with a G3/8 air connector, which is suitable for 38mm/1.5in I/D neoprene air hose, through which the purge air is supplied.

The flow rate depends upon local conditions and scanner orientation, but a rate of 300l/min/12.36SCFM at an inlet pressure of 1m WG/1.42psi/0.1bar is typically sufficient.
The water cooled, air purged base plate with sides is used in applications where an LSP linescanner is to be installed in environments where the ambient temperatures are in the range of 60 to 120°C/140 to 212°F, such as steel and glass plants.

The air purge facility should be utilized where the operating environment is dusty and airborne particles could contaminate the scanner viewing window.

The base plate is fitted with hose connectors suitable for 9.5mm/3/8in bore reinforced PVC water hose.

The water flow rate required depends upon each individual application, however 1l/min/0.26GPM is an absolute minimum at 30°C/86°F maximum water temperature.

The base plate is fitted with a G3/8 air connector, which is suitable for 38mm/1.5in I/D neoprene air hose, through which the purge air is supplied.

The flow rate depends upon local conditions and scanner orientation, but a rate of 300l/min/12.36SCFM at an inlet pressure of 1m WG/1.42psi/0.1bar is typically sufficient.

Water cooled, air purged base plate with sides

All dimensions in mm/in
LSP float line mountings provide protection for the LSP linecanner, against high ambient temperatures and heavy contamination associated with glass float line environments. They also give flexibility for alignment when setting up and rigidity and adjustability during scanner mounting.

To counter high ambient temperatures, a water-cooling system is employed. This requires a constant, clean water supply to be available. The cooling water flows through the side and base plates and is supplied via 1/4in BSP inflow and outflow connectors, suitable for 9.5mm/3/8in bore reinforced PVC water hose.

The water flow rate required depends upon each individual application, however 1l/min/0.26GPM is an absolute minimum at 30°C/86°F maximum water temperature.

An air purge system is also utilized to protect the scanner from contamination and the hostilities of the process under observation. A G3/8 air connector in the mounting plate accommodates 38mm/1.5in I/D neoprene air hose, through which the purge air is supplied. The flow rate depends upon local conditions and scanner orientation, but a rate of 300l/min/12.36SCFM at an inlet pressure of 1m WG/1.42psi/0.1bar is typically sufficient.
The LSP linescanner float line system service panel provides mains power to all components of the LSP system, isolation facilities for servicing access and real-time system status information.

The display panel can be supplied with a choice of languages to suit the local application.

It provides a real-time indication of system status, including:

- **Power On (24V)** - status indication
- **Over Temperature** - warning indication
- **Low Purge Pressure** - warning indication
- **High Purge Pressure** - warning indication
- **Shutter Not Open** - status indication
- **Manual Close** - status indication
- **Push For Manual Close** - manual operation

Any chosen installation site for the service panel must have low vibration, low contamination and must be within ambient temperature specification at all times (max. 50°C/90°F).

The maximum cable run between the service panel installation site and the float line mountings should not exceed 15m/50ft, taking into account the safe routing of the cable.

---

**LSP float line system service panel**

![Diagram showing dimensions of the service panel.](image)

- **Minimum clearance** 200/8.0
- **All dimensions in mm/in**

- 530/20.87
- 442/17.40
- 210/8.27
- 39.5/1.56
- 264/10.39
The LSP Mini Services Panel provides mains power to all components of the LSP system, isolation facilities for servicing access and system status information. It is primarily utilized when a cable extension is required, allowing up to 300m/1000ft of additional cable run from initial 15m/50ft installation point.

Any chosen installation site for the service panel must have low vibration, low contamination and must be within ambient temperature specification at all times (max. 50°C/122°F).

The maximum cable run between the mini services panel installation site and the LSP must not exceed 15m/50ft, taking into account the safe routing of the cable.
The plate mounted blower unit provides air to linescanning and thermal systems, where the specified application requires a controlled, conditioned air source for instrument cooling and/or optical air purging in order to maintain a clear sight path to the target. Optional weatherproof cover available.

### Specifications

<table>
<thead>
<tr>
<th></th>
<th>Option 1</th>
<th>Option 2</th>
<th>Option 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>50Hz</td>
<td>60Hz</td>
<td>60Hz</td>
</tr>
<tr>
<td>Power consumption</td>
<td>400W</td>
<td>500W</td>
<td>500W</td>
</tr>
<tr>
<td>Circuit breaker (type C)</td>
<td>10A</td>
<td>16A</td>
<td>10A</td>
</tr>
</tbody>
</table>

### Dimensions

- Operating temperature: -20 to 50°C/-4 to 122°F (-40 to 50°C/-40 to 122°F with optional air heater fitted)
- Environmental rating: IP55/NEMA 4 (IP55/NEMA 4X (with weatherproof cover fitted)
- CE marking: 89/336/CEE; 73/23/CEE
- Weather proofing: In accordance with EN 60034-5

**Description and Dimensions**

- All dimensions in mm/in
- *Clearance required for fitting weatherproof cover
# RECOMMENDED CABLE ASSEMBLIES

The following cabling schedules are intended to provide a guide to recommended cable arrangements for typical industrial applications encountered. For specific recommendations on your application contact Land Instruments International for further advice before ordering.

## Light Industrial - General Purpose

<table>
<thead>
<tr>
<th>Key</th>
<th>Connection</th>
<th>Cable Length</th>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>LSP to LSC-B/C</td>
<td>up to 15m/50ft</td>
<td>Standard cable</td>
<td>031-402</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>LSP to LSC-B</td>
<td>15m/50ft to 100m/500ft</td>
<td>Special order cable</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>LSP to LSC-B/C</td>
<td>150m/500ft to 300m/1000ft</td>
<td>Standard cable + Mini service panel + Belden 8162 (2-pair) or Belden 8163 (3-pair)</td>
<td>031-402/794</td>
</tr>
<tr>
<td>F</td>
<td></td>
<td></td>
<td></td>
<td>203-849</td>
</tr>
</tbody>
</table>

## Heavy Industrial - Hostile Environments

<table>
<thead>
<tr>
<th>Key</th>
<th>Connection</th>
<th>Cable Length</th>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>LSP to LSC-B/C</td>
<td>up to 15m/50ft</td>
<td>Standard cable or High temperature cable</td>
<td>031-402</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>031-794</td>
</tr>
<tr>
<td>B</td>
<td>LSP to LSC-B</td>
<td>15m/50ft to 100m/500ft</td>
<td>Special order cable or High temperature cable</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>031-794</td>
</tr>
<tr>
<td>E</td>
<td></td>
<td>All lengths</td>
<td>Mini service panel + Belden 8162 (2-pair) or Belden 8163 (3-pair)</td>
<td>203-849</td>
</tr>
<tr>
<td>F</td>
<td></td>
<td>All lengths</td>
<td></td>
<td>203-852</td>
</tr>
</tbody>
</table>

## Glass Float Line Applications

<table>
<thead>
<tr>
<th>Key</th>
<th>Connection</th>
<th>Cable Length</th>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>LSP to LSC-B/C</td>
<td>all lengths</td>
<td>High temperature cable + Float line service panel + Data cable - Belden 8162 (2-pair) or Belden 8163 (3-pair) + Service cable - Belden 8777 (3-pair) min.</td>
<td>031-794/795</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>092-733</td>
</tr>
<tr>
<td>E</td>
<td></td>
<td></td>
<td></td>
<td>Z77198</td>
</tr>
<tr>
<td>F</td>
<td></td>
<td></td>
<td></td>
<td>203-849</td>
</tr>
<tr>
<td>G</td>
<td></td>
<td></td>
<td></td>
<td>203-852</td>
</tr>
</tbody>
</table>
For further information please contact the appropriate office or visit our web site.

Land Instruments International
Infrared Temperature Measurement
Dronfield S18 1DJ, England
Telephone: (01246) 417691
Facsimile: (01246) 410585
Email: infrared.sales@landinst.com
Internet: www.landinst.com

Land Instruments Sarl
Infrared Temperature Measurement
7 Parc des Fontenelles
78870 Bailly, France
Téléphone: (1) 34 62 05 45
Télécopie: (1) 30 56 51 12
Email: commercial@landinst.fr
Internet: www.landinst.fr

Land Instruments GmbH
Infrared Temperature Measurement
Fixheider Str. 6
51381 Leverkusen, Germany
Telefon: 02171/7673-0
Telefax: 02171/7673-9
Email: infrarot@landinst.de
Internet: www.landinst.de

Land Instruments Ltd
Infrared Temperature Measurement
31-27 Toyotsuchou, Suita Osaka 564-0051, Japan
Telephone: 06 6330 5153
Facsimile: 06 6330 5338
Email: info@landinst.jp
Internet: www.landinst.jp

Land DEL Infrared Pvt. Ltd
Infrared Temperature Measurement
ACROPOLIS, 1st Floor, Marol Maroshi Rd Off. Military Road, Andheri (East)
Mumbai, 400 059
Telephone: (022) 5668 2072
Facsimile: (022) 5668 2070
Email: sales.mumbai@landdel.com
Internet: www.landdel.com

Land Instruments Srl
Infrared Temperature Measurement
Via dell’Industria, 2
20037 Paderno Dugnano, Milano, Italy
Telefono: 02/99040423
Telefax: 02/99040418
Email: info@landinst.it
Internet: www.landinst.it

Land Instruments Ltd
Av. Horacio 1132 Planta Baja “B” Col. Polanco
11550 Mexico, D.F.
Telephone: 52 55 5281 1165
Facsimile: 52 55 5281 5364
Email: ventas@landinstruments.net
Internet: www.landinstruments.net

Land Instruments International
Infrared Temperature Measurement
Chile, 10-Edificio Madrid 92
28290 Las Matas, Madrid, Spain
Telephone: 91 630 0791
Facsimile: 91 630 2918
Email: land-infrared@landinst.es

Land Instruments International
Infrared Temperature Measurement
10 Friends Lane
Newtown, PA 18940-1804, USA
Telephone: (215) 504-8000
Facsimile: (215) 504-0879
Email: irsales@landinstruments.net
Internet: www.landinstruments.net