Monitors

Warden 3174EX
Hazardous Area Monitors

Description

The Warden 3174EX is an 80mm remote controlled monitor made from cast bronze (LG2, C83600). The monitor is power by 24 VDC and the motors are housed in brass/bronze enclosures. Hazardous area certification to IECEx or ATEX for Class 1, Zone 1 areas, IP66.

Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Recommended Flow:</td>
<td>4,500 lpm</td>
</tr>
<tr>
<td>Horizontal Rotation:</td>
<td>-250° to +250°</td>
</tr>
<tr>
<td>Vertical Movement:</td>
<td>-75° + 90°</td>
</tr>
<tr>
<td>Inlet Connection:</td>
<td>Flanged</td>
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<tr>
<td>Outlet Connection:</td>
<td>80mm BSP Male</td>
</tr>
<tr>
<td>Weight (approx):</td>
<td>39 kg</td>
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</tbody>
</table>
**Design Features**

To ensure maximum monitor availability for many years this monitor incorporates some key design features:

- Fully enclosed swivels
- Metal balls for swivel races
- All external parts are bronze, brass or stainless steel. No external aluminium or steel components are used, thus minimising any possible corrosion problems.
- No external limit switches or position sensors.
- Wide elevation movement and up to 500 degrees of rotation movement.
- Dust seal in swivels.

**Materials of Construction**

- **Waterway:** Bronze Alloy
- **Swivels:** Bronze Alloy
- **Inlet Flange:** Bronze Alloy
- **Balls:** Brass
- **Grease Nipples:** 316 Stainless Steel
- **Fasteners:** 316 Stainless Steel
- **Motors Housing:** Brass/Bronze

**Operation**

The monitor motors include all necessary control electronics. The monitors are directly controlled by the joystick controller. As an option the monitor can be controlled over an RS-485 network using the Modbus protocol.

The monitor travel limits are field adjustable within the ranges specified in the table above.

**Connections**

- **Inlet:** 100mm ASME Cl150 flat-face flange bronze flanges,
- **Outlet:** 80mm for high performance applications
Control Functions

Left-Right movement
Up-Down movement
Spray-Jet pattern control for nozzle

Optional – Standard movement speed is 6 degrees per second but this may be adjusted.

Optional – preset oscillation modes
– preset parking position

The Commando monitors are designed for use with the Orion FireNet monitor control system. The monitors can be network controlled and may be programmed for preset oscillating movement and auto parking. As a result of the “Smart” nature of these monitors they do not require detailed control by the network controller which greatly reduces network traffic and this makes them ideal for larger systems.

Only a four core screened cable is required to operate the monitor and nozzle when networked, making cabling extremely simple.

Power Requirements

24 VDC, 10 Amps (4 amps normal)

Performance Data

Friction Loss Curve
Part Numbers

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warden 3174EX with 100mm FF Flange, hard wired</td>
<td>17865</td>
</tr>
<tr>
<td>Warden 3174EX with 100mm FF Flange, networked</td>
<td>14017</td>
</tr>
</tbody>
</table>

Options

These monitors can also be manufactured in a range of alternative bronze alloys including nickel aluminium bronze.