Pillard flame scanners
Flame monitoring for all industrial burners

Real time flame monitoring compatible with all fuels

- Easy installation
- Proven and flexible technology
- Secure equipment
- Easy operation and maintenance
Fives’ ultimate solutions for real time monitoring of flame presence

Fives’ complete range of flame scanners ensures a secured combustion process thanks to state-of-the-art detection technologies. Pillard flame scanners are adapted to different types of fuels and combustion processes.

EASY INSTALLATION
- “All-in-one” design includes electronics control integrated within the flame scanner sight
- No remote box, nor cable needed

APPLICATIONS / MARKETS (non-exhaustive list)
Pillard flame scanners are compatible with all type of fuels and can be used in the following industries:
- Energy
- Petrochemical
- Cement
- Chemical
- Steel
- Claus unit

EASY OPERATION AND MAINTENANCE
- Innovative IR remote control
- Flame level display directly on the detector

SAFE EQUIPMENT
Pillard flame scanners meet the most stringent safety regulations and compliances:
- ATEX / IECEx (EN 60079)
- SIL3 (EN 61508)
- TUV (EN 298)
- FM approvals

PROVEN AND FLEXIBLE TECHNOLOGY
- Can be used in hazardous combustion areas
- Adapted to all customer requests whatever the power and sites constraints

Pillard flame scanners fitted on industrial burners

Remote control
Proven technology for industrial burners flame monitoring and all types of fuels

**PILLARD RUBY PACKSCAN™**
- Ultra-Violet radiation technology
- Monitors flame presence of gas and diesel oil

The sensor measures the flame presence as the Ultra-Violet radiation emitted from the flame gets in touch with the gas integrated in the sensor. The signal of the flame presence is ensured with a patented mechanical self-checking device, fitted within the electronic unit.

**PILLARD SAFYR PACKSCAN™**
- Infra red technology
- Monitors heavy oil, coal or liquid fuel

A light sensor monitors the flame presence by measuring the flickering frequency of the flame. The measured frequency is then compared to a defined frequency threshold, thus providing the signal of either presence or absence of the flame. The electronical self-checking device guarantees the proper functioning of the sensor and the electronic parts.

**PILLARD DARKSCAN™ AND PILLARD DARKSCAN™ FLEX**
- Pyrometric technology
- Monitors flame presence of acid gas and multi-fuel combustion

The flame detection is ensured by the measure of the temperature difference variation between two points in a flame. The electronical self-checking device checks the proper functioning of the sensor and electronic parts every second.

Fives has also developed a special flame scanner for flame detection within a rotary kiln, the Pillard Darkscan™ Flex. The electronic box installed on the front plate is connected to the sensor inside the rotary kiln thanks to a tailor-made connection.
### Technical features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power supply</strong></td>
<td>24V DC (+10%,-15%), 10VA</td>
</tr>
<tr>
<td><strong>Wave length</strong></td>
<td>Pillard Ruby Packscan™: 185nm</td>
</tr>
<tr>
<td></td>
<td>Pillard Safyr Packscan™: 320-1,100nm</td>
</tr>
<tr>
<td><strong>Operating temperature</strong></td>
<td>Pillard Safyr Packscan™ / Pillard Darkscan™</td>
</tr>
<tr>
<td></td>
<td>-40°C to +70°C</td>
</tr>
<tr>
<td></td>
<td>Pillard Ruby Packscan™</td>
</tr>
<tr>
<td></td>
<td>-20°C to +70°C (optional -40°C to +70°C)</td>
</tr>
<tr>
<td><strong>Dimensions / Weight</strong></td>
<td>360 x 130mm /4.8kg</td>
</tr>
<tr>
<td><strong>Housing</strong></td>
<td>Aluminum</td>
</tr>
<tr>
<td><strong>Digital output</strong></td>
<td>2 contact relays RT 250V - 2A</td>
</tr>
<tr>
<td><strong>Analog output</strong></td>
<td>4 – 20mA, 300Ohms max</td>
</tr>
<tr>
<td><strong>Communication port</strong></td>
<td>RS 485</td>
</tr>
<tr>
<td><strong>Sweeping air flow rate</strong></td>
<td>5Nm³/h</td>
</tr>
<tr>
<td><strong>Sweeping air connector</strong></td>
<td>3/8”NPT</td>
</tr>
<tr>
<td><strong>Warranty</strong></td>
<td>1 year</td>
</tr>
</tbody>
</table>

### Cable features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard length</strong></td>
<td>10m</td>
</tr>
<tr>
<td><strong>Outer diameter</strong></td>
<td>11mm</td>
</tr>
<tr>
<td><strong>Cross-section</strong></td>
<td>9 x 0.75sq.mm + 4 x 0.34sq.mm</td>
</tr>
<tr>
<td><strong>Admissible temperature range</strong></td>
<td>-20°C to +105°C</td>
</tr>
</tbody>
</table>

### OPTIONS
- Infra-red RC1 remote for parameters setting (N°LCIE 05 ATEX 6014 X)
- Flanged swivel mount
- Thermal insulator
- Junction box (ATEX version available)
- Ball valve for sight-tube shut-off
- Electrical supply unit (230VAC / 24VCC)
- 3 year warranty

### SERVICES
- Commissioning assistance
- Maintenance contract

Images are for describe purposes only, and may be subject to change.