The FLIR Ax5-Series of thermal imaging temperature sensors offers comprehensive visual temperature monitoring for process control and quality assurance applications as well as condition monitoring and fire prevention. The A35 and A65 integrate seamlessly into existing systems and are the only thermal imaging temperature sensors on the market to provide temperature linear output through GenICam™ compliant software.

www.flir.com/automation

**VISUALIZE HEAT**
These non-contact temperature sensors are enhanced with thermal imaging

- Detect temperature differences as small as 50 mK
- Choose the right field of view for your measurement area, from wide (90°) to narrow (6.2°)
- Measures accurately in conditions up to 140°F (60°C)

**COMMUNICATE DATA SEAMLESSLY**
Stream temperature linear output through GenICam™ compliant software

- Integrate easily with Cognex, National Instruments, and other top machine vision systems
- Stream thermal images at up to 60 Hz directly to your system, for instant data analysis
- Synchronize cameras for stereoscopic applications

**DESIGNED TO FIT YOUR APPLICATIONS**
Get more out of your data with advanced analysis tools

- Compact size makes for easy installation in electrical cabinets and other small spaces.
- Offering the stability of a GigE Vision lockable connector, and the flexibility of Power over Ethernet (PoE)
- Ideal for any environment, the cameras’ robust design can withstand harsh conditions
### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Image and Optical Data</th>
<th>A35</th>
<th>A65</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IR Resolution</strong></td>
<td>320 x 256</td>
<td>640 x 512</td>
</tr>
<tr>
<td><strong>Thermal Sensitivity/NETD</strong></td>
<td>&lt;0.05°C @ 30°C (86°F) / 50 mK</td>
<td></td>
</tr>
<tr>
<td><strong>Image Frequency</strong></td>
<td>60 Hz</td>
<td>30 Hz</td>
</tr>
<tr>
<td><strong>Focus</strong></td>
<td>Fixed</td>
<td></td>
</tr>
</tbody>
</table>

**Detector Data**
- **Detector Type**: Uncooled VOx microbolometer
- **Spectral Range**: 7.5 – 13 µm
- **Detector Pitch**: 17 µm
- **Detector Time Constant**: 2 ms (typical)

**Measurement**
- **Object Temperature Range**: -25°C to 100°C (-13°F to 212°F)
- **Accuracy**: ±5°C (±9°F) or 5% of reading

**Ethernet**
- **Type**: Gigabit Ethernet, control and image
- **Standard, Connector**: IEEE 802.3, RJ-45
- **Communication**: GigE Vision ver. 1.2, Client API GenICam compliant
- **Image Streaming**: 8-bit monochrome @ 60 Hz, 8-bit monochrome @ 30 Hz
- **Bit Rate**: 14-bit 320 x 256 @ 60 Hz, 14-bit 640 × 512 pixels @ 30 Hz

**Environmental Data**
- **Operating Temperature Range**: -15°C to 60°C (5°F to 140°F)
- **Storage Temperature Range**: -40°C to 70°C (-40°F to 158°F)
- **Humidity (Operating and Storage)**: IEC 60068-2-30/24 h 95% relative humidity 25°C to 40°C (77°F to 104°F)
- **EMC**: EN 61000-6-2 (Immunity), EN 61000-6-3 (Emission), FCC 47 CFR Part 15 Class B (Emission)

**Physical Data**
- **Camera Size (L x W x H)**: A35 w/ 50 mm lens: 141.1 × 56.4 × 58.4 mm (5.5 × 2.2 × 2.3 in)
- **Synchronization In**: Frame Synch In to control another FLIR Ax5 unit 1x, non-isolated
- **Synchronization Out**: LVDS Buffer @ 3.3 V, “0” = 0.8 V, “1” = 2.0 V

**Power System**
- **A35**: 12/24 VDC, < 3.5 W nominal < 6.0 W absolute max
- **A65**: 12/24 VDC, < 4.0 W nominal < 6.0 W absolute max

**Digital Input/Output**
- **Digital Input**: 1x opto-isolated, “0” = 12 VDC, “1” = 2.5 – 2.5 VDC
- **Digital Output**: 1x opto-isolated, 2 – 40 VDC, 185 mA
- **Digital I/O, Isolation Voltage**: 500 V RMS
- **Digital I/O, Supply Voltage**: 2 – 40 VDC, 250 mA
- **Digital I/O, Connector Type**: 12-pole M12 connector (shared with Digital Synchronization and external power)

**Synchronization In Type**
- **Frame Synch In**: to control camera 1x, non-isolated
- **LVC Buffer**: @ 3.3 V, “0” = 0.8 V, “1” = 2.0 V

**Synchronization Out Type**
- **Frame Synch Out**: to control another FLIR Ax5 unit 1x, non-isolated
- **LVC Buffer**: @ 3.3 V, “0” = 24 mA max, “1” = –24 mA max

**Digital Synchronization**
- **Connector Type**: 2-pole M12 connector (shared with Digital I/O and External Power)

**Part Number**
- **FLIR A35 f=9 mm with SC kit**: 73309-0102
- **FLIR A35 FOV 13 (60 Hz)**: 83225-0101
- **FLIR A35 FOV 25 (60 Hz)**: 73313-0102
- **FLIR A52 FOV 45 (60 Hz)**: 83250-0101
- **FLIR A35 FOV 69 (30 Hz)**: 83209-0102
- **FLIR A65 f=13 mm with SC kit (30 Hz)**: 73413-0102
- **FLIR A65 f=13 mm with SC kit (7.5 Hz)**: 73513-0102
- **FLIR A65 FOV 12.4 (30 Hz)**: 75050-0101
- **FLIR A55 FOV 25 (30 Hz)**: 75025-0101
- **FLIR A65 FOV 45 (30 Hz)**: 75013-0101
- **FLIR A55 FOV 6.2 (30 Hz)**: 75010-0101
- **FLIR A65 FOV 90 (30 Hz)**: 75007-0101

**Packaging**
- **Contents**: Thermal imaging camera with lens, base support, printed documentation (some models include focus adjustment tool)

Specifications are subject to change without notice. For the most up-to-date specs, go to www.flir.com