1. Introduction

The **Dahua DHI-HY-TSC-40DA** is a **linear heat detector (LHD)** designed for fire detection in industrial and commercial environments. It operates using a **thermal sensor cable** that can detect heat at any point along its length. The system consists of **a detection cable, an adapter unit, and a termination unit**.

The detector triggers an alarm when the heat-sensitive material within the cable melts due to temperature rise, causing a **short circuit that activates the fire alarm control panel (FACP)**.

2. Key Features

- **Continuous heat detection** along the entire length of the cable.
- **Multiple alarm temperature ratings**: 68°C, 88°C, 105°C, and 138°C.
- **High precision** with minimal tolerances.
- **Fast response time** for heat detection.
- **Different outer jacket colors** for easy identification.
- **Suitable for diverse environments** with high resistance to humidity and temperature variations.

3. Installation

3.1. Prerequisites

Before installation, ensure you have:

- A compatible fire alarm control panel.

- Proper mounting brackets for securing the sensor cable.
- Tools for connection and system setup.

3.2. Installation Procedure

1. **Secure the Sensor Cable**: Install the cable in the monitoring area following safety regulations.
2. **Connect to the Adapter Unit**: Ensure a stable connection to the detection system.
3. **System Verification**: Test the cable and alarm panel response before activation.

---

4. Usage and Maintenance

- **Periodic Inspection**: Check cable condition every six months.
- **Proper Cleaning**: Prevent dust and debris accumulation in the detection area.
- **Functional Testing**: Simulate alarm conditions to ensure proper operation.
- **Preventive Replacement**: Replace damaged or malfunctioning cables.

---

5. Troubleshooting

Issue	Possible Cause	Solution
Alarm does not activate	Faulty connection	Check wiring and configuration
Frequent false alarms	Exposure to ambient heat	Relocate the sensor cable

| No response from FACP | Damaged cable or improper installation | Verify circuit continuity |

---

6. Technical Specifications

- **Model**: DHI-HY-TSC-40DA
- **Conductor Material**: Steel
- **Conductor Diameter**: 0.92 mm
- **Cable Length**: 200 m / 500 m
- **Conductor Resistance**: 0.64±0.06 Ω/m (at 25°C)
- **Minimum Bending Radius**: 15 cm
- **Alarm Temperatures**: 68°C, 88°C, 105°C, 138°C
- **Accuracy**: ±3°C to ±5°C depending on model
- **Response Time**: 10 to 20 s
- **Operating Temperature**: Up to 93°C depending on model
- **Operating Humidity**: ≤ 95% RH
- **Available Colors**: Blue, Red, White, Yellow

---

7. Warranty and Support

For technical assistance and updates, refer to Dahua's official documentation or contact authorized technical support.