

DATA SHEET

TMI-Orion

PicoVACQ

Thermocouple



Temperature measurement in thermal processes up to +1300°C with an extra small thermocouple logger.

PicoVACQ Th is a cylindrical logger with one thermocouple channel.

This solution is specially designed for thermal processes requiring both temperature measurement in industrial environment and quick response time.

METROLOGY

| Operating range* | Battery | Measurement range | Resolution | Internal reference channel uncertainty** |
|------------------|---------|--|------------|--|
| 0°C to +140°C | 015P | 0°C to +550°C or 0°C to +1300°C (Other measurement ranges upon request) | ±0.02°C | ± 0.2°C from -40°C to +140°C |
| -40°C to +85°C | 015PW | | | |
| -40°C to +140°C | 016PTA | | | |

(*) A thermal shield is necessary beyond +140°C.

(**) The specified uncertainties correspond to two standard deviations. The uncertainties are calculated taking into account the various significant error sources, including the calibration probes, the equipment, the environmental conditions, the influence of the logger, repeatability, etc...

FUNCTIONS

- Start set up: immediate or delayed
- Time stamped measurement data
- Battery level alert with Qlever software
- Memory set up: stop at maximum capacity or loop writing

TECHNICAL SPECIFICATIONS

| Model | Internal channel | Number of external channels | Probe type | Connector type | 10 Hz version |
|-------------|------------------|-----------------------------|---------------------|-----------------|---------------|
| PicoVACQ Th | ● | 1 | K type thermocouple | Micro-connector | ● |

| | | | | |
|--|---|---------------|-----------------|------------------------|
| Material | 316L Stainless steel | | | |
| Dimensions logger + connector | | Length | Diameter | Operating range |
| | With battery pack 015P | 90.5 mm | 15 mm | 0°C to +140°C |
| | With battery pack 015PW | 115.8 mm | | -40°C to +85°C |
| | With battery pack 016PTA | 138.6 mm | 16 mm | -40°C to +140°C |
| Temperature sensor | Thermocouples : K type (full scale +1300°C) | | | |
| Connector type | Micro-connector | | | |
| Memory capacity | Acquisitions stored in a non-volatile memory (EEPROM) 32 500 acquisitions | | | |
| Acquisition rate | Programmable: minimum 0.1 second (10 Hz), maximum 59 minutes and 59 seconds | | | |
| Program duration | Programmable: days, hours, minutes Loop writing available beyond maximum memory capacity | | | |
| Recording | Programmable start: by date, hour, minute | | | |
| Power | User replaceable battery pack | | | |
| Events dating | Real time clock | | | |
| Connectivity | USB wired interface to the PC | | | |



PicoVACQ Th with 016PTA battery pack and K type micro-connector



PicoVACQ Th with 015PW battery pack and K type micro-connector



PicoVACQ Th with 015P battery pack and K type micro-connector



AUTONOMY

The PicoVACQ Thermocouple is powered by a battery pack; its autonomy depends on environment and operational conditions of the application (extreme temperatures, data acquisition rate).

As a result of the variety of environments and operational conditions, TMI-Orion does not guaranty the battery lifetime and recommends that the user determine the battery lifetime according to his own process conditions and experience.

SOFTWARE AND RELATED PRODUCTS

PicoVACQ Thermocouple is used with Qlever software.

Qlever software platform: data acquisition, management and visualization of data from TMI-Orion data loggers.

Qlever is installed on a PC and operates under Windows® Vista/7/8/10. Data transmission and visualization are done after the industrial process.

DELIVERABLES

The PicoVACQ Thermocouple solution usually includes the following items:

- The PicoVACQ Thermocouple data logger with a battery pack
- The PicoVACQ Thermocouple internal reference channel calibration certificate

- The PicoVACQ Thermocouple configuration and calibration file
- Qlever software (to be ordered separately)
- A USB wired interface to the PC (to be ordered separately)
- A transport case (optional – to be ordered separately)

SERVICES

Maintenance : TMI-Orion recommends annual preventative maintenance and calibration service for the replacement of o-rings, functional checking, calibration and adjustment.

Accessories: The battery packs, engineered by TMI-Orion, are replaceable by the user and are referenced in the specific datasheet on our website.

TMI-Orion S.A.
Parc Bellegarde - Bâtiment A
1, chemin de Borie
34170 Castelnau-le-Lez - France
T.: +33 (0)4 99 52 67 10 – F.: +33 (0)4 99 52 67 19



TMI-USA, Inc.
11491 Sunset Hills Road, Suite 310
Reston, VA 20190 - USA
T : +1 703 668 0114 – F : +1 703 668 0118