

DATA SHEET

TMI-Orion

PicoVACQ

Thermocouple

universal



Temperature measurement in thermal processes up to +1820°C with an extra small thermocouple logger.

PicoVACQ Thermocouple universal is an autonomous cylindrical data logger with one configurable channel. It is equipped with one universal thermocouple micro-connector.

This solution is specially designed for thermal processes requiring a variety of thermocouple types and a fast response time in rugged industrial environments.

METROLOGY

Operating range*	Battery pack	Measurement range	Resolution	Internal reference channel uncertainty**
0°C to +140°C	015P	Depending on the thermocouple: Type K : 0°C to +1300°C and -200°C to +1300°C Type T : 0°C to +400°C and -230°C to +400°C Type N : 0°C to +1300°C and -150°C to +1300°C Type J : 0°C to +760°C and -200°C to +760°C Type B : +600°C to +1820°C Type E : 0°C to +690°C Type S : 0°C to +1660 °C Type R : 0°C to +1760°C Other measurement range 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			
Set up with Qlever Software				

(*) 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 universal	●	1	Thermocouple: K, T, N, J, B, E, S, R	Universal 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	Thermocouple			
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			
Watertightness	The PicoVACQ Thermocouple universal is not watertight			



PicoVACQ Th with 016PTA battery pack and universal micro-connector



PicoVACQ Th with 015PW battery pack and universal micro-connector



PicoVACQ Th with 015P battery pack and universal micro-connector



AUTONOMY

The PicoVACQ Thermocouple universal is powered by a battery pack; its autonomy depends on environment and operational conditions of the application (extreme temperatures of the mentioned temperature ranges, data acquisition rate). Please contact our sales department to optimize the choice of the battery pack according to the temperature of your application.

As a result of the variety of environments and operational conditions, TMI-Orion does not guarantee 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 universal 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 universal solution usually includes the following items:

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

- The PicoVACQ Thermocouple universal 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