

OROS Universal Inputs

Dynamic, Parametric & XPod™ Inputs for OROS Teamwork Analyzers



For OR36 & OR38 Teamwork Instruments

Introduction

The vibration measurement on machines, vehicles and structures is a proven method for system health determination and qualification. These operations take place in the field close to the operating unit, making the **portability and robustness** of the instrument a key point.

Moreover, different types of transducers/inputs are required to collect all the relevant data during such tests. The **flexibility** of the instrument is then essential.

With the universal inputs for OR36 and OR38 multi-analyzers/recorder, **OROS offers the ultimate solution. Teamwork instruments combine in a robust design, the flexibility** which is usually offered by expensive and heavy laboratory devices.

Industries

- > Automotive, Railways
- > Aerospace
- > Machine Tools
- > Energy & Process
- > Industrial Vehicles
- > Marine / Defense
- > Automation

Machines

- > Vehicles ground link, chassis
- > Engines, transmissions
- > Pumps & compressors
- > Motors, generators & alternators
- > Pipes, hydraulics cylinder
- > Turbines & fans
- > Aircrafts, ships structures

Applications

- > Mixed **dynamic** and **parametric** measurements
- > Acceleration, displacement, velocity, sound pressure
- > Force, pressure, load and **strain**
- > **RPM, torsion**, angular position, torque
- > **Temperature**, power, position
- > Laboratory, **field** and **on-board** test and measurements



Description

With the OROS universal inputs, there's no need to check and carry dedicated conditioners to conduct comprehensive and accurate measurements for your tests. The OR36 and OR38 universal inputs manage many types of transducers with their adapted conditioning. Each input can be independently changed at any time offering:

- > A **standard noise and vibe input** for hammers, accelerometers, proximity probes and microphones,
- > A high accuracy **parametric input** for power, pressure, **proportional tach**,
- > The specific **XPod™ conditioning** for dynamic **strain gauges, pressure, load or temperature** transducers

In addition, the external synch. dedicated inputs allow measuring:

- > High precision **triggering**
- > 1 to N pulses/rev **tachometer**
- > 1 to 4096 pulses/rev **torsional + angular sampling** inputs

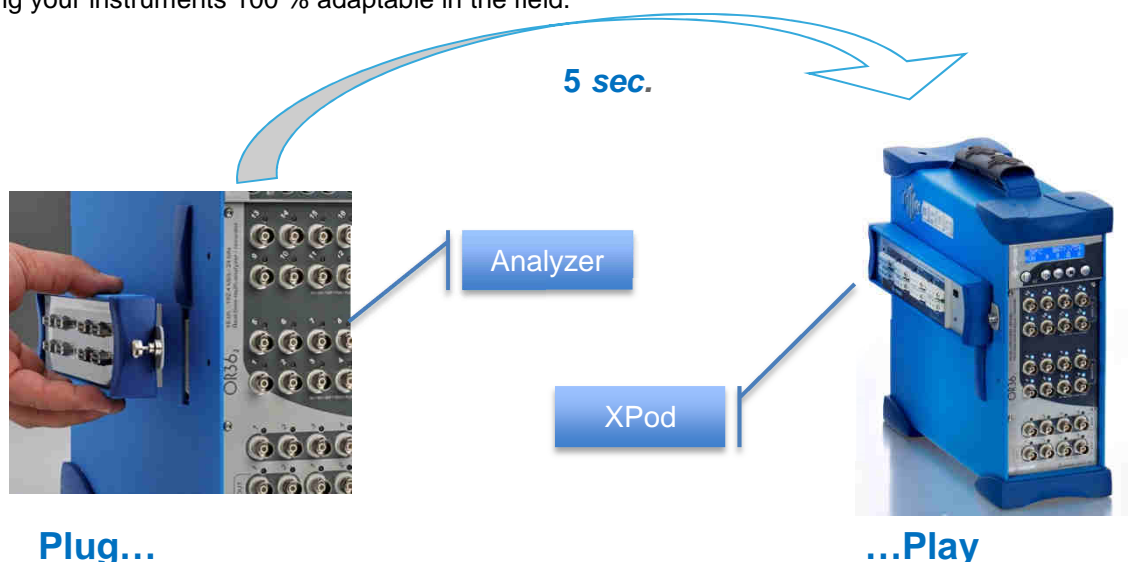
No need to change anything with your instrument hardware. The switch from one input type to another is easily available from the software interface. Simply select the requested type for the channel in use. Depending on the assigned input type, the corresponding settings are made available. The way to operate the analyzer software, NVGate®, is kept clear and easy whatever the front-end or analysis.

The universal inputs are fully supported by the direct recording (D-rec) mode that allows recording any types of inputs raw data in stand-alone without a PC.

XPod™ Technology

OROS instruments benefit from a **field-oriented design**. For signal conditioning, the Teamwork instruments feature plug & play conditioners instead of old-fashioned card slots. This technology brings unrivalled **flexibility, portability and robustness for measurements**.

The XPod modules can be added, removed and exchanged between the analyzers in a few seconds, making your instruments 100 % adaptable in the field.



Thanks to the side fixation, the regular BNC connectors remain available to use the inputs with classical ICP/AC/DC/Float transducers. When activated, each XPod channel can be set individually. The unused channels remain available for classical use with the front-end BNCs.

Of course, as with any OROS instrument, the XPod offers high quality of design and manufacturing for both **robustness and accuracy**.

Main Features

- > Multiple uses for each input:
 - o Dynamic inputs for regular AC, DC ICP float transducers
 - o High accuracy DC inputs for parameter acquisition
 - o XPod conditioners for Wheatstone bridge & thermocouple
- > 100 % switchable from software interface
- > All inputs sampled synchronously
- > External synch inputs 64 times oversampled

Specifications

Dynamic input

- > 24 bits / 140 dB / ±40 V
- > 2.048 kS/s to 102.4 kS/s
- > AC, DC, ICP(2 or 4 mA), Float, TEDS

Parametric input

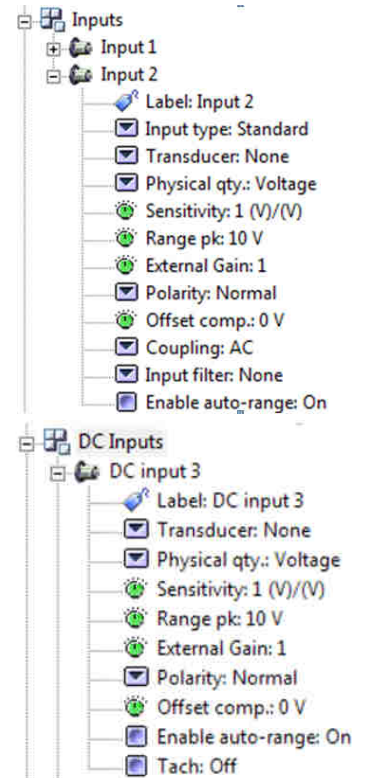
- > 21.5 bits / ±40 V
- > -3 dB @ 3.5 Hz
- > -200 dB rejection of 10 Hz harmonics
- > DC offset < ±100 µV

Strain gauge (Wheatstone bridge) XPod

- > 8 inputs per module. Dynamic inputs
- > 120 Ω and 350 Ω built-in completion resistors
- > Full, ½ & ¼ bridge interface
- > 0 to 10 V excitation voltage
- > NVGate or D-rec auto zero
- > Slim design: h < 25 mm / 1" - 0.4 kg / 0.180 lb
- > High (100:10) and Low gain (10:1)

Temperature (RTD & Thermocouple) XPod

- > 8 inputs / module. Parametric inputs
- > PT100, PT1000 RTDs
 - 0.5 to 4 mA power for RTDs
 - Precision: 0.3% of full range +0.4°C
 - 2 or 3 wires
- > J, K, T, N, E Thermocouples
 - Cold junction compensation: 2 integrated built in sensors
 - Integrated linearization
 - Precision: < 0.1% of full range +0.4°C
- > Probe identification by colored LED
- > -210 °C to +1 300 °C temperature range



Ordering Information

Reference	Description
OR36-IN4-U	Additional 4 universal inputs for OR36
OR38-IN8-U	Additional 8 universal inputs for OR38
OR38-FREQ-32	OR38, 32 universal ch. FFT & recorder analyser
OR36-REC-16	OR36, 16 universal ch. PC & Stand-alone recorder
OR3X-XPB-B	8 ch. bridge conditioner XPod
OR3X-XPB-T	8 ch. RTD & Thermocouple conditioner XPod

OROS, Leadership through Innovation

About Us

30-years in business, OROS' designs and manufacturing have been renowned for providing the best in noise and vibration analyzers as well as in specific application solutions.

Our Philosophy

Reliability and efficiency are our ambition everyday. We know you require the same for your measurement instruments: comprehensive solutions providing performance and assurance, designed to fit the challenges of your demanding world.

Our Emphasis

Continuously paying attention to your needs, OROS collaborates with a network of proven scientific affiliates to offer the latest of the technology, always based on innovation.

Worldwide Presence

OROS products are marketed in more than 35 countries, through our authorized network of representatives, offices and accredited maintenance centers.

Want to know more?

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