



WSD12T-EXn

**Capetti**  
ELETTRONICA

**Wcap** IP65



## Strain gauge/Load cell/Temperature

Wireless datalogger to acquire strain gauges/Load cells inputs and outdoor temperature.

### Suitable to monitor deformations, stresses, forces and loads of:

- Buildings, in particular public buildings, hospitals, skyscrapers, etc.
- Roads, in particular high traffic roads, highways, etc.
- Bridges, overpasses and gangways
- Structures and materials laboratories for stress tests
- Dams
- Offshore platforms
- Ramps
- Landslide tests

### Main features

- Can be installed in all positions
- Sturdy and impact resistant case
- IP65
- Bridge impedance at 120 or 350Ω
- Temperature measurement
- Up to 10 years of autonomy



# WSD12T-EXn

## General technical specifications

Power supply	8.5Ah - 3.6V type "C" lithium internal battery ( <i>BAT2</i> )
Battery life (*)	Up to 10 years ( <i>samples every 60 minutes and radio signal quality at least sufficient</i> )
Measures acquired ( <i>4 input channels</i> )	<ul style="list-style-type: none"> <li>• Temperature</li> <li>• Strain gauge/Load cells</li> </ul>
Sampling interval (*)	Selectable from one minute to 24 hours ( <i>60 minutes default</i> )
Datalogger capacity	64,000 samples ( <i>for each channel</i> )
Working temperature	<ul style="list-style-type: none"> <li>• Operative: -30°C ÷ +60°C</li> <li>• Warehousing: -40°C ÷ +70°C</li> </ul>
Radio frequency	ISM 868MHz
Radio coverage	Up to 6Km in line of sight ( <i>can be extended using <a href="#">WR12</a> battery powered repeaters</i> )
Sealing	IP65
Dimensions	90x120x50mm
Weight	350g
Case material	ABS
Mounting	Fix on 4 points
Connections	Wireless, USB
Cable external diameter	4.7mm maximum
Copper wire section	0.05÷2.5mm² / ÷ 14 AWG

## Outdoor temperature

Transducer type	NTC10KΩ
Measure range	-30°C ÷ +60°C
Measure accuracy	<ul style="list-style-type: none"> <li>• ± 0.5°C Range -30°C ÷ 0°C</li> <li>• ± 0.2°C Range 0°C ÷ +60°C</li> </ul>
Measure resolution	0.01°C

## Strain Gauges/Load Cells

Channels	3
Bridge input type	full bridge, ½ bridge, ¼ bridge ( <i>to be defined during order</i> )
Bridge impedance	120Ω or 350Ω ( <i>to be defined during order</i> )

## Order code nomenclature

WSD12T-EX1	<ul style="list-style-type: none"> <li>• 1 CH Temperature</li> <li>• 120Ω – 4,950μV/V - ½ bridge 3 CH full scale strain gauge - 2.5μV/V resolution</li> </ul>
WSD12T-EX2	<ul style="list-style-type: none"> <li>• 1 CH Temperature</li> <li>• 120Ω – 4,950μV/V - ¼ bridge 3 CH full scale strain gauge - 2.5μV/V resolution</li> </ul>
WSD12T-EX3	<ul style="list-style-type: none"> <li>• WSD12T-Ex3 • 1 CH Temperature</li> <li>• 350Ω – 4,950μV/V - ½ bridge 3 CH full scale strain gauge - 2.5μV/V resolution</li> </ul>
WSD12T-EX4	<ul style="list-style-type: none"> <li>• 1 CH Temperature</li> <li>• 350Ω – 4,950μV/V - ¼ bridge 3 CH full scale strain gauge - 2.5μV/V resolution</li> </ul>
WSD12T-EX5	<ul style="list-style-type: none"> <li>• 1 CH Temperature</li> <li>• 4,950μV/V - full bridge 3 CH full scale strain gauge or load cell - 2.5μV/V resolution</li> </ul>
WSD12T-EX6	<ul style="list-style-type: none"> <li>• 1 CH Temperatura</li> <li>• 2,480μV/V - full bridge 3 CH full scale strain gauge or load cell - 1.2μV/V resolution</li> </ul>



## WSD12T-EXn

The **WSD12T-EXn** is a datalogger with 4 input channels to acquire Strain gauge/Load cells and Outdoor temperature with storage functionality of samples acquired.

The radio module High Reliability (*unique 868MHz radio technology. implementing frequency hopping on 11 channels*) based on **WINECAP™ LuPo** protocol (*Long Range*) provides an excellent radio range, low battery consumption and the certainty of data recovery in any situation (*black out/ signal obstacles*).

With a backup memory onboard may store the last 64,000. samples per channel even if the wireless link is down. Samples can be downloaded using a USB connection.

Using the configuration software, the sampling interval may be set and two thresholds per channel can be activated.

Can be interfaced with:

- all the **gateways** of **MWDG** product line
- all the **gateways** of **MWLI** product line

If necessary, radio coverage may be extended up to 16 times using **WR12 repeaters** (*battery powered repeaters with battery life up to 7 years*) between the datalogger and the **gateway**.

capetti  
ELETTRONICA