# **Info-Electronics Systems**

## Weather & water are our business

**IES** is proud to bring to Canada the latest technologies in Remote Sensing, Analysis & Weather Forecasting through the representation of state-of-the-art meteorological instrumentation companies.

Not only do we represent these firms, but we act as a prime contractor, customer liaison and provide value-added services, including project management, software development, systems integration, installation, training, testing, support and post-maintenance support as well.



## **A Passion for Precision**

G. Lufft Mess- und Regeltechnik GmbH, located in Fellbach near Stuttgart, has been developing and producing professional sensors and systems for climate and environment measurement for more than 130 years.

The precision workmanship of highly skilled specialists has enabled our LUFFT label to be known and the products to be purchased worldwide. Intelligent meteorological sensors form the basis of highly available measuring networks along roads, rails and at airports all over the world. Meteorological services and environmental bodies appreciate the precise and long-lasting Lufft quality as do building equipment manufacturers and energy suppliers as well.

### **APPLICATIONS**

#### **Applications in Meteorology:**

- Climate research / Science Weather forecasting
- Extreme weather warnings
- Airport weather monitoring
- Hydo-Meteorology
- Agro-meteorological monitoring networks
- Roadway & Runway Weather



## **COMPACT WEATHER STATIONS**

## **WS-Series-All-in-one weather sensors**

#### **WS800-UMB Smart Weather Sensor**



**Technology**: Ultrasonic/Wind, NTC/T, Capacitive/RH/Pressure, Radar/Precipitation, radio wave emission/Lightning strikes

**Parameters**:Temperature, relative humidity, air pressure, wind direction, wind speed, precipitation intensity, precipitation quantity, radiation, lightning strikes

#### **WS700-UMB Smart Weather Sensor**



**Technology**: Ultrasonic/Wind, NTC/T, Capacitive/RH/Pressure, Radar/Precipitation, radio wave emission/Lightning strikes

**Parameters**: Temperature, relative humidity, precipitation intensity, precipitation type, precipitation quantity, air pressure, wind direction, wind speed, radiation

#### **WS601-UMB Smart Weather Sensor**



**Technology**: Ultrasonic/Wind, NTC/T, Capacitive/RH, MEMS capacitive/Pressure, Tipping spoon and bucket/Precipitation

**Parameters**: Temperature, relative humidity, precipitation, air pressure, wind direction, wind speed

### **WS600-UMB Smart Weather Sensor**



**Technology**: Ultrasonic/Wind, NTC/T, Capacitive/RH, MEMS capacitive/Pressure, 24 GHz Doppler radar/Precipitation

Parameters: Temperature, relative humidity, precipitation intensity, precipitation type, precipitation quantity, air pressure, wind direction, wind speed

## **WS510-UMB Smart Weather Sensor**



**Technology**: Ultrasonic/Wind, NTC/T, Capacitive/RH, MEMS capacitive/Pressure, Kipp&Zonen/Radiation

**Parameters**: Temperature, relative humidity, air pressure, wind direction, wind speed, radiation

#### **WS502-UMB Smart Weather Sensor**



**Technology**: Ultrasonic/Wind, NTC/T, Capacitive/RH, MEMS capacitive/Pressure, Lufft Pyranometer/Radiation

**Parameters**:Temperature, relative humidity, air pressure, wind direction, wind speed, radiation

#### **WS501-UMB Smart Weather Sensor**



**Technology**: Ultrasonic/Wind, NTC/T, Capacitive/RH/Pressure, Radar/Precipitation, radio wave emission/Lightning strikes

**Parameters**: Temperature, relative humidity, air pressure, wind direction, wind speed, radiation

## **WS500-UMB Smart Weather Sensor**



**Technology**: Ultrasonic/Wind, NTC/T, Capacitive/RH, MEMS capacitive/Pressure

**Parameters**: Temperature, relative humidity, air pressure, wind direction and wind speed

#### **WS401-UMB Smart Weather Sensor**



**Technology**: NTC/T, Capacitive/RH, Tipping bucket/Precipitation, MEMS capacitive/Pressure

**Parameters**: Temperature, relative humidity, precipitation and air pressure

#### **WS400-UMB Smart Weather Sensor**



**Technology**: NTC/T, Capacitive/RH, MEMS capacitive/Pressure, 24 GHz Doppler radar/Precipitation

**Parameters**:Temperature, relative humidity, precipitation intensity, precipitation type, precipitation quantity and air pressure

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#### **WS310-UMB Smart Weather Sensor**



**Technology**: Temperature, relative humidity, air pressure, radiation

**Parameters**: Temperature, relative humidity, precipitation intensity, precipitation type, precipitation quantity and air pressure

WMO STANDARD

**WMO STANDARD** 

#### **WS302-UMB Smart Weather Sensor**



**Technology**: NTC/T, Capacitive/RH, MEMS capacitive/Pressure, Lufft Pyranometer/Radiation

**Parameters**:Temperature, relative humidity, air pressure, radiation

### **WS301-UMB Smart Weather Sensor**



**Technology**: NTC/T, Capacitive/RH, MEMS capacitive/Pressure, Kipp&Zonen Pyranometer/Radiation

**Parameters**:Temperature, relative humidity, air pressure, radiation

#### **WS300-UMB Smart Weather Sensor**



**Technology**: NTC/T, Capacitive/RH, MEMS capacitive/Pressure

**Parameters**: Temperature, relative humidity, air pressure

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#### **WS200-UMB Smart Weather Sensor**



**Technology**: Ultrasonic/Wind

Parameters: Wind direction and speed

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### **ANEMOMETERS**

## **VENTUS-X-UMB Ultrasonic Wind Sensor - Extended Heating**



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**Technology**: Ultrasonic

**Parameters**: Wind speed, wind direction, virtual temperature, barometric pressure

#### **VENTUS-UMB Ultrasonic Wind Sensor with heater**



**Technology**: Ultrasonic

**Parameters**: Wind speed, wind direction, virtual temperature, barometric pressure

### **V200A Ultrasonic Wind Sensor**



**Technology**: Ultrasonic

**Parameters**: Wind speed, wind direction, virtual temperature, barometric pressure

## **PRECIPITATION SENSORS**

## WS100 Radar Precipitation Sensor / Smart Disdrometer



**Technology**: 24GHz Doppler radar

**Parameters**: Rain/precipitation quantity, rain/precipitation type (Rain, snow, sleet,

freezing rain, hail)

Not displayed here-WTB100

## **SNOW DEPTH SENSOR**

## **Snow Depth Sensor SHM31**



**Technology**: Opto-electronic measuring technique (rangefinder; laser distance sensor) with eye-safe laser.

Parameters: Snow depth

#### **VISIBILITY SENSORS**

## Visibility Sensor VS2k-UMB



**Technology**: 45° forward light scattering

**Parameters**: Visibility (measuring range 10 ...

2000 m, resolution 1 m)

Not displayed here-VS20k

## **CLOUD HEIGHT-LIDAR**

#### Ceilometer CHM 15k "NIMBUS"



**Technology**: Optical (LIDAR)

**Parameters**: Aerosol backscatter profile, cloud base height, cloud penetration depth, aerosol layer height, cloud cover, vertical visibility, Sky Condition Index

Not displayed here- CHM 8k

## **ROAD & RUNWAY WEATHER**

#### **NIRS31-UMB**



**Technology**: Optical spectroscopic principle, lamp transmitter, pyrometer

**Parameters**: Surface temperature, Water film height, Ice layer thickness, Ice percentage Freezing temperature, Road condition (dry, damp, wet, snow, ice), Friction, Snow height Saline concentration

Not displayed here - MARWIS (Mobile Advanced Road
Weather Information Sensor)

# **Canadian Orders**



For detailed specs, request custom quotes, lead times, on any of Luffts' products you can reach your authorized valueadded resellers at;

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