

PRODUCT CATALOGUE

Self-powered monitoring solutions
for industrial environments

COMPANY

Contents

A clear route from company information to products, installation and data services.

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COMPANY

About MOİZ

Unlocking critical industrial data with self-powering sensors.

MOİZ develops self-powered monitoring solutions that harvest energy from temperature differences to operate connected industrial sensors.

Harvestree uses thermal energy from the monitored equipment to power industrial monitoring.

01 Thermal energy harvesting

Uses temperature differences to generate the energy required for monitoring.

02 Continuous condition monitoring

Supports ongoing monitoring of industrial equipment and infrastructure.

03 Industrial applications

Designed for railway infrastructure, energy systems and heavy industry.

COMPANY

Product design principles

The principles guiding the design and deployment of MOİZ solutions.

01 Energy autonomy

Harvest energy from local temperature differences to support remote monitoring.

02 Reduced maintenance

Reduce the need for routine battery replacement and simplify hard-to-access installations.

03 Industrial robustness

Configure solutions for demanding installation environments and operating temperature constraints.

04 Flexible connectivity & integration.

Connect industrial sensors through LoRaWAN and project-specific data services.

COMPANY

Customers & partners

Companies and technical partners that have worked with MOÏZ.



Industrial experience across demanding environments

MOÏZ solutions support monitoring projects across railway infrastructure, energy systems and heavy industry.

02

Harvestree

Self-powered monitoring for connected industrial sensors.



ENERGY HARVESTING PLATFORM

HARVESTREE

Harvestree system architecture

From field measurements to customer data access.

01

SENSORS

Temperature, voltage, vibration and other compatible measurements.

02

HARVESTREE V5

Local energy harvesting and sensor connection.

03

LORAWAN GATEWAY

EU868 / US915

04

DATA SERVICES

Collection, storage, API access and custom dashboards.

Data architecture and subscription scope depend on the selected project configuration.

HARVESTREE

Harvestree V5

A self-powered LoRaWAN sensor node for industrial monitoring.



THERMAL ENERGY

Harvests energy from the temperature difference available at the installation site.



LORAWAN

Transmits sensor data to a compatible gateway and data service.



NO EXTERNAL POWER CABLE

Self-powered operation simplifies industrial monitoring installations.

Choose your configuration

Context & need		Harvestree configuration	Ref. code
Installation environment	 Indoor	Black heat sink	B
	 Outdoor	White heat sink	W
Power continuity	 Permanent temperature differential	Supercapacitor	S
	 Non-permanent temperature differential	250 mAh LiPo	R
Electronic temperature protection	 Standard surface No protection needed	No cooling fin	NF
	 High temperature Electronics kept < 85 °C	4 cooling fins	4F

HARVESTREE

Harvestree V5 - Available configurations

Select the four attributes to identify the appropriate 4 connector reference.



Harvestree V5 — Find your reference

Power continuity			Standard surface No protection needed	High temperature Thermal spacer included
INDOOR - Black heat sink				
Permanent temperature differential	HVT5-AHBSNF4C-LHI			HVT5-AHBS4F4C-LHI
Non-permanent temperature differential	HVT5-AHBRNF4C-LHI			HVT5-AHBR4F4C-LHI
OUTDOOR - White heat sink				
Permanent temperature differential	HVT5-AHWSNF4C-LHI			HVT5-AHWS4F4C-LHI
Non-permanent temperature differential	HVT5-AHWRNF4C-LHI			HVT5-AHWR4F4C-LHI

Stock-listed configurations · Indicative lead time: 12 weeks.



SPECIFIC CONFIGURATIONS

2C variants are available for specific projects. Contact the sales team for selection support.

03

Sensors

Temperature, voltage, current, vibration and condition monitoring.



SENSORS

SENSORS

Sensor portfolio

Commercial sensor families compatible with MOİZ monitoring projects.

01 Temperature

PT1000, thermocouple, digital and infrared measurement

02 Voltage & current

Potential difference, 4–20 mA and 30 A AC current

03 Vibration

Single-axis accelerometers with magnetic, screw or adhesive mounting options

04 Condition monitoring

Magnetic field, dry contact, humidity and sound level

Selected configurations are available subject to MOQ and application review.

SENSORS

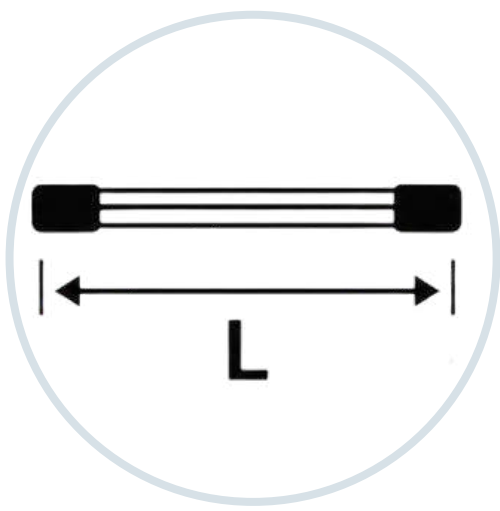
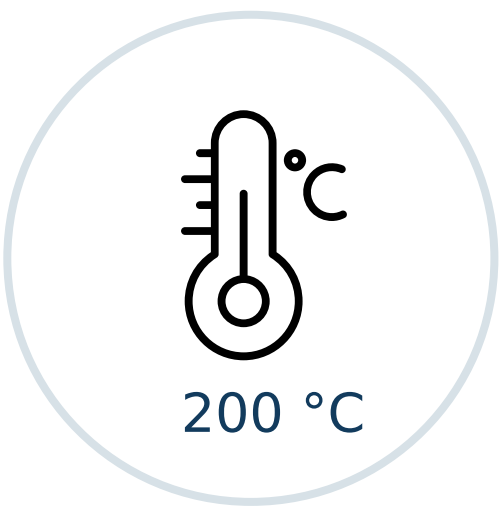
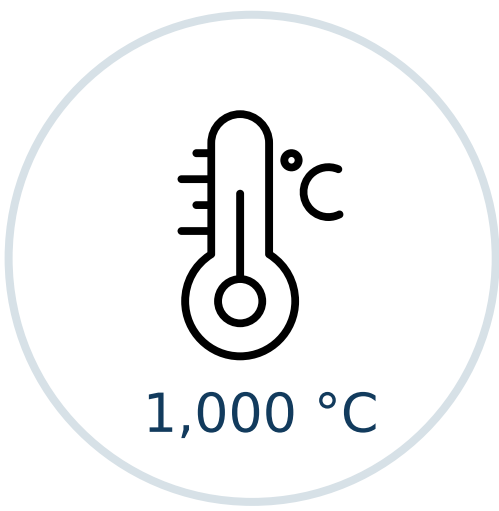
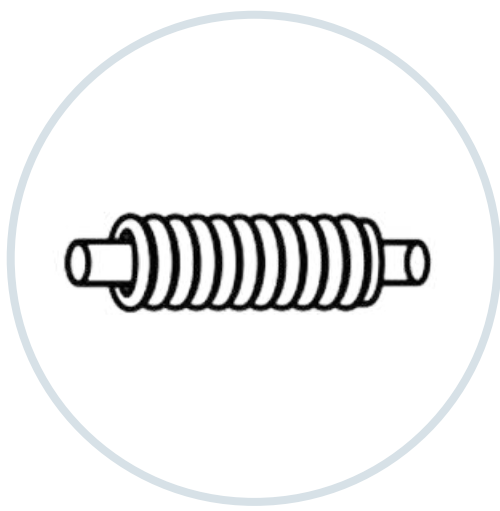
Standard PT1000 probe references

Direct-contact probes with standard, high-temperature or mechanical protection.



Class A platinum PT1000 · 4-wire connection
Ø5 × 30 mm · M8 connector
Temperature measurement -50°C / +200°C

Three cable-protection options are available



Cable length	Standard cable version resistant up to 200 °C	Cable With High-temperature oversleeve Resistant up to 1,000 °C (for 15 minutes)	Cable with mechanical protection (flexible corrugated conduit) resitant up to 80°C
0.5 m	2000004501	2000004601	—
0.76 m	2000008101	2000008201	—
1 m	2000003701	2000003801	—
1.2 m	2000007701	2000007801	—
1.5 m	2000003901	2000004001	—
1.8 m	2000007901	2000008001	—
2 m	2000004101	2000004201	2000008301
3 m	2000004301	2000004401	—
5 m	—	—	2000008401

SENSORS

Thermowell PT1000 references

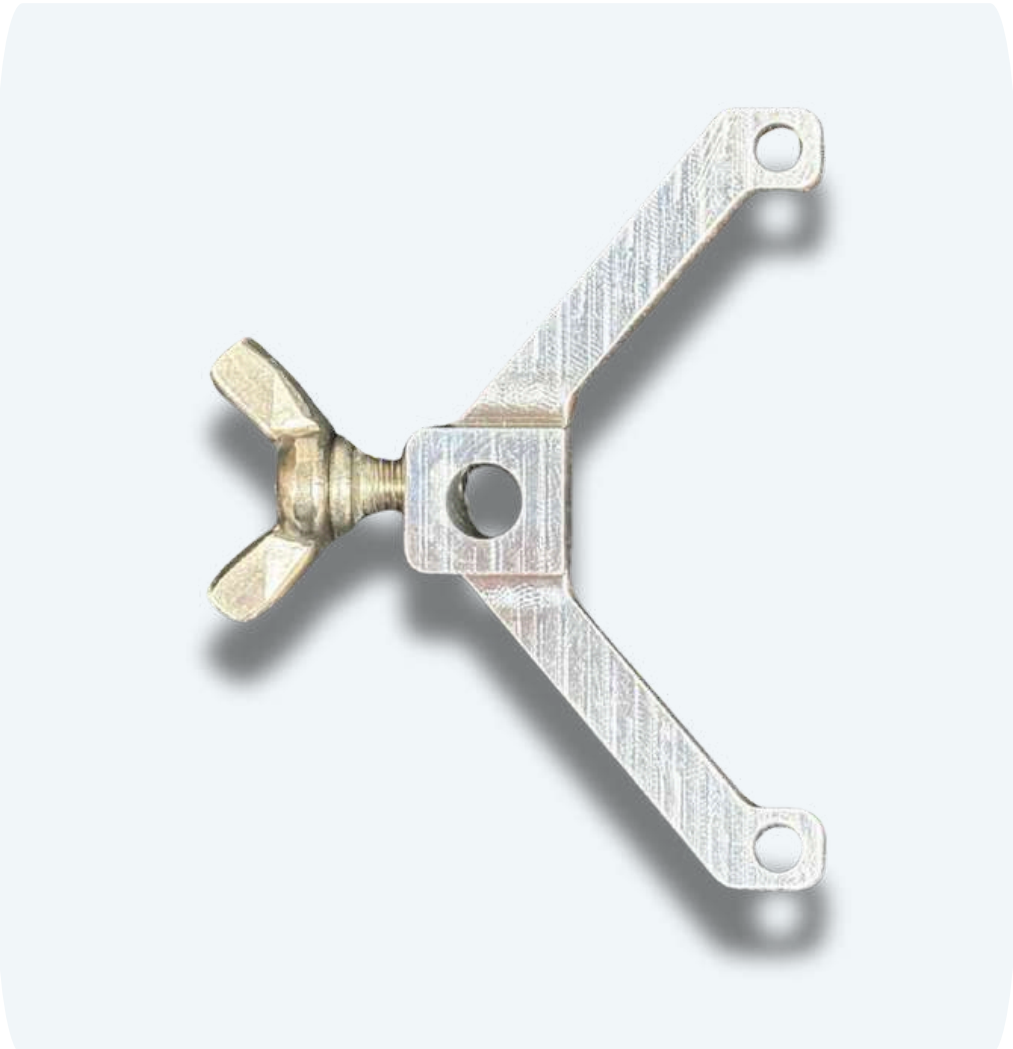
The probe must reach the bottom of the thermowell for correct measurement.



**Class A platinum PT1000 ·
4-wire connection
Ø6 × 320 mm · M8 connector**

Thumbscrew adjustment allows the probe height to be set without tools.
Temperature measurement -50°C / +200°C

Cable length	Standard cable version resistant up to 200 °C	Cable with High-temperature oversleeve resistant up to 1,000 °C(for 15 minutes)
0.5 m	2000003501	2000003601
1 m	2000002701	2000002801
1.5 m	2000002901	2000003001
2 m	2000003101	2000003201
3 m	2000003301	2000003401



Mounting component	Temperature / condition	Product code
Thermowell guide adapter	Application dependent	0100011401

SENSORS

Additional temperature sensors

Thermocouple, digital, infrared, and temperature-humidity solutions for compatible Harvestree configurations.



Universal thermocouple adapter

Compatible with standard and miniature thermocouples, types K, J, T, N, S, E, B and R.

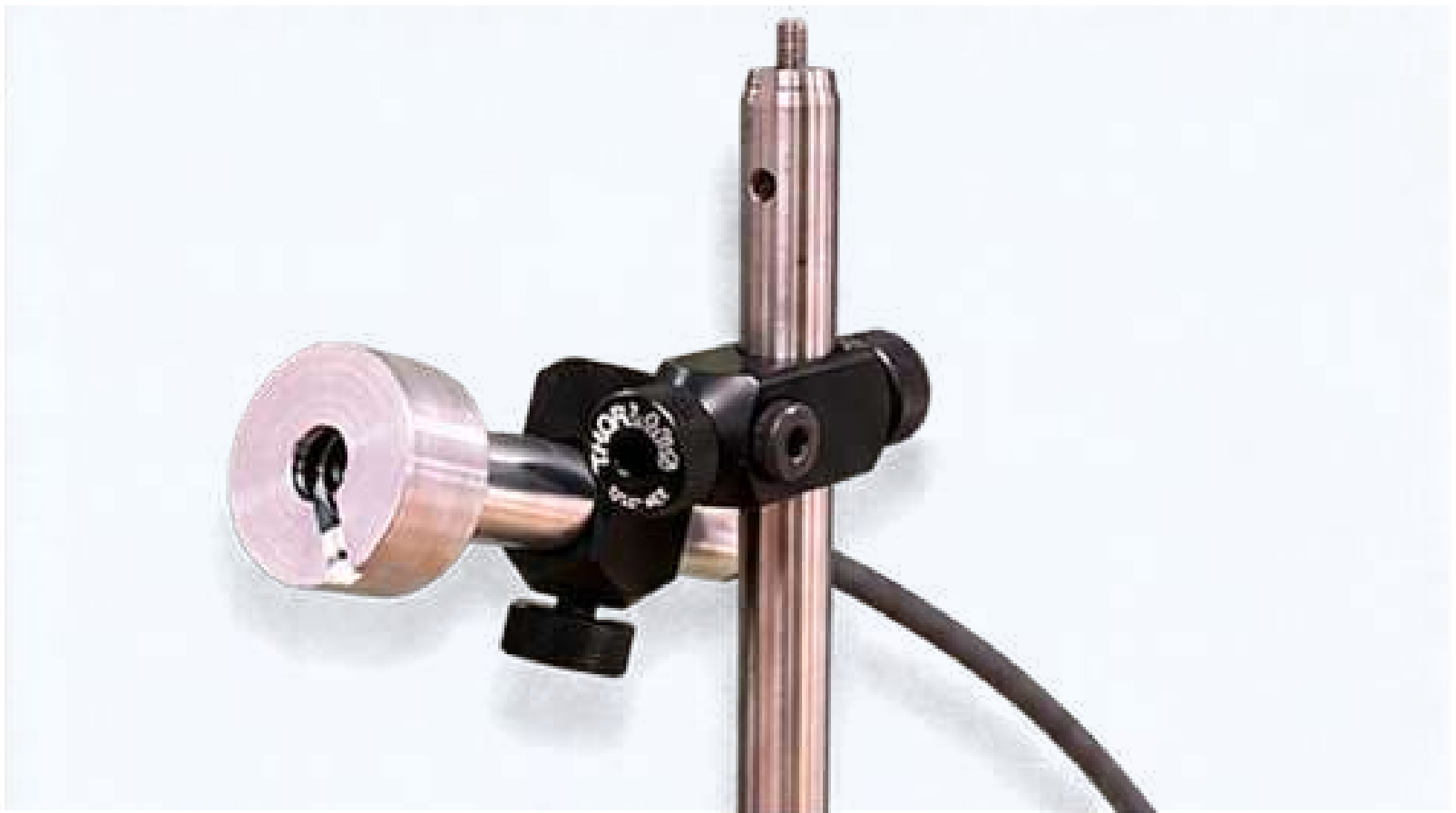
Product code	Connection
2000000501	M8, 4-pin



Digital temperature probe

Sensor temperature: $-40\text{ }^{\circ}\text{C}$ to $+125\text{ }^{\circ}\text{C}$
Cable temperature: $-40\text{ }^{\circ}\text{C}$ to $+105\text{ }^{\circ}\text{C}$
Temperature accuracy: $\pm 0.2\text{ }^{\circ}\text{C}$

Product code	Cable length
2000005101	1 m
2000005201	0.5 m



Infrared temperature probe

Non-contact temperature measurement.
Temperature range: $-70\text{ }^{\circ}\text{C}$ to $+270\text{ }^{\circ}\text{C}$.
Field of view: 5° .

Product code	Cable length
2000011401	1 m
2000012001	0.5 m



Digital temperature and humidity probe

Sensor temperature: $-40\text{ }^{\circ}\text{C}$ to $+125\text{ }^{\circ}\text{C}$
Cable temperature: $-40\text{ }^{\circ}\text{C}$ to $+105\text{ }^{\circ}\text{C}$
Accuracy: $\pm 0.1\text{ }^{\circ}\text{C} \cdot \pm 1.0\text{ \%RH}$

Product code	Cable length
2000004701	1 m
2000004801	0.2 m

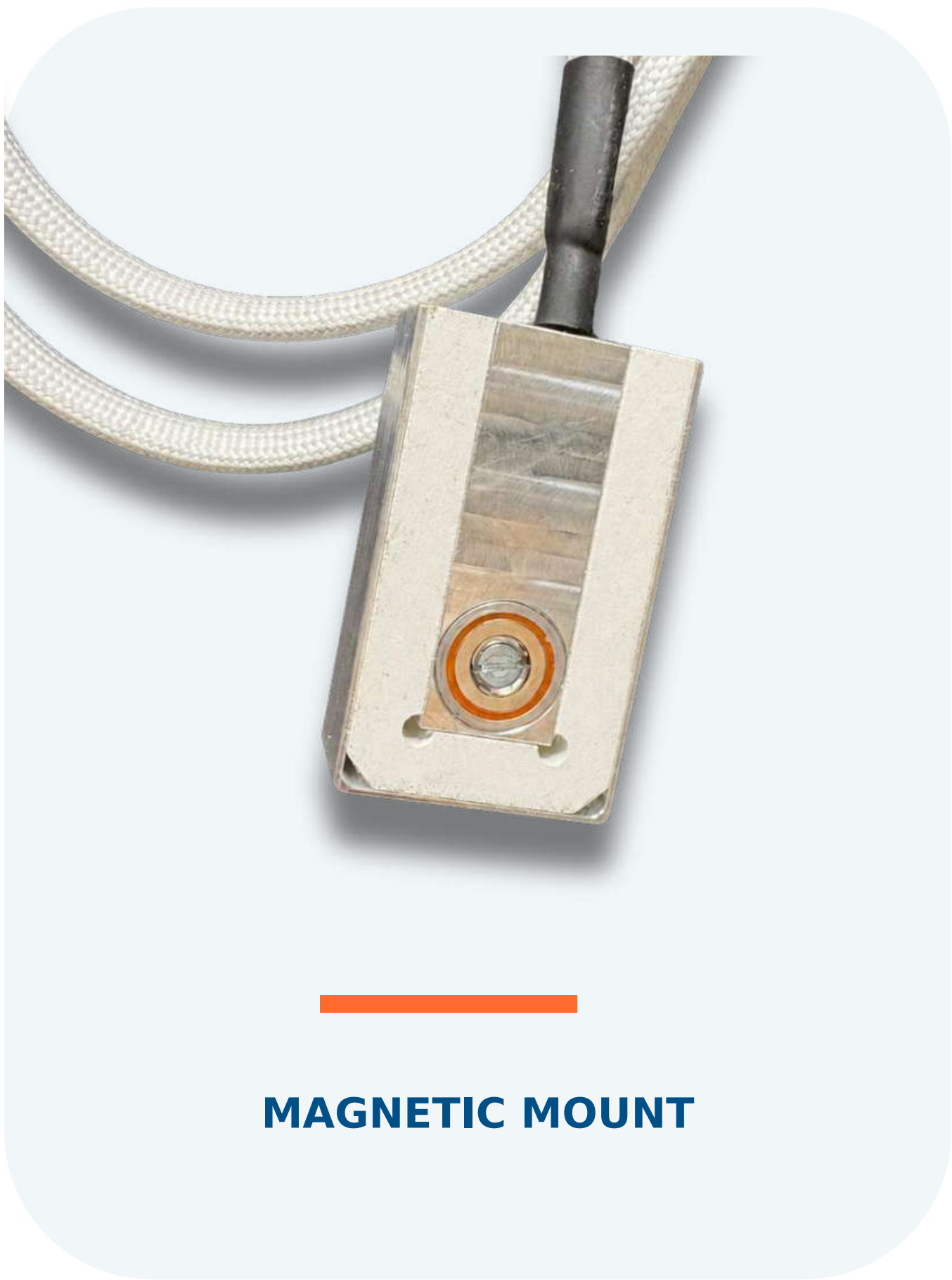
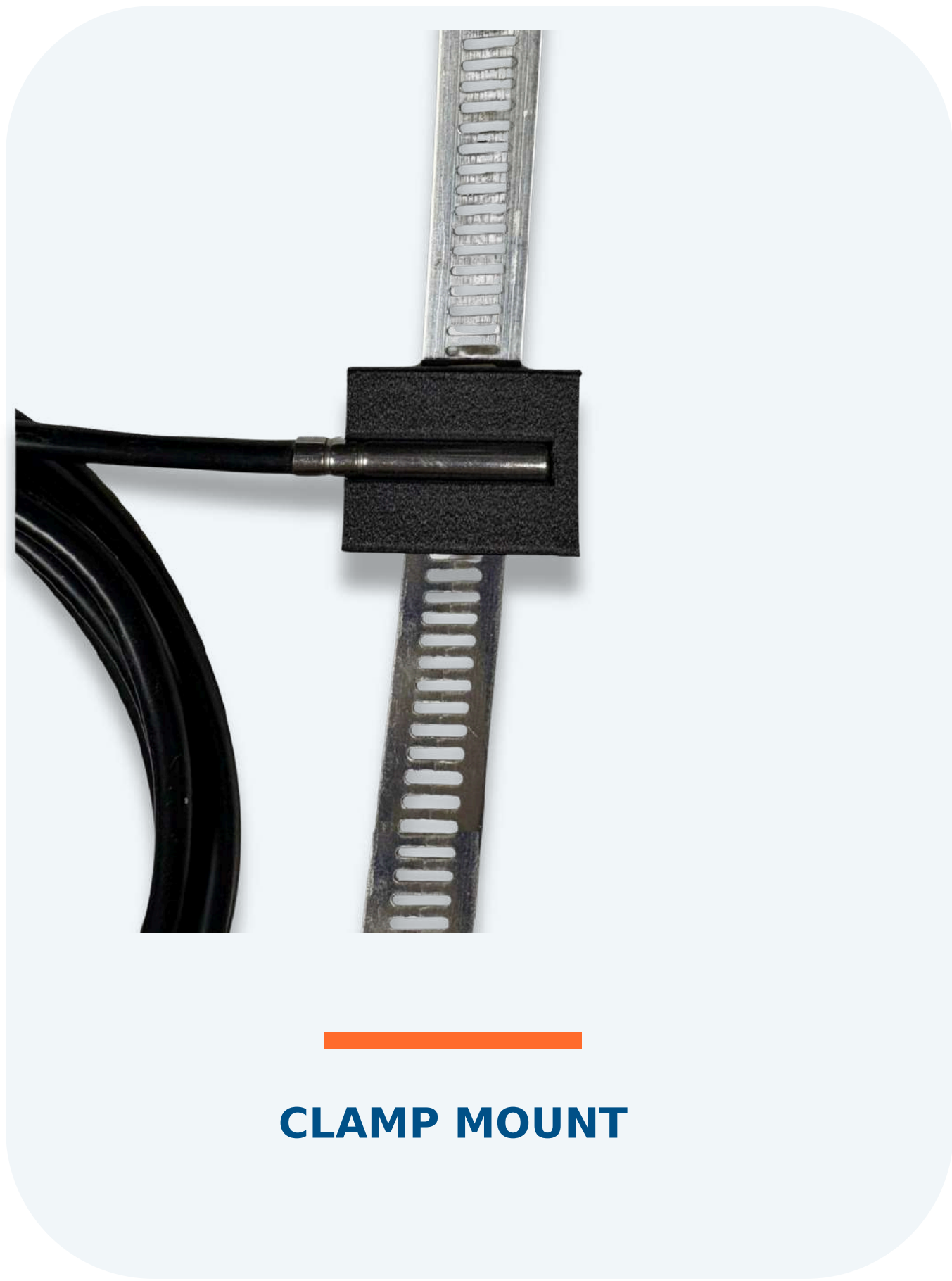
Infrared accessories

Alignment laser	Infrared Sighting Mount	Emissivity paint
		Indoor / outdoor · Up to $100\text{ }^{\circ}\text{C}$ Alternative version rated up to $1,000\text{ }^{\circ}\text{C}$
2000002401	0100007901	2000009601

SENSORS

PT1000 mounting solutions

Magnetic and clamp mounting solutions enable quick installation of PT1000 probes without permanent modification.



Mounting solution	Max temperature	Holding force	Product code
Insulated magnetic mount	150 °C	83 N	0100007201
Insulated magnetic mount	280 °C	57 N	0100007301
Insulated magnetic mount	350 °C	41 N	0100007401
Clamp mount	180 °C	—	0100007501

SENSORS

Electrical measurements & dry contacts

Accessories for industrial voltage and current monitoring.

01

Potential-difference measurement cable

Configurable cable for voltage measurement, available with multiple cable lengths, lead lengths, terminations and sleeve options.



Common cable length

1 or 2 m

Leads length

1 / 1 m
0.5 / 0.5 m

Termination

Bare wire or ring terminal

Variant

- Standard cable (resistant up to 200 °C)
- Cable with High-temperature oversleeve resistant up to 1,000 °C

Leads	Termination	Cable length : 1 m.		Cable length : 2 m	
		1 m Standard	1 m HT oversleeve	2 m Standard	2 m HT oversleeve
1 / 1 m	Bare wire	2000006001	2000006101	2000006801	2000006901
1 / 1 m	Ring terminal	2000006201	2000006301	2000007001	2000007101
0.5 / 0.5 m	Bare wire	2000006401	2000006501	2000007201	2000007301
0.5 / 0.5 m	Ring terminal	2000006601	2000006701	2000007401	2000007501

AVAILABILITY	LEAD TIME	MOQ
Made to order – contact us	5 weeks	5 units

SENSORS

Electrical measurements & dry contacts

Accessories for industrial voltage and current monitoring.

02

Dry contact measurement cable, wire termination

PVC cable for connecting a dry-contact signal, with bare-wire termination. Available in 1 m and 2 m lengths.



CABLE	PRODUCT CODE
1 m	2000001201
2 m	2000001301

03

4-20 mA shunt cable

Measures the signal from an existing 4–20 mA current loop. The transmitter requires a separate power supply.



CABLE	TRANSMITTER SIDE	HARVESTREE SIDE	PRODUCT CODE
2 m	Bare wires	M8 connector	2000002301
3 m	Bare wires	M8 connector	2000007601

04

Voltage measurement amplifier adapter

Adapter for amplified voltage measurement with Harvestree.

Product code
2000000401



Additional configurations are available.

Contact us for other cable lengths, lead lengths, terminations or high-temperature oversleeves.

SENSORS

Vibration sensors

Single-axis accelerometers with magnetic, screw or adhesive mounting options.

VS-JV10 — 10 mV/(m/s²) Magnetic or screw mounting

Single-axis sensor · Frequency range: 10 Hz–15 kHz

Model	Mounting	Cable length	Product code
VS-JV10	Magnetic base	1 m	2000005601
VS-JV10	Screw mounting	1 m	2000005701
VS-JV10	Magnetic base	2 m	2000005801
VS-JV10	Screw mounting	2 m	2000005901



Magnetic mounting base



VS-JV10 accelerometer



Screw mounting base

VS-BV20 — 20 mV/(m/s²) Adhesive mounting

Single-axis sensor · Frequency range: 10 Hz–15 kHz

Model	Mounting	Cable length	Product code
VS-BV20	Adhesive mounting	1 m	2000001001
VS-BV20	Adhesive mounting	2 m	2000001101



VS-BV20 accelerometer with adhesive mounting

AVAILABILITY	LEAD TIME	MOQ
Made to order – contact us	16 weeks	1 unit

SENSORS

Other sensors

Additional sensing solutions available on request. Minimum order quantities and lead times may apply.

01

Magnetic field measurement

Magnetic field sensor. M8 cable required separately.

Product code	Configuration
2000000601	10 mT sensor

Availability: On request. Lead time: 12 weeks. MOQ: 5 units



02

AC current measurement

Available current ratings: 30 A, 60 A, 120 A, 250 A and 500 A.

Product code	Configuration
2000009701	1 m cable
2000009801	2 m cable

2000005301: On request · Lead time: 2 weeks · MOQ: 1 unit.
Other variants: contact us for lead time and MOQ.



03

Sound level measurement

Ambient sound level measurement in dB.

Product code	Configuration
2000000701	Measurement enclosure

M8 cable required separately
Availability: On request. Lead time: 16 weeks. MOQ: 5 units



04

Pressure measurement

Product code	Model	Pressure range	Process connectio	Cable / connector
2000008601	MSP 300	0–200 psi	¼" NPT	2 m · M8



04

Mounting accessories

Mounting solutions selected for the surface, temperature and mechanical constraints.



MOUNTING

MOUNTING KITS

Mounting kits

Complete mounting assemblies for common industrial installations.

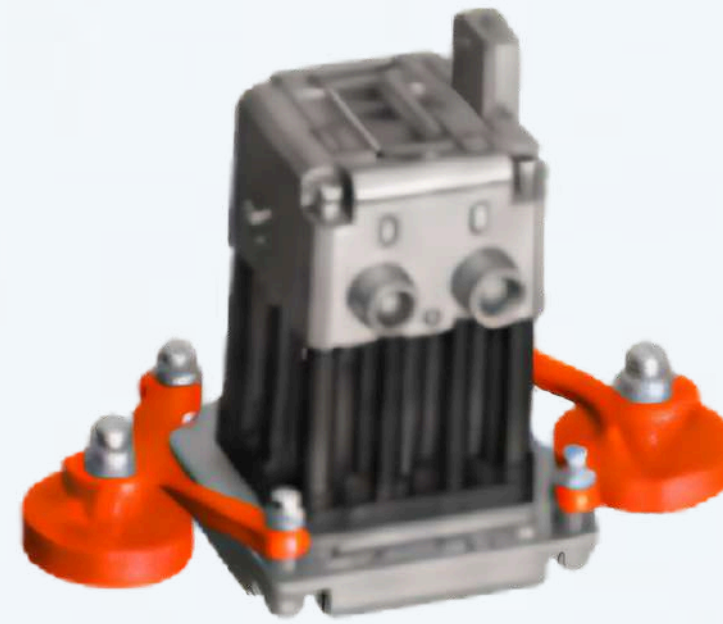
MAGNETIC MOUNTING



High-temperature insulated magnetic kit

4 magnets rated at 60 N each
Max. 350 °C

0100005001



Reinforced magnetic kit

2 magnets rated at 205 N each
/ 150 °C or 310 N each / 80 °C

0100005101

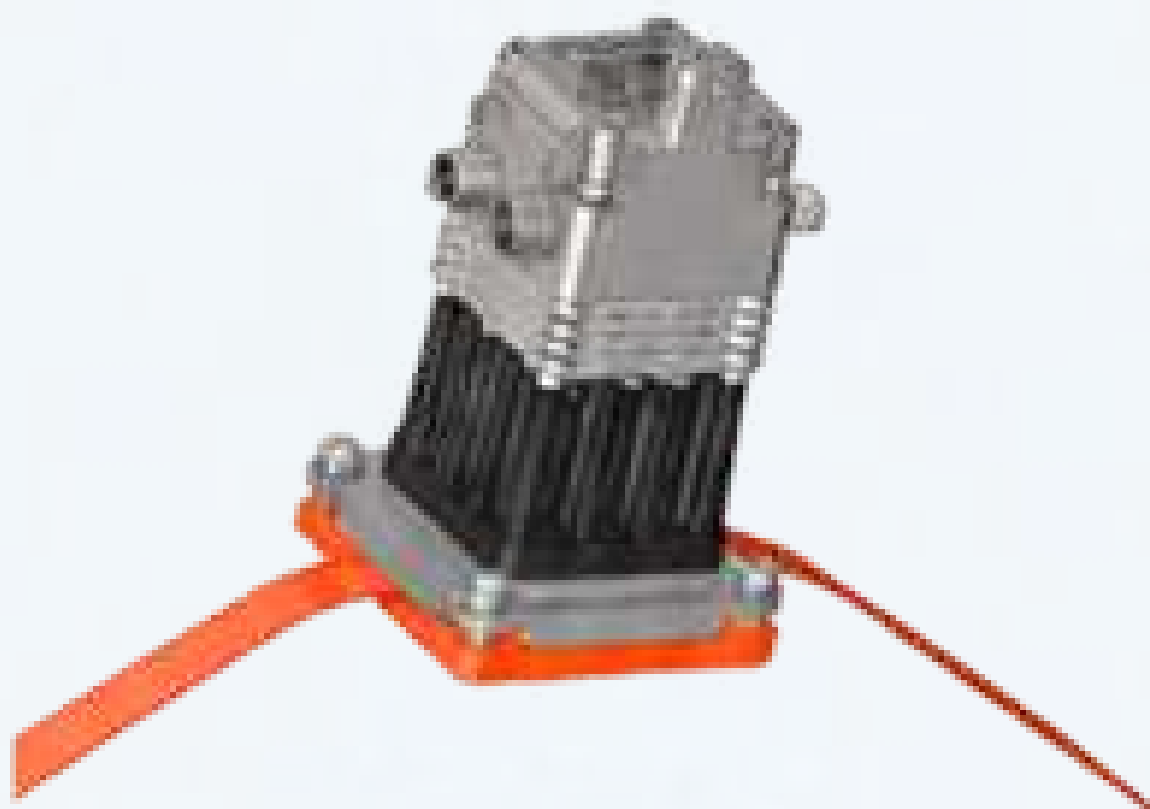


Standard magnetic kit

4 magnets rated at 83 N each
Max. 150 °C

0100005201

CLAMP AND POLE MOUNTING



Clamp mounting kit

Mounting on pipes or other structures

0100005401



Insulated clamp Mounting kit

Thermally insulated

0100005301



Pole-mounted solution

0100007601

FIXING KITS

In stock · Dispatch within 5 weeks.

POLE-MOUNTED SOLUTION

Project-specific configuration · Contact us for lead time.

ASSOCIATED TOOLS



Removal tool

For reinforced magnetic mounting kit.

0100004401



Installation tool

For pole mounting kit

0100004501

In stock · Dispatch within 5 weeks.

MOUNTING KITS

Mounting accessories

Supporting accessories for sensor, catenary and pole-mounted installations.

STAINLESS-STEEL BANDS



Stainless-steel band

2.5 m • 6 closures

Product code
0100003001



Stainless-steel band

5 m • 12 closures

Product code
0100003101

CATENARY CONTACT-WIRE MOUNTS



North American contact-wire mount

Product code
0100004201



European contact-wire mount

Product code
0100004301

05

Preconfigured solutions

Predefined assemblies for railway monitoring and demonstrations.

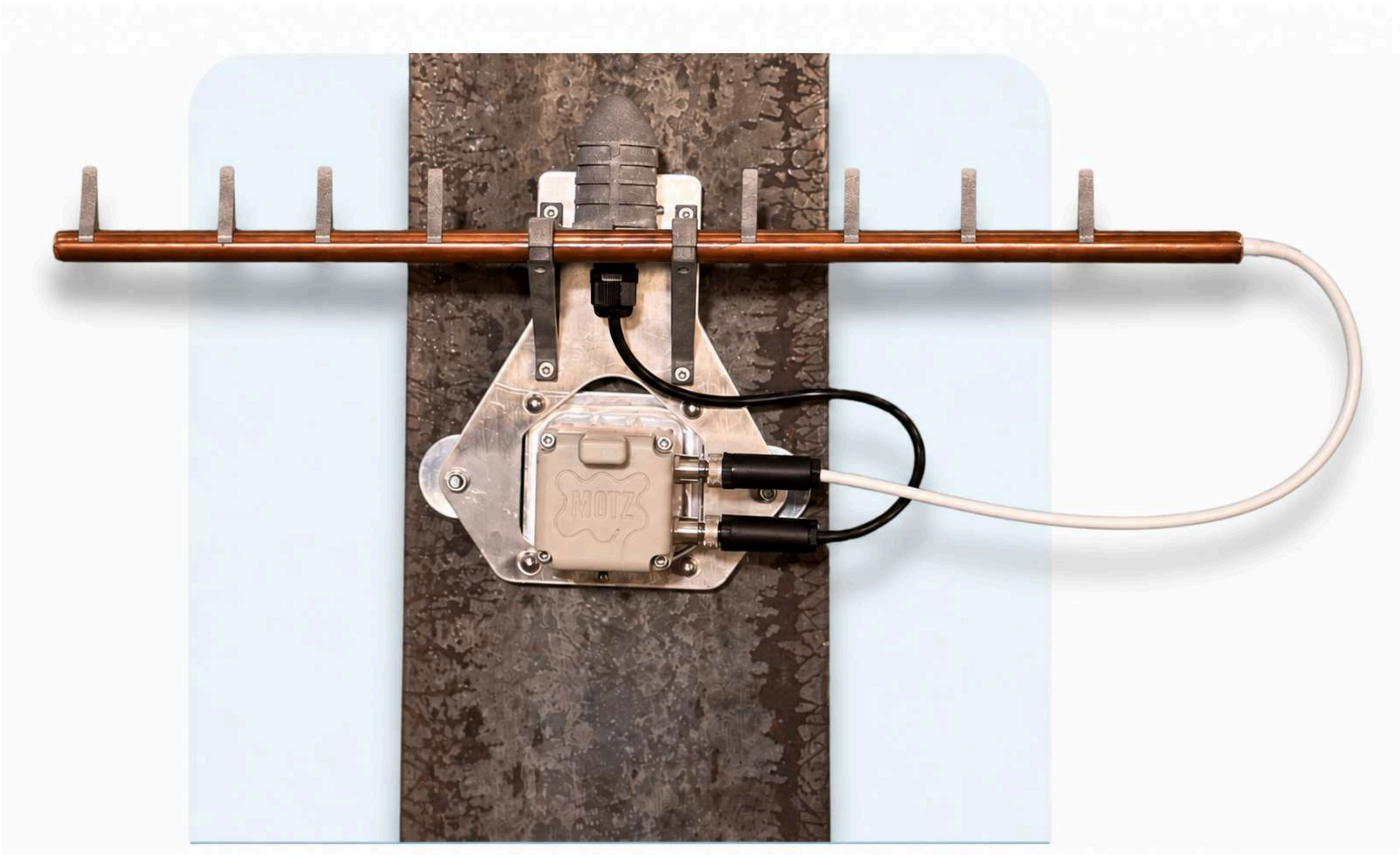


SOLUTIONS

SOLUTIONS

Catenary solutions

Harvestree assemblies for contact-wire frost monitoring in Europe and North America.



CATENARY MOUNTING

Product code	Configuration	Availability	Lead time
3000001301	Catenary solutions for Europe (LoRaWan 868MHz)	Contact us	7 weeks
3000001401	Catenary solutions for North America (LoRaWan US 902-928 MHz)	Contact us	7 weeks

SOLUTIONS

Rail coupon monitoring solution

Preconfigured assembly combining a rail coupon, a Harvestree and dedicated mounting hardware.



Integrated rail assembly



Rail coupon



Harvestree integration



Dedicated mounting hardware



SOLUTIONS

Harvestree Demonstration Kit

A configurable demonstration solution designed to let users evaluate the complete measurement chain from sensing to data visualization without permanent installation.

16

POSSIBLE
CONFIGURATIONS



Choose your configuration



HARVESTREE UNITS

One or two units



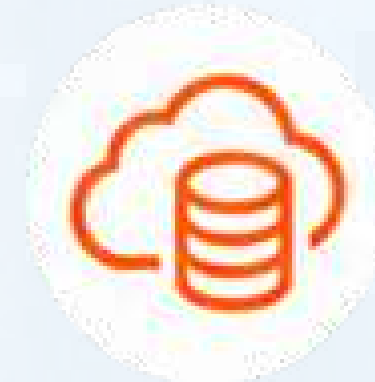
ENVIRONMENT

Indoor or outdoor



REGION

Europe or North America
(Other regions: contact us)



DATA INTEGRATION

Cloud subscription or
local system



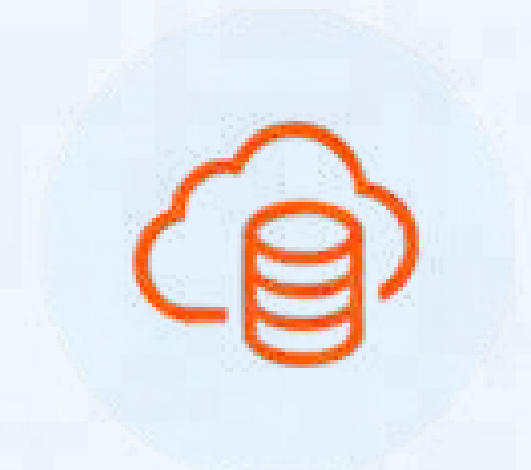
UNITS



ENVIRONMENT



REGION



DATA INTEGRATION

Product code — 3000001601



Kit contents depend on the selected configuration. Contact us for the detailed list of included equipment and available options.

06

Connectivity & data services

Gateway hardware, network connectivity and access to industrial data.



DATA

DATA

LoRaWAN Gateways

Regional gateway hardware connecting Harvestree devices to the selected network infrastructure.



SENSORS

HARVESTREE V5

LORAWAN GATEWAY

Product code	Description	Region / frequency	Lead time
0400000301	Multitech LoRaWAN gateway, LTE Worldwide, external antenna	EU868 · Europe	2 weeks
0400000401	Multitech LoRaWAN gateway, LTE Worldwide, external antenna	US915 · North America	4 weeks
0400000101	Multitech LoRaWAN gateway, LTE Europe	EU868 · Europe	Contact us
0400000201	LoRaWAN gateway · LTE Worldwide · Integrated antenna	US915 · North America	Contact us



GATEWAY SETUP
Configuration adapted to the selected installation.



4G CONNECTIVITY
Connectivity scope defined according to country and project requirements.

DATA

Connectivity & Data Services

Flexible services for transmitting, managing and visualizing industrial data.

SERVICE	PRODUCT CODE	INCLUDED SERVICES	SCOPE / REGION
Gateway Setup	8900000141	Gateway configuration for deployment	Linked to cloud-based LNS
Gateway 4G Connectivity Europe	8900000501	SIM card and data plan connecting the gateway to the server	Europe · Annual subscription per gateway
Gateway 4G Connectivity North America	8900000401	SIM card and data plan connecting the gateway to the server	North America · Annual subscription per gateway
Gateway 4G Connectivity Middle East	8900001301	SIM card and data plan connecting the gateway to the server	Middle East · Annual subscription per gateway
Cloud-based LNS	8900000601	Routes LoRaWAN data to customer applications	Annual subscription per device
Public LoRaWAN Network	8900000801	National public operator network subscription	Annual subscription · Subject to coverage
Data subscription 12 months	8900000101	Device data collection, storage and API access	12 months · Per device
Data Visualization Dashboard	8900000301	Cloud-based dashboard accessible through a web browser	Scope to be confirmed

SERVICE SCOPE

The final service scope, connectivity and subscriptions are defined and validated for each project. Connectivity plans are subject to fair-use conditions.

MOTIZ

Powering Autonomy

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