4.0 INDUSTRY

CUBE

3 AXES VIBRATION & MACHINE EFFICIENCY MEASURE

MEASURE

- Triaxial Vibration
- Bearing condition
- Unbalance
- Misalignment
- Coupling defects
- Rotation Speed
- Pulse detection
- Mechanical impacts
- Temperature

PROTECT

Configurable OUTPUT:

- 4-20 mA
- On/Off

COMMUNICATE

2 wires ETHERNET (SPE):

- Modbus/IP
- HTTPs

COMPRESSOR · INDUSTRIAL FAN · MOTOR · FEED WATER PUMP · GEAR BOX · TURBINE · MACHINE TOOL

NEW

MACHINE PROTECTION
PREDICTIVE MAINTENANCE
IOT CONDITION MONITORING

CE | UKCA

CEMB
VIBRATION EQUIPMENT

CUBE
TOTAL MACHINE EFFICIENCY

CUBE is a triaxial sensor for vibration measurement, predictive diagnostics and protection of rotating machinery.

CUBE integrates filtering and FFT algorithms to measure the performance and efficiency of rotating machinery: state of bearings, joints and rotating parts subject to wear.

CUBE can detect the rotational speed or pulsation frequencies of fans, propellers, compressors…

CUBE combines the functions of:

- Machine protection
- Monitoring via Modbus/IP and HTTP

| CUBE available models:		CUBE 0	CUBE 1-2	CUBE 3
Monitoring	Modbus/IP - HTTP ethernet SPE	✔	✔	✔
Machine protection	4-20 mA output		✔	✔
	ON-OFF output			✔

CUBE CONFIGURATION

Cube is delivered with a predefined configuration that covers the most common applications.

Indeed, Cube is fully configurable to fit any custom or special requirement; here below a summary of what can be configured:

- Low speed vs high speed machine
- Bandpass filters for Velocity & Acceleration
- Vibration Mode, Range, Unit of measure
- Alarm setpoint & Delay
- Rotation speed detection mode & parameters
- Tag Name of the point
- IP Address

Cube can be configured via Modbus or by Cube Manager software, available free of charge.
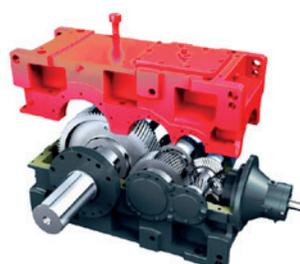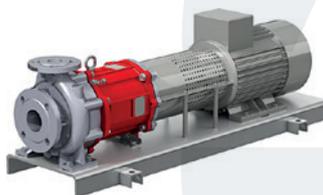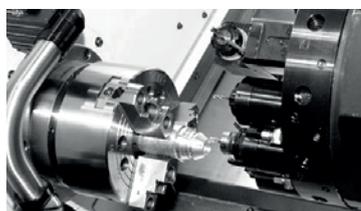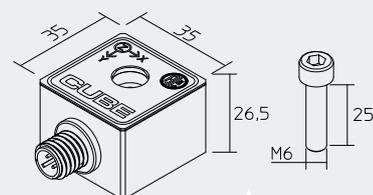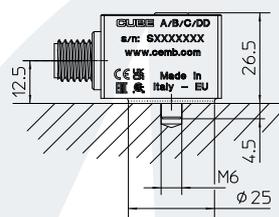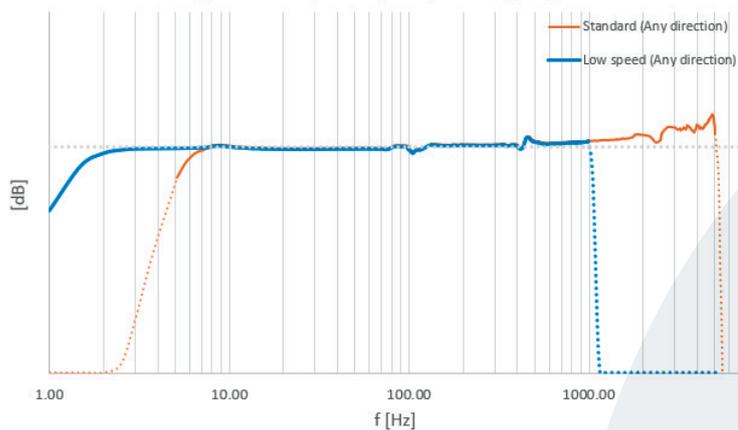
3 AXES VIBRATION & MACHINE EFFICIENCY MEASURE

CUBE Connections	M12 Connector	Integrated PUR Cable	Integrated Armoured Cable
CUBE is designed for heavy duty environments, IP68, stainless steel body AISI 316 and available with:			

CARATTERISTICHE TECNICHE

Material	Stainless Steel AISI 316	Bandwith	0,9 Hz-5 kHz on each axis
Body Dimension	35x35x26mm - Lateral exit Mating surface Ø 25mm	Linearity	± 5% (range 5 Hz - 4,5 KHz @25°C)
		Measure resolution	16 bit
Power Supply	24 Vdc (10÷35Vdc) 200 mA max	Sampling rate	12,8KHz
	Binary Output (PNP/NPN) Load: 50mA Max	Communication and protocols	Ethernet SPE (10Base-T1L) Modbus TCP/IP, MQTT, HTTP API 10Mbit/s @ 300m (on twisted pair)
Operating conditions	- 50°C ÷ + 100°C IP68		
Storage conditions	- 60°C ÷ + 120°C not condensing		
Temperature Measure	+20°C bis +110°C @ ± 5%	IoT & configurability	100% configurable
Vibration Measure	3 Axis: XYZ Sismic (absolute vibration)	Screwing torque vite	5÷8 Nm
Dynamic range	32g Pk-Pk	Shock resistance	100 g

Typical frequency response [dB]

CUBE 3 AXES VIBRATION & MACHINE EFFICIENCY MEASURE

Ordering information: The code is laser-marked on the body of the device and on the declaration of conformity to standards.

CUBE/A/B/C/DD

/A: Model
0: SPE

1: SPE + 4-20mA

2: SPE + 4-20mA + 4-20mA (not yet available)

3: SPE + 4-20mA + ON/OFF contact (configurable PNP, NPN, PUSH/PULL)

/B: Connection
0: Connector M12 - 4 pins
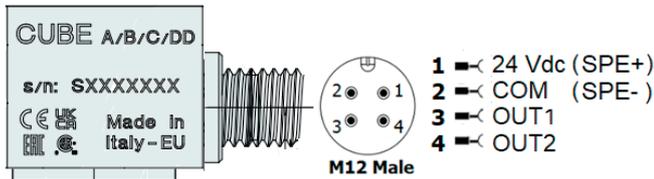
1: Integrated Cable

2: Integrated Cable Armoured

/C: Certification
0: Safe zone

2: ATEX (not yet available)

4: CSA/UL (not yet available)

5: IECEX (not yet available)

/DD: Cable Lenght
0: With connector (cable to be ordered apart (B=0)

1-30: Lenght of integral cable [m]

CABLES AND CONNECTIONS

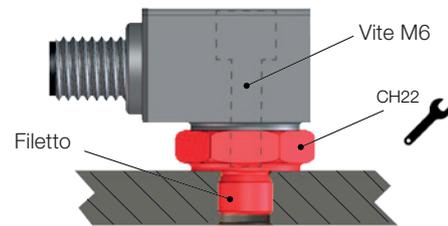|	24 Vdc (SPE+)
1	24 Vdc (SPE+)
2	COM (SPE-)
3	OUT1
4	OUT2

M12 Male

CBL-CUBE/A/B

/A: Cable type

H2: Cable SPE 2 Pin - (Just for CUBE/0)

H4: Cable 4 Pin

/B: Cable Lenght [m]

Pitch 1m – max. 500m

THREAD ADAPTERS

Vite M6

CH22

Filetto

Thread	Code
M6 x 1	440A057135
M8 x 1	440A056943
M8 x 1.25	440A056944
M10 x 1	440A056945
M10 x 1.5	440A056946
¼" - 28 UNF	440A057136
¼" - 18 NPT	440A056947

SPE-RJ45 ETHERNET CONVERTER ON DIN RAIL

1 SPE PORT

Cod. 39IN056741
SPE Bridge
Unmanaged
1 SPE port (PoDL)

8 SPE PORTS

Cod. 7904000142
8 Ports SPE (PoDL)
IEC 63171-2
3 Ports RJ-45

Codice: 87SE070460
SPE cable 0.5m
(2 twisted wires + shield)
Side1: integrated connector
IEC 63171-2
Side2: blunt cut