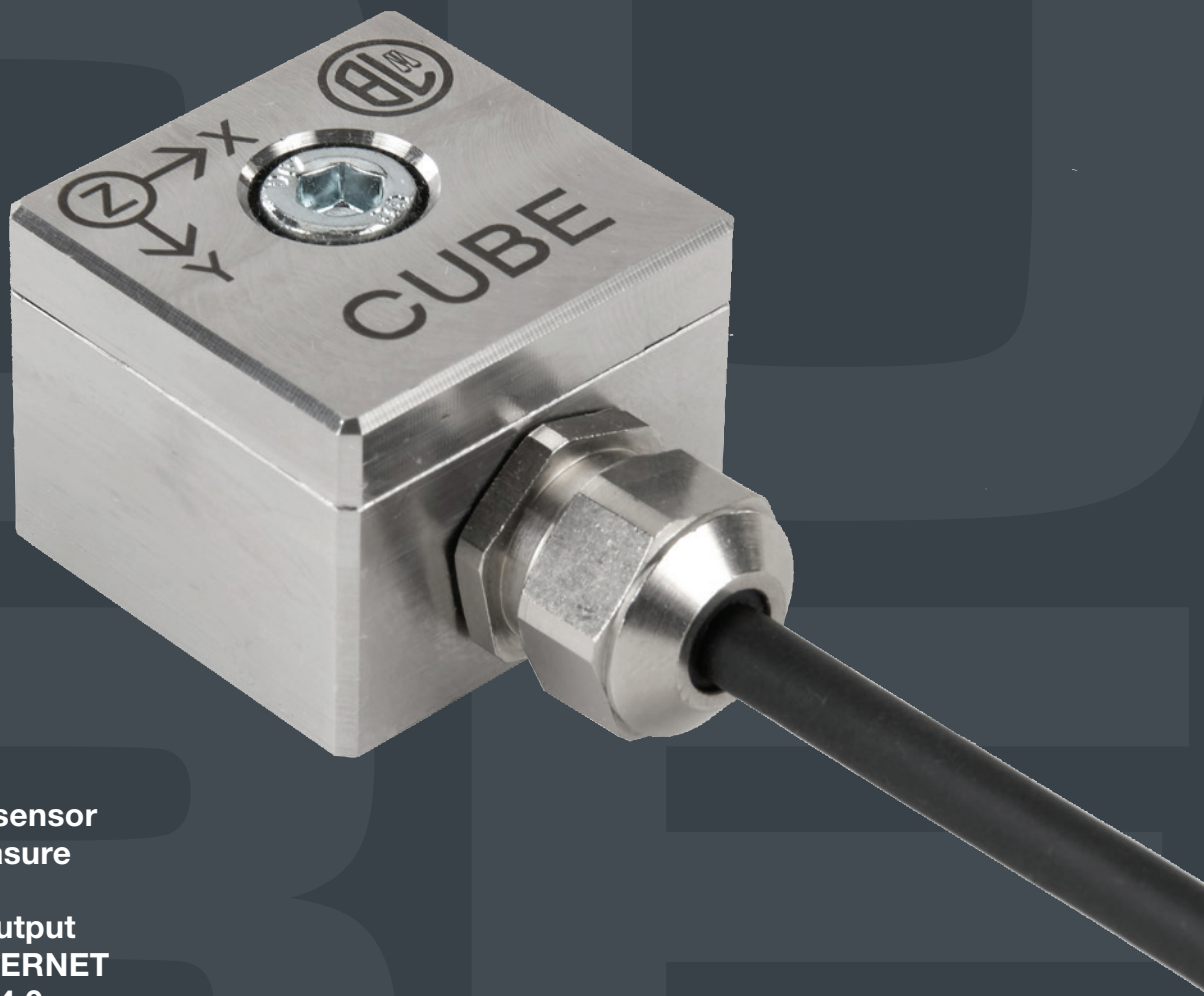


CUBE

MACHINE PROTECTION CONDITION MONITORING & IoT



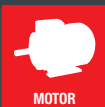
- 3 AXIS Vibration sensor
- Temperature measure
- 4-20 mA output
- ON/OFF Binary output
- SPE: 2 WIRE ETHERNET
- IoT & INDUSTRY 4.0



COMPRESSOR



INDUSTRIAL FAN



MOTOR



FEED WATER PUMP



GEAR BOX



TURBINE



MACHINE TOOL

NEW

THE PERFECT IoT SOLUTION
DESIGNED FOR INDUSTRY 4.0
10BASE-T1L ETHERNET



CEMB

BALANCING MACHINES



CUBE measures continuously the vibration over 3 axis + the temperature of machine support.

CUBE is the first heavy duty industrial sensor that provides, in a single device, the following functions:

- **Machine protection:** 4-20mA & ON/OFF output
- **Condition Monitoring:** FFT & Raw data via ethernet
- **Predictive maintenance:** Configurable filters & advanced algos

CUBE is designed for heavy duty IP 68 environment, with stainless steel body, rugged integrated cable or connector.

CUBE is native IoT & 4.0 Industry



The most common way to directly communicate with PLC/DCS



- ENJOY**
- The standard of ethernet
 - Speed and reliability without extra cables
 - 10 Mbit/s up to 1 km

- AVOID**
- The Troubles of wireless networks
 - The Problems of batteries

**MEASURE CAPABILITY
(3 AXIS + TEMPERATURE)**



Overall vibration FFT - Raw data - Temperature
Acceleration - Velocity
RMS value - Peak value

OUTPUT FEATURES



Dual output fully mappable
Selectable processing bands
Configurable Range, threshold and delay

SIMPLE AND EASY



Measure + Communication in a single device
It installs like any accelerometer
Configurable even at commissioning or remotely

CUBE

CUBE 0 1 2 3

	CUBE 0	CUBE 1	CUBE 2	CUBE 3
COMMUNICATION PORT	Ethernet SPE	Ethernet SPE	Ethernet SPE	Ethernet SPE
OUTPUT 1	-	4-20 mA	4-20 mA	4-20 mA
OUTPUT 2	-	-	4-20 mA	PNP/NPN Contact

CONNECTIVITY

Each **CUBE** is available with 3 types of connection



M12 Connector



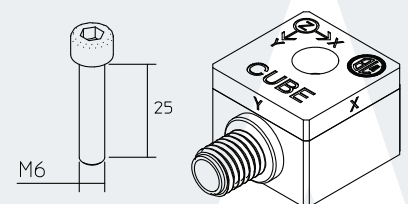
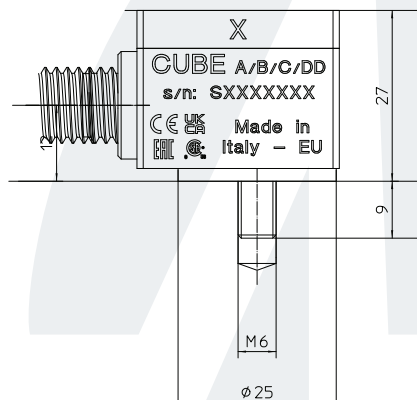
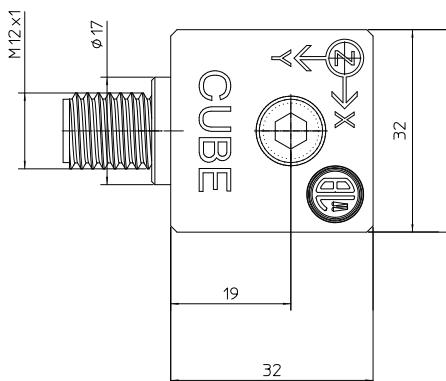
PUR Integral cable



Armoured Integral cable

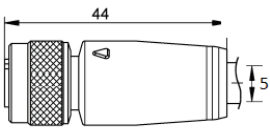
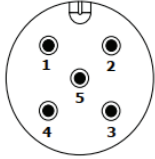
TECHNICAL DATA

Material	Stainless steel AISI 316	Linearity	± 5% (range 3 Hz ÷ 5 KHz @25°C)
Body Size	32x32x27mm - Lateral exit mating surface: 25 mm diameter	Measure resolution	16 bit
Power supply	24 Vdc (10÷35Vdc) 200 mA max Binary Output (PNP/NPN) load: 50mA	Communication	Ethernet SPE (10Base-T1L)
Operating conditions	- 50°C ÷ + 105°C IP68	Comm. speed	10Mbit/s @ 1 km (on twisted pair)
Storage conditions	- 60°C ÷ + 120°C non condensing	Comm. Protocols	Modbus/TCP-IP, FTP, UDP, MQTT, HTTP
Temperature Measure	-20°C - 110°C @± 5%	IoT & configurability	100% online configurable via ethernet
Vibration measure	3 Axis: XYZ Seismic (absolute vibrations)	Screwing torque	5÷10 Nm
Dynamic Range	32g Pk-Pk	Shock resistance	100 g
Bandwith	1 Hz-5 kHz on each axis	Periodic Maintenance or calibration	Not required



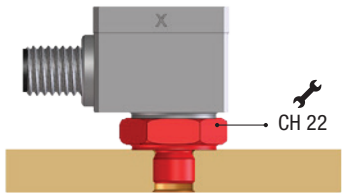
CEMB

CABLES

Code	Length	Size	Pinout description
65800B050 Black PUR not shielded Blunt cut on free side	5 m		 <p>M12 FEMALE</p>
65800B150 Black PUR not shielded Blunt cut on free side	15 m		
CBL/P/4/XX Black PUR shielded Terminals on free side	XX m		

- 1 — SPE+ (24 Vdc)
- 2 — SPE - (COM)
- 3 — OUT1
- 4 — OUT2
- 5 —

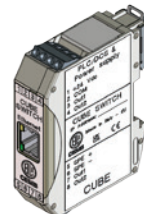
THREAD ADAPTERS

Thread	Adapter Ordering code	Reference picture
M6 x 1	440A057135	
M8 x 1	440A056943	
M8 x 1.25	440A056944	
M10 x 1	440A056945	
M10 x 1.5	440A056946	
1/4" - 28 UNF	440A057136	
1/4" - 18 NPT	440A056947	

SPE TO RJ45 ETHERNET CONVERTER

CUBE BRIDGE din rail module cod. 39IN056741

Converts 10Base-T1L to Ethernet RJ45.
If your PLC/DCS does not yet support 10Base-T1L,
just install this module and connect a standard ethernet cable.
No configuration is required.



Ordering codes:

CUBE/A/B/C/DD

/A: Model

- 0: SPE
- 1: SPE + 4-20mA
- 2: SPE + 4-20mA + 4-20mA
- 3: SPE + 4-20mA + contact On/Off

/B: Connection

- 0: M12 Connector 4 pins
- 1: Integrated cable PUR 4 pins
- 2: Integrated Armoured cable 4 pins

/C: Certification

- 0: Safe
- 2: ATEX - Coming soon
- 4: CSA/UL - Coming soon
- 5: IECEX - Coming soon

/DD: Cable length

- 0: With integrated connector - cable to be order apart- (B=0)
- 1-30 Length of integrated cable [m]