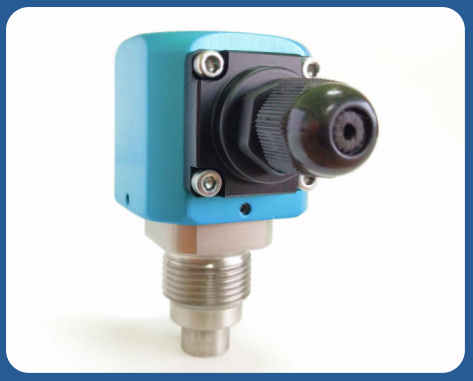
L'OMT
L'OLEOMECCATRONICA

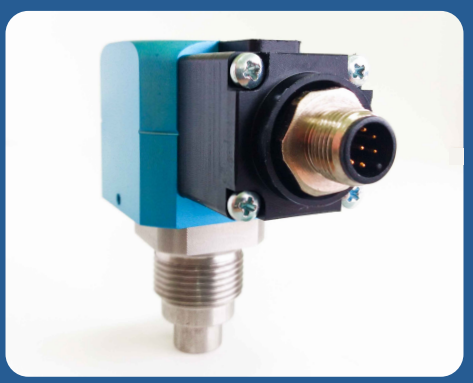
TECHNICAL CATALOG
YEAR 2020

INTERNATIONAL
PATENT PENDING

UNIBEEPER

UNIVERSAL FERROMAGNETIC END-OF-STROKE SENSOR FOR HYDRAULIC CYLINDERS





UNIBEEPER: WHAT IS IT? HOW DOES IT WORK?

UniBeeper is a ferromagnetic end of stroke sensor applicable to the front and rear ends of the hydraulic cylinder tubes.
It detects without contact the presence of the ferrous piston inside the cylinder in one of the two extreme positions, switching the state of one or two subminiature NO/NC electric micro-switches; the absence of the ferrous piston causes the reset of the internal mechanism, which is completely isolated from the mineral fluid, restoring the changeover contacts from NC to NO.

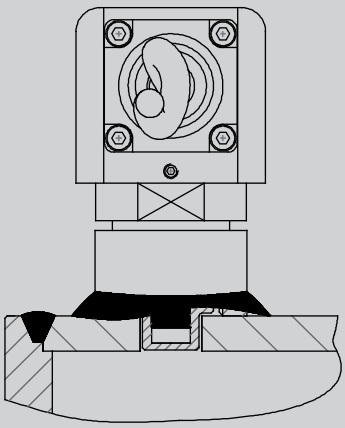
HOW DOES IT APPLY?

To apply UniBeeper on an hydraulic cylinder, it is sufficient to make a Ø13 hole on the tube at the established coordinates and weld the radiated and threaded port M22x1.5 (provided by us), perfectly perpendicular to the tube and concentric to the hole mentioned above.
Then, screw UniBeeper into the stud, with the recommended tightening torque, interposing the appropriate sealing washer. Finally, angularly orient the cover to obtain the desired cable exit position, and lock it tightening the four set screws provided.

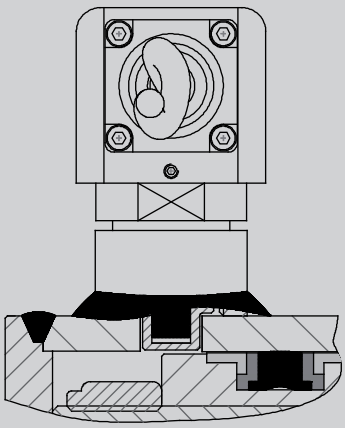
TYPICAL APPLICATION

UniBeeper is an electrically "universal" sensor because it provides 2 NO and two NC changeover contacts, powered in parallel (or separately), with or without a bipolar led, to convey driving or power currents.
In hydraulic cylinders, inadequately, pressure switches are often used to electrically indicate the reached end of stroke position, associating it with the increase or decrease of the pressure value inside the cylinder chamber; however, this value does not always correspond to the actual reaching of the extreme positions by the cylinder piston.
Therefore, using a pressure switch instead of an end-of-stroke sensor can induce incorrect position signals.
UniBeeper totally solves this problem, and can also be mounted:
- on the same M22x1.5 weldable ports that receive Beeper 22 ONE/DUO or other similar products with a spherical probe with mechanical actuation (also inheriting the previously built piston with conical side ends*);
- on a cylinder of different or new conception, for example with piston and self-locking nut**, realizing the necessary mechanical predispositions.

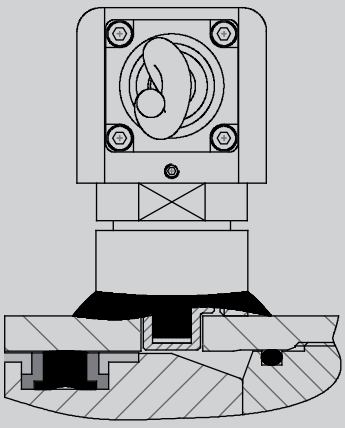
PISTON ABSENCE
UNIBEEPER DISABLED
"OFF"



PISTON PRESENCE**
UNIBEEPER ACTIVATED
"ON"

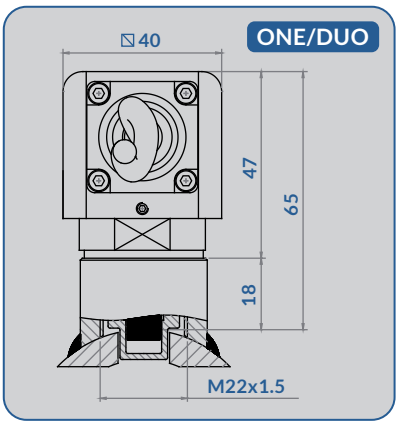


PISTONE PRESENCE*
UNIBEEPER ACTIVATED
"ON"



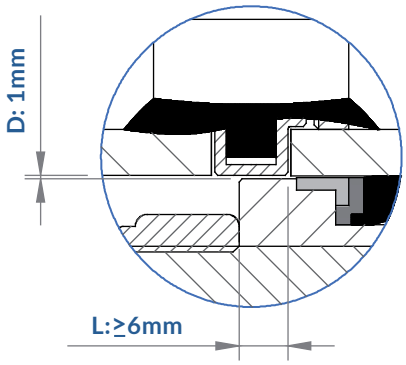
PRODUCT VERSIONS

UniBeeper ONE includes a microswitch with NO/NC changeover contact.
UniBeeper DUO has two microswitches with NO/NC changeover contacts, powered in parallel (or separately). **UniBeeper ONE/DUO** can convey driving or power signals.



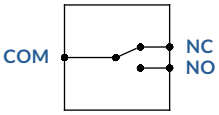
MAIN FEATURES

- **Body thread:** M22x1.5
- **Tightening torque:** 50/60Nm
- **Intervention distance D:** 1mm
- **Quote L:** 6mm or more
- **Operating pressure:** 350bar
- **Peak pressure:** 420bar
- **Operating temperature:** -25°+85°



UNIBEEPER ONE VAC VERSION

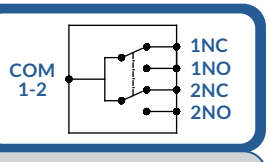
ONE VAC



- 1 microswitch with NO/NC changeover contact
- **Status Led:** absent
- **Supply voltage:** 125/250VAC
- **Rated current:** 5A
- **Standard wiring:** cable gland and multipolar cable
- **Protection degree for standard wiring:** IP68

UNIBEEPER DUO VAC VERSION

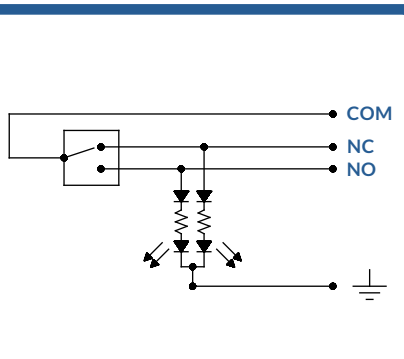
DUO VAC



- 2 microswitches with NO/NC changeover contacts
- **Status led:** absent
- **Supply voltage:** 125/250VAC
- **Rated current:** 3A
- **Standard wiring:** cable gland and multipolar cable
- **Protection degree for standard wiring:** IP68

UNIBEEPER ONE VDC VERSION

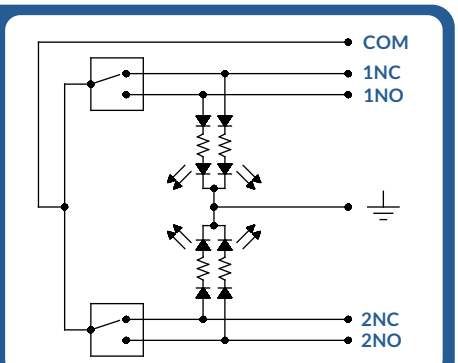
ONE VDC



- 1 microswitch with NO/NC changeover contact
- 1 bipolar status led (●NC - ●NO)
- **Supply voltage:** 10/30VDC
- **Rated current:** 5A
- **Standard wiring:** cable gland and multipolar cable
- **Protection degree for standard wiring:** IP67

UNIBEEPER DUO VDC VERSION

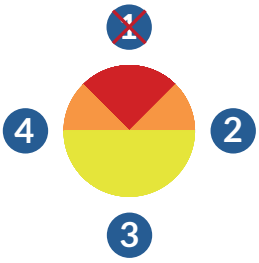
DUO VDC



- 2 microswitches with NO/NC changeover contacts
- 2 bipolar status leds (●●NC - ●●NO)
- **Supply voltage:** 10/30VDC
- **Rated current:** 3A
- **Standard wiring:** cable gland and multipolar cable
- **Protection degree for standard wiring:** IP67

On request, available product version:
- for particularly heavy duty applications and with high cyclical frequencies, to guarantee over a million operations conveying currents up to 5A;
- for high temperatures, with UL/CSA certified microswitches.

N.B.!
In case of applications with high mechanical shocks, avoid installing UniBeeper in position 1, preferring positions 2-3-4 (see diagram on the side).



ORDER CODING

Following, the coding to order the various UniBeeper models.

	UNIBEEPER ONE (M22x1.5)	UNIBEEPER DUO (M22x1.5)
1 or 2 MICROSWITCHES	UB1	UB2
FOR CYLINDERS WITH TUBE THICKNESS 5mm	1	1
FOR CYLINDERS WITH TUBE THICKNESS 6mm	2	2
FOR CYLINDERS WITH TUBE THICKNESS 7.5mm	3	3
FOR CYLINDERS WITH TUBE THICKNESS 10mm	4	4
FOR CYLINDERS WITH TUBE THICKNESS 12.5mm	5	5
FOR CYLINDERS WITH TUBE THICKNESS 15mm	6	6
VAC VERSION	X	X
VDC VERSION	Y	Y
CABLE GLAND AND MULTIPOLAR CABLE, L=2MT	A*	A*
4-PIN M12x1 CIRCULAR CONNECTOR **	B*	---
6-PIN M12x1 CIRCULAR CONNECTOR **	---	C*
DIN43650 ELECTRICAL CONNECTOR, “C” SHAPED **	D*	---
DIN43650 DOUBLE ELECTRICAL CONNECTOR, “C” SHAPED **	---	E*
3-PIN M8x1 CIRCULAR CONNECTOR **	F*	---
3-PIN M8x1 DOUBLE CIRCULAR CONNECTOR **	---	G*

For applications on non-welded cylinders, contact our technical department.

* The A connection option is standard, while B-C-D-E-F-G options are made on request and for minimum lots; furthermore, these last connection options include the supply of one or two female connectors with molded cable, L=2mt.**

The weldable port must be ordered separately, according to the coding shown on page 7.00 of the "Beeper" catalog.

B22 = M22x1.5 flat port
(example) B22-R30 = M22x1.5 port, radiated R30 for welding on cylinders with tube of outer diameter Ø60mm

CODING EXAMPLES

UB1 - 2 - X - A
UB2 - 3 - Y - C

N.B. L’Oleomeccatronica reserves the right to modify without notice the technical features and dimensions of UniBeeper communicated in this catalog.

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