



# Micro Detectors

Italian Sensors Technology



Application:  
Marble and granit panels  
presence control

UK6 - M18 Ultrasonic Sensor  
Short housing



Ultrasonic Sensors  
Application Note

CAT3EUK1371001

Application Note - UK6 - english - Ed.01/2013



MARKET  
SECTOR

PROBLEM  
DESCRIPTION

APPLIED  
SOLUTION

TECHNICAL  
SPECIFICATION  
& DIMENSION


Marble industry.

Polishing machines need to identify the presence of marble or granit panels, to the correct machine drive.

Ultrasonic technology allows to detect object independently from material shiny and color.

Contrary to other technologies, this is the perfect solution to detect object with different colors and shades as marble and granit panels. Moreover ultrasonic sensors operate correctly also in dusty applications, where photoelectric technology could have difficulties because of the optic dimming.

UK6A, at the beginning of the line, replaces the micro-mechanical subject at wear over time and notices the panel presence.

models	UK6A/D*-0*UL
	
maximum sensing distance Sn	300 mm <sup>(1)</sup>
minimum operating distance (blind zone)	35 mm
beam angle	± 10°
switching frequency (digital output)	40 Hz
response time (digital output)	12 ms
hysteresis	2%
repeat accuracy	2%
linearity error	≤ 3%
temperature range	-20°C ...+60°C
temperature compensation	yes
operating voltage	15 - 30 Vcc
thermal drift	≤ 7%
ripple	5%
leakage current	≤ 10 µA @ 30 Vcc
output voltage drop	2,2 V (IL=100mA)
No-Load supply current	≤ 40 mA
maximum load current (digital output)	100 mA
minimum load resistance	500 Ω (power voltage analogue output)
adjustment set point	external Teach-in
supply electrical protections	polarity reversal, overvoltage pulses
digital output electrical protections	short circuit, overvoltage pulses
EMC	conforming to the EC Directive 2004/108/EC requirements according to EN 60947-5-2
protection degree	IP67 <sup>(2)</sup>
housing material	PBT
front end material	epoxy-glass resin
tightening torque	1 Nm
weight	15 gr (connector exit), 80 gr (cable exit)
storage temperature	-35°C...+70° without freezing



<sup>(1)</sup> Metallic target 100 x 100 mm

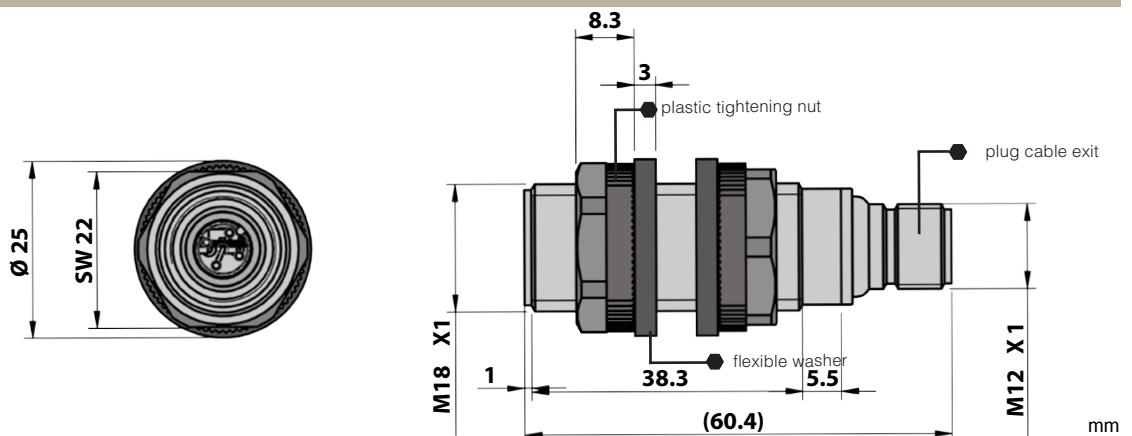
<sup>(2)</sup> Protection granted only by plug mounted in a correct way

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