

DMS-A

Description

This inclinometer module is available with one or two measurement axes. The inclinometer working principle is based on a micromachined silicon capacitive transducer (developed with MEMS technology). This inclinometer has a compact design, low vibration sensitivity, low price and find application in a variety of industrial and automotive application. Typical application are cranes, aerial platforms, drilling machines, excavators, robotics and mobile equipment.

DMS- A



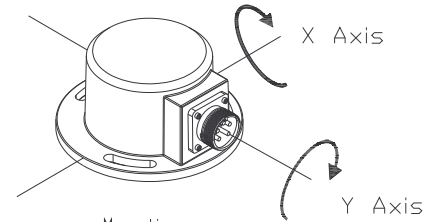
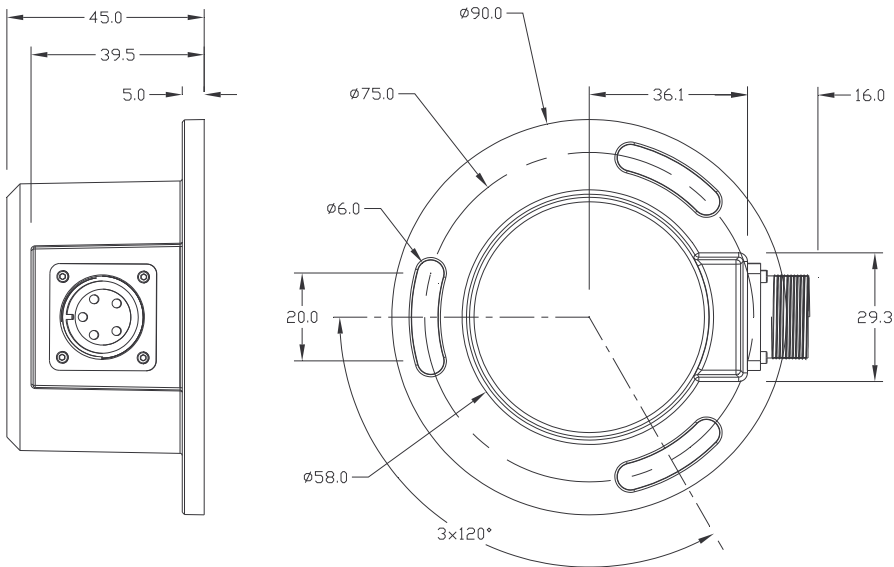
Features

- Inclination sensor one or two axis;
- MEMS primary sensor;
- Angular range two axis $\pm 5^\circ \dots \pm 60^\circ$ DMS-A -O;
- Angular range one axis from 0 to 360° DMS-A -V;
- Output 4-20 mA, or 0-10 Volt or RS232;
- No moving parts;
- Coated Zama Housing;
- Protection IP67;
- Electronics encapsulated with resin;
- MIL 5015 connector;
- Bicolor status led.

Technical specifications

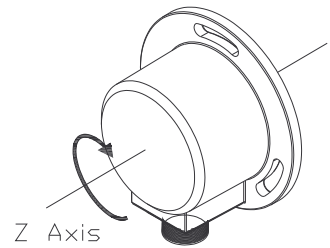
Measuring range	°	$\pm 5^\circ$ to $\pm 60^\circ$ (programmable) Type O 0° to 360° single axis Type V
Input voltage	Volt	10 to 30 (max 32)
Output	-	0.5 ÷ 4.5 V 4 ÷ 20 mA 0 ÷ 10 V RS232 TTL
X-Y out zero	-	2.5 V +/- 50 mV 12 mA
Non linearity	% F.S.	max 1
Resolution	°	0.01
Insulation Resistance	MOhm	> 100 @500Vdc
Temperature compensated Range	°C	-0 ÷ +60 -20° ÷ +70°
Stocking Temperature	°C	-40° + 80°
Frequency Response	s	0.3 (factory calibrated)
Zero temperature drift T 0°C- 60°C	°	< 0.005
Temperature Sensitivity drift T 0°C -60°C	°	< 0.002
Shock resistance	MIL- STD 202 E 213 B	1000 g
Vibration resistance	MIL STD 202E 204 D	20 g (10 to 2000 Hertz)

Dimensions and mounting



Mounting:
Horizontal

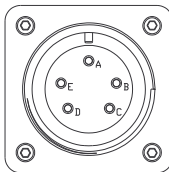
Tilt:
positive rotation
shown in figure



Mounting:
Vertical

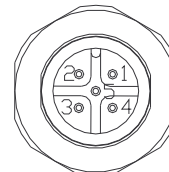
Tilt:
positive rotation
shown in figure

Connections



CONNECTOR

Amphenol
Military series
MS3102A14S5



CONNECTOR

Binder
763 series
09-3441-88-05

Double axis configuration (Horiz. axis)			
	Volt out	Curr out	rs232
A	V supply	V supply	V supply
B	Vy out	Iy out	Rx
C	Gnd	Gnd	Gnd
D	Vx out	Ix out	Tx
E	VGnd	IGnd	Gnd

Double axis configuration (H axis)			
	Volt out	Curr out	rs232
1	V supply	V supply	V supply
2	Vy out	Iy out	Rx
3	Gnd	Gnd	Gnd
4	Vx out	Ix out	Tx
5	VGnd	IGnd	Gnd

Single axis configuration (Vertical axis)			
	Volt out	Curr out	rs232
A	V supply	V supply	V supply
B	N.C.	N.C.	N.C.
C	Gnd	Gnd	Gnd
D	Vz out	Iz out	Tx
E	VGnd	IGnd	Gnd

Single axis configuration (V axis)			
	Volt out	Curr out	rs232
1	V supply	V supply	V supply
2	N.C.	N.C.	N.C.
3	Gnd	Gnd	Gnd
4	Vz out	Iz out	Tx
5	VGnd	IGnd	Gnd

Ordering informations

Ordering Information	
DMS-A-X-XXX-X-X	
A:	Analog output
V:	for vertical mounting (1 axis) , □: for Horizontal mounting (2 axis)
	Measuring range: 0°-360° (V version) ±5° ±60° (□ version)
	P: MIL3015 connector, 6 pins M: M12 Binder Connector
	output 1: 0,5-4,5 V ; 2: 0-10 V ; 3: 4-20 mA; 4: RS232