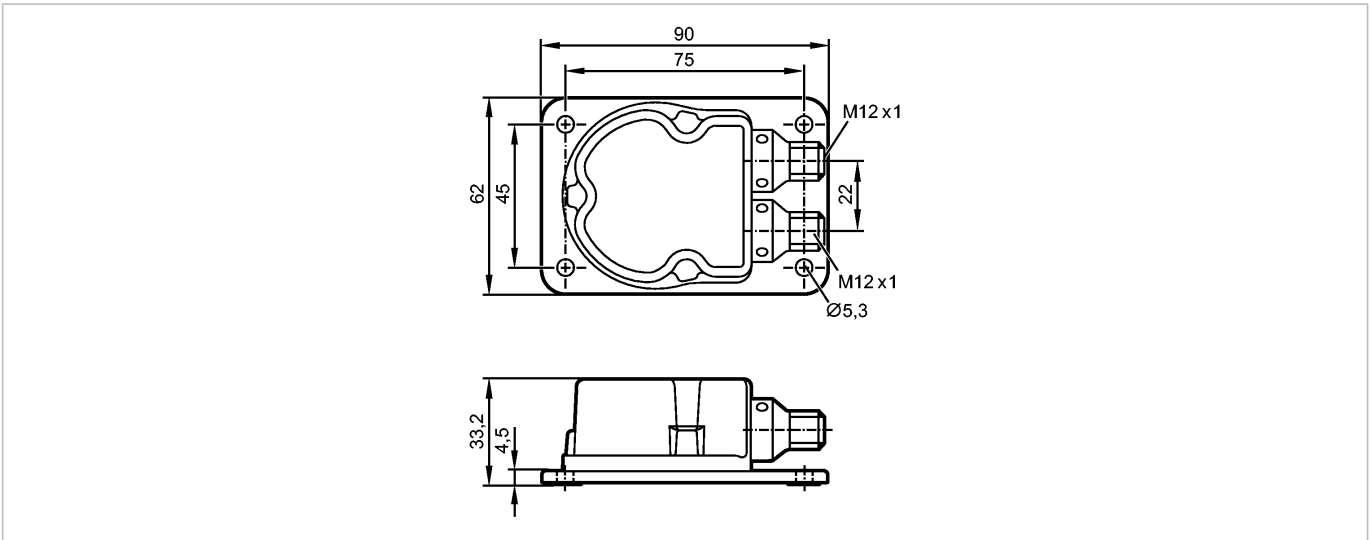




# JN2200

INC-M2M360ABIAKG/US

Inclination sensor



CE IO-Link

### Product characteristics

Inclination sensor
± 180°
Self-test function
IO-Link interface
Analogue interfaces (voltage / current)
Analogue / binary outputs

### Application

Application	2-axis position detection and zero point levelling
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### Electrical data

Operating voltage [V]	9.2...30 DC
Current consumption [mA]	90 (24 V DC / 25° C) max. 325 mA at 9.2 V and -40° C with heating < 40 mA (24 V) without heating
Reverse polarity protection	yes
Reverse polarity protection	yes

### Inputs / outputs

Inputs / outputs total	4
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### Outputs

Output function	OUT1: IO-Link / NO / NC programmable; OUT2: NO / NC programmable; PNP / NPN
Max. current load per output [mA]	125 *)
Voltage drop [V]	< 2.5
Short-circuit protection	yes
Overload protection	yes
analogue current output [mA]	4...20; (2 mA in case of fault)
Max. load [Ω]	220 (9.2...15 V) / 500 (15...30 V)
voltage output [V]	2...10; (1 V in case of fault)
Min. load [Ω]	10000 (12...13.5 V) / 1000 (13.5...30 V)

### Accuracy / deviations

Accuracy	≤ ± 0.5°
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Temperature coefficient [1/K]	$\leq \pm 0.002^\circ$
Repeatability	$\leq \pm 0.1^\circ$
Resolution [°]	0.05

## Interfaces

IO-Link device	
Transfer type	COM2 (38.4 kBaud)
IO-Link revision	V1.1
SDCI standard	IEC 61131-9 CDV
IO-Link device ID	416 / 0x0001A0
Profiles	Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis
SIO mode	yes
Required master port class	A
Process data analogue	2
Process data binary	2
Min. process cycle time [ms]	5
Programming options	angle (X/Y) / vibration (Veff / aPeak); hysteresis / window; switch points; output logic; fault signalling; self-test; current/voltage output

## Environment

Ambient temperature [°C]	-40...85
Storage temperature [°C]	-40...85
Protection	IP 65 / IP 67 / IP 68 / IP 69K

## Tests / approvals

EMC	DIN EN 61000-4-2 ESD: 4 kV CD / 8 kV AD DIN EN 61000-4-3 HF radiated: 10 V/m DIN EN 61000-4-4 Burst: 2 kV DIN EN 61000-4-6 HF conducted: 10 V
Shock resistance	100 g (1 ms) / 1000 Impacts per axis (X/Y) DIN EN 60068-2-27
Salt spray test	DIN EN ISO 9227
MTTF [Years]	229

## Mechanical data

Limit frequency [Hz]	adjustable: 10, 5, 1, 0.5
Linearity deviation [°]	$\pm 0.2$
Number of measurement axes	2
Housing materials	housing: diecast zinc nickel-plated
Weight [kg]	0.469
Angular range	$\pm 180^\circ$

## Displays / operating elements

Operation LED	green
Function display LED	yellow (switch point)

## Electrical connection

Connection	2 x M12 connector
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### Wiring

plug M12 left  
 1: L+ 24 V DC (+Ub-D)  
 2: OUT 2 Switching output 2  
 3: L - GND

plug M12 right  
 1: L+ 24 V DC (+Ub-A)  
 2: A2 analogue output  
 2  
 3: L - GND





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4: OUT 1 Switching output 1 or IO-Link

4: A1 analogue output  
1

Remarks	
Remarks	*) 125 mA (85° C); 200 mA (60° C); 250 mA (40° C)
Pack quantity [piece]	1

### Other data

#### Measuring and setting range

Inclination measurement	x axis		min.	max.
Set point	SP1	[°]	-179.00	180.00
Reset point	rP1	[°]	-180.00	179.00
Analogue start point	ASP1	[°]	-180.00	179.00
Analogue end point	AEP1	[°]	-179.00	180.00
In steps of		[°]	0.01	
Inclination measurement	y axis			
Set point	SP2	[°]	-179.00	180.00
Reset point	rP2	[°]	-180.00	179.00
Analogue start point	ASP2	[°]	-180.00	179.00
Analogue end point	AEP2	[°]	-179.00	180.00
In steps of		[°]	0.01	
Vibration measurement	v eff		min.	max.
Set point	SP1	[mm/s]	10	32000
Reset point	rP1	[mm/s]	0	31990
Analogue start point	ASP3	[mm/s]	0	31990
Analogue end point	AEP3	[mm/s]	10	32000
In steps of		[mm/s]	0.1	
Vibration measurement	a peak			
Set point	SP2	[mg]	1	16000
Reset point	rP2	[mg]	0	15999
Analogue start point	ASP4	[mg]	0	15999
Analogue end point	AEP4	[mg]	1	16000
In steps of		[mg]	1	