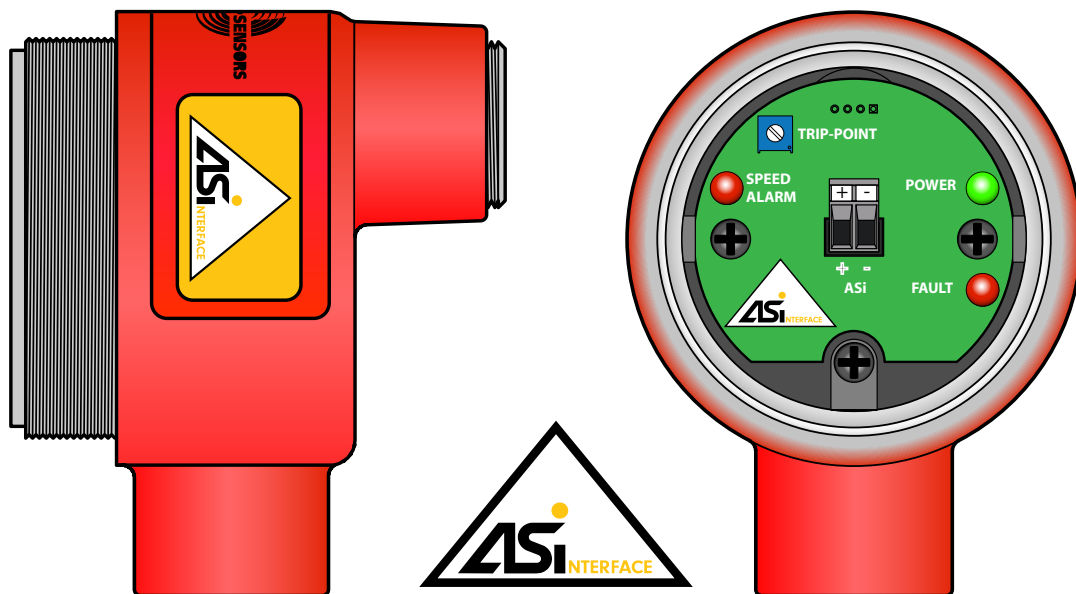




ASiSA

AS-Interface Speed Alarm

USER'S MANUAL



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990-002800 Revision C

Description

ASiSA continuously monitors rotating shaft speed, comparing it to a trip-point setting and alarming when less than the trip-point. The ALARM state is accessible over AS-Interface communications and visibly indicated by the internal ALARM led.

The rugged unit requires a shaft-mounted magnetic pulser target (disc or wrap) such as the model 255 pulser disc (included). The rotating pulser target produces an alternating magnetic signal at ASiSA's stationary sensing head. The signal frequency varies in direct linear proportion to the rotating target's rpm. ASiSA senses this frequency and compares it to the TRIP-POINT setting.

When the frequency falls below the TRIP-POINT setting, ASiSA is alarmed.

When the frequency exceeds the TRIP-POINT setting, ASiSA is not-alarmed.

Measurable Speed Range

The ASiSA TRIP-POINT frequency is adjustable within the range: **0.53 → 27 Hz.**

The frequency (f) to RPM conversion is given by the formula: **RPM = f * 60 / PPR**

Where f is in Hz (pulses per second) and PPR is pulser target pulses-per-revolution.

Since RPM changes *inversely* with PPR, *increasing* PPR scales TRIP-POINT RPM range *down*:

Pulser Target	Corresponding TRIP-POINT RPM range
Model 256 Pulser Disc (4 PPR)	8.0 → 400
Model 255 Pulser Disc (8 PPR)	4.0 → 200
Custom Pulser Wrap (16 PPR)	2.0 → 100

AS-Interface

Profile

S-B.A.E (A/B slave free profile, I/O code B)

AS-Interface Parameter bits	P3	P2	P1	P0
(master Write Parameter info)		unused	unused	unused

AS-Interface I/O Data bits	D3	D2	D1	D0
Output (master Data Exchange req. info)			unused	unused
Input (slave Data Exchange resp. info)	ALARM	unused (1)		

ALARM (D3) polarity 1 (Alarmed) - speed less than TRIP POINT setting

0 (Not Alarmed) - speed greater than TRIP POINT setting

LEDs

LED	ON	OFF
ALARM	Alarmed	Not Alarmed
POWER	Receiving Power	Not Receiving Power
ASi (status)	Communication OFF	Communication ON

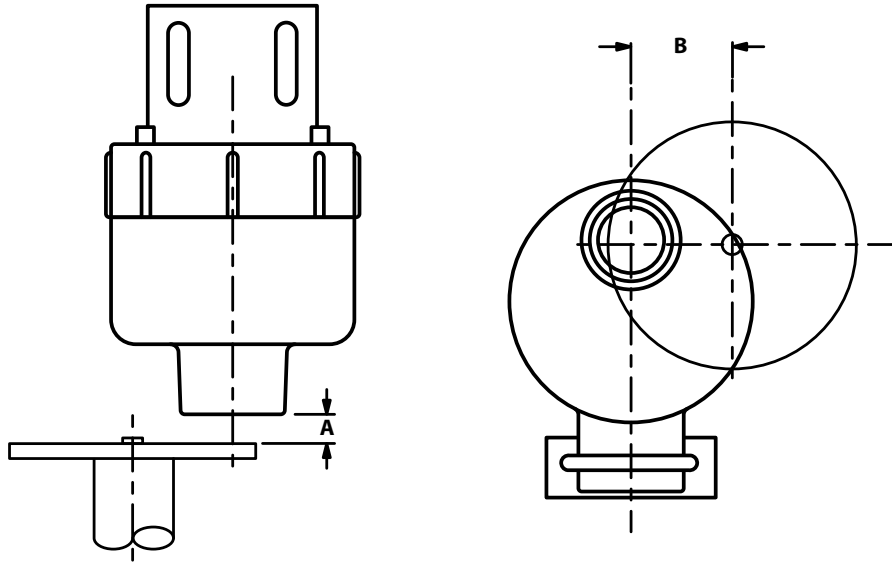
Mechanical installation

ASiSA may be mounted on rigid conduit or with the mounting bracket assembly (provided).

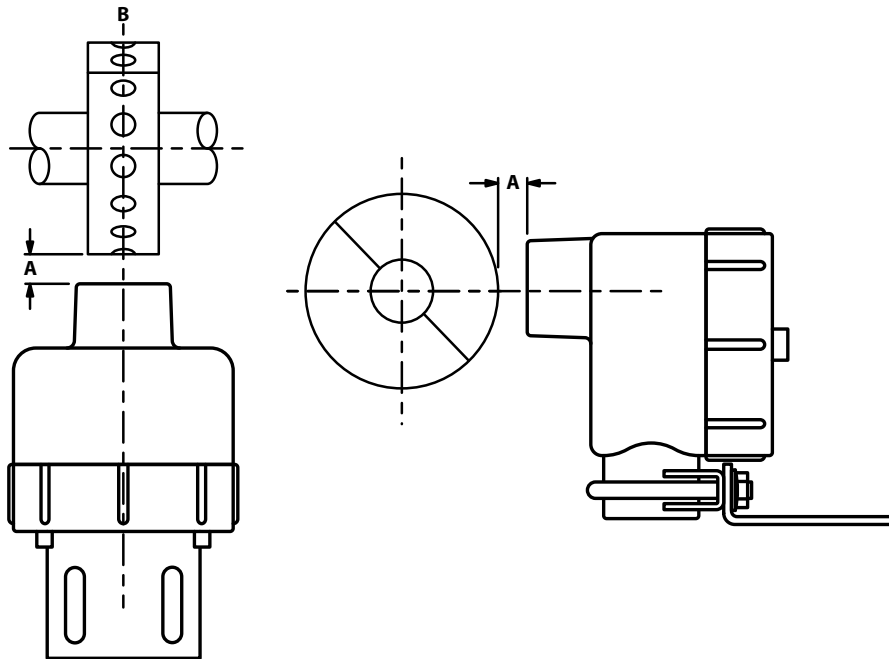
The gap (A) between the sensing head and the Pulser Disc/Wrap must be 1/16 to 1/4 inch.

The center line of the magnets (B) must align with the center of the sensing head as the Pulser Disc/Wrap rotates.

Remove the round cover from the housing and pull AS-Interface network cable through the conduit port into the enclosure. Connect the 2 cable wires to the terminal plug.



With Pulser Disc Target



With Pulser Wrap Target

Setting the TRIP-POINT

With network power applied and the shaft turning at normal operating speed, slowly turn the TRIP-POINT potentiometer clockwise until the ALARM led turns on. Then slowly turn the TRIP-POINT potentiometer counter-clockwise until the ALARM led turns off. How far below this point you set the TRIP-POINT will determine how far below the current shaft speed the ASiSA will alarm. Firmly screw the round cover back onto the housing for normal use.

Specifications

Connector		2-conductor “phoenix-style” terminal plug
Power (network supplied)		20 → 31.6 Vdc, 30 mA maximum
TRIP-POINT	Setting Range	Potentiometer (single-turn, 280°, linear response) 0.53 → 27 Hz (4.0 → 200 rpm with 8 PPR disc/wrap)
LED indicators		ALARM (red), POWER (green), ASi status (red)
AS-Interface	Specification	V2.11
	Extended (A/B) addressing Profile	Yes S-B.A.E
Airgap (sensing head to Disc/Wrap)		1/16 → 1/4 inch (2 → 6 mm)
Operating temperature		-25 → +85 °C (-13 → +185 °F)
Enclosure hazardous locations ratings		



Class I, Div 1, Group C, D
Class II Groups E, F, G
UL File: E249019

Weight	(with bracket)	2.45 Lb (1.11 kg)
Dimensions	(with bracket)	(in inches)

