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Electronic Control Systems Sensors

ATS90 Tilt Sensor



ENGINEERING YOUR SUCCESS.

Application

The ATS90 sensor belongs to the Parker family of accessories provided to complement electronic control systems. The ATS90 is a non-contact, Hall effect angle/tilt sensor for mobile hydraulic applications. The ATS90 will sense angular movement in two axes and output a ratiometric 0-5 VDC signal for each axis based on position. The sensor has twelve inch leads and an attached Deutsch connector. To make the sensor suitable for mobile equipment, we have focused upon properties such as reliability, electromagnetic immunity and ease of installation.

Properties

Reliability

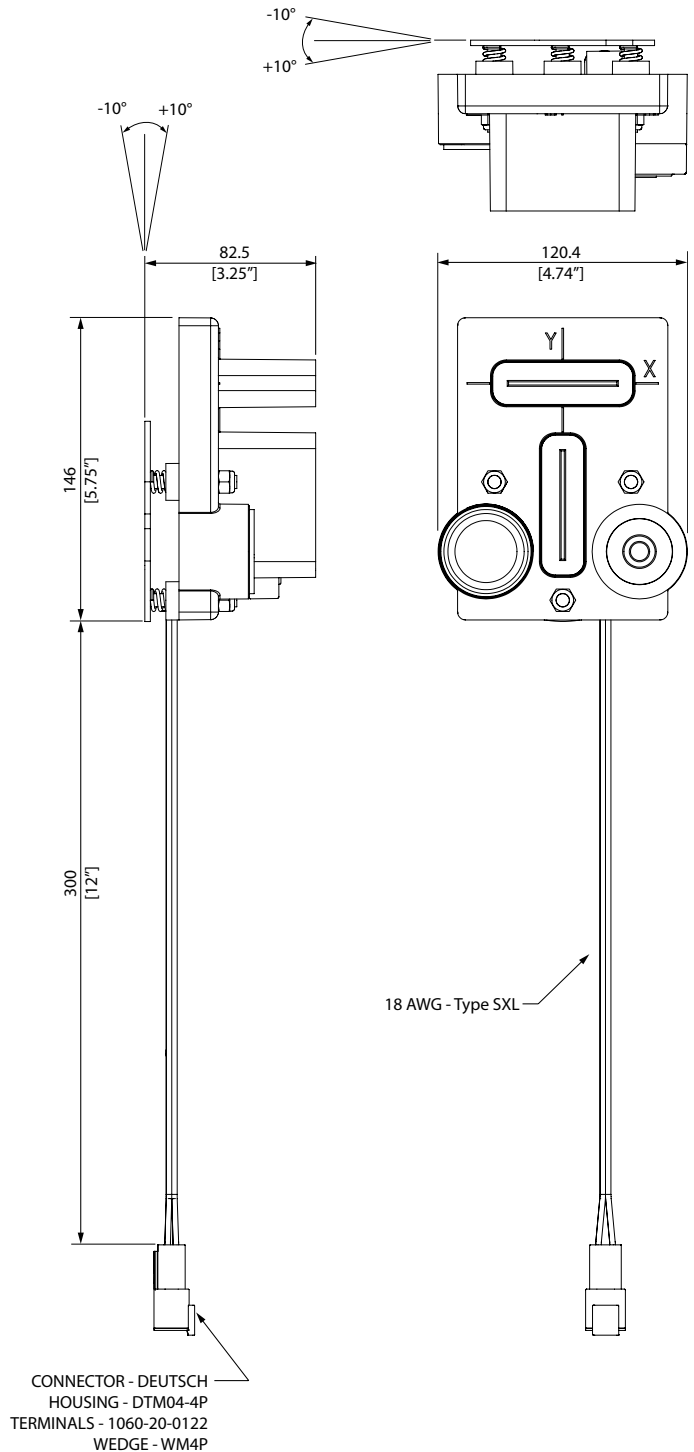
The ATS90 has a tough ABS plastic construction for strength and corrosion resistance. The sensor uses non-contact, Hall effect technology for trouble free operation. The sensor is very robust and able to withstand rugged applications.

Electromagnetic immunity

The design of the ATS90 has a high level of EMI protection.

Installation

The ATS90 is well designed for the mobile hydraulics industry. The 4 pin connector is a sealed Deutsch DTM type designed for automotive use. This connector combined with potted electronics gives the sensor IP67 protection for exposed outdoor applications. Simply attach the 3 point spring loaded bracket to a level surface. The built-in bubble level makes it easy to install and setup. These features provide for easy installation and removal, even in field conditions.



General

Weight	1.23 kg
Temperature range	-35°C to 85°C
Operating life	10 million cycles
Working angle	±10° each axis
Hysteresis	<0.5%
Linearity	±0.3% FS

Mechanical characteristics

Mounting	3 point bracket
Connector	Deutsch DTM

Electrical characteristics

Supply voltage	10 - 32 VDC
Supply current	Max 100 mA
Output range	0.5 - 4.5 VDC
Output current	Max 5 mA each output

Ordering part number

ATS90	01716
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Environmental protection

EMI	
ISO 11452-2	150 V/m

ESD	
EN 61000-4-2	3 kV

Mechanical	
Shock	1m drop
Vibration	10 Gs

Climate	
Sealing (electronics)	IP67

Chemical environment	
Liquids (resistance)	standard automotive



WARNING - USER RESPONSIBILITY

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

- This document and other information from Parker-Hannifin Corporation, its subsidiaries and authorized distributors provide product or system options for further investigation by users having technical expertise.
- The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalog and in any other materials provided from Parker or its subsidiaries or authorized distributors.
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