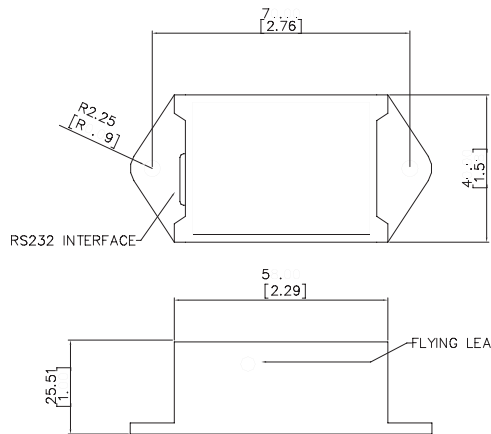


**Electronic Tilt Switch - Microprocessor Controlled - Analogue Output**  
**Part Number : ETS 90XA & ETS 90DA**  
**Product Data Sheet**

**DIMENSIONS** **PICTURE**



Drawings not to scale  
 All dimensions in mm nominal

**SPECIFICATION**

Supply Voltage	9 to 24Vdc, 25mA typ.
Measurement	ETS 90XA Single X Axis, ETS 90DA Dual X and Y Axis
Angular Range	+/- 30 degrees from horizontal
Accuracy	+/- 1 degree
Analogue Output	50mV per degree
Response Time	150ms (Variable)
Alarm Levels	-10° and +10° both axes (Configurable)
MOSFET Output	N Channel, Open Drain
On Resistance	150 mOhm Maximum
Switching Voltage	30 Vdc Maximum
Switching Current	1.8A Maximum
Operating Temperature	-5°C to +75°C
Case Material	Flame Retardant ABS

**Did you know we also sell?**



**Applications**

- Position and limit sensing.
- Security system switch.
- Levelling systems.

Rev. No.	Revision Note	Date	Signature
2	New data sheet format	23-6-06	KG

FORM AE043 ISS.2 As part of the company policy of continued product improvement, specifications may change without notice. Our sales office will be pleased to help you with the latest information on this product range and the details of our full design and manufacturing service. All products are supplied to our standard conditions of sale unless otherwise agreed in writing.



# Electronic Tilt Switch - Microprocessor Controlled - Analogue Output

Part Number : ETS 90Xa & ETS 90DA

## Product Data Sheet

### FEATURES

The ETS 90XA/DA is an intelligent microprocessor controlled single or dual axis sensor that operates over the range of  $\pm 30^\circ$  from horizontal.

The MOSFET output switching levels are factory pre-set at  $-10^\circ$ , and  $+10^\circ$  for each axis, but are fully configurable via the RS232 interface. The switching levels for the MOSFET outputs operate as follows:

Level 1 is the negative X axis angle level. When the measured angle equals, or becomes more negative than level 1, the X axis MOSFET is turned on.

Level 2 is the positive X axis angle level. When the measured angle equals, or becomes more positive, than level 2, the X axis MOSFET is turned on.

Level 3 is the negative Y axis angle level. When the measured angle equals, or becomes more negative than level 3, the Y axis MOSFET is turned on.

Level 4 is the positive Y axis angle level. When the measured angle equals, or becomes more positive than level 4, the Y axis MOSFET is turned on.

Microprocessor control enables the sensor to be rapidly customised for specific applications. Not only the output alarm levels can be adjusted but also the gain settings and the unit can also be re-calibrated for zero via the RS232 interface. If you have an angle or acceleration application that falls outside of our standard range, then please contact our sales office for technical assistance.

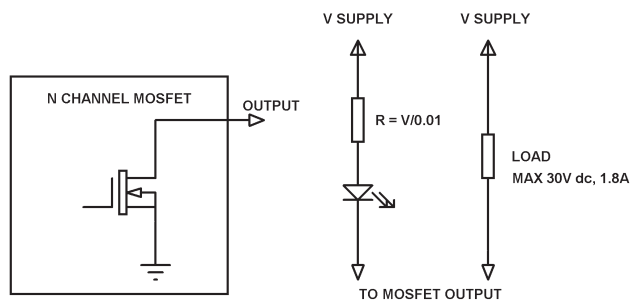
The mating RS232 interface cable, Part No. ETS 90RC, connects the sensor directly to the serial port on a PC enabling all parameters to be configured using a terminal program (i.e. Hyperterminal).

For alternative output configurations please see the other models in the electronic tilt sensor range: ETS 90DP, ETS 90SS and TSS\_SP-001.

### Connections

Supplied with 500mm 4 core 7/0.2 flying lead.

RED	=	Supply Voltage, 9 to 24Vdc.
GREEN	=	0V, Ground.
BLACK	=	0V, Ground.
YELLOW	=	X Axis Analogue output
WHITE	=	Y Axis Analogue output
BLUE	=	X Axis MOSFET output
VIOLET	=	Y Axis MOSFET output



### Applications Include

- Position and limit sensing.
- Automatic levelling systems.
- Security systems.
- Vehicle alarm.

### Did you know we also sell?



Rev. No.

Revision Note

Date

Signature

2

New data sheet format

23-6-06

KG

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