



Universal Tilt Sensor (UTS-ID)

Tilt Sensors

Catalog MSG33-2374/US



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Technical data**Universal Tilt Sensor (UTS-ID)****Application**

The UTS-ID uses MEMS technology to provide a multi-axis acceleration sensor optimized for mobile hydraulic applications. The UTS-ID accelerometers are used to calculate changes in orientation with respect to gravity to compute and communicate impact events. The sensor communicates over CAN bus using SAE J1939 protocol and has an integral Deutsch connector. UTS-ID is IoT ready and can be integrated with Parker Mobile IoT solutions.

Properties**Reliability**

The UTS-ID comes standard with 3 axis acceleration detection and advanced algorithm to create impact events. The UTS-ID has a glass-filled, hybrid plastic construction for sturdiness and corrosion resistance. The sensor is very robust and able to withstand rugged applications. For moisture protection, the electronics are layered with a conformal coating, and the enclosure is sealed against harsh environments using spin-weld technology. These features give the sensor IP69k protection for exposed outdoor applications when mounted right side up and an IP68 rating when mounted up-side down. Additionally, the UTS-ID design has a high level of EMI protection.

Electromagnetic immunity

The design of the UTS-ID has a high level of EMI protection.

Installation

The UTS-ID has three mounting holes in a tripod pattern to facilitate level installation and a 4-pin sealed Deutsch DT connector type designed for automotive use. These features provide for easy installation and removal, even in field conditions.

General

Purchasing Part Number	167427ECD
Weight	0.14 kg
Temperature (operating)	-40°C to 85°C
Temperature (storage)	-40°C to 105°C
Number of axes ¹	3
Acceleration Range	±16 g
Angular range ¹	±2000 dps
Mounting	Tripod

Communication

CAN protocol	SAEJ1939
CAN messages	see part drawing
CAN bus speed	250 kbps
Data Broadcast Rate	0.1 Hz
CAN source address	0xE4

Mechanical characteristics

Mounting bolt	1/4"-20 UNC or M6x1.0
Mounting torque	135 in-lb max
Mounting surface flatness	.010"
Connector	Deutsch DT06-4s

Electrical specifications

Operating voltage	6.5 - 36 Vdc
Reverse polarity	-48 Vdc
Short circuit protection	+58 Vdc or ground
Current draw	16.5 mA (12 V); 14.0 mA (24 V)
Accuracy	±3.15%
Resolution	0.488 mG/bit

Ordering part number

UTS-ID ±16g 3 axis	167427ECD
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Environmental Protection**EMI**

ISO 11452-2	100 V/m
ISO 7637-2 and -3	transients

ESD

ISO 10605:2008	±15 kV
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Mechanical

Shock	1m drop
Vibration	40 Gs

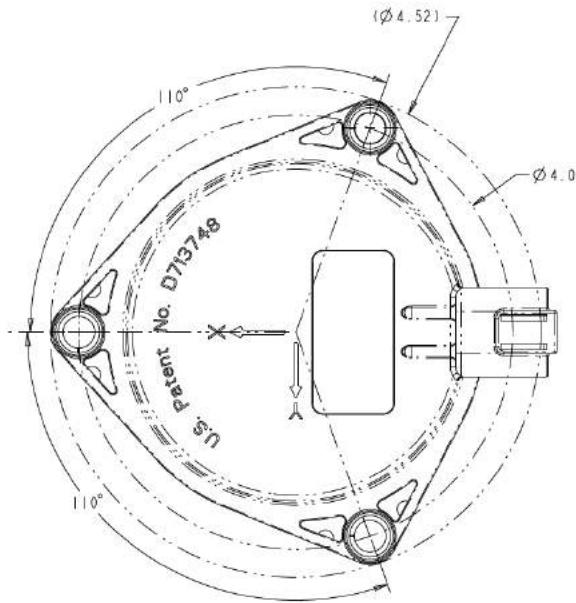
Climate

Sealing	IP68 / IP69K (with rear connector protection)
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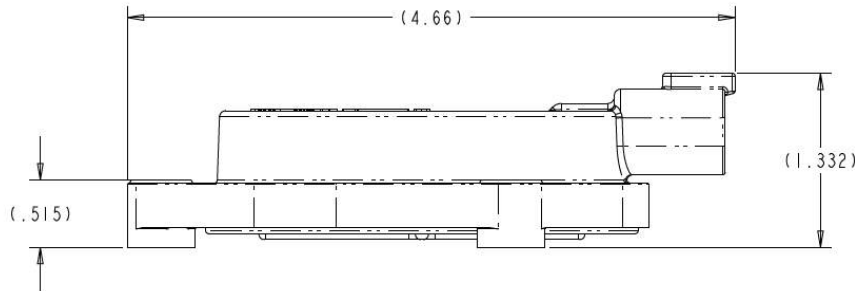
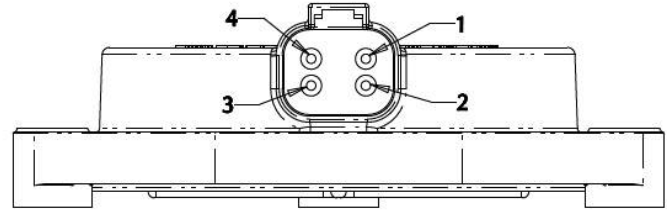
Chemical

Liquids (resistance)	standard automotive
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¹ depending on part number



PIN	DESCRIPTION
1	+V BAT
2	-V BAT
3	CAN-L
4	CAN-H



WARNING - USER RESPONSIBILITY

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This product can expose you to chemicals including ANTIMONY TRIOXIDE, CARBON BLACK (AIRBORNE, UNBOUND PARTICLES OF RESPIRABLE SIZE) which is known to the State of California to cause cancer and 4,4'-(PROPANE-2,2-DIYL)DIPHENOL, BPA, P,P'-ISOPROPYLIDENE BISPHENOL, which is known to the State of California to cause birth defects or other reproductive harm.

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Parker Motion Systems International Sales Offices

North America

Motion Systems Group Headquarters

6035 Parkland Boulevard
Cleveland, OH 44124-4141 USA
Tel: 216-896-3000
Fax: 216-896-4031

Parker Canada Division

160 Chisholm Drive Milton Ontario
Canada L9T 3G9
Tel: 905-693-3000
Fax: 905-876-1958

Parker Hannifin de México

Industrial Hydraulic Sales
Eje Uno Norte No. 100
Parque Industrial Toluca 2000
Toluca, Edo, de Mexico CP 50100
Tel: 52 722 275 4200
Fax: 52 722 279 9308

Parker Hannifin de México

Mobile Hydraulic Sales
Via de FFCC a Matamoros 730
Apodaca, NL, de Mexico CP 66600
Tel: 52 81 8156 6000
Fax: 52 81 8156 6068

Europe

Motion Systems Group Headquarters

La Tuilière 6
1163 Etoy - Switzerland
Tel: 41 21 821 8500
Fax: 41 21 821 8580

South Africa

Parker Hannifin Africa Pty Ltd

P.O. Box 1153
ZA-Kempton Park 1620,
Republic of South Africa
Tel: 27 11 961 0700
Fax: 27 11 392 7213

Mobile Sales

Mobile Sales Organization and Global Sales

850 Arthur Avenue
Elk Grove Village, IL 60007 USA
Tel: 847-258-6200
Fax: 847-258-6299

Industrial Sales

Central Region

1042 Maple Avenue
Unit 331
Lisle, IL 60532 USA
Tel: 630-964-0796

Great Lakes Region

6035 Parkland Boulevard
Cleveland, OH 44124-4141
USA Tel: 216-896-2740
Fax: 866-498-7507

Gulf Region

20002 Standing Cypress Drive
Spring, TX 77379 USA
Tel: 817-473-4431
Fax: 888-227-9454

Southwest Region

700 S. 4th Avenue
Mansfield, TX 76063 USA
Tel: 817-473-9341
Fax: 817-473-2680

Mid Atlantic and Southeast Regions

1225 Old Alpharetta Road
Suite 290
Alpharetta, GA 30005 USA
Tel: 770-619-9767
Fax: 770-619-9806

Midwest Region

8145 Lewis Road
Minneapolis, MN 55427 USA
Tel: 763-513-3535
Fax: 763-544-3418

Northeast Region

P.O. Box 396
Pine Brook, NJ 07058 USA Tel:
973-227-2565
Fax: 973-227-2467

Northwest Region

6458 North Basin Avenue
Portland, OR 97217 USA
Tel: 503-283-1020
Fax: 866-611-7308

Pacific Region

8460 Kass Drive
Buena Park, CA 90621
Tel: 714-228-2510
Fax: 714-228-2511

Asia Pacific

Parker Hannifin Shanghai Ltd

280 Yunqiao Road,
Jin Qiao Export Processing Zone
Shanghai 201206, China
Tel: 86 21 2899 5000
Fax: 86 21 6445 9917

Parker Hannifin Hong Kong Ltd

8/F, Kin Yip Plaza
9 Cheung Yee Street
Cheung Sha Wan, Hong Kong
Tel: 852 2428 8008
Fax: 852 2425 6896

Parker Hannifin Korea Ltd

9F KAMCO Yangjae Tower
949-3 Dogok1-dong, Gangnam-gu
Seoul, 135-860, Korea
Tel: 82 2 559 0400
Fax: 82 2 556 8187

Parker Hannifin India Pvt Ltd

Plot No. EL-26, MIDC
TTC Industrial Area
Mahape, Navi Mumbai, 400 709
India Tel: 91 22 6513 7081
Fax: 91 22 2768 6841

Parker Hannifin Australia

Parker Hannifin Pty Ltd.
9 Carrington Road
Castle Hill, NSW 2154, Australia
Tel: 612 9634 7777
Fax: 612 9842 5111

Latin America

Parker Hannifin Ind. e Com. Ltda Hydraulics Division

Av. Frederico Ritter, 1100
94930-000 Cachoeirinha RS, Brazil
Tel: 55 51 3470 6090
Fax: 55 51 3470 9281

Parker Hannifin Argentina S.A.I.C.

Stephenson 2711
1667-Tortuguitas-Malvinas
Argentinas Pcia. de Buenos Aires,
Argentina Tel: 54 3327 44 4129
Fax: 54 3327 44 4199

Pan American Division

7400 NW 19th Street, Suite A
Miami, FL 33126 USA
Tel: 305-470-8800
Fax: 305-470-8808

