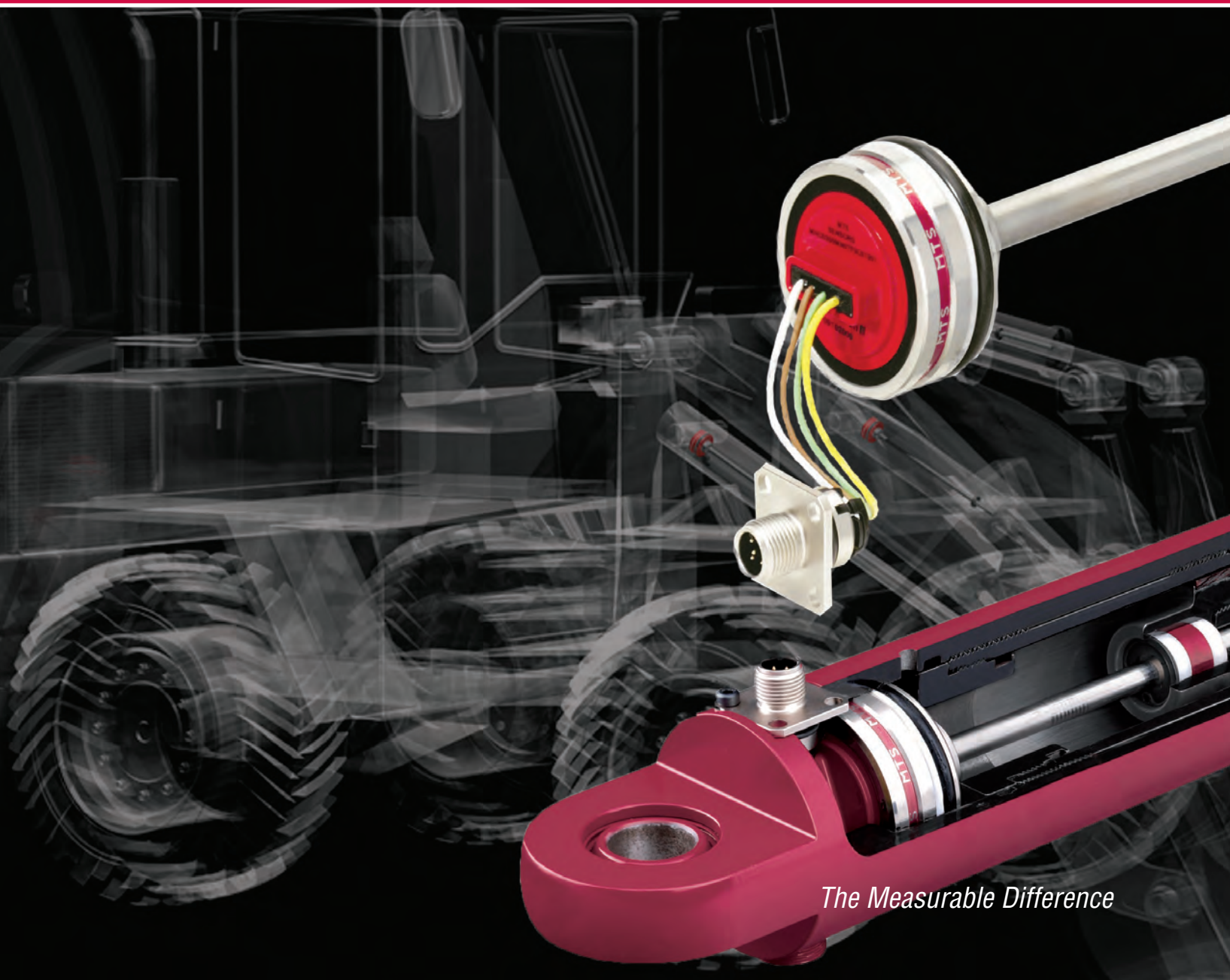
Temposonics®

Magnetostrictive, Absolute, Non-contact
Linear-Position Sensors

MTS SENSORS

Document Part Number
551115 Revision C

Mobile Hydraulic Product Overview



The Measurable Difference

MTS®
SENSORS

M-

Embedded Sens

The sensor will be fully protected by the cylinder housing

	Model MH Analog Standard voltage and current outputs	**Model MH Digital** CAN protocol output	**Model MH PWM** Frequency output with pulse width modulation
AVAILABLE OUTPUT	**Voltage & Current**	**CANopen CANopen Safety CAN J1939**	**PWM**
MEASURED VARIABLE: (POSITION & VELOCITY)	50 mm (2 in.) to 2500 mm (98 in.)		
	-	± 1.0 m / sec (CAN only)	-
LINEARITY (ACCURACY)	≤ ± 0.1 mm @ ≤ 250 mm ± 0.8 mm @ ≤ 2500 mm		
RESOLUTION	0.1 - 0.6 mm (length dependent)	± 0.10 mm	± 0.10 mm
REPEATABILITY	± 0.20 mm	± 0.10 mm	± 0.10 mm
OPERATING TEMPERATURE	-40 °C (-40 °F) to 105 °C (221 °F)		
PRESSURE RATING	Rod diameter 10 mm: Operating = 350 bar / Pmax. = 450 bar Rod diameter 7 mm: Operating = 300 bar / Pmax = 400 bar		
SHOCK RATING	IEC 60068-2-27, 50 g (11 ms) 1000 shocks per axis, 100 g Single Hit		
VIBRATION RATING	IEC 60068-2-6 (10 to 2000 Hz) Rod diameter 10 mm to 25 g (rms) Rod diameter 7 mm to 15 g (rms)		
INGRESS PROTECTION	IP67 (IP69K with M12 x 1 connector attached)		
ELECTRICAL INSTALLATION	Operating voltage: 12/24 Vdc Operating range: 8 to 32 Vdc Power Consumption: < 1 W (< 1.5 W for CAN) Electrical isolation: 500 Vdc (DC ground to machine ground) Polarity protection: -36 Vdc Overvoltage protection: 36 Vdc		
EMI (IMMUNITY ONLY)			ISO 11452-2 (Antenna Method) ISO 11452-4 (Bulk Current Injection) IEC 61000-4-3 (Radio Frequency Interference) IEC 61000-4-6 (Conducted Disturbances) IEC 61000-4-4 (Burst) IEC 61000-4-8 (Magnetic Fields)

-SERIES

nsors for In-Cylinder Design

g and resistant against environmental influences (Water, Dirt, EMC)

		
Model MT **Redundant sensor with 2 individual analog outputs**	**Model MS** **In-cylinder design with voltage and current outputs**	**Model MB** **Compact design for external assembly**
Voltage & Current	**Voltage & Current**	**Voltage**
50 mm (2 in.) to 1500 mm (59 in.)	50 mm (2 in.) to 2500 mm (79 in.)	72 mm (3 in.) to 250 mm (9 in.)
-	-	-
≤ ± 0.1 mm @ ≤ 250 mm ≤ ± 0.6 mm @ ≤ 1500 mm	≤ ± 0.1 mm @ ≤ 250 mm ± 0.8 mm @ ≤ 2500 mm	≤ ± 0.25 mm @ ≤ 250 mm
0.1 - 0.4 mm (length dependent)	0.1 - 0.6 mm (length dependent)	≤ ± 0.25 mm @ ≤ 250 mm
± 0.20 mm	± 0.20 mm	± 0.25 mm
-40 °C (-40 °F) to 105 °C (221 °F)	-40 °C (-40 °F) to 105 °C (221 °F)	-40 °C (-40 °F) to 85 °C (185 °F)
Rod diameter 10 mm Operating = 350 bar / Pmax. = 450 bar	Rod diameter 7 mm Operating = 300 bar / Pmax. = 400 bar	Rod diameter 8 mm Operating = 300 bar / Pmax. = 400 bar
IEC 60068-2-27, 50 g (11 ms) 1000 shocks per axis, 100 g Single Hit		IEC 60068-2-27, 20 g (11 ms) 1000 shocks per axis, 50 g Single Hit
IEC 60068-2-6 (10 to 2000 Hz) Rod diameter 10 mm to 10 g (rms)	IEC 60068-2-6 (10 to 2000 Hz) Rod diameter 7 mm to 15 g (rms)	IEC 60068-2-6 (10 to 2000 Hz) Rod diameter 8 mm to 15 g (rms)
IP67 (IP69K with M12 x 1 connector attached)		
Operating voltage: 12/24 Vdc Operating range: 8 to 32 Vdc Power Consumption: < 1 W Electrical isolation: 500 Vdc (DC ground to machine ground) Polarity protection: -36 Vdc Overvoltage protection: 36 Vdc	Operating voltage: 12/24 Vdc Operating range: 8 to 32 Vdc Power Consumption: < 1 W Electrical isolation: 500 Vdc (DC ground to machine ground) Polarity protection: -36 Vdc Overvoltage protection: 36 Vdc	Operating voltage: 12/24 Vdc Operating range: 8 to 32 Vdc Power Consumption: < 1 W Electrical isolation: 500 Vdc (DC ground to machine ground) Polarity protection: -36 Vdc Overvoltage protection: 30 Vdc
		ISO 11452-2 (Antenna Method) ISO 11452-5 (Stripline Method)

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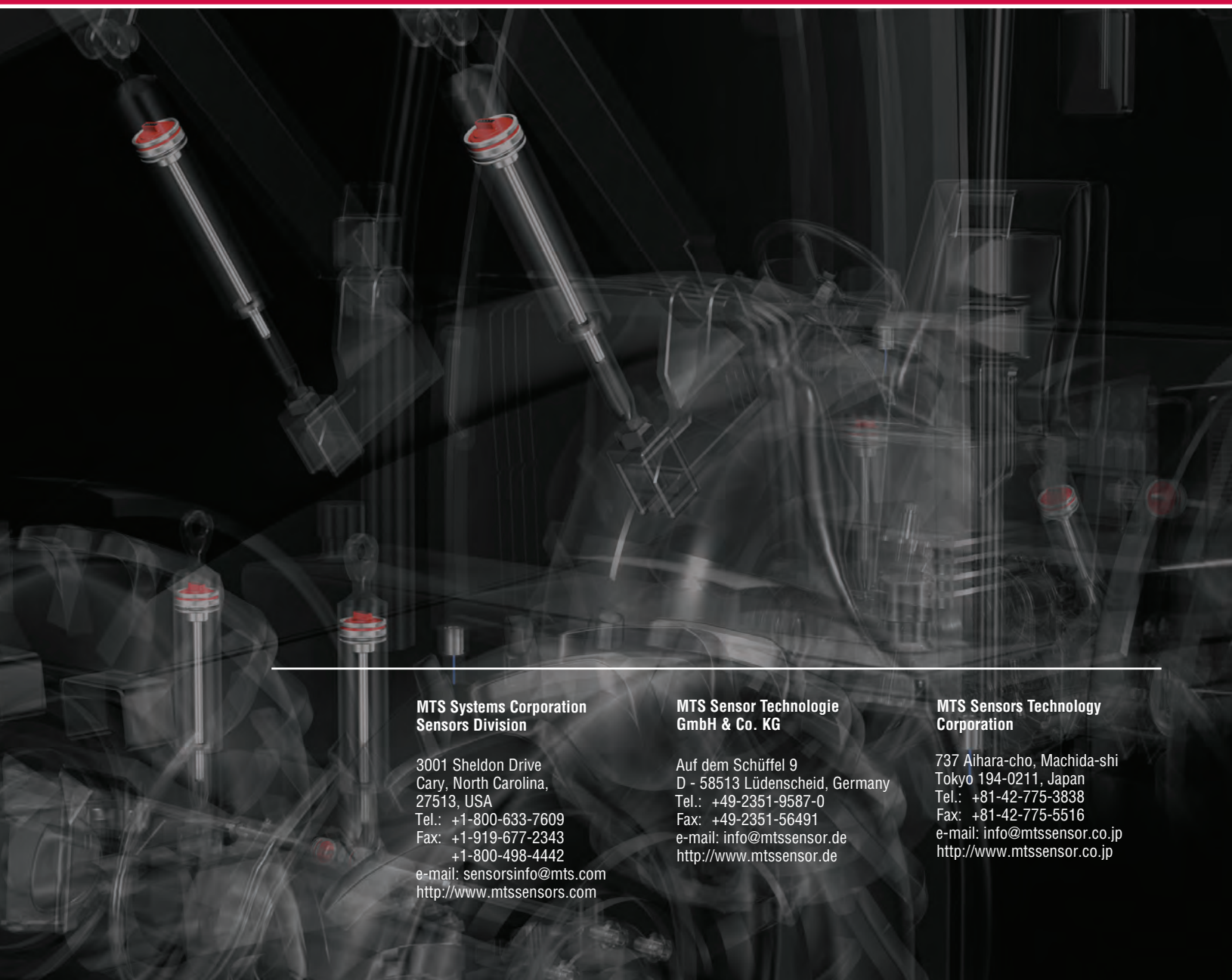

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