



**QPS Evaluation Services Inc**  
Testing, Certification and Field Evaluation Body  
Accredited in Canada, the USA, and Internationally

File
LR1346

**CERTIFICATE OF COMPLIANCE**  
(ISO TYPE 3 CERTIFICATION SYSTEM)

Issued to	MTS Sensor Technologie GmbH & Co KG
Address	Auf Dem Schüffel 9, Lüdenscheid, Germany, D-58513
Project Number	LR1346-3
Product	Linear Position Sensors
Model Number	Tempsonics ® E-Series ET (see annex below for full model information)
Ratings/Markings	see annex below for full marking information
Applicable Standards	CSA C22.2 No. 60079-0:2015, CSA C22.2 No. 60079-15:2016, CSA C22.2 No 60079-31:2015, CSA C22.2 No 61010-1:2012, CSA C22.2 94.2:2015 ANSI/ISA 12.12.01 (2015), ANSI/UL 61010-1 (2012), ANSI/UL 50E 2nd Edition, ANSI/UL 60079-0 (2013), ANSI/UL 60079-31 (2015), ANSI/UL 2225 (2013)
Factory/Manufacturing Location	Same as above

**Statement of Compliance:** The product(s) identified in this Certificate and described in the Report covered under the above referenced project number have been investigated and found to be in compliance with the relevant requirements of the above referenced standard(s). As such, they are eligible to bear the QPS Certification Mark shown below, in accordance with the provisions of QPS's Service Agreement.



Issued By: Dave Adams P.Eng.

Signature: 

Date: March 28, 2017



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**Annex:**

Product: Linear Position Sensors Tempsonics ® E-Series ET  
 Models: SSI Output, Analog & Digital Start/Stop

<b><u>Model (output)</u></b>	<b><u>Canada</u></b>	<b><u>US</u></b>
Analog	Ex nC IIC T4 Gc Ex tc IIIC T130°C Dc IP66/68 -40°C ≤Ta≤85°C Type 4X	Class I/II/III Div 2 T4 ABCDFG Class I Zone 2 T4 IIC Zone 22 AEx tc T4 IIIC Dc -40°C ≤Ta≤85°C, Type 4X
Digital Start/Stop	Ex nC IIC T4 Gc Ex tc IIIC T130°C Dc IP66/68 -40°C ≤Ta≤105°C Type 4X	Class I/II/III Div 2 T4 ABCDFG Class I Zone 2 T4 IIC Zone 22 AEx tc T4 IIIC Dc -40°C ≤Ta≤105°C, Type 4X
SSI Output	Ex nC IIC T4 Gc Ex tc IIIC T130°C Dc IP66/68 -40°C ≤Ta≤90°C Type 4X	Class I/II/III Div 2 T4 ABCDFG Class I Zone 2 T4 IIC Zone 22 AEx tc T4 IIIC Dc -40°C ≤Ta≤90°C, Type 4X

\*Models are differentiated by output signal type

Each model has its own designated ambient range and dust temperature limitation (see table).

The sensors are supplied with a permanently connected cable with a rated voltage of 24 (-15%, +20%) VDC and a maximum current of 105 mA.

The equipment is intended for permanent field installation.

Model nomenclature below:



## ET Configurator

### Model Number Configurator:

1	2	3	4	5	6	7	8	9	10	11	12	13	14
E	T	—	—	—	—	—	—	—	—	—	—	—	—

### (1 - 2) SENSOR MODEL

ET = extended temperature

### (3) HOUSING STYLE

Model ET HEX-shape housing only (magnet(s) must be ordered separately)

M = Flat faced flange, metric threads M18 x 1.5, rod diameter 10 mm

S = Flat faced flange, US customary threads 3/4" – 16 UNF, rod diameter 10 mm

W = Flat faced flange, metric threads M18 x 1.5, rod diameter 10 mm, material 1.4404, AISI 316L

F = Flat faced flange, US customary threads 3/4"-16, rod diameter 10 mm, material 1.4404, AISI 316L

P = Profile style

### (4 - 8) STROKE LENGTH

— — — . — U = Inches and tenths ( 2" ... 118,1)

or

— — — — M = millimeters ( 25 ... 3000 mm in steps of 5mm )

### (9 - 11) CONNECTION TYPE

Txx = Teflon cable

standard: 2m, 5m, 10m, 15m, 25m (max. length 30 m)

Vxx = Silicone cable 530113, 3 x 2 x 0.25

### (12) RESERVED FOR FUTURE USE

1 = Standard default, (data sheet shows, "Input Voltage: 1 = +24 VDC (+20%, -15%), standard")

### (13) Certification

N = none

A = Ex Approvals: IECEx, ATEX, NEC505/506

E = Ex Approvals: IECEx, ATEX, NEC505/506 with 1/2" NPT Adapter



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**(14 – 20) OUTPUT**

V01 = 0 to 10 VDC (1 output channel with 1 magnet)  
V11 = 10 to 0 VDC (1 output channel with 1 magnet)  
V02 = 0 to 10 VDC (2 output channels with 2 magnets)  
V12 = 10 to 0 VDC (2 output channels with 2 magnets)  
V03 = 0 to 10 VDC and 10 to 0 VDC (2 output channels with 1 magnet)

Analog current (14-16)

A01 = 4 to 20 mA (1 output channel with 1 magnet)  
A11 = 20 to 4 mA (1 output channel with 1 magnet)  
A02 = 4 to 20 mA (2 output channels with 2 magnets)  
A12 = 20 to 4 mA (2 output channels with 2 magnets)  
A03 = 4 to 20 mA and 20 to 4 mA (2 output channels with 1 magnet)

Start/Stop (14-15)

R3 = Start/Stop with sensor parameters upload function

SSI (14-20)

S = SSI    1 = 25 bit    G = gray code    1 = 0.005 mm    1 = no filter    00 = Forward, async.  
          2 = 24 bit    B = binary    2 = 0.01 mm    2 = avg 2    01 = Reverse async  
                  3 = 0.05 mm    3 = avg 4    02 = Sync. Measurement, forward  
                  4 = 0.1 mm    4 = avg 8    03 = Sync. Measurement, reverse  
                  5 = 0.02 mm