

EXPRO METERS

ActiveSONAR™ QEX1000 models – HAZARDOUS AREA Certification Guide

Model #	QEX1000F-A- <u>AB</u> (ATEX/IECEx Zone 1)	QEX1000F-x- <u>D</u> ("US Div 2")	QEX1000F-A- <u>C</u> ("Canadian Div 2")
Country of intended use?	This model is intended for use in Europe, Australia, New Zealand, and other countries accepting ATEX Zone 1 and/or IECEx EPL Gb certified equipment.	This model is intended for use in the United States and other countries accepting United States-certified Class I, Division 2 equipment.	This model is intended for use in Canada and other countries accepting Canadian –certified Class I, Division 2 equipment.
Surface or Mining?	Only certified for Surface use (Group II). Not certified for Mining (Group I).	Only certified for Surface use. Not certified for Mining.	Only certified for Surface use. Not certified for Mining.
Explosive Gas or Dust or Flyings?	Only certified for Explosive Gas (G). Not certified for Dust (D).	Only certified for Explosive Gas (Class I). Not certified for Dust (Class II) or Flyings (Class III).	Only certified for Explosive Gas (Class I). Not certified for Dust (Class II) or Flyings (Class III).
What Zone?	Zone 2 (EUR) - OK Zone 1 (EUR) – OK Zone 0 (EUR)– Not Certified	Zone 2 (US) - OK (*1) Zone 1 (US) – Not Certified Zone 0 (US) – Not Certified	Zone 2 (CAN) - OK (*1) Zone 1 (CAN) – Not Certified Zone 0 (CAN) – Not Certified
What Division? (only applies to US & Canada)	Div 2 – Not recognized in EUR Div 1 – Not recognized in EUR	Div 2 (US) – OK Div 1 (US) – Not Certified	Div 2 (CAN) – OK Div 1 (CAN) – Not Certified
What Explosion Protection Level? (only applies to IECEx)	EPL Gc – OK EPL Gb – OK EPL Ga – Not certified	EPL Gc – Not recognized in US EPL Gb – Not recognized in US EPL Ga – Not recognized in US	EPL Gc –Not recognized in CAN EPL Gb -Not recognized in CAN EPL Ga –Not recognized in CAN
What Gas Groups? [Note: Propane is a typical group D or group IIA gas. Ethylene is a typical group C or group IIB gas. Hydrogen is a typical group B gas. Acetylene is a typical group A or group IIC gas.]	IIA – OK IIB – OK IIB+H2 – Not Certified IIC – Not Certified D – Not recognized in EUR C – Not recognized in EUR B – Not recognized in EUR A – Not recognized in EUR	IIA – Not recognized in US IIB – Not recognized in US IIB+H2 – Not recognized in US IIC – Not recognized in US D – OK C – OK B – Not Certified A – Not Certified	IIA – Not recognized in CAN IIB – Not recognized in CAN IIB+H2 – Not recognized IIC – Not recognized in CAN D – OK C – OK B – Not Certified A – Not Certified
What is required minimum T-rating? [Note: The T-rating indicates the worst-case temperature that could be generated on the outside surface of the meter. T6 is the coolest at 85°C. T4 is 135°C. The required minimum T-rating is based on the Autoignition Temperature of the explosive gasses present.]	T1 – OK T2 – OK T3 – OK T4 – OK T4A – Not recognized in EUR T5 – OK only if pipe contents are below +90°C. T6 – OK only if pipe contents are below +75°C.	T1 – OK T2 – OK T3 – OK T4 – OK T4A – OK only if pipe contents are below +90°C. T5 – OK only if pipe contents are below +90°C. T6 – OK only if pipe contents are below +75°C.	T1 – OK T2 – OK T3 – OK T4 – OK T4A – OK only if pipe contents are below +90°C. T5 – OK only if pipe contents are below +90°C. T6 – OK only if pipe contents are below +75°C.
What is required Ingress Protection rating of enclosures?	IP20 to IP66 – OK IP67 – Not OK (*2) IP68 – Not certified Type 4X – Not certified (*3)	IP20 to IP66 – OK IP67 – Not OK (*2) IP68 – Not certified Type 4X – OK (*3)	IP20 to IP66 – OK IP67 – Not OK (*2) IP68 – Not certified Type 4X – OK (*3)

Model #	QEX1000F-A-AB (ATEX/IECEX Zone 1)	QEX1000F-x-D ("US Div 2")	QEX1000F-A-C ("Canadian Div 2")
What is ambient air temp at meter location?	Only certified for range: -45°C to +60°C	Only certified for range: -45°C to +60°C	Only certified for range: -45°C to +60°C
What is the maximum temperature of pipe contents?	Only certified if less than +125°C. For max temperatures between +100°C and +125°C it is certified only if special conditions are met. (*4)	If the "x" field in the QEX1000F-x-D model number is ... "A", then only certified if less than +125°C. For max temperatures between +100°C and +125°C it is certified only if special conditions are met. (*4) "B" then only certified if less than +100°C. (*4)	Only certified if less than +125°C. For max temperatures between +100°C and +125°C it is certified only if special conditions are met. (*4)
What is the minimum temperature of pipe contents?	If less than -45°C, then special conditions apply. (*4)	If less than -45°C, then special conditions apply. (*4)	If less than -45°C, then special conditions apply. (*4)
Ex Safety Instructions for additional safety information [Includes the markings.]	Expro Meters p/n ECD00022 (which is part of ECD00062)	Expro Meters p/n ECD00036 (which is part of ECD00062)	Expro Meters p/n ECD00048 (which is part of ECD00062)
Hazardous Area certificates	FM09ATEX0038X IECEX FMG 09.0005X	FM 3037424	FM 3037424C
EC Declaration of Conformity	Expro Meters p/n ECD00025	Not applicable outside of Europe.	Not applicable outside of Europe.
Installation Manual	Expro Meters p/n EML00003	Expro Meters p/n EML00004	Expro Meters p/n EML00004
For questions or for copies of any of the listed documents, please contact us at:	Telephone: +1 203.303.5691 E-mail: sonartechsupport@exprogroup.com		

Notes:

*1 – The US and Canadian models are certified for Class I, Division 2 (not Class I, Zone 2). However, the US and Canadian Electric Codes permit the use of equipment marked Class I, Division 2 in areas classified as Class I, Zone 2.

*2 – The Transducer Assembly, TA1000, is certified as IP67. However, the other two enclosures (FT1000 and JB1000) are certified as IP66. Since they are installed in close proximity to each other, the system rating should be considered IP66, not IP67.

*3 – The US and the Canadian Transmitter, FT1000, and Junction Box, JB1000, enclosures are certified and marked TYPE 4X. The ATEX/IECEX system's enclosures are not so marked, but the FT1000 and JB1000 enclosures and glands are identical to those of the Canadian system.

*4 – For the ATEX/IECEX system, the Canadian system, or the QEX1000F-A-D US system, if the process temperature extremes can be below -45°C or between +100°C and +125°C then the certification requires that a temperature probe must be used to verify that the temperature at a special temperature sensing hole in the Transducer Assembly remains between -45°C and +100°C. The QEX1000F-B-D US system is not certified for process temperatures above +100°C. See ECD00062 for the detailed temperature limitations.