



SOLVING A WAVE OF EMI COMPLIANCE PROBLEMS

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DECLARATION OF SIMILARITY

April 4, 2019

Innovation, Science, and Economic Development Canada (ISED)
3701 Carling Ave., Bldg. 94,
Ottawa, ON, K2H 8S2

Federal Communications Commission
Authorization and Evaluation Division
7435 Oakland Mills Rd.
Columbia, MD 21046

Dear Sir or Madam:

We Aclara Technologies LLC hereby declare that product: Gas Remote/Water MTU, models: 2017-013, 2017-013-A, 2017-013G, 2017-013G-A, 2017-013P, 2017-013P-A are electrically identical with the same electromagnetic emissions and electromagnetic compatibility characteristics as model: 2017-013, Tested by Radiometrics, the results of which are featured in Radiometrics project: RP-8786.

A description of the differences between the tested model and those that are declared similar are as follows: The only difference is the component population options for the I/O interfacing. Some models require voltage translators and others use only pullup resistors. There are three I/O ports on the MTUs. Port1 and Port2 are used for interfacing with meters. The third port, Port3, is for controlling a remote disconnect device and is not populated on any of the three models.

The 2017-013 and 2017-013-A MTU is a water MTU that can be configured for two types of water meters, pulse or encoder. The encoder type meters require MTU circuitry for voltage translation (3.3V to 5V). This is accomplished using U8, U9, U10 and U11 single bit translators. Individual power control for the data line pullups (R30, R40) is accomplished using Q7 and Q8 complementary FETs. The 2017-013 MTU can be configured with both ports (Port1, Port2) set for encoder, both ports set for pulse or a combination of the two. The "-A" suffix indicates an external antenna vs an internal antenna with no "-A" suffix. Otherwise the 2017-013 and 2017-013-A are identical.

The 2017-013P and 2017-013P-A MTU is a water MTU that interfaces only to pulse style meters. The pulse style meter interfacing only requires 2.2MegaOhm pullup resistors (R36, R37, R38, R39) on the pulse and alarm input for each port. There are 47KOhm series resistors (R32, R33, R34, R35) associated with each of the pulse and alarm signal nets for monitoring with the microcontroller. There are no voltage translators or data line power control circuitry populated on this model. This model can support one or two pulse type water meters using Port1 and Port2. The "-A" suffix indicates an external antenna vs an internal antenna with no "-A" suffix. Otherwise the 2017-013P and 2017-013P-A are identical.

The 2017-013G and 2107-013G-A MTU is a gas MTU that uses a remote mount pulse unit on the gas meter and interfaces with both Port1 and Port2 of the MTU. It can only support one gas meter. The inputs from the gas meter remote pulse unit include three reed switch signals (A, B, C) for rotational calculations and two alarm signals, tilt and tamper. Port1 uses 2.2MegaOhm pullup resistors (R38, R39) for the alarm signal inputs. There are 47KOhm series resistors (R34, R35) associated with each of the alarm signal nets for monitoring with the microcontroller. Port2 is configured to handle the three reed switch signals with 10MegaOhm pullup resistors (R145, R146, R157). There are 47KOhm series resistors (R32, R33, R147) associated with each of the reed switch signal nets for monitoring with the microcontroller. The "-A" suffix indicates an external antenna vs an internal antenna with no "-A" suffix. Otherwise the 2017-013G and 2017-013G-A are identical.

Please contact me should there be need for any additional clarification or information.

Best Regards,

Authorized Signature



Joseph Strzelecki
Senior EMC Engineer
Radiometrics Midwest Corporation
Authorized Agent for Aclara Technologies LLC.