Installation Manual Supplement
P/N MMI-20017381, Rev AA
May 2010

9739MVD Transmitter Electronics Module Upgrade Instructions for continued ATEX Compliance

These instructions are in addition to and supplement the "***9739MVD Transmitter Electronics Module Upgrade Installation Guide"***. Strict adherence to this supplemental information is required to continue to assure ATEX compliance of your RFT9739 Transmitter after installation of the Electronics Module Upgrade.

Some of the RFT9739 Transmitter electrical parameters will change when you upgrade using the 9739MVD Electronics Module. The new electrical parameters for the 9739MVD Electronics Module Upgrade are as follows:

1) Parameters

1.1 Mains circuit (see document EB-3007165 for terminals)

voltage	AC/DC	12 -250 V		
max. voltage	Um	AC/DC	250	V

1.2 For Transmitter types RFT9739D/E with 9739MVD Electronics Module
Intrinsically safe circuits type of protection Ex ib IIC / Ex ib IIB
The circuits designed for connecting sensors are classified initially in Group IIC. However, when certain sensors are connected, they can also be assigned to Group IIB.

1.2.1 Drive circuit (see document EB-3007165 for terminals)

voltage	Uo	DC	10,5	V
current	Io		1,04	A
power	Po		2,11	W
Internal resistance	Ri		10,12	Ω
type of protection Ex ib IIC				
max. external inductance	Lo		33	µH
max. external capacitance	Co		2,41	µF
max. inductance/resistance ratio	Lo/Ro		13,05	µH/Ω
type of protection Ex ib IIB				
max. external inductance	Lo		131	µH
max. external capacitance	Co		16,8	µF
max. inductance/resistance ratio	Lo/Ro		52,6	µH/Ω

The maximum external inductance L (sensor coil) can be calculated with the following term:

$L = 2 \times E \times (Ri + Ro / 1,5 \times Uo)^2$

Whereby E= 40µJ for group IIC and E = 160µJ for group IIB will be inserted and Ro is the total resistance (coil resistance + series resistance).

1.2.2	Pick-off circuits (see document EB-3007165 for terminals)			
	voltage	Uo	DC	17,3 V
	current	Io		18,05 mA
	power	Po		30 mW
	type of protection Ex ib IIC			
	max. external inductance	Lo		109 mH
	max. external capacitance	Co		353 nF
	type of protection Ex ib IIB			
	max. external inductance	Lo		436 mH
	max. external capacitance	Co		2,06 µF
1.2.3	Temperature circuit (see document EB-3007165 for terminals)			
	voltage	Umax	DC	17,3 V
	curent	Imax		21 mA
	power	Pmax		91 mW
	type of protection Ex ib IIC			
	max. external inductance	Lo		80,4 mH
	max. external capacitance	Co		353 nF
	type of protection Ex ib IIB			
	max. external inductance	Lo		322 mH
	max. external capacitance	Co		2,06 µF

Because some of the electrical parameters have changed a new IS Loop Assessment is required to assure your continued compliance with the ATEX Energy Limitations. Perform these as indicated in EN 60079-14.