

# **Certificate of Compliance**

**Certificate:** 70081467 **Master Contract:** 264512 (264512)

**Project: Date Issued:** 70173282 2018-11-28

**Emerson - Rosemount, Micro Motion Inc. Issued to:** 

12001 Technology Dr.

Eden Prairie, Minnesota 55344

**USA** 

**Attention: Sean Welch** 

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.



Andrew Redeker Issued by:

Andrew Redeker

#### **PRODUCTS**

**CLASS 2252 06 - PROCESS CONTROL EQUIPMENT** CLASS 2252 86 - PROCESS CONTROL EQUIPMENT - Certified to US Standards

Magnetic Flow Meter – Model 8732EM Transmitter with integral or remote mount to Model 8705M, 8705W or Model 8711M/L, 8711 R/U Magnetic Flow Tubes. Enclosure Type 4X and IP 66 Rated. Ambient temperature ranges are defined for Integral and Remote mount configurations on Rosemount Drawings 08732-2061 or 08732-2066. Equipment provides NON-IS connections in accordance with drawing 08732-2061 or 08732-2066:

ELECTRICAL INPUT RATINGS						
UNIT	AC SUPPLY	DC SUPPLY	DC SUPPLY			
MAX VOLTAGE	250 VAC	42 VDC	30 VDC			
MAX CURRENT	0.45 A	1.2 A	0.25			
MAX POWER	40 VA	15W	3W			
ELECTRICAL OUTPUT RATINGS FOR "NON-IS" CIRCUITS						
4-20mA ANALOG	PULSE OUTPUT	ELECTRODE CI	RCUIT REMOTE			
OUTPUT (Active/Passive)	(Active/Passive)	JUNCTION BOX TE	ERMINALS 19, 18, 17			
24/30VDC	12/28VDC	5	V			
25/25mA	12.1/100mA	200	)uA			

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600/750mW	73mW/1W	1mW
MODBUS		COIL EXCITATION CIRCUIT
100mA		500mA
3.3VDC		40V max
100mW		20W max

#### **Magnetic Flow Transmitter Model 8712EM Wallmount**

The Magnetic Flow Transmitter Model 8712EM Wallmount is remote mounted to the 8705M, 8705W or 8711M/L, 8711 R/U Magnetic Flow Tubes. Enclosure Type 4X and IP 66/IP 69K Rated. Ambient temperature ranges are defined for Integral and Remote mount configurations on Rosemount Drawings 08732-2061 or 08732-2066.

Equipment provides Non-IS connections in accordance with drawing 08732-2061 or 08732-2066:

ELECTRICAL INPUT RATINGS							
UNIT	AC SUPPLY	DC SUPPLY (Divisions DC SUPPLY (Divisions					
	(Divisions)	and Zones)	Zones)				
MAX VOLTAGE	250 VAC	42 VDC	30 VDC				
MAX CURRENT	0.45 A	1.2 A	0.25 A				
MAX POWER	40 VA	15W	3W				
ELE	CTRICAL OUTPUT RA	TINGS FOR "NON-IS" (	CIRCUITS				
4-20mA ANALOG	PULSE OUTPUT	ELECTRODE CIRCUIT REMOTE JUNCTION BO					
OUTPUT	(Active/Passive)	<b>TERMINALS 19, 18, 17</b>					
(Active/Passive)							
24/30VDC	12/28VDC	5V					
25/25mA	12.1/100mA	200uA					
600/750mW	73mW/1W		1mW				
MODBUS		COIL EXCIT	TATION CIRCUIT				
100mA			500mA				
3.3VDC		40	0V max				
100mW		9	W max				

#### Magnetic Flow Meter System Model 8750W

**8750W Magnetic Flow Meter System (Transmitter and Flow Tube)** – The transmitter may be integral or remote mounted to the flow tube. For the remote mount option there are two variations, "Remote" or "Wallmount". The "Remote" version is the same as the Integral version in that it is a rebadged 8732EM transmitter with an 8750W nameplate. The "Wall mount" variation is a re-badged 8712E transmitter - certified in CSA Report 1120344 - with an 8750W nameplate. The transmitters and integral-mounted flow tubes will be marked with enclosure ratings; Type 4X and IP66 Rated. Remote mounted flow tubes will be marked with enclosure ratings Type 4X, IP66/IP68/ IP69K.

Ambient temperature ranges are defined for Integral and Remote mount configurations on Rosemount Drawings 8750W-1051 or 8750W-2051.



Equipment provides NON-IS output connections in accordance with drawings 8750W-1051 or 8750W-2051.

ELECTRICAL INPUT RATINGS						
UNIT	AC SUPPLY	DC SUPPLY				
MAX VOLTAGE	250 VAC	42 VDC				
MAX CURRENT	0.45 A	1.2 A				
MAX POWER	40 VA	15W				
ELEC	TRICAL INPUT RATINGS - Wa	ll Mount				
UNIT	AC SUPPLY	DC SUPPLY				
MAX VOLTAGE	250 VAC	42 VDC				
MAX CURRENT	2.0 A	3.0 A				
MAX POWER	20 W	20W				
ELECTRICAL	L OUTPUT RATINGS FOR "NON	I-IS" CIRCUITS				
4-20mA ANALOG OUTPUT	PULSE OUTPUT	ELECTRODE CIRCUIT				
(Active/Passive)	(Active/Passive)	REMOTE JUNCTION BOX				
		<b>TERMINALS 19, 18, 17</b>				
24/30VDC	12/28VDC	5V				
25/25mA	12.1/100mA	200uA				
600/750mW	73mW/1W	1mW				
MODBUS		COIL EXCITATION CIRCUIT				
100mA		500mA				
3.3VDC		40V max				
100mW		20W max				



#### **Magnetic Flow Meter Transmitter Model 8750WDMW Wallmount**

The Magnetic Flow Transmitter Model 8750WDMW Wallmount is remote mounted from the Magnetic Flow Tubes. The Wallmount is a re-badged 8712EM transmitter - certified in CSA Report 70081467X - with an 8750W nameplate. Enclosure Type 4X, IP66 and IP69K Rated.

Temperature Class, Maximum Surface Temperatures, and Ambient temperature ranges are defined on Drawings 08750W-1051 or 08750W-2051.

Equipment provides Non-IS connections in accordance with drawing 08750W-1051 or 08750W-2051:

ELECTRICAL INPUT RATINGS						
UNIT	AC SUPPLY (Divisions)	DC SUPPLY (Divisions and Zones)				
MAX VOLTAGE	250 VAC	42 VDC				
MAX CURRENT	0.45 A	1.2 A				
MAX POWER	40 VA	15W				
ELECTRICA	AL OUTPUT RATINGS FOR "N	NON-IS" CIRCUITS				
4-20mA ANALOG OUTPUT	PULSE OUTPUT	ELECTRODE CIRCUIT REMOTE				
(Active/Passive)	(Active/Passive)	JUNCTION BOX TERMINALS 19,				
		18, 17				
24/30VDC	12/28VDC	5V				
25/25mA	12.1/100mA	200uA				
600/750mW	73mW/1W	1mW				
MODBUS		COIL EXCITATION CIRCUIT				
100mA		500mA				
3.3VDC		40V max				
100mW		20W max				

#### CLASS 2258 02 - PROCESS CONTROL EQUIPMENT - For Hazardous Locations

Magnetic Flow Transmitter and Flow Tubes, Model 8732EM and Models 8705-M and 8711-M/L

Class I, Division 2, Groups A, B, C and D; (Non-Incendive)

Ex nA [ia Ga] IIC T4...T3 Gc (Transmitter)

Ex nA ia IIC T5...T3 Ga/Gc (Flow Tube)

Ex nA ic IIC T5...T3 Gc (Flow Tube)

Class II, Division 1, Groups E, F and G; Class III (Dust Ignition Proof)

Ex tb IIIC T80°C... 200°C Db (Transmitter and Flow tube)

#### Flameproof - Zone 1

Ex d eb [ia Ga] IIC T6...T3 Gb (Transmitter) Ex d [ia Ga] IIC T6...T3 Gb (Transmitter)

#### **Increased Safety – Zone 1**

Ex eb ia IIC T5...T3 Ga/Gb (Flow Tube)

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#### Ex eb ib IIC T5...T3 Gb (Flow Tube)

Magnetic Flow Meter – Model 8732EM Transmitter with integral or remote mount to the 8705M, 8705W (Divisions only) or 8711M/L, 8711 R/U (Divisions only) Magnetic Flow Tubes. Enclosure Type 4X and IP 66 Rated. Temperature Class, Maximum Surface Temperatures, and Ambient temperature ranges are defined for Integral and Remote mount configurations on Rosemount Drawings 08732-2061 (Division Installation) or 08732-2066 (Zone Installation). Equipment provides IS and NON-IS connections in accordance with drawing 08732-2061 or 08732-2066 and the following Entity Parameters:

ELECTRICAL INPUT RATINGS						
UNIT		AC	SUPPLY	DC SUPPLY	DC SUPPLY	
MAX VOLTA	AGE	25	50 VAC	42 VDC	30 VDC	
MAX CURRE	ENT	(	0.45 A	1.2 A	0.25	
MAX POWI	ER	4	40 VA	15W	3W	
ELECT	TRICAL O	UTPUT RAT	INGS FOR "IS" (	CIRCUITS (Entity Para	imeters)	
4-20mA	Foundation	on Fieldbus	PULSE	ELECTRODE CIP	RCUIT REMOTE	
ANALOG	and Profi	bus Digital	OUTPUT	JUNCTION BOX TE	<b>RMINALS 19, 18, 17</b>	
OUTPUT	Ou	tput				
Ui = 30VDC	Ui = 3	30VDC	Ui = 28VDC	Uo = 28.5	56 VDC	
Ii = 300 mA	Ii = 3	880mA	Ii = 100mA	Io = 5.7	77 mA	
Ci = 924pF	Ci =	924pF	Ci = 4.5nF	Po = 165 mW		
Li = 0.0uH	Li = 0	0.0mH	Li = 0.0uH	Co = 61.7  nF		
Pi = 1.0W	Pi = 5.32W		Pi = 1.0W	Lo = 1.0 H		
	ELECTRIC	CAL OUTPU	T RATINGS FOR	R "NON-IS" CIRCUITS	S	
4-20mA ANALOG	OUTPUT	PULS	E OUTPUT	ELECTRODE CIP	RCUIT REMOTE	
(Active/Passi	ive)	(Acti	ve/Passive)	JUNCTION BOX TERMINALS 19, 18, 1		
24/30VDC		12/28VDC 5V				
25/25mA		12.	1/100mA	2001	uA	
600/750mV	V	73	mW/1W	1mW		
MODBUS	5			COIL EXCITAT	TION CIRCUIT	
100mA				5001		
3.3VDC				40V 1	max	
100mW				20W	max	

## **Magnetic Flow Transmitter Model 8712EM Wallmount**

Class I, Division 2, Groups A, B,C and D, T4 (Non-Incendive)
Ex nA ic [ia Ga] IIC T4 Gc
Ex ec ic [ia Ga] IIC T4 Gc
Class II, Division 1, Groups E, F and G, T5; Class III (Dust Ignition Proof)
Ex tb IIIC T80°C Db

The Magnetic Flow Transmitter Model 8712EM Wallmount is remote mounted to the 8705M, 8705W (Divisions only) or 8711M/L, 8711 R/U (Divisions only) Magnetic Flow Tubes. Enclosure Type 4X and IP 66/IP 69K Rated.



Temperature Class, Maximum Surface Temperatures, and Ambient temperature ranges are defined on Drawings 08732-2061 (Division Installation) or 08732-2066 (Zone Installation).

Equipment provides IS and Non-IS connections in accordance with drawing 08732-2061 or 08732-2066 and the following Entity Parameters:

	ELECTRICAL INPUT RATINGS						
UNIT	AC SUPPLY	DC SUPPLY (Div	visions	DC SUPPLY (Divisions and			
	(Divisions)	and Zones)		<b>Zones</b> )			
MAX VOLTAGE	250 VAC	42 VDC		30 VDC			
MAX CURRENT	0.45 A	1.2 A		0.25 A			
MAX POWER	40 VA	15W		3W			
ELECTR	ICAL OUTPUT RATII	NGS FOR "IS" CII	RCUITS	(Entity Parameters)			
4-20mA ANALOG	Foundation Fieldbus	PULSE	ELEC	TRODE CIRCUIT REMOTE			
OUTPUT	and Profibus Digital	OUTPUT	JUNC	TION BOX TERMINALS 19,			
	Output			18, 17			
Ui = 30VDC	Ui = 30VDC	Ui = 28VDC		Uo = 28.56  VDC			
Ii = 300mA	Ii = 380mA	Ii = 100mA		Io = 5.77  mA			
Ci = 924pF	Ci = 924pF	Ci = 4.5nF		Po = 165  mW			
Li = 0.0uH	Li = 0.0mH	Li = 0.0uH		Co = 61.7  nF			
Pi = 1.0W	Pi = 5.32W	Pi = 1.0W		Lo = 1.0 H			
El	LECTRICAL OUTPUT	RATINGS FOR "	NON-IS	" CIRCUITS			
4-20mA ANALOG	PULSE OUTPUT	ELECTRODE C	IRCUIT	REMOTE JUNCTION BOX			
OUTPUT	(Active/Passive)	T	ERMIN	ALS 19, 18, 17			
(Active/Passive)							
24/30VDC	12/28VDC			5V			
25/25mA	12.1/100mA	200uA		200uA			
600/750mW	73mW/1W			1mW			
MODBUS		COIL	EXCIT	ATION CIRCUIT			
100mA		500mA		00mA			
3.3VDC		4		OV max			
100mW			9	W max			

#### Magnetic Flow Meter System Model 8750W

Class I, Division 2, Groups A, B, C and D; (Non-Incendive)

Ex nA [ic] IIC T4 Gc (Transmitter – DC Powered Only)

Ex nA ic IIC T5...T4 Gc (Flow Tube)

Class II, Division 1, Groups E, F and G; Class III (Dust Ignition Proof)

Ex tc IIIC T80 °C...T130 °C Dc (Transmitter and Flow Tube)

**Magnetic Flow Meter** – Model 8750W Magnetic Flow Meter System (Transmitter and Flow Tube) – The transmitter may be integral or remote mounted to the flow tube.



For the remote mount option there are two variations, "Remote" or "Wallmount". The "Remote" version is identical to the Integral version in that it is a rebadged 8732EM transmitter with an 8750W nameplate. The "Wall mount" variation is a re-badged 8712E transmitter - certified in CSA Report 1120344 - with an 8750W nameplate. The transmitters and integral-mounted flow tubes will be marked with enclosure ratings; TYPE 4X and IP66 Rated. Remote mounted flow tubes will be marked with enclosure ratings TYPE 4X, IP66/IP68/ IP69K.

Temperature Class, Maximum Surface Temperatures, and Ambient temperature ranges are defined for Integral and Remote mount configurations on Rosemount Drawings 8750W-1051 (Division Installation) or 8750W-2051 (Zone Installation). Equipment provides IS and NON-IS output connections in accordance with drawings 8750W-1051 (Division Installation) or 8750W-2051 (Zone Installation).

ELECTRICAL INPUT RATINGS						
UNIT		AC SUP			DC SUPPLY (Divisions and Zones)	
		(Divisions)				
MAX VOLTA		250 V	AC		42 VDC	
MAX CURRE	NT	0.45	A		1.2 A	
MAX POWE		40 V			15W	
	E			<b>FINGS</b>	S - Wall Mount	
UNIT		AC SUP			DC SUPPLY (Divisions)	
		(Division				
MAX VOLTA		250 V			42 VDC	
MAX CURRE		2.0 A			3.0 A	
MAX POWE	R	20 V	•		20W	
			ICAL OUT			
4-20mA		tion Fieldbus	PULSI		ELECTRODE CIRCUIT REMOTE	
ANALOG		ofibus Digital	OUTPU	JT	JUNCTION BOX TERMINALS 19, 18,	
OUTPUT		Output			17	
Ui = 30VDC		= 30VDC	Ui = 28V		Uo = 28.56 VDC	
Ii = 300 mA		= 380mA	Ii = 100r		Io = 5.77  mA	
Ci = 924pF		= 924pF	Ci = 4.5		Po = 165 mW	
Li = 0.0uH		= 0.0 mH	$Li = 0.0\iota$		Co = 61.7  nF	
Pi = 1.0W		= 5.32W	Pi = 1.0		Lo = 1.0 H	
				S FOR	"NON-IS" CIRCUITS	
4-20mA ANAL		PULSE O			ELECTRODE CIRCUIT REMOTE	
OUTPUT (Active/I	Passive)	(Active/Pa		JU	UNCTION BOX TERMINALS 19, 18, 17	
24/30VDC		12/28V		5V		
25/25mA		12.1/100mA		200uA		
600/750mW		73mW/1W			1mW	
MODBUS					COIL EXCITATION CIRCUIT	
100mA				500mA		
3.3VDC					40V max	
100mW					20W max	



#### **Magnetic Flow Meter Transmitter Model 8750WDMW Wallmount**

Class I, Division 2, Groups A, B, C and D, T4 (Non-Incendive)
Ex nA ic [ic] IIC T4 Gc
Ex ec ic [ic] IIC T4 Gc
Class II, Division 1, Groups E, F and G, T5; Class III (Dust Ignition Proof)
Ex tc IIIC T80°C Dc

The Magnetic Flow Transmitter Model 8750WDMW Wallmount is remote mounted from the Magnetic Flow Tubes. The Wallmount is a re-badged 8712EM transmitter - certified in CSA Report 70081467X - with an 8750W nameplate. Enclosure Type 4X, IP66 and IP69K Rated.

Temperature Class, Maximum Surface Temperatures, and Ambient temperature ranges are defined on Drawings 08750W-1051 (Division Installation) or 08750W-2051 (Zone Installation).

Equipment provides IS and Non-IS connections in accordance with drawing 08750W-1051 or 08750W-2051 and the following Entity Parameters:

ELECTRICAL INPUT RATINGS					
UNIT		AC SUP	PLY (Divisions)	DC SUPPLY (Divisions and Zones)	
MAX VOLTA	AGE	2	250 VAC	42 VDC	
MAX CURRI	ENT		0.45 A	1.2 A	
MAX POWI	ER		40 VA	15W	
ELECT	RICAL OU	TPUT RATI	NGS FOR "IS" C	IRCUITS (Entity Parameters)	
4-20mA	Foundation	n Fieldbus	PULSE	ELECTRODE CIRCUIT REMOTE	
ANALOG	and Profi	bus Digital	OUTPUT	<b>JUNCTION BOX TERMINALS 19, 18,</b>	
OUTPUT		tput		17	
Ui = 30VDC	Ui = 3	80VDC	Ui = 28VDC	Uo = 28.56  VDC	
Ii = 300 mA	Ii = 3	80mA	Ii = 100mA	Io = 5.77  mA	
Ci = 924pF	Ci =	924pF	Ci = 4.5nF	Po = 165  mW	
Li = 0.0uH	Li = 0	0.0mH	Li = 0.0uH	Co = 61.7  nF	
Pi = 1.0W	Pi = 3	5.32W	Pi = 1.0W	Lo = 1.0 H	
]	ELECTRIC	AL OUTPU	Γ RATINGS FOR	"NON-IS" CIRCUITS	
4-20mA ANALOG	OUTPUT	PUL	SE OUTPUT	ELECTRODE CIRCUIT REMOTE	
(Active/Passi	ive)	(Act	tive/Passive)	JUNCTION BOX TERMINALS 19,	
				18, 17	
24/30VDC			2/28VDC	5V	
25/25mA	25/25mA		2.1/100mA	200uA	
600/750mV	V	73mW/1W		1mW	
MODBUS	3			COIL EXCITATION CIRCUIT	
100mA				500mA	
3.3VDC				40V max	
100mW				20W max	



#### CLASS 2258 82 - PROCESS CONTROL EQUIPMENT - For Hazardous Locations -To US Requirements

Class I, Division 1, Groups C and D; (Explosion Proof)

Class I, Zone 1, AEx d ec [ia Ga] IIC T6...T3 Gb (Transmitter)

Class I, Zone 1, AEx d [ia Ga] IIC T6...T3 Gb (Transmitter)

#### **Increased Safety – Zone 1**

Class I, Zone 1, AEx eb ia IIC T5...T3 Ga/Gb (Flow Tube)

Class I, Zone 1, AEx eb ib IIC T5...T3 Gb (Flow Tube)

Class I, Zone 1, AEx [ia Ga] IIC Gb (Transmitter)

Class I, Division 2, Groups A, B, C and D; (Non-Incendive)

Class I, Zone 2, AEx nA [ia Ga] IIC T4...T3 Gc (Transmitter)

Class I, Zone 2, AEx nA ia IIC T5...T3 Ga/Gc (Flow Tube)

Class I, Zone 2, AEx nA ic IIC T5...T3 Gc (Flow Tube)

Class II, Division 1, Groups E, F and G; Class III (Dust Ignition Proof)

Class II, Zone 21 AEx tb IIIC T80 °C...T200 °C Db (Transmitter and Flow Tube)

**Magnetic Flow Meter** – Model 8732EM Transmitter with integral or remote mount to Model 8705M, 8705W (Division only) or Model 8711M/L, 8711 R/U (Division only) Magnetic Flow Tubes. Enclosure Type 4X and IP 66 Rated.

Temperature Class, Maximum Surface Temperatures, and Ambient temperature ranges are defined for Integral and Remote mount configurations on Rosemount Drawings 08732-2061 (Division Installation) or 08732-2066 (Zone Installation). Equipment provides IS and NON-IS connections in accordance with drawing 08732-2061 or 08732-2066 and the following Entity Parameters:

ELECTRICAL INPUT RATINGS							
UNIT		AC SUP	PLY	DC SUPPLY		DC SUPPLY	
MAX VOLTA	GE	250 VA	AC		42 VDC	30 VDC	
MAX CURRE	NT	0.45	A		1.2 A	0.25	
MAX POWE	R	40 V	A		15W	3W	
ELECT	TRICAL (	<b>DUTPUT RAT</b>	INGS FOR	"IS" (	CIRCUITS (Entity	Parameters)	
4-20mA	Founda	tion Fieldbus	PULS	E	ELECTRODE	CIRCUIT REMOTE	
ANALOG	and Pro	ofibus Digital	OUTPUT		<b>JUNCTION BOX TERMINALS 19, 18,</b>		
OUTPUT	(	Output				17	
Ui = 30VDC	Ui :	Ui = 30VDC		VDC	Uo =	28.56 VDC	
Ii = 300mA	Ii =	Ii = 380mA		mA	Io =	= 5.77 mA	
Ci = 924pF	Ci = 924pF		Ci = 4.5nF Po		Po	= 165 mW	
Li = 0.0uH	Li = 0.0mH		Li = 0.0	)uH	Co	= 61.7  nF	
Pi = 1.0W	Pi	Pi = 5.32W		)W	Lo	o = 1.0  H	
	ELECTR	ICAL OUTPU	T RATING	S FOR	"NON-IS" CIRC	UITS	
4 20 A A NIA T	OC	DITTOLO	TOTAL TOTAL		ELECTRODE OF	DOLLE DEMOTE	

4-20mA ANALOG OUTPUT (Active/Passive)	PULSE OUTPUT (Active/Passive)	ELECTRODE CIRCUIT REMOTE JUNCTION BOX TERMINALS 19, 18, 17
24/30VDC	12/28VDC	5V



25/25mA	12.1/100mA	200uA
600/750mW	73mW/1W	1mW
MODBUS		COIL EXCITATION CIRCUIT
100mA		500mA
3.3VDC		40V max
100mW		20W max

#### **Magnetic Flow Transmitter Model 8712EM Wallmount**

Class I, Division 2, Groups A, B, C and D, T4 (Non-Incendive)

Class I Zone 2 AEx nA ic [ia Ga] IIC T4 Gc

Class I Zone 2 AEx ec ic [ia Ga] IIC T4 Gc

Class II, Division 1, Groups E, F and G, T5; Class III (Dust Ignition Proof)

Class II Zone 21 AEx tb IIIC T80°C Db

The Magnetic Flow Transmitter Model 8712EM Wallmount is remote mounted to the 8705M, 8705W (Divisions only) or 8711M/L, 8711 R/U (Divisions only) Magnetic Flow Tubes. Enclosure Type 4X and IP 66/IP 69K Rated Temperature Class, Maximum Surface Temperatures, and Ambient temperature ranges are defined for Integral and Remote mount configurations on Rosemount Drawings 08732-2061 (Division Installation) or 08732-2066 (Zone Installation).

Equipment provides IS and Non-IS connections in accordance with drawing 08732-2061 or 08732-2066 and the following Entity Parameters:

ELECTRICAL INPUT RATINGS						
UNIT	AC SUPPLY	DC SUPPLY		DC SUPPLY (Divisions and		
	(Divisions)	(Divisions and	<b>Zones</b> )	Zones)		
MAX VOLTAGE	250 VAC	42 VDC	2	30 VDC		
MAX CURRENT	0.45 A	1.2 A		0.25 A		
MAX POWER	40 VA	15W		3W		
ELECT	ELECTRICAL OUTPUT RATINGS FOR "IS" CIRCUITS (Entity Parameters)					
4-20mA	Foundation Fieldbus	PULSE	ELE	CTRODE CIRCUIT REMOTE		
ANALOG	and Profibus Digital	OUTPUT	JUNC	ΓΙΟΝ BOX TERMINALS 19, 18,		
OUTPUT	Output			17		
Ui = 30VDC	Ui = 30VDC	Ui = 28VDC	Uo = 28.56  VDC			
Ii = 300mA	Ii = 380mA	Ii = 100mA	Io = 5.77  mA			
Ci = 924pF	Ci = 924pF	Ci = 4.5nF	Po = 165  mW			
Li = 0.0uH	Li = 0.0mH	Li = 0.0uH	Co = 61.7 nF			
Pi = 1.0W	Pi = 5.32W	Pi = 1.0W		Lo = 1.0 H		
ELECTRICAL OUTPUT RATINGS FOR "NON-IS" CIRCUITS						
4-20mA	PULSE OUTPUT	ELECTRODE CIRCUIT REMOTE JUNCTION BOX				
ANALOG	(Active/Passive)	<b>TERMINALS 19, 18, 17</b>				
OUTPUT						
(Active/Passive)						
24/30VDC	12/28VDC	5V				



25/25mA	12.1/100mA	200uA
600/750mW	73mW/1W	1mW
MODBUS		COIL EXCITATION CIRCUIT
100mA		500mA
3.3VDC		40V max
100mW		9W max

#### **Magnetic Flow Meter System Model 8750W**

Class I, Division 2, Groups A, B, C and D; (Non-Incendive)

Class I, Zone 2, AEx nA [ic] IIC T4 Gc (Transmitter – DC Powered Only)

Class I, Zone 2, AEx nA ic IIC T5...T4 Gc (Flow Tube)

Class II, Division 1, Groups E, F and G; Class III (Dust Ignition Proof)

Class II, Zone 22, AEx tc IIIC T80°C... 130°C Dc (Transmitter and Flow Tube)

**8750W Magnetic Flow Meter System (Transmitter and Flow Tube)** – The transmitter may be integral or remote mounted to the flow tube. For the remote mount option there are two variations, "Remote" or "Wallmount". The "Remote" version is the same as the Integral version in that it is a rebadged 8732EM transmitter with an 8750W nameplate. The "Wall mount" variation is a re-badged 8712E transmitter - certified in CSA Report 1120344 - with an 8750W nameplate. The transmitters and integral-mounted flow tubes will be marked with enclosure ratings; Type 4X and IP66 Rated. Remote mounted flow tubes will be marked with enclosure ratings Type 4X, IP66/IP68/ IP69K.

Temperature Class, Maximum Surface Temperatures, and Ambient temperature ranges are defined for Integral and Remote mount configurations on Rosemount Drawings 8750W-1051 (Division Installation) or 8750W-2051 (Zone Installation).

Equipment provides IS and NON-IS output connections in accordance with drawings 8750W-1051 (Division Installation) or 8750W-2051 (Zone Installation).

ELECTRICAL INPUT RATINGS						
UNIT		AC S	SUPPLY	DC SUPPLY		
MAX VOLTA	<b>G</b> E	250	0 VAC	42 VDC		
MAX CURRE	ENT	0	.45 A	1.2 A		
MAX POWE	ER	40 VA		15W		
	ELECTRICAL INPUT RATINGS - Wall Mount					
UNIT	UNIT		SUPPLY	DC SUPPLY		
MAX VOLTA	MAX VOLTAGE 2		0 VAC	42 VDC		
MAX CURRENT		2.0 A		3.0 A		
MAX POWER		20 W		20W		
ELECTRICAL OUTPUT RATINGS						
4-20mA	Foundation Fieldbus		PULSE	ELECTRODE CIRCUIT REMOTE		
ANALOG	and Profibus Digital		OUTPUT	<b>JUNCTION BOX TERMINALS 19, 18,</b>		
OUTPUT	Output			17		
Ui = 30VDC	Ui = 30VDC		Ui = 28VDC	Uo = 28.56  VDC		



Ii = 300mA	Ii = 380mA		Ii = 100mA	Io = 5.77 mA	
Ci = 924pF	Ci = 924pF		Ci = 4.5nF	Po = 165 mW	
Li = 0.0uH	Li = 0	0.0mH	Li = 0.0uH	Co = 61.7  nF	
Pi = 1.0W	Pi = 3	5.32W	Pi = 1.0W	Lo = 1.0 H	
	ELECTRIC	CAL OUTPU	T RATINGS FO	R "NON-IS" CIRCUITS	
4-20mA ANALOG	OUTPUT PULSE		E OUTPUT	ELECTRODE CIRCUIT REMOTE	
(Active/Passive)		(Active/Passive)		<b>JUNCTION BOX TERMINALS 19, 18, 17</b>	
24/30VDC		12/28VDC		5V	
25/25mA	25/25mA 12.1		/100mA	200uA	
600/750mW		73mW/1W		1mW	
MODBUS				COIL EXCITATION CIRCUIT	
100mA				500mA	
3.3VDC			40V max		
100mW			20W max		

#### **Magnetic Flow Meter Transmitter Model 8750WDMW Wallmount**

Class I, Division 2, Groups A, B, C and D, T4 (Non-Incendive)

Class 1 Zone 2 AEx nA ic [ic] IIC T4 Gc

Class 1 Zone 2 AEx ec ic [ic] IIC T4 Gc

Class II, Division 1, Groups E, F and G, T5; Class III (Dust Ignition Proof)

Class II Zone 22 AEx tc IIIC T80°C Dc

The Magnetic Flow Transmitter Model 8750WDMW Wallmount is remote mounted from the Magnetic Flow Tubes. The Wallmount is a re-badged 8712EM transmitter - certified in CSA Report 70081467X - with an 8750W nameplate. Enclosure Type 4X, IP66 and IP69K Rated.

Temperature Class, Maximum Surface Temperatures, and Ambient temperature ranges are defined on Drawings 08750W-1051 (Division Installation) or 08750W-2051 (Zone Installation).

Equipment provides IS and Non-IS connections in accordance with drawing 08750W-1051 or 08750W-2051 and the following Entity Parameters:

ELECTRICAL INPUT RATINGS						
UNIT		AC SUPPLY (Divisions)		DC SUPPLY (Divisions and Zones)		
MAX VOLTA	AGE	250 VAC		42 VDC		
MAX CURRI	ENT	0.45 A		1.2 A		
MAX POWI	ER	40 VA		15W		
ELECT	ELECTRICAL OUTPUT RATINGS FOR "IS" CIRCUITS (Entity Parameters)					
4-20mA	Foundation Fieldbus		PULSE	ELECTRODE CIRCUIT REMOTE		
ANALOG	and Profibus Digital		OUTPUT	<b>JUNCTION BOX TERMINALS 19, 18,</b>		
OUTPUT	Output			17		
Ui = 30VDC	Ui = 30VDC		Ui = 28VDC	Uo = 28.56  VDC		
Ii = 300 mA	Ii = 380mA		Ii = 100mA	Io = 5.77  mA		
Ci = 924pF	Ci = 924pF		Ci = 4.5nF	Po = 165  mW		

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Li = 0.0uH	Li = 0.0mH		Li = 0.0uH	Co = 61.7  nF	
Pi = 1.0W	Pi = 5.32W		Pi = 1.0W	Lo = 1.0 H	
	ELECTRIC	AL OUTPU	T RATINGS FOR	"NON-IS" CIRCUITS	
4-20mA ANALOG OUTPUT (Active/Passive)		PULSE OUTPUT (Active/Passive)		ELECTRODE CIRCUIT REMOTE JUNCTION BOX TERMINALS 19,	
`	(======================================		,	18, 17	
24/30VDC		12/28VDC		5V	
25/25mA		12.1/100mA		200uA	
600/750mW		73mW/1W		1mW	
MODBUS				COIL EXCITATION CIRCUIT	
100mA				500mA	
3.3VDC				40V max	
100mW				20W max	

#### **Model Nomenclature**

8732EM-abcde Magnetic Flow Meter

- a = Transmitter Mounting Options: R or T.
- b = Power Supply: 1, 2, or 3.
- c = Outputs: A, B, or M
- d = Conduit Entry: 1, 2, 4 or 5. (Codes 3 and 6 are for ordinary location only)
- e = Options: Any Alpha-Numeric characters representing product options up to fifty digits. Includes Safety Approval Code Options N5, N6, KU, K5, NC, K6 or blank (ordinary locations).

#### **Special Conditions of Safe Use**: (For Class/Division)

- 1. For use with the appropriate 8705M and 8711M/L Flow tubes only.
- 2. When the 8732EM transmitter is integrally mounted to 8705M or 8711M/L Flow Tubes, the ambient temperature ranges marked on each product need to be taken into consideration before installation. The Ambient temperature range for 8732EM transmitter is -40°C  $\leq$  Ta  $\leq$  +60°C and the ambient temperature range for 8705M or 8711M/L Flow Tubes is -29°C  $\leq$  Ta  $\leq$  +60°C . Therefore, the -29°C rating of the flow tubes will limit the overall cold temperature range of the complete system unless other approved temperature control methods are employed.
- 3. When the 8732EM transmitter is integrally mounted to 8705W or 8711R/U flow tubes, the ambient temperature ranges marked on each product need to be taken into consideration before installation. The ambient temperature for 8732EM transmitter is -40°C to 60°C and the ambient temperature range for 8705W or 8711R/U flowtube is -50°C to 60°C. Therefore, the -40°C rating of the transmitter will limit the overall cold temperature range of the complete system unless other approved temperature control methods are employed.
- 4. The intrinsically safe 4-20 mA and pulse output cannot withstand the 500 V isolation test between signal and ground, due to integral transient protection up to a voltage of 250 Vac. This must be taken into account upon installation.

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#### **Special Conditions for Safe Use (X) for Class Zone:**

- 1. Warning Ignition hazard, wetted parts may contain Titanium and Zirconium. For processes requiring EPL Ga and Gb rated equipment, suitability for use must be determined by the end user to eliminate ignition hazard due to impact or friction.
- 2. When "Special Paint Systems" are applied, instructions for safe use regarding potential electrostatic charging hazard have to be followed.
- 3. Terminals 1,2,3,4, for data communication, cannot withstand the 500 V isolation test between Signal and ground, due to integral transient protection. This must be taken into account upon Installation.
- 4. Conduit entries must be installed to maintain the enclosure ingress rating of IP66.
- 5. In order to maintain the ingress protection level on the M3 and M4 electrode housing, the copper crush washer that seals the electrode access plug shall be replaced when the plug is reinstalled. The copper crush washer is one time use only.
- 6. The flow tube and transmitter are not allowed to be thermally insulated.
- 7. The property class of the special fasteners which attach the Magnetic Flow Tube or Transmitter Remote Junction Box to the Magnetic Transmitter is A2-70 or A4-70 SST.
- 8. For information on the dimensions of the flameproof joints the manufacturer shall be contacted.
- 9. The Magnetic Flow Meter Tube contains nonconductive liners over the grounded tube. For process requiring EPL Ga, precautions shall be taken to avoid the liner being charged by the flow of nonconductive media.

#### 8705abcdefgh. Magnetic Flow tube

- a = Lining material: Any one digit alpha or numeric character
- b = Electrode Material: Any one digit alpha or numeric character
- c = Electrode Type: Any one digit alpha or numeric character
- d = Line Size: 005, 010, 015, 020, 025, 030, 040, 050, 060, 080, 100, 120, 140, 160, 180, 200,
- 240, 300, or 360.
- e = Flange Material: Any one digit alpha or numeric character
- f = Flange Rating: Any one digit alpha or numeric character
- g = Electrode Housing: M0, M1, M2, M3 or M4.
- h = Options: Any Alpha-Numeric characters representing non-safety product options up to fifty-two digits in length. Includes safety approval code options N5, N6, KU, K5, NC, K6 or blank (ordinary locations).

#### 8711abcdefg. Magnetic Flow tube

- a = Lining material: Any one digit alpha or numeric character
- b = Electrode Material: Any one digit alpha or numeric character
- c = Electrode Type: Any one digit alpha or numeric character
- d = Line Size: 015, 020, 030, 040, 060, and 080
- e = Transmitter Mounting Configuration: L or M.
- f = Mating Flange: Any one digit alpha or numeric character
- g = Options: Any Alpha-Numeric characters representing product options up to fifty-four digits in length.

Includes Safety Approval Code Options N5, N6, KU, K5, NC, K6 or blank (ordinary locations).



#### **Special Conditions of Use for Class Division:**

- 1. The flow tube is IP68 only when mounted remotely from the transmitter.
- 2. Options V1, V2 or V3 are not Type 4X Corrosion Resistant.
- 3. Options F0234, V1, V2, or V3 may be subject to electrostatic discharge. To avoid electrostatic charge build-up, do not rub the flowmeter with a dry cloth or clean with solvents.

#### Special Conditions for Safe Use (X) for Class Zone:

- 1. Warning Ignition hazard, wetted parts may contain Titanium and Zirconium. For processes requiring EPL Ga and Gb rated equipment, suitability for use must be determined by the end user to eliminate ignition hazard due to impact or friction.
- 2. When "Special Paint Systems" are applied, instructions for safe use regarding potential electrostatic charging hazard have to be followed.
- 3. Terminals 1,2,3,4, for data communication, cannot withstand the 500 V isolation test between Signal and ground, due to integral transient protection. This must be taken into account upon installation.
- 4. Conduit entries must be installed to maintain the enclosure ingress rating of IP66.
- 5. In order to maintain the ingress protection level on the M3 and M4 electrode housing, the copper crush washer that seals the electrode access plug shall be replaced when the plug is reinstalled. The copper crush washer is one time use only.
- 6. The flow tube and transmitter are not allowed to be thermally insulated.
- 7. The property class of the special fasteners which attach the Magnetic Flow Tube or Transmitter Remote Junction Box to the Magnetic Transmitter is A2-70 or A4-70 SST.
- 8. For information on the dimensions of the flameproof joints the manufacturer shall be contacted.
- 9. The Magnetic Flow Meter Tube contains nonconductive liners over the grounded tube. For process requiring EPL Ga, precautions shall be taken to avoid the liner being charged by the flow of nonconductive media.

#### 8712EM-abcde Magnetic Flow Transmitter

- a = Transmitter Mounting Options: R
- b = Power Supply: 1, 2 or 3.
- c = Outputs: A, B, or M
- d = Conduit Entry: 1 or 2. (Code 3 is for ordinary location only)
- e = Options: Any Alpha-Numeric characters representing product options up to fifty digits. Includes Safety Approval Code Options N5, N6, NC or blank (ordinary locations).

#### Special Conditions of Safe Use: (For Class/Division)

- 1. For use with the appropriate 8705 and 8711 Flow tubes only.
- 2. The intrinsically safe 4-20 mA and pulse output cannot withstand the 500 V isolation test between signal and ground, due to integral transient protection up to a voltage of 250 Vac. This must be taken into account upon installation.

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#### **Special Conditions for Safe Use (X) for Class Zone:**

- 1. Warning Ignition hazard, wetted parts may contain Titanium and Zirconium. For processes requiring EPL Ga and Gb rated equipment, suitability for use must be determined by the end user to eliminate ignition hazard due to impact or friction.
- 2. When "Special Paint Systems" are applied, instructions for safe use regarding potential electrostatic charging hazard have to be followed.
- 3. Conduit entries must be installed to maintain the enclosure ingress rating of IP66 or IP69K
- 4. In order to maintain the ingress protection level on the M3 and M4 electrode housing, the copper crush washer that seals the electrode access plug shall be replaced when the plug is reinstalled. The copper crush washer is one time use only.
- 5. The flow tube and transmitter are not allowed to be thermally insulated.
- 6. The property class of the special fasteners which attach the Magnetic Flow Tube or Transmitter Remote Junction Box to the Magnetic Transmitter is A2-70 or A4-70 SST.
- 7. For information on the dimensions of the flameproof joints the manufacturer shall be contacted.
- 8. The Magnetic Flow Meter Tube contains nonconductive liners over the grounded tube. For process requiring EPL Ga, precautions shall be taken to avoid the liner being charged by the flow of nonconductive media.
- 9. When utilizing the keypad of Magnetic Flow Transmitter Model 8712EM, instruction for safe use regarding potential electrostatic charging hazard have to be followed.
- 10. Terminals for the output signals of the magnetic Flow Transmitters, cannot withstand the 500V isolation test between signal and ground, due to integral transient protection. This must be taken into account upon installation.

#### 8750WDabcdefghijklm... Magnetic Flow Meter

 $a = Transmitter Class: E^*, M, or 0$ 

b= Transmitter Mount: R, T, or W\*.

c = Power Supply: 0, 1\*, or 2.

d = Outputs: A, M, U, G or 0

e = Conduit Entry: 0, 1, 2, 4, or 5

f= Sensor Style: F or 0

g= Lining Material: Any one digit alpha or numeric character

h = Electrode Material: Any one digit alpha or numeric character

i = Electrode Type: Any one digit alpha or numeric character

j= Line Size: 000, 005, 010, 015, 020, 025, 030, 040, 050, 060, 080, 100, 120, 140, 160, 180, 200, 240, 300, 360, 400, 420, and 480.

k= Flange Type: Any one digit alpha or numeric character

l=Flange Rating: Any two digit alpha or numeric character

m = Options: Any Alpha-Numeric characters representing product options up to forty-five digits in length.

Includes Safety Approval Code Options Z5, Z6, ZC or blank (ordinary locations).

\*Only for Class and Division Rating

#### **Special Conditions of Safe Use for Class Division:**

1. Flow tube to be used only in a non-flammable process.



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#### **Special Conditions for Safe Use (X) for Class Zone:**

- 1. When "Special Paint Systems" are applied, instructions for safe use regarding potential electrostatic charging hazard have to be followed.
- 2. Conduit entries must be installed to maintain the enclosure ingress rating of IP66 (Transmitter and Flow Tube), IP68 or IP69K (Flow Tube) as applicable.

#### 8750WDMWabcde Magnetic Flow Transmitter

a = Transmitter Mounting Options: W

b = Power Supply: 1, or 2.

c = Outputs: A, M, or 0

d = Conduit Entry: 0, 1, 2, 4, or 5

e = Options: Any Alpha-Numeric characters representing product options up to fifty digits. Includes Safety Approval Code Options Z5, Z6, ZC or blank (ordinary locations).

#### **Special Conditions of Safe Use for Class Division:**

1. Flow tube to be used only in a non-flammable process.

### **Special Conditions for Safe Use (X) for Class Zone:**

- 1. When "Special Paint Systems" are applied, instructions for safe use regarding potential electrostatic charging hazard have to be followed.
- 2. Conduit entries must be installed to maintain the enclosure ingress rating of IP66 (Transmitter and Flow Tube), IP68 or IP69K (Flow Tube) as applicable.
- 3. Terminals for the output signals of the Magnetic Flow Transmitters, cannot withstand the 500V isolation test between signal and ground, due to integral transient protection. This must be taken into account upon
- 4. When utilizing the keypad of Magnetic Flow Transmitter Model 8750WDMW, instructions for safe use regarding potential electrostatic charging hazard have to be followed.

#### **APPLICABLE REQUIREMENTS**

CSA C22.2 No. 0-10

CSA C22.2 No. 94-M1991 (R2011) CSA C22.2 No. 142-M1987 (R2014)

CSA C22.2 No. 213-M1987 (R2013)

CAN/CSA C22.2 No. 60079-0-15

CAN/CSA-C22.2 No. 60079-1-11

CAN/CSA-C22.2 No. 60079-7-16

- General Requirements Canadian Electrical Code Part II
- Special Purpose Enclosures
- Process Control Equipment
- Non-Incendive Electrical Equipment for Use in Class I, **Division 2 Hazardous Locations**
- Electrical apparatus for explosive gas atmospheres; Part 0: General requirements
- Explosive atmospheres Part 1: Equipment protection by flameproof enclosures "d"
- Explosive atmospheres Part 7: Equipment protection by increased safety "e"

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CAN/CSA C22.2 No. 60079-11-14

CAN/CSA-C22.2 No. 60079-15:12 CAN/CSA-C22.2 No. 60079-31:12 CAN/CSA-C22.2 No. 61010-1-17

CAN/CSA C22.2 No. 60529-05

FM 3600: 2011

FM 3610: 2010

FM 3611: 2004

FM 3615: 2006 FM 3616: 2011

UL Standard 50, Eleventh Edition UL Standard 508 Seventeenth Edition

ANSI/ISA-60079-0 (12.00.01) - 2013

ANSI/ISA-60079-1 (12.22.01) – 2009 (R2013)

ANSI/ISA-60079-7 (12.16.01) – 2008 (R2013)

ANSI/ISA-60079-11 (12.02.01) - 2013

ANSI/ISA-60079-15 (12.02.02) – 2012

ANSI / ISA 60079-31 (12.10.03) - 2013

ANSI / ISA 61010-1 (82.02.01) - 2015

ANSI/IEC 60529:2004

- Electrical apparatus for explosive gas atmospheres; Part 11: Intrinsic safety "i"
- Part 15: Equipment Protection by Type of protection "n"
- Part 31: Equipment dust ignition protection by enclosure "t"
- Safety requirements for electrical equipment for measurement, control, and laboratory use
- Degrees of protection provided by enclosures (IP Code)
- Electrical Equipment for Use in Hazardous (Classified)
   Locations General Requirements
- Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II and III, Division 1, Hazardous Locations
- Non-Incendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations
- Explosion-Proof Electrical Equipment General Requirements
- Dust-Ignition Proof Electrical Equipment General Requirements
- Enclosures for Electrical Equipment
- Electric Industrial Control Equipment
- Electrical apparatus for explosive gas atmospheres; Part 0: General requirements
- Electrical apparatus for explosive gas atmospheres; Part 1: Equipment Protection by Flameproof Enclosures Type "d"
- Explosive Atmospheres Part 7: Equipment protection by increased safety "e"
- Electrical apparatus for explosive gas atmospheres; Part 11: Intrinsic safety "i"
- Electrical apparatus for explosive gas atmospheres; Part 15: Equipment Protection by Type "n"
- Part 31: Equipment Dust Ignition Protection by Enclosure "t" (Edition 1.1)
- Safety requirements for electrical equipment for measurement, control, and laboratory use
- Degrees of Protection Provided by Enclosures (IP Code)

#### **MARKINGS**

See Report.



# Supplement to Certificate of Compliance

**Certificate:** 70081467 **Master Contract:** 264512 (264512)

The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

## **Product Certification History**

Project	Date	Description
70173282	2018-11-28	Update to report 70081467 X for models 8732EM & 8712EM to include the addition of foundation Fieldbus Communication to the existing design based on the IECEx test data and results.
70134349	2017-12-19	Update to report 70081467X to add new North American certification for model 8712EM rated for Class I Div 2, Class I Zone 2, Class II Div 1, Class II Zone 21, Class III Div 1, Type 4X, IP66Addition of the Magnetic Flow Transmitter Model 8750WDMW -Update report for Magnetic Flow Transmitter Models 8732EM and Model 8750W for type of protection Ex ec and for type of protection ebAdded class numbers 2252-06/86 for ordinary locationsAdded third power supply option for 8732 transmitter. Added reference to 8705W & 8711 R/U for Divisions onlyUpdated typo to 924pF in electrical output rating tables.
70131500	2017-05-03	Update to CSA Report 70081467 to add alternate approval codes N5, K5 and Z5 to be used for marketing purpose along with the addition of 9 revised drawings.
70113789	2017-03-16	Update to report 70081467 to include a new PWB layout due to miss aligned copper pad and minor changes in other board layouts for future proofing.
70081467	2016-07-12	Transfer of CSA Report 70030489 from Master Contract Number 155387 to 264512 under New Report Number 70081467, changes to approval and label drawings to replace Eden Prairie MFG location with Boulder, Colorado and other editorial note changes.