ControlWave EFM STANDARD INTEGRATED PACKAGE

CWM-EFM-2   **(PC 834)**

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT
A B C		**Integral MVT Sensor Assembly DP URL /**		**A B C**
		Static Pressure URL (gauge units) (Note 1)		
10		No Integral Sensor Assembly	UL	00
		150" H_2O / 1000 psi	UL	121
		150" H_2O / 2000 psi	UL	122
		300" H_2O / 1000 psi	UL	141
		300" H_2O / 2000 psi	UL	142
		300" H_2O / 4000 psi	UL	144
		25 **PSID** / 2000 psi	UL	202
		25 **PSID** / 4000 psi	UL	204
D		**Flange Orientation - Location of static pressure sensor**		**D**
20		No Integral Sensor Assembly **(Note 2)**	UL	0
		Upstream on the **Left** (Standard) **(Note 3)**	UL	1
		Upstream on the **Right (Note 3)**	UL	2
E		**Integral Enclosure and LCD/Keypad**		**E**
30		12" x 14" Fiberglass for **4-slot** Chassis w/**2 button** Keypad	UL	1
		12" x 14" Fiberglass for **4-slot** Chassis w/**25 button** Keypad	UL	2
		12" x 14" Fiberglass for **8-slot** Chassis w/**2 button** Keypad	UL	3
		12" x 14" Fiberglass for **8-slot** Chassis w/**25 button** Keypad	UL	4
F		**Chassis, Processor, System Controller (Note1)**		**F**
40		**With Wet End Interface**		
		4-Slot Chassis, 33MHz Processor **(Note 4)**	UL	1
		8-Slot Chassis, 33MHz Processor **(Note 4)**	UL	3
		4-Slot Chassis, 150MHz Ethernet Processor **(Note 4)**	UL	5
		8-Slot Chassis, 150MHz Ethernet Processor **(Note 4)**	UL	7
		Without Wet End Interface		
		4-Slot Chassis, 33MHz Processor **(Note 4)**	UL	2
		8-Slot Chassis, 33MHz Processor **(Note 4)**	UL	4
		4-Slot Chassis, 150MHz Ethernet Processor **(Note 4)**	UL	6
		8-Slot Chassis, 150MHz Ethernet Processor **(Note 4)**	UL	8
G H		**Application Program**		**G H**
50		None	UL	00
		Standard 1 - 4 Run M&R Program	UL	01

Model Number: CWM-EFM-2 - A B C - D E F - G H - J K L M N - O P - Q R - Q 1 - Q 2 - Q 3 - Q 4 - S T U V - W X Y

Note 1: The standard program does not necessarily require the integral sensor assembly. It allows the user to select the integral sensor and/or one or more, external transmitters.

Note 2: Please match with "000" in 'ABC,' above.

Note 3: Be sure to specify the upper range limit (URL) in ABC, above.

Note 4: Please match chassis selection, here, with 'E,' above.

Note 5: All System Controllers are 6 - 18 Vdc versions with Sensor Interface.

ControlWave EFM STANDARD INTEGRATED PACKAGE (Cont.)

CWM-EFM-2 (PC 834)

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT
J		**Power System (Note 2)**		**J**
60		None - External Power Source is Necessary	UL	0
		12 V, 33 AH Lead Acid Cell Battery, **30 W** Solar Panel **Not UL Approved, K must = 0**	N/A	1
		12 V, 33 AH Lead Acid Cell Battery, **40 W** Solar Panel **Not UL Approved, K must = 0**	N/A	2
		12 V, 33 AH Lead Acid Cell **Battery only**	UL	3
		FM approved solar panels to match the above selection, J=3 are as follows:		
		Part number 396698-01-8 for 30W panel	UL	
		Part number 396698-02-6 for 40W panel	UL	
K		**Hazardous Area Certification**		**K**
70		NONE - UL Class I, Division 2 **at Component Level Only**	UL	0
		Class I, Division 2 Non-incendive (CUL - NI) **for the Package**	UL	1
L		**Bendable RTD (Note 3)**		**L**
80		None	UL	0
		With RTD, 6 Foot Cable Length	UL	1
		With RTD, 15 Foot Cable Length	UL	2
		With RTD, 25 Foot Cable Length	UL	3
M		**Thermowell Options for RTD**		**M**
90		None	UL	0
		With Thermowell, 2 1/2" Insertion Length	UL	1
		With Thermowell, 4 1/2" Insertion Length	UL	2
		With Thermowell, 7 1/2" Insertion Length	UL	3
N		**21 V dc/dc Loop Power Supply -- On Snap Track (Note 4)**		**N**
100		None	UL	0
		With 21 V dc/dc Power Supply **Requires Power Distribution Board, S below**	UL	1

Model Number: CWM-EFM-2 - A B C - D E F - G H - J K L M N - O P - Q R - Q 1 - Q 2 - Q 3 - Q 4 - S T U V - W X Y

Note 1: The "without MVT Sensor Interface" version of the system controller is no longer available. Please use one of the selections, below, regardless of sensor selection in 'ABC.'

Note 2: External Power, J=0, is the only valid selection with the 8-slot chassis, F=3, 4, 6 or 8 above.

Note 3: For the temperature input, the standard load allows the user to select this RTD or an external transmitter.

Note 4: Required for 4 - 20 mA loop power or for transmitters that require > 12 Vdc.

ControlWave EFM STANDARD INTEGRATED PACKAGE (Cont.)

CWM-EFM-2 **(PC 834)**

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT
O P		**I/O Slot 3 (Note 2, 3)**		**O P**
110		No Card	UL	00
		Mixed 6 DIO, 4 AI, 2 HSC	UL	01
		Mixed 6 DIO, 4 AI, 2 HSC, 1 AO	UL	02
		Mixed 12 DI, 4 DO without LEDs	UL	03
		Mixed 6 AI, 2 AO	UL	04
		Analog In Only, 6 AI	UL	05
		4 High/Low Speed Counter Inputs with LEDs	UL	06
		Comm Expansion Module **Specify modem in U and/or radio in WXY**	UL	07
		Analog Out 4 points	UL	08
Q R		**I/O Slot 4 (Note 2, 4)**		**Q R**
120		No Card	UL	00
		Mixed 6 DIO, 4 AI, 2 HSC	UL	01
		Mixed 6 DIO, 4 AI, 2 HSC, 1 AO	UL	02
		Mixed 12 DI, 4 DO without LEDs	UL	03
		Mixed 6 AI, 2 AO	UL	04
		Analog In Only, 6 AI	UL	05
		4 High/Low Speed Counter Inputs with LEDs	UL	06
		Comm Expansion Module **Specify modem in U and/or radio in WXY**	UL	07
		Analog Out 4 points	UL	08

Model Number: CWM-EFM-2 - A B C - D E F - G H - J K L M N - O P - Q R - Q 1 - Q 2 - Q 3 - Q 4 - S T U V - W X Y

Note 1: Required for 4 - 20 mA loop power or for transmitters that require > 12 Vdc.

Note 1: All I/O modules listed use LOCAL TERMINATIONS.

Note 2: The standard load supports only the **Comm Expansion Module** in Slot 3. However, a user's custom programmed load or a modified standard load can support the other options listed here. Please contact Application Services!

Note 3: The standard load supports only the **6 DIO, 4 AI, 2 HSC Module** (with or without the **1 AO)** in Slot 4 and it is not necessarily required. Custom programming can support any of the other options listed, here. Please contact Application Services!

ControlWave EFM STANDARD INTEGRATED PACKAGE (Cont.)

CWM-EFM-2   **(PC 834)**

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT
Q 1		**I/O Slot 5 (Note 1, 2)**		**Q 1**
121		No Card	UL	00
		Mixed 6 DIO, 4 AI, 2 HSC	UL	01
		Mixed 6 DIO, 4 AI, 2 HSC, 1 AO	UL	02
		Mixed 12 DI, 4 DO without LEDs	UL	03
		Mixed 6 AI, 2 AO	UL	04
		Analog In Only, 6 AI	UL	05
		4 High/Low Speed Counter Inputs with LEDs	UL	06
		Analog Out 4 points	UL	08
Q 2		**I/O Slot 6 (Note 1, 2)**		**Q 2**
122		No Card	UL	00
		Mixed 6 DIO, 4 AI, 2 HSC	UL	01
		Mixed 6 DIO, 4 AI, 2 HSC, 1 AO	UL	02
		Mixed 12 DI, 4 DO without LEDs	UL	03
		Mixed 6 AI, 2 AO	UL	04
		Analog In Only, 6 AI	UL	05
		4 High/Low Speed Counter Inputs with LEDs	UL	06
		Analog Out 4 points	UL	08
Q 3		**I/O Slot 7 (Note 1, 2)**		**Q 3**
123		No Card	UL	00
		Mixed 6 DIO, 4 AI, 2 HSC	UL	01
		Mixed 6 DIO, 4 AI, 2 HSC, 1 AO	UL	02
		Mixed 12 DI, 4 DO without LEDs	UL	03
		Mixed 6 AI, 2 AO	UL	04
		Analog In Only, 6 AI	UL	05
		4 High Speed/Low Counter Inputs with LEDs	UL	06
		Analog Out 4 points	UL	08
Q 4		**I/O Slot 8 (Note 1, 2)**		**Q 4**
124		No Card	UL	00
		Mixed 6 DIO, 4 AI, 2 HSC	UL	01
		Mixed 6 DIO, 4 AI, 2 HSC, 1 AO	UL	02
		Mixed 12 DI, 4 DO without LEDs	UL	03
		Mixed 6 AI, 2 AO	UL	04
		Analog In Only, 6 AI	UL	05
		4 High/Low Speed Counter Inputs with LEDs	UL	06
		Analog Out 4 points	UL	08

Model Number: CWM-EFM-2 - A B C - D E F - G H - J K L M N - O P - Q R - Q 1 - Q 2 - Q 3 - Q 4 - S T U V - W X Y

Note 1: Requires 8-slot Chassis, F = 3, 4, 7, or 8.

Note 2: The standard load does not include any I/O in slots 5 - 8. However, custom programming can support I/O in these slots as well as any of the other options listed in these price pages. Please contact Application Services!

Revision Date: Jan 24, 2012   Effective Date: Oct 1, 2011

ControlWave EFM STANDARD INTEGRATED PACKAGE (Cont.)

CWM-EFM-2   **(PC 834)**

MODEL & SEG	SPEC SHEET	DESCRIPTION	APPROVAL	SELECT
S		**Power Distribution Board -- On Snap Track**		**S**
130		None	UL	0
		With Power Distribution Board **Required for 21V PS, relay option or ext. radio**	UL	1
T		**Relay Board -- On Snap Track**		**T**
140		None	UL	0
		With Relay Board **Requires Power Distribution Board, S above**	UL	1
U		**Switched Network Modem**		**U**
150		No Dial-line Modem	UL	0
		With 1 OEM Dial-line Modem **(Note1)**	UL	1
		With 2 OEM Dial-line Modems **(Note 1)**	UL	2
		With Cermetek Dial-line Modem **Cermetek is mutually exclusive with radio.**	UL	3
V		**Radio Cable/Mounting Hardware and Polyphaser Option**		**V**
160		No Radio, No Radio Ready	UL	0
		Without Polyphaser **(Note 2)**	UL	1
		With Polyphaser **(Note 2)**	UL	2
W X Y		**Radio Option (Note 3, 5)**		**W X Y**
170		None	UL	000
		Standard FreeWave Radio **(Note 4)**	UL	103
		Standard FreeWave Radio Ready **(Note 4)**	UL	104
		Standard MDS Transnet Radio **(Note 4)**	UL	201
		Standard Transnet Radio Ready **(Note 4)**	UL	202
		Standard MDS 9810 Radio with Diag	UL	301
		Standard MDS 4710A Radio with Diag	UL	310
		Standard MDS 4710B Radio with Diag	UL	311
		Standard MDS 9710A Radio with Diag	UL	320
		Standard MDS 9710B Radio with Diag	UL	321
		Standard MDS 4710 A/B, 9710 A/B, 9810 Radio Ready	UL	322
		Standard MDS EntraNet Radio Ready	UL	404
		Standard MDS iNet 900 Radio Ready	UL	423

Model Number: CWM-EFM-2 - <u>A</u> <u>B</u> <u>C</u> - <u>D</u> <u>E</u> <u>F</u> - <u>G</u> <u>H</u> - <u>J</u> <u>K</u> <u>L</u> <u>M</u> <u>N</u> - <u>O</u> <u>P</u> - <u>Q</u> <u>R</u> - <u>Q</u> <u>1</u> - <u>Q</u> <u>2</u> - Q 3 - Q 4 - S T U V - W X Y

Note 2: Be sure to specify a "1" or "2" here if a radio or radio-ready is selected in 'WXY' below!

Note 3: Limit of ONE RADIO PER PACKAGE.

Note 4: "Standard" radios are located on the Radio Bracket in the Standard Package. The Power Distribution Board, S, is required if a Standard radio is selected.

Note 5: The standard load supports only "Standard" radios but a simple change can be made to support an OEM modem or radio. Please contact Application Services!

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