



	PM13x	EM13x	BFM-II	PRO SERIES	PM172	PM174/5	PM180		
PRIMARY USAGE	Power Meter	Energy Meter	Multi-Circuit Energy Meter	New Gen Power Meter	Power Meter	Power Quality Analyzer	Power Quality Analyzer		
PRIMARY MOUNTING	Panel**	DIN	DIN	Panel / DIN	Panel	Panel	Panel / DIN / 19" Rack		
ACCURACY CLASS	0.5S (0.2S*)	0.5S	0.5S	0.2S	0.2S	0.2S	0.2S		
ADDITIONAL COM PROTOCOL			BACnet	IEC 61850			IEC 61850		
MAX. CURRENT INPUTS	3	3	54 (18 x 3Ph)	3 + N	3	3	4 (+ 4 fault currents)		
BUILT-IN I/O		2 DI + 1 DO		2DI+1DO+1AI *	2 DI + 2 DO	2 DI + 2 DO			
COM	RS485	RS485	RS485 + ETH	RS485 + 2 x ETH	RS485	RS485	RS485 + ETH		
MAX EXTRA MODULES	1	1	4	3 + AUX PS	1 I/O + 1 COM	1 I/O + 1 COM	3		
MODULES OF CHOICE	COM	ETH	ETH			ETH	ETH	2nd ETH (TXFX)	
		2G/3G/4G	2G/3G/4G	2G/3G	3G/M-Cat	2G/3G	2G/3G	2G/3G/4G	
		PROFIBUS	PROFIBUS			PROFIBUS	PROFIBUS		
	I/O	DIGITAL	4DI	4DI	18 DI	8 DI	2 DI	2 DI	16 DI
			4 DI + 2 DO	4 DI + 2 DO					8 DO
			12 DI + 4 DO + ETH com	12 DI + 4 DO + ETH com	9 DO	4 DO	2 DO	2 DO	8 DI + 4 DO
			4 AO	4 AO	4 AI		2 AI	2 AI	4 AI + 4 AO
			2 AI + 3G COM			2AO	2AO		
	OTHER			Auxillary power supply	Auxillary power supply			PMU	
							DFR		
							Transient recorder		
SPECIAL FUNCTIONS	POWER QUALITY	Harmonics (40)	Harmonics (40)	Harmonics (25)	Class S	Harmonics (42)	EN50160 Reports	Class A, Ed. 3	
	FAULT RECORDING			20 x In			20 x In	40 x In	
	DC METERING		@ Hall Effect Sensors		@ Hall Effect Sensors				

All SATEC Meters Feature:

- ▶ **Communication protocols:**
Modbus; IEC 60870-5-101/104; DNP3.0
- ▶ **DO (Relay) options:**
EM relays or SSR
- ▶ **Current input Options**
 - ▶ 1A (Excl. BFM)
 - ▶ 5A (Excl. BFM)
 - ▶ 63A (EM13x only)
 - ▶ HACS CTs: 5-3,000A solid/split core

HACS ARE...

- ▶ Mandatory for BFM series
- ▶ Incompatible with EM720/920

Learn about HACS concept and available ratings [on our website](http://www.satec-global.com)

* Optional
** Optional: DIN-rail mounting

REVENUE METERING / BILLING APPLICATIONS



EM133

PRO

BFM136

BFM II

EM720

EM920

	EM133	PRO	BFM136	BFM II	EM720	EM920
MOUNTING	DIN	DIN / Panel	DIN	DIN	Wall	Socket
ACCURACY CLASS	0.5S	0.2S	0.5S	0.5S	0.2S	0.2 (ANSI)
CURRENT INPUTS *	1A / 5A / 63A	1A / 5A	HACS only	HACS only	1A / 5A	1A / 5A
MAX. CURRENT CHANNELS	3	4	36 (12 x 3Ph)	54 (18 x 3Ph)	3	3
COMMUNICATION	**	**	**	**	2G / 3G / ETH / Serial	2G / 3G / 4G / ETH / Serial
CERTIFICATION / STANDARD	MID / UL	UL		UL	KEMA / IEC	UL / ANSI
POWER QUALITY	Harmonics (40)	Class S		Harmonics (25)	Class A	Class A
MAX PULSE INPUT / OUTPUT	13 / 4	26 / 9		72 / 18	8 / 4	10 / 7
IEC 62056-21 (DLMS / IR)	✓				✓	✓
SELF ENERGIZED FROM MEASURED VOLTAGE	✓		✓	✓	✓	✓
SPECIAL FEATURES		IEC 61850	BACnet	BACnet	<ul style="list-style-type: none"> ▶ 6 hour backup battery ▶ "Virtual" metering point ▶ IEC 61850 	<ul style="list-style-type: none"> ▶ "Virtual" metering point ▶ IEC 61850

* See remarks on current inputs on previous page

** See Com options on previous page