

Upgrade to VRX180

Model Selection Guide

Instructions

- Make the desired selection from table I to IV .
The arrow to the right marks the selection available.
A dot (•) denotes unrestricted availability.

Key Number I II III IV V VI
 [UPX180] - [] - [] - [] - [] - [] - []

KEY NUMBER	Selection	Availability
Description		
Upgrade Key Number	UPX180	↓

TABLE I - ANALOG INPUTS

Analog Universal Inputs (slot A to F)	No additional analog inputs	00	•
	Add 4 Universal Analog Inputs	04	•
	Add 8 Universal Analog Inputs	08	•
	Add 12 Universal Analog Inputs	12	•
	Add 16 Universal Analog Inputs	16	•
	Add 20 Universal Analog Inputs	20	•

TABLE II - ADDITIONAL INPUTS AND OUTPUTS

Slot J	None	0 _ _ _ _	•
	Add 4 Universal Analog Inputs	A _ _ _ _	•
	Add 6 Digital Inputs (contact closure)	B _ _ _ _	•
	Add 6 Digital Inputs 24 Vdc	C _ _ _ _	•
	Add 6 Digital Inputs 120 / 240 Vac	E _ _ _ _	•
	Add 6 Relays Outputs	R _ _ _ _	•
	Add 6 Digital Outputs 24 Vdc (open collector)	G _ _ _ _	•
	Add 6 Digital Outputs 120 / 240 Vac (triac)	H _ _ _ _	•
Slot K	None	_ 0 _ _ _	•
	Add 4 Universal Analog Inputs	_ A _ _ _	•
	Add 6 Digital Inputs (contact closure)	_ B _ _ _	•
	Add 6 Digital Inputs 24 Vdc	_ C _ _ _	•
	Add 6 Digital Inputs 120 / 240 Vac	_ E _ _ _	•
	Add 6 Relays Outputs	_ R _ _ _	•
	Add 6 Digital Outputs 24 Vdc (open collector)	_ G _ _ _	•
	Add 6 Digital Outputs 120 / 240 Vac (triac)	_ H _ _ _	•
Slot L	None	_ _ 0 _ _	•
	Add 4 Universal Analog Inputs	_ _ A _ _	•
	Add 6 Digital Inputs (contact closure)	_ _ B _ _	•
	Add 6 Digital Inputs 24 Vdc	_ _ C _ _	•
	Add 6 Digital Inputs 120 / 240 Vac	_ _ E _ _	•
	Add 6 Relays Outputs	_ _ R _ _	•
	Add 6 Digital Outputs 24 Vdc (open collector)	_ _ G _ _	•
	Add 6 Digital Outputs 120 / 240 Vac (triac)	_ _ H _ _	•
Slot M	None	_ _ _ 0 _	•
	Add 4 Universal Analog Inputs	_ _ _ A _	•
	Add 6 Digital Inputs (contact closure)	_ _ _ B _	•
	Add 6 Digital Inputs 24 Vdc	_ _ _ C _	•
	Add 6 Digital Inputs 120 / 240 Vac	_ _ _ E _	•
	Add 6 Relays Outputs	_ _ _ R _	•
	Add 6 Digital Outputs 24 Vdc (open collector)	_ _ _ G _	•
	Add 6 Digital Outputs 120 / 240 Vac (triac)	_ _ _ H _	•

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TABLE II - ADDITIONAL INPUTS AND OUTPUTS (continued)

		Selection	
Slot N	None	_____ 0 _	•
	Add 4 Universal Analog Inputs	_____ A _	•
	Add 6 Digital Inputs (contact closure)	_____ B _	•
	Add 6 Digital Inputs 24 Vdc	_____ C _	•
	Add 6 Digital Inputs 120 / 240 Vac	_____ E _	•
	Add 6 Relays Outputs	_____ R _	•
	Add 6 Digital Outputs 24 Vdc (open collector)	_____ G _	•
	Add 6 Digital Outputs 120 / 240 Vac (triac)	_____ H _	•
Slot P	Add 4 Current Outputs	_____ M _	•
	None	_____ 0	•
	Add 4 Universal Analog Inputs	_____ A	•
	Add 6 Digital Inputs (contact closure)	_____ B	•
	Add 6 Digital Inputs 24 Vdc	_____ C	•
	Add 6 Digital Inputs 120 / 240 Vac	_____ E	•
	Add 6 Relays Outputs	_____ R	•
	Add 6 Digital Outputs 24 Vdc (open collector)	_____ G	•
	Add 6 Digital Outputs 120 / 240 Vac (triac)	_____ H	•
	Add 4 Current Outputs	_____ M	•
	(Note 5)		

TABLE III - FIRMWARE - DATA STORAGE

Control Loops (Note 1)	None	0 _____	•
	Add 1 Control Loop	1 _____	•
	Add 2 Control Loops	2 _____	•
	Add 4 Control Loops	4 _____	•
	Add 6 Control Loops	6 _____	•
	Add 8 Control Loops	8 _____	•
Set Point Programs (Note 4)	None	_ 0 _ _ _	•
	Add 1 Set Point Program	_ 1 _ _ _	•
	Add 2 Set Point Programs	_ 2 _ _ _	•
	Add 3 Set Point Programs	_ 3 _ _ _	•
	Add 4 Set Point Programs	_ 4 _ _ _	•
Math (Note 2)	No Additional Math	_ _ 0 _ _	•
	Add Advance Math	_ _ 1 _ _	•
	Add Advance Math and 4 Totalizers	_ _ 2 _ _	•
	Add Advance Math and 48 Totalizers	_ _ 3 _ _	•
	No Selection	_ _ _ 0 _	•
Product Firmware	No Upgrade	_ _ _ _ 0	•
	Upgrade to latest product firmware version	_ _ _ _ S	•

TABLE IV - COMMUNICATION

Communication	No Upgrade	0	•
	Add communication RS485 - Modbus RTU	C	•
	Add Ethernet Interface	E	c

TABLE V

No Selection	000000	•
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TABLE VI

Factory Use Only	00	•
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RESTRICTIONS

Restriction Letter	Available With		Not Available With	
	Table	Selection	Table	Selection
c			II	_____ A, _____ B, _____ C, _____ E, _____ R, _____ G, _____ H, _____ M

Notes:

1. The VRX180 can support a maximum of 8 control loops.

The available algorithms include: PID (standard and advance), Cascade, Split Output and On/Off.

The appropriate outputs from Table I must be specified - Current or Relays.

If Split (Duplex) output Control is required, advance math must be selected (Table III).

2. Standard Math includes 24 Calculated Values and the following pre-packaged algorithms

Free Form Math	Logic Operators	Flip-Flop/One Shot	Periodic Timer
Free Form Logic	Math Operators	Invertor	

Advance Math includes 64 Calculated Values and the following additional of pre-package algorithms.

Signal Select	Interval Timer	Counter
Compare	Relative Humidity	Scaling
Signal Clamp	Mass Flow	Advanced Splitter
Peak Picking	Fo Calculation	Continuous Emissions Monitoring
Function Generator	Multiple Input Average	- CEM Block Average
Carbon Potential	Single Point Average	- CEM Rolling Average
Rolling Average	Standard Splitter	

3. When selecting SP program make sure to select analog output (current) as necessary (Table II slot N,P).

4. When selecting Control loops, make sure to select outputs (as necessary in Table II)

5. Instrument must have Table II Selection _____ M _ before upgrading to add Table II Selection _____ M.