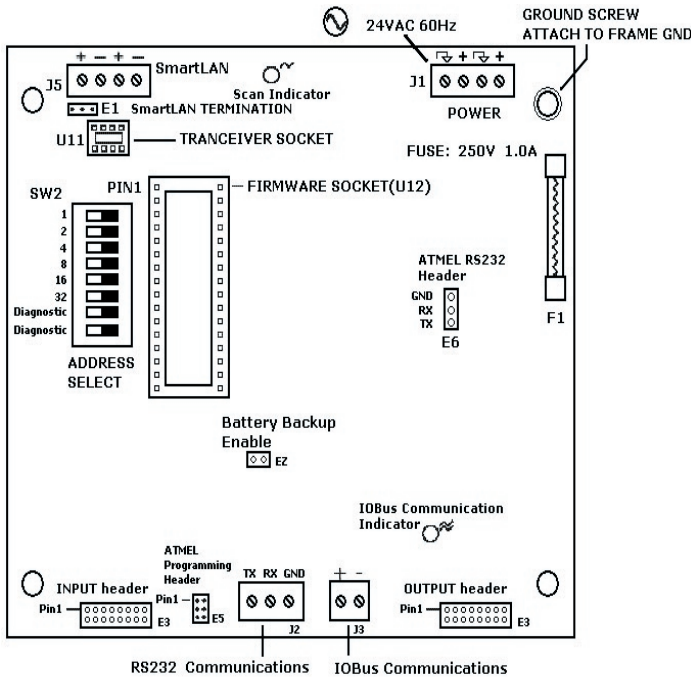




# MicroSAC-31 (Stand Alone Controller)



## DESCRIPTION

MicroSAC 31 is Walker's latest entry into the HVAC controller marketplace and begins the evolution of the Walker controller product line to a single form factor.

Based on the successful MicroSAC 21 product line, MicroSAC 31 adds a second microprocessor, expandable I/O, and on board I/O Bus power to greatly enhance and expand performance. MicroSAC 31 is a competitive addition to current applications, as well as a low cost solution for many OEM applications.

MicroSAC 31 is identical in programming to all previous Walker products and is completely backward compatible with the existing installed base.

## APPLICATIONS

- Medium to high point density areas
- Mechanical/electrical equipment control
- OEM Applications

## FEATURES

### HARDWARE

- Based on the MicroSAC 21 product line.
- Real time clock with 48 hour backup.
- On board I/O BUS power allows up to 22 I/O BUS modules to be directly connected.
- Atmel RS232 can be used for quick access to I/O and Atmel information.
- The basic MicroSAC 31 board comes with no I/O to allow for cost effective expansion.
- Single robust hardware expansion technology allows up to 24 hardware inputs and 24 hardware outputs on any single controller.
- Optional BACnet support.
- Expansion boards are low cost and will be plug compatible to future core board upgrades.
- Expansion boards:  
These three EXP boards are connected via ribbon cable to the MicroSAC-31.

EXP-IP8	8 Universal inputs
EXP-DO8	8 Triac outputs (24Vac)
EXP-OP8	8 Universal outputs (0-10Vdc)

- Daughterboards:  
EXPD boards mount on top of the MicroSAC31. EXP boards can not be used when an EXPD board is in use.
- |                |  |
|----------------|--|
| EXPD-IP8DO8    | 8 universal inputs, 8 Triac outputs                        |
| EXPD-IP8OP4    | 8 universal inputs, 4 universal outputs                    |
| EXPD-IP8OP4DO4 | 8 universal inputs, 4 universal outputs<br>4 Triac outputs |
- Snap track mountable.

### SOFTWARE

- Menu-driven operator interface
- Multilevel password security
- English language programming
- Global System Access
- Fixed-function (canned) programs

# Technical Specifications

## MicroSAC-31 (Stand Alone Controller)

### I/O POINT QUANTITIES

MICROSAC-31	
Inputs	0 on board. Expandable in units of 8 up to a total of 24
Outputs	0 on board. Expandable in units of 8 up to a total of 24

### INPUTS

TYPE	USAGE	RANGES	DEVICES	DISPLAY
Universal	voltage	0-1 VDC / 0-5 VDC / 0-10 VDC	standard devices	0 to 100%
	current	1-5 VDC / 2-10 VDC	standard devices	0 to 100%
		0-20 mA / 4-20 mA / 0-50 mA	current transducers	0 to 100%
	digital	1 mA to GND / 10mA to GND	contact closures	user defined
	temperature	-10°C to 140°C (14°F to 284°F)	3k thermistor	temperature
	temperature	-40°C to 40°C (-40°F to 104°F)	1k thermistor	temperature
existing sensors	inputs can be adapted to operate with existing sensors			temperature, etc.

### OUTPUTS

TYPE	USAGE	RANGES	CAPACITY	DISPLAY
Universal	Voltage	0-5 VDC / 0-10 VDC / 2-10 VDC	50 mA	0 TO 100%
	Current	4-20 mA	500 Ω	0 TO 100%
		4-20 mA	250 Ω	0 TO 100%
Triac Digital	Digital	24 VAC	30 VAC @ 1.2 A	user defined

### EXPANSION OPTIONS

COMPONENT	POINT TYPE	QTY	LIMITS
EXPD-IP8OP4DO4	Universal Inputs/Universal Outputs/ Triac Digital Outputs	8/4/4	Only 1 expansion card can be added to 1 MicroSAC-31 (8 inputs, 8 outputs)
EXPD-IP8OP4	Universal Inputs/Universal Outputs	8/4	
EXPD-IP8DO8	Universal Inputs/Triac Digital Outputs	8/8	
EXP-OP8	Universal Outputs	8	A maximum of 3 input expansion boards and 3 output expansion boards may be added to a MicroSAC31. (24 inputs, 24 outputs)
EXP-DO8	Triac Digital Outputs	8	
EXP-IP8	Universal Inputs	8	

### CPU & MEMORY

PROCESSOR			MEMORY		OTHER		
CPU	MHz	BITS	RAM	ROM	CLOCK	A/D RESOLUTION	BACKUP
Z84C15	10	8	16k	128k	hardware	10 bit	FLASH
Atmel-Mega 8	16	8					

### COMMUNICATION PORTS

TYPE	QTY	USAGE	9.6 kbps	38.4 kbps
RS-232	1	terminal	✓	
RS-485	1	SmartLAN		✓
Atmel RS232	1	3-PIN	✓	
IOBUS	1	Walker ASCII IOBUS Protocol	✓	

### ELECTRICAL / MECHANICAL

TRANSFORMER	TERMINAL CONNECTOR
24 VAC	RS-232†

† uses 3-pin adapter to 6-pin terminal to communicate with MicroSAC-31 and network.

### DIMENSIONS

	Height	Width
Panel Size	127 mm	133 mm
Backplate Size	127 mm	171 mm
Mounting Hole Distances	76 mm	152 mm

25.4mm = 1.0 inches

### VA RATINGS

Walker Component	w/ no expansion	For each EXPIP8	For each EXPDO8	For each EXPOP8	MicroSAC31 daughter-board
Loaded VA Rating	17 VA	0.5 VA	4.0 VA	26.5 VA	15 VA



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