

BU-9H18XF and BU-2H18XF Base Units

Features

- ✓ 18 Dedicated FET Outputs/Inputs
- ✓ CAN Bus Capable
- ✓ Four Character Display Option
- ✓ Dual Connectors for Ease of Wiring
- ✓ Battery Backup Real-Time Clock
- ✓ Integral Weatherproof Translucent Case
- ✓ DSSS Technology (900MHz @ 10mW, 2.4GHz @ 100mW)
- ✓ Current Sense Capable
- ✓ 11 Diagnostic LEDs
- ✓ Power Cutoff FET
- ✓ PWM Control
- ✓ Dual Analog Input Capable
- ✓ Compact Design



The versatile BU-9H18XF and BU-2H18XF base units feature eighteen FET (field effect transistor) high-side switching outputs or switch-to-ground digital inputs, factory configurable dual 0-10VDC or 0-20mA analog inputs that can also be configured as digital outputs/inputs, and CAN Bus control capability. Eight pairs of base unit FET channels can be equipped with high side current sense for better control of valve coil pairs.

The BU-9H18XF and BU-2H18XF accept a broad range of input power with operating voltages ranging from 7VDC to 28VDC. The rugged weatherproof translucent enclosure allows these units to operate worry free in harsh weather conditions. Two 12-wire color-keyed weatherproof cables connect the controlled devices.

Using Direct Sequence Spread Spectrum (DSSS) wireless technology at 900MHz or 2.4GHz, the base unit provides a robust link to SmaRT hand-held remotes in congested radio environments. SmaRT base units feature seamless association to SmaRT hand-held remotes without the need to open either the base unit or the handheld remote case.

Specifications

Power

Operating V_{in} +7 to +28VDC

Environment

Operating Temp -20°C to 55°C
(-4°F to 131°F)

Storage Temp -40°C to 85°C
(-40°F to 185°F)

Humidity 0 to 100%

Enclosure

Dimensions 119mm x 133mm x 36mm
(5.24" x 4.69" x 1.42")

Durability High Impact Polymer

Mounting 7.4mm (0.29") dia. holes
102mm center-to-center
(4" center-to-center)

Factory Configurable Outputs/Inputs

Digital 18-FET, Open Drain; Input/Output

Analog Two 0-10V or 4-20mA inputs,
or digital Input/Output

Current 2A Per channel
15A Max. @ 55°C

Indicators (red LEDs)

Unmarked Unused

+V1, +V2, +V3 Voltages OK when lit

HTH Health – blinks when active

RTX RF TX – blinks when active

RRX RF RX – blinks when active

CTX CAN TX – blinks when active

CRX CAN RX – solid when active

OUT Output – solid when active

IN Input – solid when active

ERR Error – solid – channel output
low or high current

blink – global voltage problem

Radio

Frequency	BU-9H18XF	BU-2H18XF
	906-924MHz	2405-2580MHz

Power	10mW	100mW
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License	License Free
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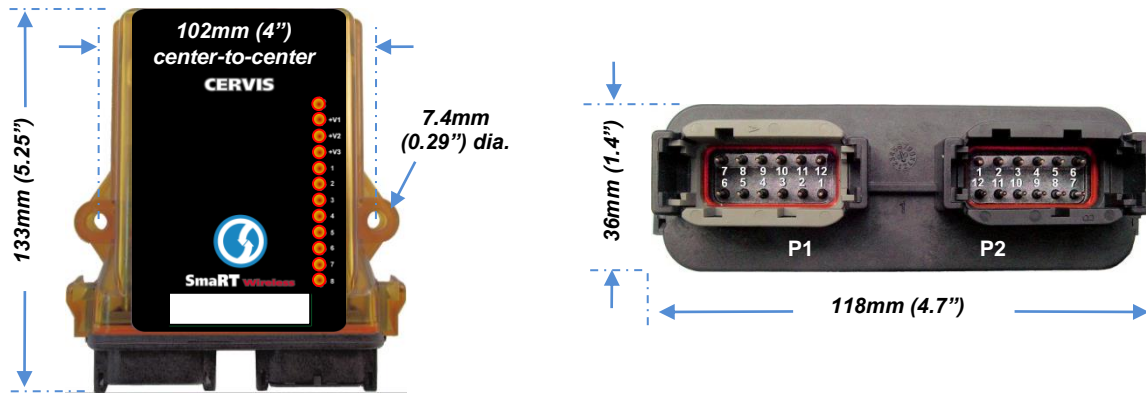
Modulation	DSSS
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Antenna	Internal or External (RP-TNC)
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Umbilical Communications (option)

CAN Bus	SAE J1939
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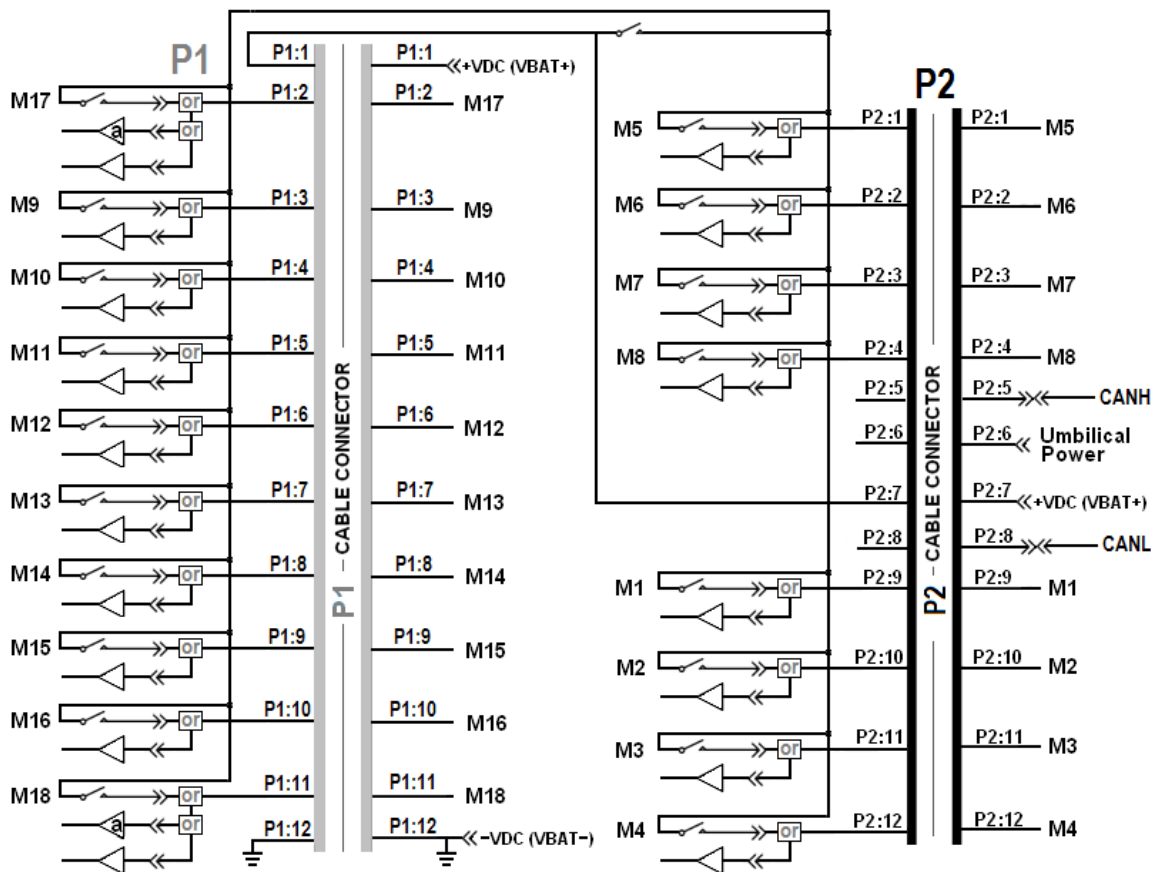
SmaRT BU-9H18XF and BU-2H18XF Dimensions



SmaRT BU-9H18XF and BU-2H18XF P1 and P2 Pinout and Wiring

P1 Pin	Assigned	P1 Pin	Assigned
P1:1	+VDC	P1:7	M13
P1:2	M17	P1:8	M14
P1:3	M9	P1:9	M15
P1:4	M10	P1:10	M16
P1:5	M11	P1:11	M18
P1:6	M12	P1:12	-VDC

P2 Pin	Assigned	P2 Pin	Assigned
P2:1	M5	P2:7	+VDC
P2:2	M6	P2:8	CANL
P2:3	M7	P2:9	M1
P2:4	M8	P2:10	M2
P2:5	CANH	P2:11	M3
P2:6	Umbilical PWR	P2:12	M4



SmaRT BU-9H18XF and BU-2H18XF Options

Name	Freq.	RF Power	Type	Input Power	Serial Port	Analog Channels	Antenna
BU-2H18XF-EXT	2.4GHz	100mW	18 FET	7-28VDC	CAN	NA	External
BU-2H18XF-INT	2.4GHz	100mW	18 FET	7-28VDC	CAN	NA	Internal
BU-2H18XF-EXT-DIS	2.4GHz	100mW	18 FET	7-28VDC	CAN	NA	External
BU-2H18XF-INT-DIS	2.4GHz	100mW	18 FET	7-28VDC	CAN	NA	Internal
BU-2H18XF-EXT-DIS-AI2	2.4GHz	100mW	18 FET	7-28VDC	CAN	(2) 4-20mA IN	External
BU-2H18XF-INT-DIS-AI2	2.4GHz	100mW	18 FET	7-28VDC	CAN	(2) 4-20mA IN	Internal
BU-2H18XF-EXT-AI2	2.4GHz	100mW	18 FET	7-28VDC	CAN	(2) 4-20mA IN	External
BU-2H18XF-INT-AI2	2.4GHz	100mW	18 FET	7-28VDC	CAN	(2) 4-20mA IN	Internal
BU-2H18XF-EXT-DIS-AV2	2.4GHz	100mW	18 FET	7-28VDC	CAN	(2) 0-10V IN	External
BU-2H18XF-INT-DIS-AV2	2.4GHz	100mW	18 FET	7-28VDC	CAN	(2) 0-10V IN	Internal
BU-2H18XF-EXT-AV2	2.4GHz	100mW	18 FET	7-28VDC	CAN	(2) 0-10V IN	External
BU-2H18XF-INT-AV2	2.4GHz	100mW	18 FET	7-28VDC	CAN	(2) 0-10V IN	Internal
BU-9H18XF-EXT	900MHz	10mW	18 FET	7-28VDC	CAN	NA	External
BU-9H18XF-INT	900MHz	10mW	18 FET	7-28VDC	CAN	NA	Internal
BU-9H18XF-EXT-DIS	900MHz	10mW	18 FET	7-28VDC	CAN	NA	External
BU-9H18XF-INT-DIS	900MHz	10mW	18 FET	7-28VDC	CAN	NA	Internal
BU-9H18XF-EXT-DIS-AI2	900MHz	10mW	18 FET	7-28VDC	CAN	(2) 4-20mA IN	External
BU-9H18XF-INT-DIS-AV2	900MHz	10mW	18 FET	7-28VDC	CAN	(2) 4-20mA IN	Internal
BU-9H18XF-EXT-AI2	900MHz	10mW	18 FET	7-28VDC	CAN	(2) 4-20mA IN	External
BU-9H18XF-INT-AI2	900MHz	10mW	18 FET	7-28VDC	CAN	(2) 4-20mA IN	Internal
BU-9H18XF-EXT-DIS-AV2	900MHz	10mW	18 FET	7-28VDC	CAN	(2) 0-10V IN	External
BU-9H18XF-INT-DIS-AV2	900MHz	10mW	18 FET	7-28VDC	CAN	(2) 0-10V IN	Internal
BU-9H18XF-EXT-AV2	900MHz	10mW	18 FET	7-28VDC	CAN	(2) 0-10V IN	External
BU-9H18XF-INT-AV2	900MHz	10mW	18 FET	7-28VDC	CAN	(2) 0-10V IN	Internal

✓ **Note: BU-xH18XF-CAN units are internally terminated at 1.0kΩ. Termination can be removed at the factory.**

