TFC2BN room mount Sensor / Setpoint
24Vac/dc. Current 40mA
TFT wide viewing angle screen
Rotary encoder

Firmware update available via USB port and App or memory stick
Contact Sales Office for full details

TFC2 Setup Instructions

Firmware TFC2BN 1.0.8

Issued 15/07/25

Engineers Menu

Press and Hold Knob for 10 seconds to access Engineers menu

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MAC ADDRESS	0 – 127 Default 1
BAUD RATE	9600, 19200, 38400, 57600, 76800 and 115200 Default: 38400
DEVICE INSTANCE	1076000-1076999 (adjustable via BACnet or in system setup: No reset is required)
MAX MASTER	127
MAX FRAMES	1
APDU TIMEOUT	480
APDU RETRIES	1
Firmware reference	Shows current Firmware reference (for information regarding Firmware updates contact the Sales Office)

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Offset Temp sensor Add offset to temp reading / output. Plus / minus 10 deg C

ZONE 1 SEN0 OFFSET	-10 to +10 deg C
ZONE 1 SEN1 OFFSET	-10 to +10 deg C
ZONE 1 SEN2 OFFSET	-10 to +10 deg C
ZONE 2 SEN3 OFFSET	-10 to +10 deg C
ZONE 2 SEN4 OFFSET	-10 to +10 deg C
ZONE 2 SEN5 OFFSET	-10 to +10 deg C

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ZONE 1 SETPOINT MIN	Range 0 – 49 degC Default 18 degC
ZONE 1 SETPOINT MAX	Range 1 – 50 deg C Default 24 degC
ZONE 1 SETBACK	Range 2 – 10 degC Default 10 degC 9 value lower than actual setpoint
ZONE 2 SETPOINT MIN	Range 0 – 49 deg C Default 18 deg C
ZONE 2 SETPOINT MAX	Range 1 -50 deg C Default 24 deg C
ZONE 2 SETBACK	Range 2 – 10 degC Default 10 degC 9 value lower than actual setpoint

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FROST SETPOINT	Range 5 – 15 deg C Applies to both Zones Default = 12 deg C
ENABLE FROST	Enable On / Off
ZONE 1 FROST ON/OFF	On / Off
ZONE 2 FROST ON / OFF	On / Off
ZONE 1 TOWEL RAIL TIME	Max time period for Towel Rail 3hr,6 hr,12hr. Default 3 hr
ZONE 2 TOWEL RAIL TIME	Max time period for Towel Rail 3hr,6 hr,12hr. Default 3 hr

PoR SETPOINT	SP Low , SP Med, SP High SP memory. Default SP memory
PoR FAN SPEED	Low, Med, High, Auto, Off. Default Auto
BACKLIGHT ACTIVE	20 – 120 Brightness of screen
BACKLIT STANDBY	20 – 120 Brightness of screen in Standby mode
BACKLIT TIMEOUT	10 – 60 secs Timeout to revert to Standby brightness
LOAD DEFAULTS	

User Menu

Press and hold Knob for 5 seconds to access User menu (If selected)

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Zone 1 Mode selection

AUTO
HEAT
HEAT BOOST
COOL
SETBACK
OFF / FROST

If mode not available then “greyed out” (ie If Fan is not selected HEAT BOOST and COOL not available)
If HEAT BOOST is enabled and selected it adds a User selection HEAT BOOST On / Off and displays on the screen
If SETBACK or FROST are enabled and selected the Setpoint shows the relative Setpoint value and is non user adjustable

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If Zone 2 is not selected this page is not available

Zone 2 Mode selection

AUTO
HEAT
HEAT BOOST
COOL
SETBACK
OFF / FROST

If mode not available then “greyed out” (ie If Fan is not selected HEAT BOOST and COOL not available)
If HEAT BOOST is enabled and selected it adds a User selection HEAT BOOST On / Off and displays on the screen
If SETBACK or FROST are enabled and selected the Setpoint shows the relative Setpoint value and is non user adjustable

BACnet Properties

ZONE 1 RT INT SEN0 Room Temp Analogue Input 00

In built sensor.
Type Room description into the Description box to create title for Zone 1.
Title used for Zone 1 all sensor setups
Resolution Changes display Range = 0.1, 0.5 or 1.0 Changes globally all Temp sensors displayed at the same resolution
Also changes Setpoint resolution but only 0.5 or 1.0 (If 0.1 is selected then Setpoint remains at 0.5)
Change OUT OF SERVICE to TRUE to use as a virtual sensor and write values in the BMS

ZONE 1 RT INT SEN1 Room Temp Analogue Input 01

Remote room sensor for ZONE 1 reference SEN1
Resolution copied from SEN1 so globally all Temp sensors displayed at the same resolution
Change OUT OF SERVICE to TRUE to use as a virtual sensor and write values in the BMS

ZONE 1 UF EXT SEN2 Underfloor Analogue Input 02

Remote Underfloor sensor reference SEN2
Resolution copied from SEN1 so globally all Temp sensors displayed at the same resolution
Change OUT OF SERVICE to TRUE to use as a virtual sensor and write values in the BMS

ZONE 2 RT EXT SEN3 Room Temp Analogue Input 03

Primary External Room sensor for ZONE 2
Type Room description into the Description box to create title for Zone 2.
Title used for Zone 2 for all sensor setups
Resolution copied from SEN1 so globally all Temp sensors displayed at the same resolution
Change OUT OF SERVICE to TRUE to use as a virtual sensor and write values in the BMS

ZONE 2 RT EXT SEN4 Room Temp Analogue Input 04

Remote room sensor reference SEN4
Resolution copied from SEN1 so globally all Temp sensors displayed at the same resolution
Change OUT OF SERVICE to TRUE to use as a virtual sensor and write values in the BMS

ZONE 2 UF EXT SEN5 Underfloor Analogue Input 05

Remote Underfloor sensor reference SEN2
Resolution copied from SEN1 so globally all Temp sensors displayed at the same resolution
Change OUT OF SERVICE to TRUE to use as a virtual sensor and write values in the BMS

ZONE 1 RH Humidity Analogue Input 06

A built in Humidity sensor 2% accuracy is available as an optional extra
The current Humidity value is displayed on the screen and is available via BACnet
Change OUT OF SERVICE to TRUE to use a proprietary Humidity sensor connected to the BMS and write values to the “Actual “ value to be displayed on the screen and available via BACnet

ZONE 2 RH Humidity Analogue Input 07

Zone 2 does not have a built in sensor
Change OUT OF SERVICE to TRUE to use a proprietary Humidity sensor connected to the BMS and write values to the “Actual “ value to be displayed on the screen and available via BACnet

ZONE 1 SP Temp Setpoint Analogue Input 08

Description Change title of Setpoint
Default range = 18 to 24 deg C Use Engineers menu to change range

ZONE 2 SP Temp Setpoint Analogue Input 09

Description Change title of Setpoint
Default range = 18 to 24 deg C Use Engineers menu to change range

FROST SETPOINT Analogue input 10

Set Frost protection setpoint Range 5 to 15 deg C (Default 12deg C) Applies to ZONE 1 and ZONE
Use Multi state 40 to Enable / Disable Frost protection

DIGITAL INPUT DIN1 Digital input 11

View status of Digital input On / Off Do not apply voltage to terminals

DIGITAL INPUT DIN2 Digital input 12

View status of Digital input On / Off Do not apply voltage to terminals

ZONE 1 Set Heat Status Multi State Value 13

Used to set display of flame / snow flake on Zone 1
Heat - Cool Off / Heat on / Cool on

ZONE 2 Set Heat Status Multi State Value 14

Used to set display of flame / snow flake on Zone 2
Heat - Cool Off / Heat on / Cool on

ZONE 1 Towel Rail Status Multi State Value 15

Display / Set status of Zone 1 Towel Rail setting Off / Auto / On / Timed / On
Set maximum time via Engineers menu default = 3 hours
Read / Write over BACnet

ZONE 2 Towel Rail Status Multi State Value 16

Display / Set status of Zone 2 Off / Auto / On / Timed / On
Set maximum time via Engineers menu default = 3 hours
Read / Write over BACnet

ZONE 1 User Mode Selection Multi State Value 17

View /Set status of User selection for ZONE 1 Auto / Heat / Heat Boost / Cool / Setback / Off / Off- Frost protection

ZONE 2 User Mode Selection Multi State Value 18

View /Set status of User selection for ZONE 2 Auto / Heat / Heat Boost / Cool / Setback / Off / Off- Frost protection

ZONE 1 USER FAN SPEED SELECTION Multi State Value 19
Displays user selection of fan speed for Zone 1 (if fan is enabled)
1/ Low 2/ Med 3/High 4/ Auto 5/ Off 6/ On 7/ AC Off 8/ AC On

ZONE 2 USER FAN SPEED SELECTION Multi State Value 20

Displays user selection of fan speed for Zone 2 (if fan is enabled)
1/ Low 2/ Med 3/High 4/ Auto 5/ Off 6/ On 7/ AC Off 8/ AC On

ZONE 1 TEMP INPUT Multi State Value 21

Used to change main room temperature input for Zone 1.
Internal only / external only SEN1 / average temperature of both

ZONE 2 TEMP INPUT Multi State Value 22

Used to change main room temperature input for Zone 2.
External SEN3 / External SEN4 / average temperature of both

ZONE 1 FAN SPEED POSITIONS Multi State Value 23

Options for User selection of fan speed for Zone 1. Only shown if Fan enabled with Multi State 25
1/ Low, Med, High 2/ Auto, Low, Med, High, 3/ Off, Auto, Low, Med, High 4/ Off, Low, Med, High 5/ 3 Steps graphic
6/ Auto, 3 Steps graphic 7/ Off, Auto, 3 Steps graphic 8/ Off, 3 Steps graphic, 9/ FAN On / Off 10/ A/C On / Off

ZONE 2 FAN SPEED POSITIONS Multi State Value 24

Options for User selection of fan speed for Zone 2. Only shown if Fan enabled with Multi State 26
1/ Low, Med, High 2/ Auto, Low, Med, High, 3/ Off, Auto, Low, Med, High 4/ Off, Low, Med, High 5/ 3 Steps graphic
6/ Auto, 3 Steps graphic 7/ Off, Auto, 3 Steps graphic 8/ Off, 3 Steps graphic, 9/ FAN On / Off 10/ A/C On / Off

ZONE 1 ENABLE FAN Multi State Value 25

Used to enable / disable Fan for Zone 1 Use Multi state 23 for Fan speed options

ZONE 2 ENABLE FAN Multi State Value 26

Used to enable / disable Fan for Zone 2. Use Multi state 24 for Fan speed options

ENABLE HUMIDITY Multi State Value 27

Used to enable and display humidity sensor. If used the value will be available via BACnet even if not displayed
Zone 1 only (Optional) built in sensor / Zone 2 only via proprietary Humidity sensor input / Zone 1 & Zone 2 / Disable

ENABLE TOWEL RAIL Multi State Value 28

Used to enable towel rail.
Zone 1 only with Timer/ Zone 2 only with Timer / Zone 1 & Zone 2 with Timer/ Zone 1 only / Zone 2 only /
Zone 1 and Zone 2 / Disable
When selected without Timer the User selection is On / Off / Auto The Timer range is also “greyed out” on the Engineers menu

ENABLE UNDERFLOOR Multi State Value 29

Used to set display of underfloor heating sensors If the sensors are connected the value is available via BACnet even if not displayed
Zone 1 only / Zone 2 only / Zone 1 & Zone 2 / Disabled

ENABLE ZONE 2 Multi State Value 30

Used to enable Zone 2
Zone 2 disable / Zone 2 enable

PoR SETPOINT Multi State Value 31

Value of setpoint on power up
SP low / SP medium / SP high / SP memory

PoR FAN SPEED Multi State Value 32

Value of fan speed on power up
Low / Med / High / Auto / Off

User Mode Type Multi State Value 33

Choice of user menu (press and hold button for 5 seconds).
Menu 4 / None Default Menu 4 (Menu 4 only available at present)

ZONE 1 TIMESWITCH Multi State Value 34

Used to toggle between Timeswitch On and Timeswitch Off values

ZONE 2 TIMESWITCH Multi State Value 35

Used to toggle between Timeswitch On and Timeswitch Off value

Zone 1 User Heat Boost Multi State Value 36
Enables / Disables Heat Boost selection from User menu

Zone 2 User Heat Boost — Multi State Value 37

Enables / Disables Heat Boost selection from User menu

Zone 1 User Frost Setting — Multi State Value 38

User selection of Frost protection On / Off

Zone 2 User Frost Setting — Multi State Value 39

User selection of Frost protection On / Off

Frost Enable — Multi State Value 40

Enable / Disable Frost protection (applies to Both Zones)