Multi-Channel Touch Controller

Quick-start guide: default configuration, alarm set point, math functions and relays

Product	8-channel Multi-Channel Touch Controller (eight 4-20 mA inputs)
Applies to	Controllers running the 8 CHANNEL DEFAULT configuration file
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1 Before you start

This guide covers two ways to set up the 8-channel Multi-Channel Touch Controller: a red alarm, where a relay energizes when any monitor goes into alarm (section 4), and a green indicator, where a relay stays energized while every monitor reads normal and drops out on an alarm or a lost signal (section 5). Both start from the default configuration, which a new controller ships with (section 3 explains how to reload it), and use the same building blocks: an editable set point tile, a math function that compares the monitor readings with the set point, a relay driven by the math function, and a tile that shows the relay state.

The worked example uses PureAire 0 to 25% O2 monitors, which alarm when the reading falls below the set point. Toxic and flammable gas monitors alarm when the reading rises above the set point. The only difference is the comparison chosen in the math function, and each step where it matters is marked.

1.1 The controller

The controller has sixteen hardware inputs and six relays. The eight current inputs, IN1 to IN8 on terminals 101 to 109 (105 and 110 are GND), each take the 4-20 mA signal from one monitor. The input card also has eight 0 to 10 V inputs, IN9 to IN16 on terminals 111 to 120. They are not used with PureAire monitors, but they occupy logical channels 9 to 16, which is why the new tiles in this guide start at channel 17.

The relay card in Slot C provides six relays: four individual relays, OUT1 to OUT4, each with its own pair of terminals (301/302, 303/304, 305/306 and 307/308), and two shared-common pairs, OUT5/OUT6 on terminals 309 and 310 with common 311, and OUT7/OUT8 on terminals 312 and 313 with common 314. Every relay ships disabled. Unlike earlier PureAire controllers, nothing is pre-configured: each relay you use is set up in the Built-in outputs menu as described in section 4.4. The USB port in Slot D reads configuration files from a USB stick.

1.2 Factory default configuration

A controller running the 8 CHANNEL DEFAULT configuration file shows eight input tiles on the home screen, Inp. A1 to Inp. A8, one per current input (Figure 1.1). Each input is set to the unit O2% with the 4-20 mA signal scaled 0 to 25% O2, which matches PureAire 0 to 25% O2 monitors (Figure 1.2). No set points, math functions or relays are configured, so a monitor in alarm changes its reading on the screen and nothing else. An input with nothing connected reads -LO-.

The name, unit and scaling of each input can be changed under Device configuration > Logical channels. The examples in this guide keep the default 0 to 25% O2 scaling.

Figure 1.1. Home screen in the default configuration. The eight input tiles, Inp. A1 to Inp. A8, read -LO- because no monitors are connected.

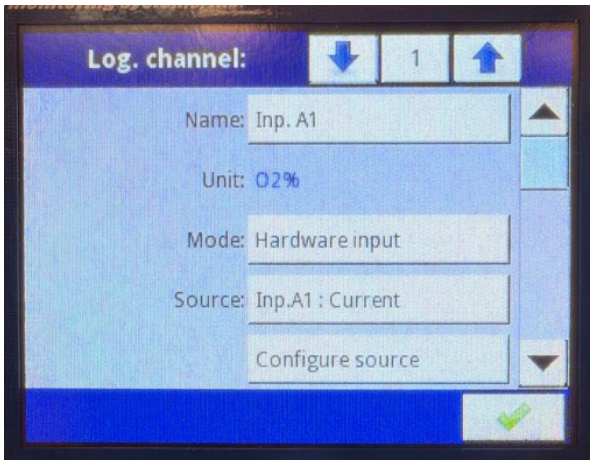

Figure 1.2. Logical channel 1 as shipped: name Inp. A1, unit O2%, mode Hardware input, source Inp.A1 : Current, scaled 0 to 25% O2.

1.3 What you need

A controller straight from PureAire already runs the default configuration, so you can skip section 3 and go straight to section 4 (red alarm) or section 5 (green indicator). The USB stick and the configuration file are only needed when the controller has been configured before and you want to start over.

- Only for a controller that has been configured before: a USB stick with the 8 CHANNEL DEFAULT configuration file, available from PureAire. Loading it returns the controller to the state described above (section 3).
- The alarm set point for your monitors. The O2 example uses 19.5% O2 to start; the set point can be changed from the home screen at any time.
- The relay you will wire to the horn, strobe or building system. The example uses Output 1 (Out.C1 : Relay, terminals 301 and 302).

1.4 How the pieces fit together

Figure 1.3 shows the four logical channels and the relay used in the red alarm example. The set point tile holds the alarm threshold. The math function watches the chosen inputs, compares each one with the set point and outputs 0 (normal) or 1 (alarm). The relay follows the math function, and a status tile shows the relay state on the home screen. The green indicator uses the same channels with the

comparison reversed and the relay set to drop out instead of pull in. Table 1.1 lists the channels and the output used in both examples.

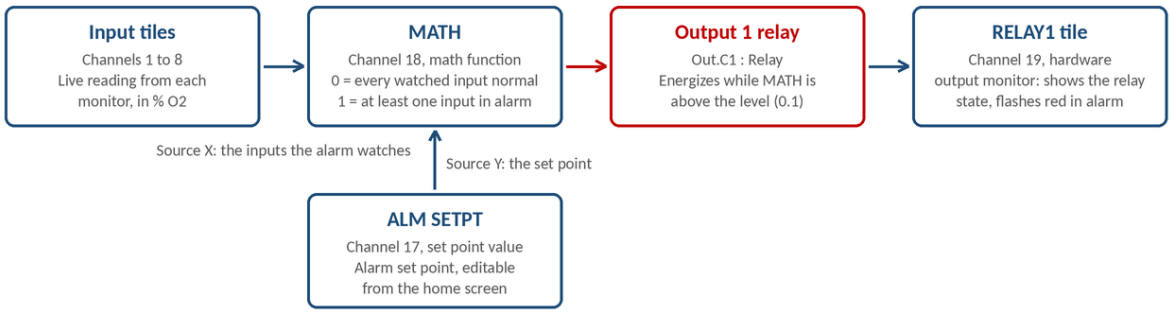

Figure 1.3. Alarm logic for the red alarm example. The channel numbers are the first free channels on a controller running the default configuration.

Table 1.1. Logical channels and output used in this guide

Channel	Name	Mode	What it does
1 to 8	Inp. A1 to Inp. A8	Hardware input	Reading from the monitor on each 4-20 mA input (default)
17	ALM SETPT	Set point value	Alarm set point, editable from the home screen
18	MATH (red alarm) or GREEN MATH (green indicator)	Math function	Compares the watched inputs with ALM SETPT; reads 0 or 1
19	RELAY1 (red alarm) or Channel 19 (green indicator)	Hardware output monitor	Shows the state of Output 1 on the home screen
Output 1	Out.C1 : Relay	above level	Relay driven by the math function

2 Getting around the menus

The home screen shows the tiles of the logical channels in the current group, with the date and time in the top bar. Tap anywhere on the screen to show the navigation keys along the bottom: MODE, MENU and GROUP (Figure 2.1 and Figure 2.2). MENU opens the main menu with four entries: Device configuration, Files management, Device information and Safe shutdown (Figure 2.3). Device configuration opens the CONFIGURATION menu: General settings, Logical channels, Built-in inputs, Built-in outputs and External outputs (Figure 2.4). Logical channels is where the tiles on the home screen are created and edited; Built-in outputs is where the relays are configured.

Figure 2.1. Home screen. Tap the screen to show the navigation keys.

Figure 2.2. Navigation keys: MODE, MENU and GROUP. MENU opens the main menu.

Figure 2.3. Main menu.

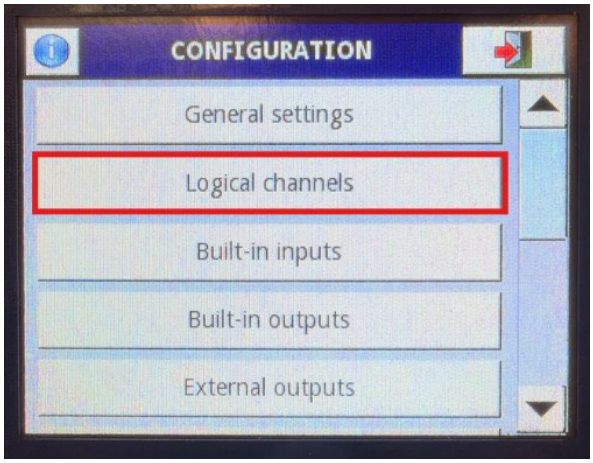

Figure 2.4. CONFIGURATION menu, opened from Device configuration. Logical channels holds the home screen tiles; Built-in outputs holds the relays.

Three things save time in the rest of this guide.

- Channel list. On a Log. channel page, the number between the two arrows is a button. Tap it to open a list of every logical channel and jump straight to the one you want instead of stepping through with the arrows (Figure 2.5 and Figure 2.6).
- Long press. A long press on a tile on the home screen opens that channel's settings directly (section 4.3).
- Saving. Nothing you enter is applied until it is saved. When you leave the configuration menus with the exit button in the top right corner, the controller asks whether to save or revert the changes; tap Save changes (section 4.3).

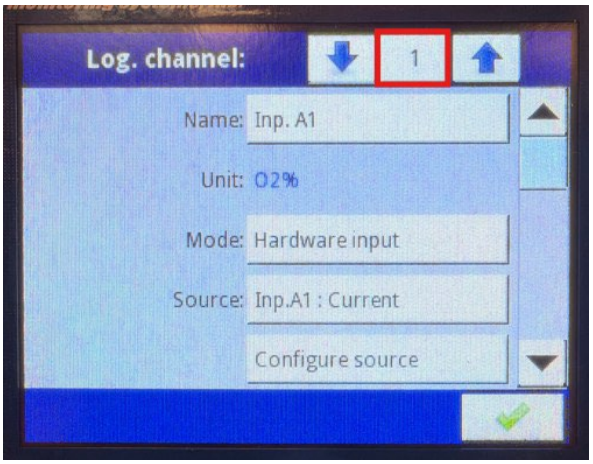

Figure 2.5. The channel number between the arrows is a button.

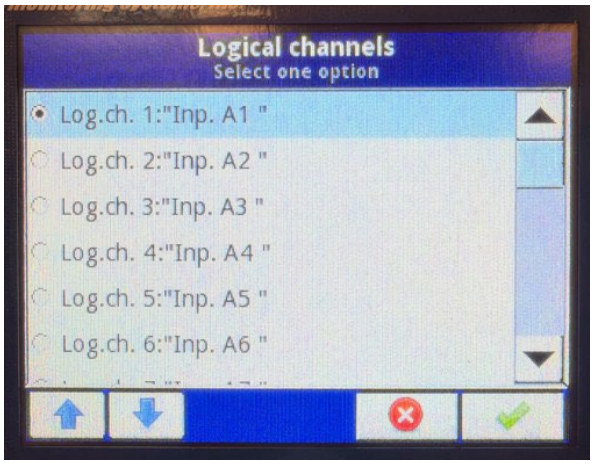

Figure 2.6. The channel list. Tap a channel to open it.

3 Loading the default configuration

Loading the 8 CHANNEL DEFAULT file returns the controller to the factory state described in section 1.2. A new controller from PureAire already runs this configuration and does not need this section. Load the file to start over after a configuration you do not want to keep, or to reset a controller that came back from the field. Copy the file to a USB stick first.

1. Tap the screen, tap MENU, then tap Files management (Figure 3.1).
2. Tap Bundled Configuration (Figure 3.2), then Load bundled configuration (Figure 3.3).

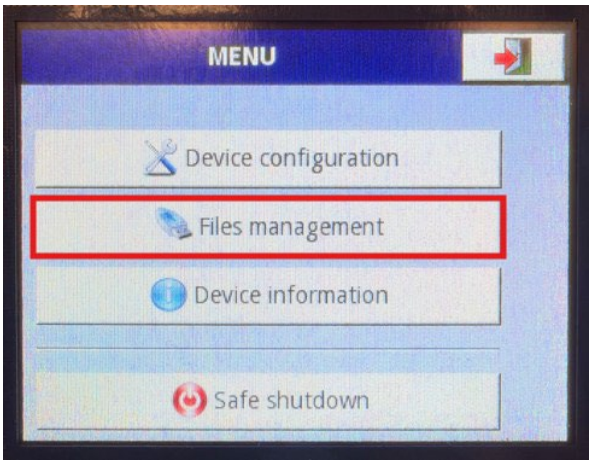

Figure 3.1. Files management on the main menu.

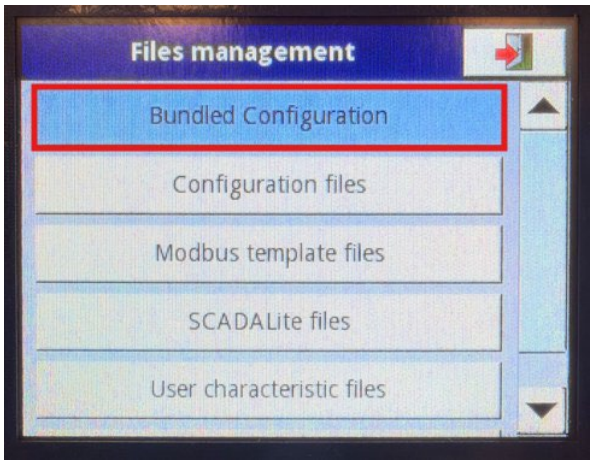

Figure 3.2. Bundled Configuration on the Files management menu.

3. Insert the USB stick. The controller lists the configuration files it finds. Tap 8 CHANNEL DEFAULT and confirm with the check mark (Figure 3.4).

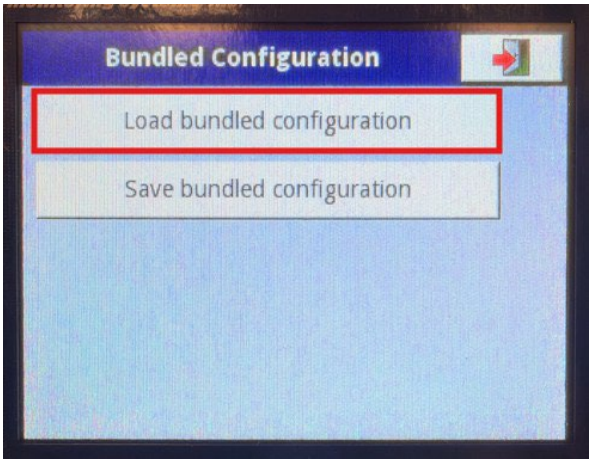

Figure 3.3. Load bundled configuration. Insert the USB stick when you reach this screen.

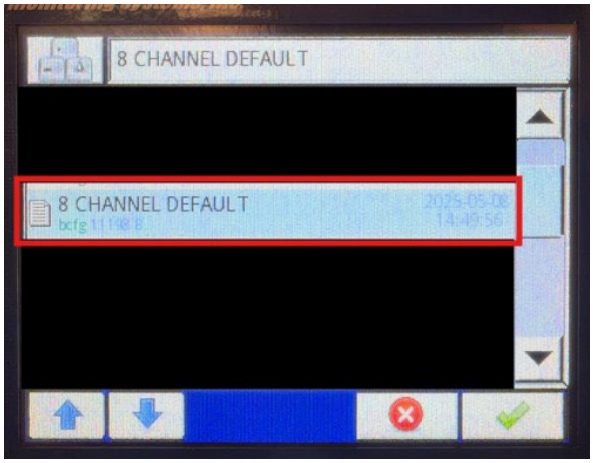

Figure 3.4. The USB stick's contents. Select 8 CHANNEL DEFAULT and confirm.

4. In Select files to import, leave both Main configuration and Users permissions ticked and confirm (Figure 3.5). The controller imports the file.
5. If the file was saved under an older firmware version, the controller reports that it will restart (Figure 3.6). Tap OK. After the restart the controller runs the default configuration.

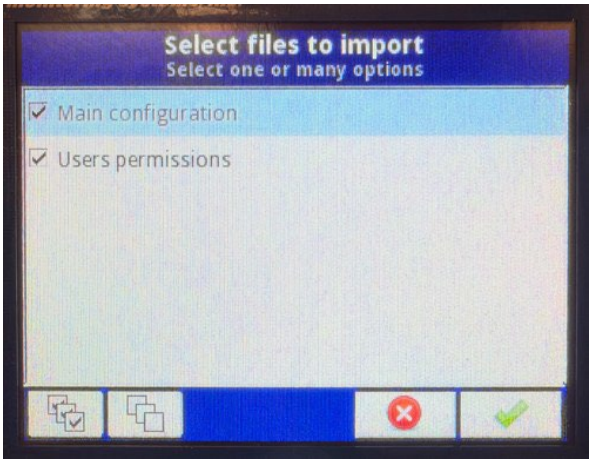

Figure 3.5. Import both Main configuration and Users permissions.

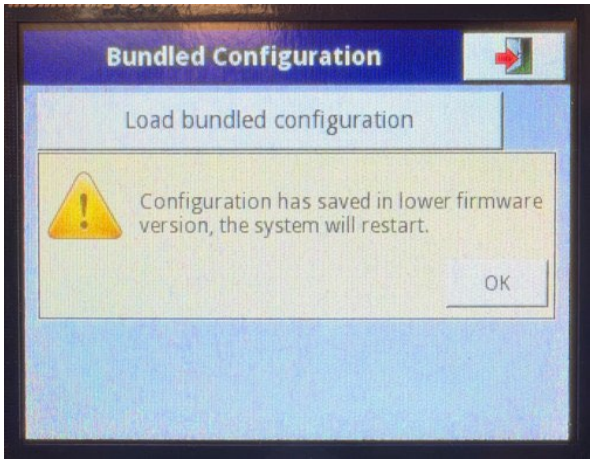

Figure 3.6. Restart notice shown when the file comes from an older firmware version. Tap OK.

4 Red alarm: a relay energizes when any monitor alarms

In this setup the relay energizes when any watched monitor reads below the alarm set point and releases when every watched monitor is back above it. On the home screen the math function and the relay tile read 1 in alarm, and the relay tile flashes red. Work through sections 4.1 to 4.5 in order; each one builds on the channels created before it.

4.1 Create the alarm set point tile (channel 17)

The set point lives in its own logical channel as a Set point value with the edit button enabled, so the alarm threshold can be changed from the home screen without opening the menus.

1. Open MENU > Device configuration > Logical channels and go to channel 17, the first channel after the sixteen inputs. An unused channel shows its default name and the mode disabled (Figure 4.1).
2. Tap Mode and select Set point value (Figure 4.2). The channel now has a Set point value field, 0 by default, and an Edit button field set to disabled (Figure 4.3).

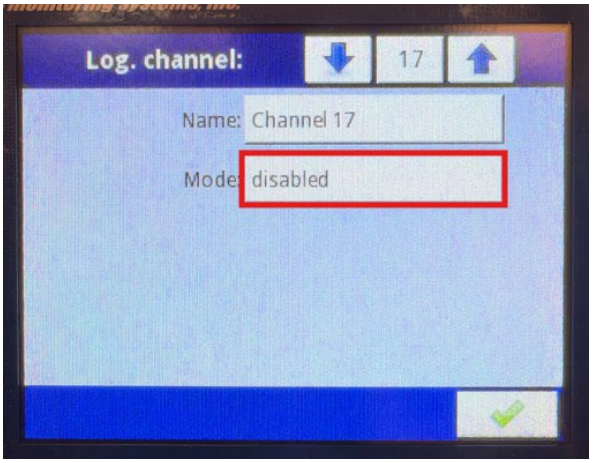

Figure 4.1. Channel 17 before configuration: default name, mode disabled.

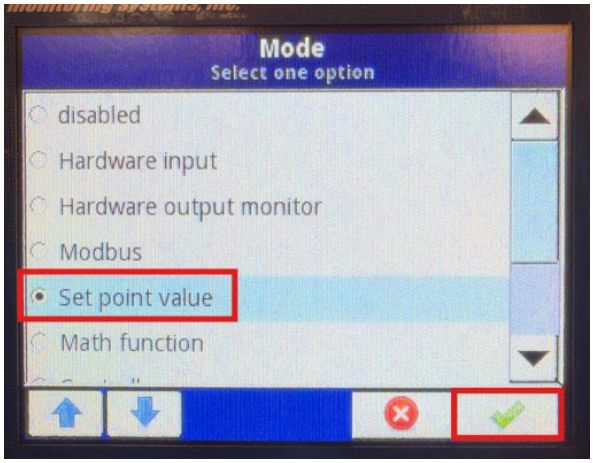

Figure 4.2. Mode list. Select Set point value and confirm.

3. Tap Edit button and select enabled (Figure 4.4). Two fields appear below it: Edit range low and Edit range high, preset to -1000000 and 1000000 (Figure 4.5).

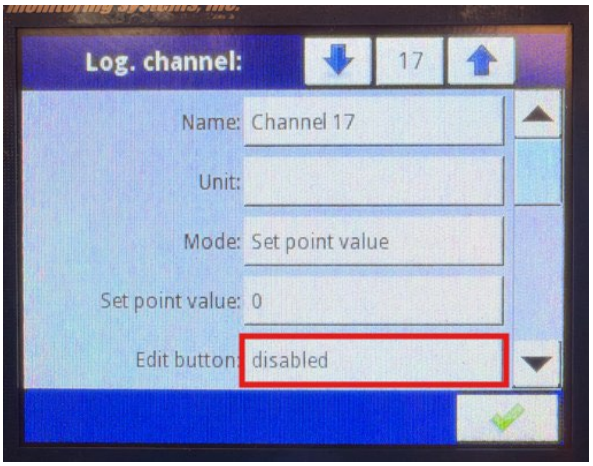

Figure 4.3. Set point value selected. Edit button is disabled by default.

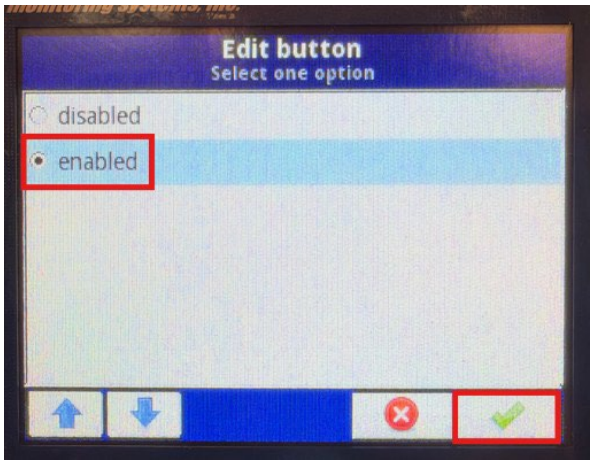

Figure 4.4. Set Edit button to enabled.

4. Tap each range field and enter the working range of your monitors. For 0 to 25% O2 monitors enter 0 and 25 (Figure 4.6). The range limits what can be typed into the tile from the home screen.

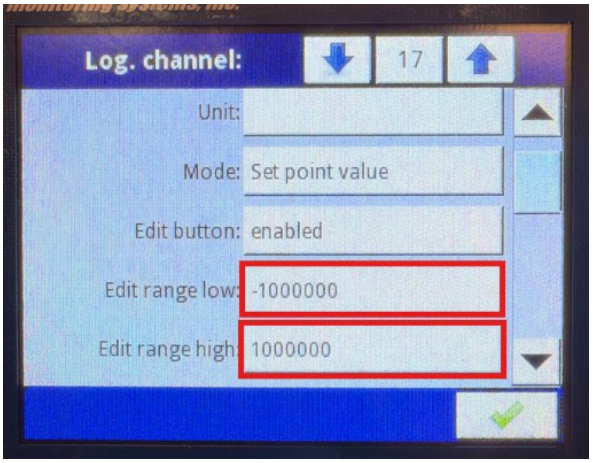

Figure 4.5. Edit range low and high as preset, -1000000 and 1000000.

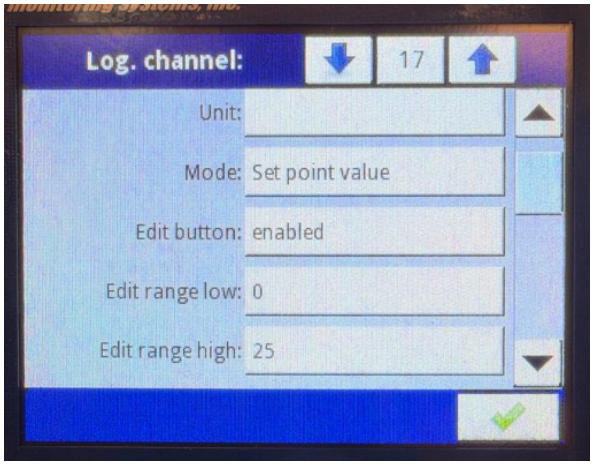

Figure 4.6. Edit range set to 0 and 25 for 0 to 25% O2 monitors.

5. Scroll down to Displaying and tap Precision (Figure 4.7). Select 0.0, one decimal place, to match the resolution of PureAire 0 to 25% O2 monitors (Figure 4.8). With the precision left at 0 the tile only accepts whole numbers.

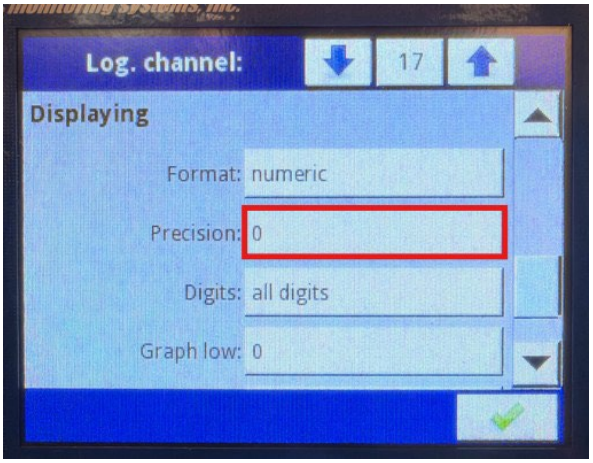

Figure 4.7. Precision under Displaying, 0 by default.

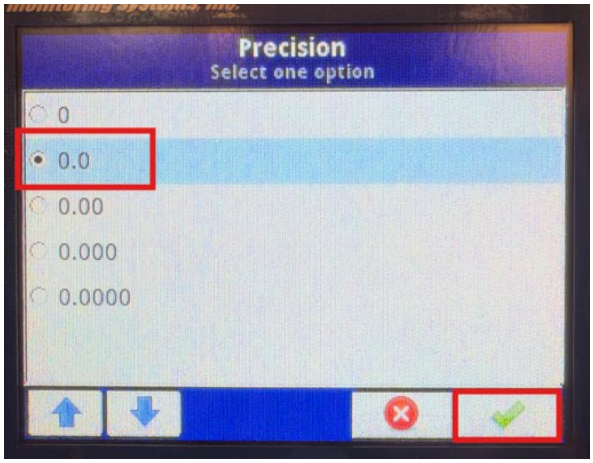

Figure 4.8. Select 0.0 for one decimal place.

6. Scroll back to the top, tap Name and rename the channel ALM SETPT (Figure 4.9). The name appears on the tile and in every list where this channel is selected later.

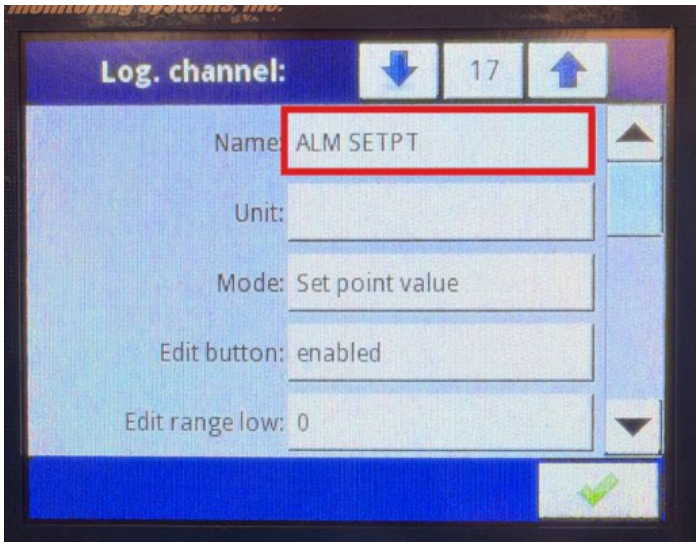

Figure 4.9. Channel 17 renamed ALM SETPT.

4.2 Create the alarm math function (channel 18)

The math function is the listener. It watches the inputs you choose (Source X), compares each one with ALM SETPT (Source Y) and outputs 1 when the comparison is true for at least one input, otherwise 0. The relay in section 4.4 and the flashing highlight in section 4.5 both follow this channel.

1. Go to channel 18 and rename it MATH (Figure 4.10).
2. Tap Mode and select Math function (Figure 4.11). A Function field appears with the default function [1] + [1] (Figure 4.12).

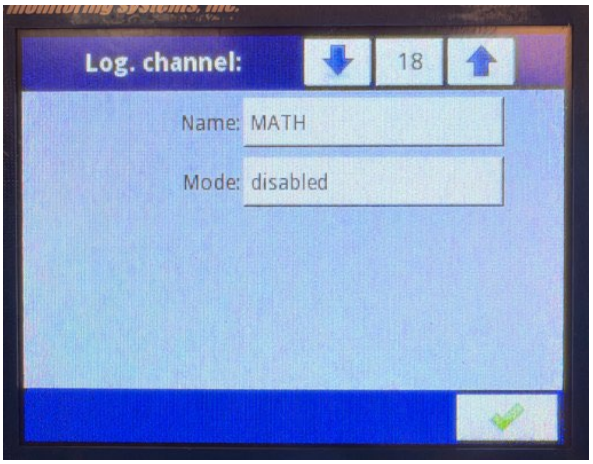

Figure 4.10. Channel 18 renamed MATH.

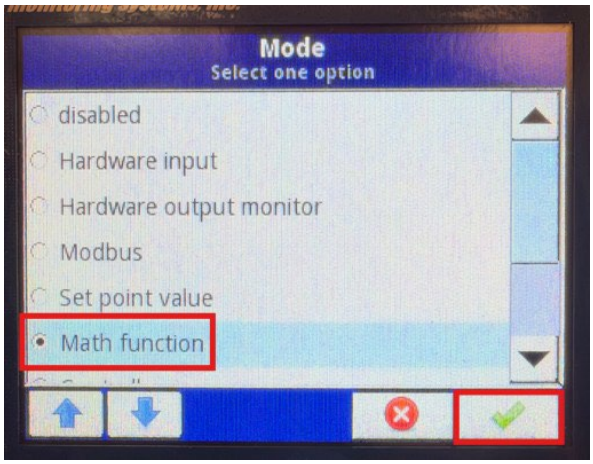

Figure 4.11. Mode list. Select Math function and confirm.

3. Tap the Function field to open the function page. The first line, Function, reads X + Y (Figure 4.13). Tap it and select At least one X[i] < Y (Figure 4.14). This function outputs 1 when at least one of the Source X inputs reads below the Source Y value, which is the alarm condition for O2 monitors.

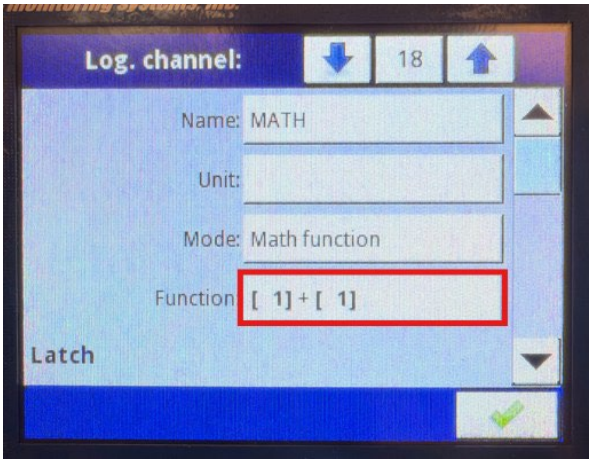

Figure 4.12. Function field with the default [1] + [1]. Tap it to open the function page.

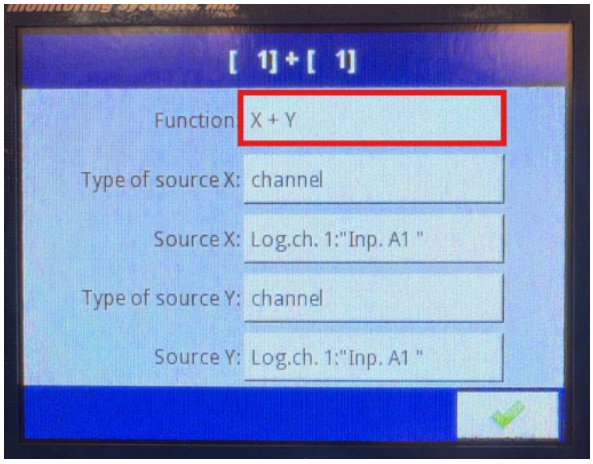

Figure 4.13. Function page. Tap the Function line, X + Y, to choose the comparison.

4. Tap Source X, which now reads Press to select (Figure 4.15), and tick the inputs the alarm should watch. The example ticks Log.ch. 1 and 2, Inp. A1 and Inp. A2 (Figure 4.16). Confirm with the check mark; Source X then reads Log.ch. 1,2. Leave X error handling at errors forwarded to result.

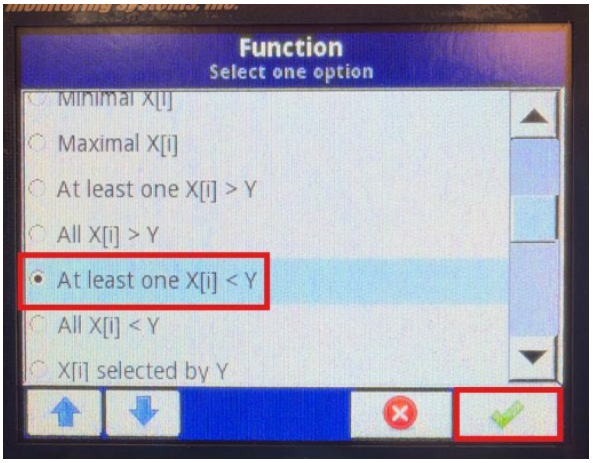

Figure 4.14. Function list. Select At least one X[i] < Y for O2 monitors.

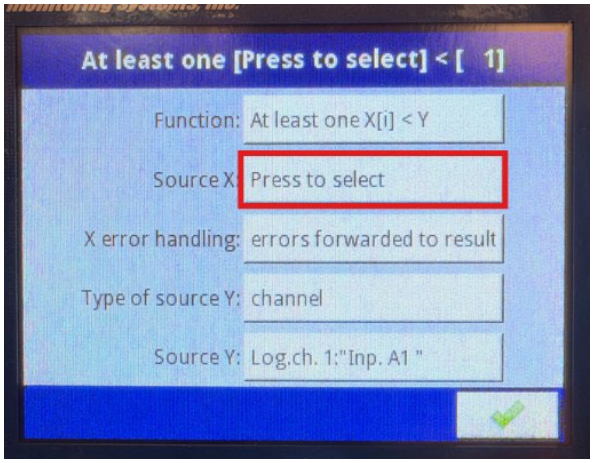

Figure 4.15. Source X reads Press to select after the function is changed. Tap it.

5. Tap Source Y, which still points to Inp. A1 (Figure 4.17), and select Log.ch.17 ALM SETPT (Figure 4.18). The page title changes to At least one [1,...] < [17] (Figure 4.19).

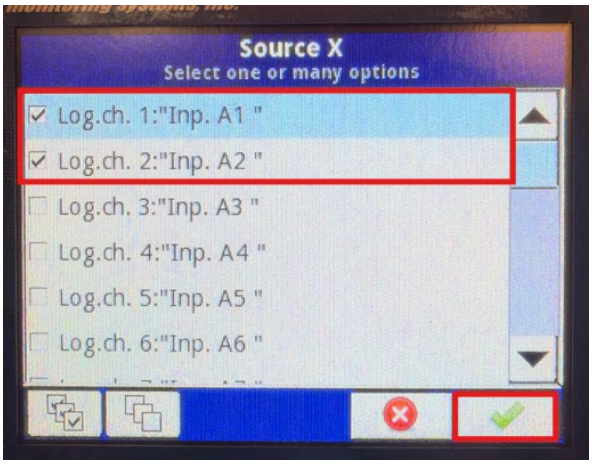

Figure 4.16. Source X list with Inp. A1 and Inp. A2 ticked.

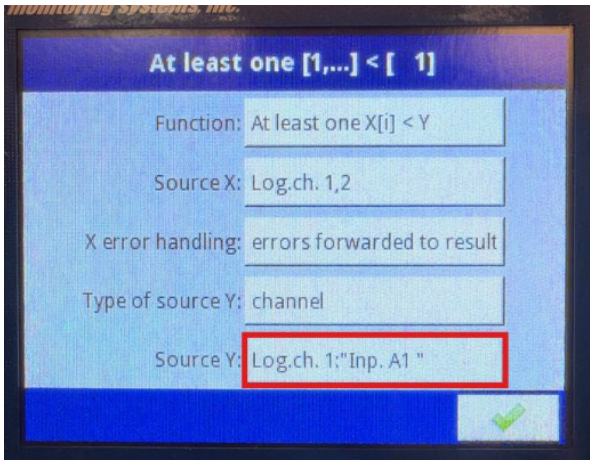

Figure 4.17. Source Y still points to Inp. A1. Tap it.

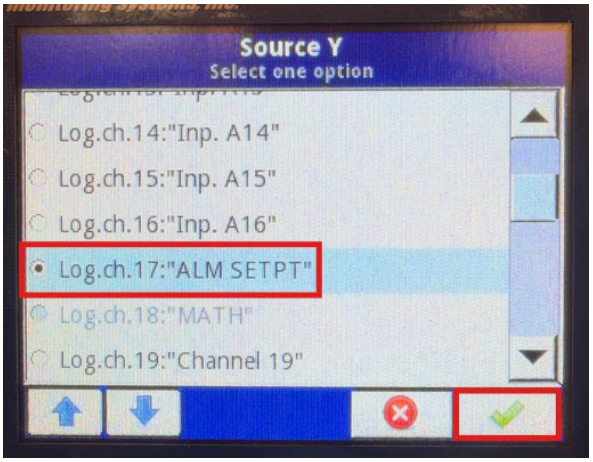

Figure 4.18. Source Y list. Select Log.ch.17 ALM SETPT.

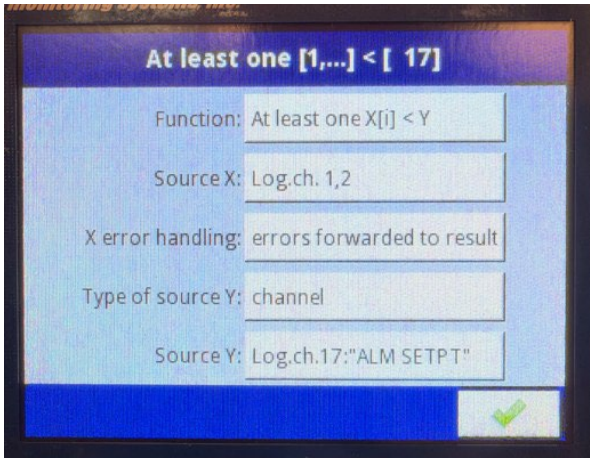

Figure 4.19. Function page complete: At least one [1,...] < [17].

6. Confirm with the check mark. The channel 18 page now shows Function: At least one [1,...] < [17] (Figure 4.20).

For monitors that alarm on a rising reading, such as CH3Br, CO or combustible gas monitors, select At least one X[i] > Y in step 3. Everything else in this section stays the same. Section 6.2 lists the functions for both monitor types.

4.3 Save and check the home screen

Leave the menus with the exit button and tap Save changes (Figure 4.20 and Figure 4.21). The home screen now shows the two new tiles, ALM SETPT with its edit button and MATH (Figure 4.22). With no monitors connected the inputs read -LO-, and MATH reads -LO- as well because errors on the watched inputs are forwarded to the result. Tap the ALM SETPT tile to enter the alarm set point. The example starts at 19.5% O2 and uses 16.0 and 18.0 for the demonstrations that follow.

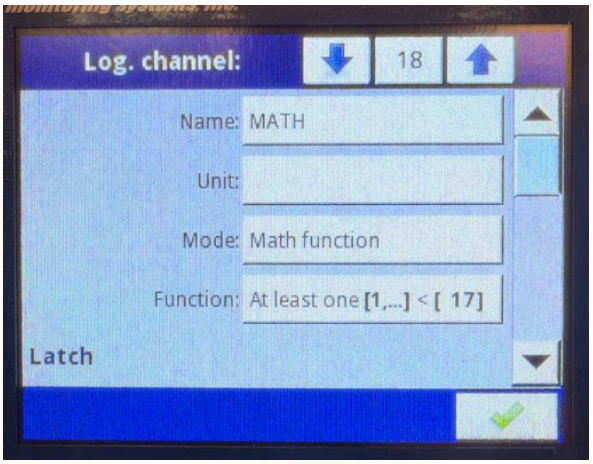

Figure 4.20. Channel 18 with the finished function.

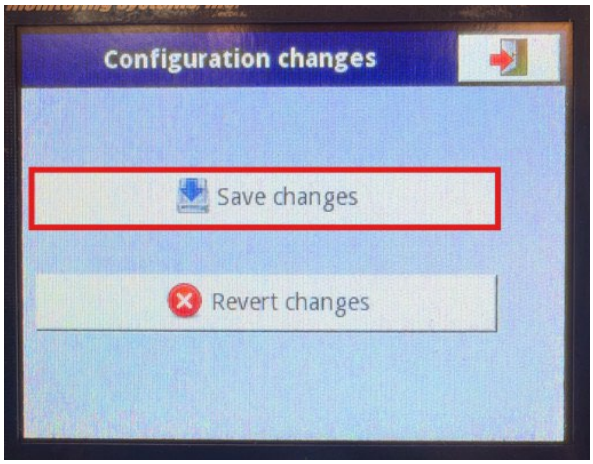

Figure 4.21. The Configuration changes prompt shown when leaving the menus. Tap Save changes.

Figure 4.22. Home screen after saving. ALM SETPT shows 19.5 and MATH reads -LO- because Inp. A1 and Inp. A2 are not connected.

Figure 4.23 to Figure 4.25 show the math function with monitors connected to inputs A1 to A4 and the set point at 16.0. MATH watches only A1 and A2, so A3 reading 15.0, below the set point, does not trigger it. When A1 drops to 15.8, MATH changes to 1; when A1 recovers to 18.7, MATH returns to 0. The math function does not latch.

Figure 4.23. Four monitors connected, set point 16.0. A3 reads 15.0 but is not a Source X input, so MATH stays 0.

Figure 4.24. A1 at 15.8, below the set point: MATH reads 1.

Figure 4.25. A1 back at 18.7: MATH returns to 0.

To change which inputs the alarm watches, long-press the MATH tile on the home screen (Figure 4.26). The function page opens directly (Figure 4.27). Tap Source X (Figure 4.28), tick the additional inputs and confirm (Figure 4.29); Source X then lists every watched channel, for example Log.ch. 1,2,3,4, and A3 reading below the set point now triggers the alarm. Save when leaving the menus. For the rest of this guide the function watches A1 and A2 only, with A3 and A4 disconnected and the set point at 18.0.

Figure 4.26. Long-press the MATH tile to open its settings.

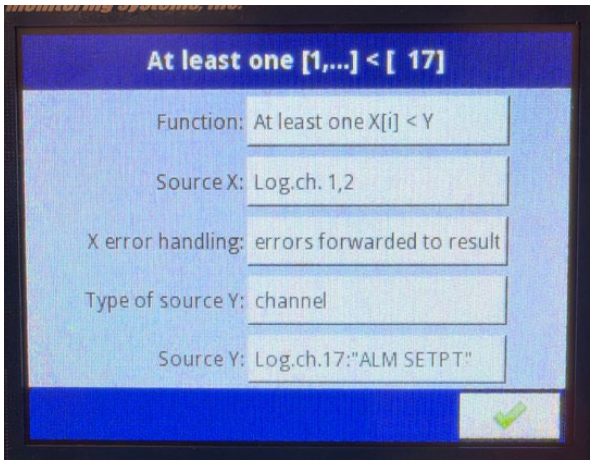

Figure 4.27. The function page opens directly.

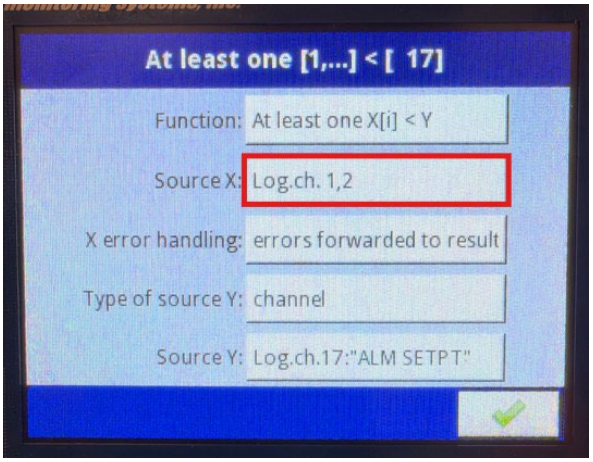

Figure 4.28. Tap Source X to change the watched inputs.

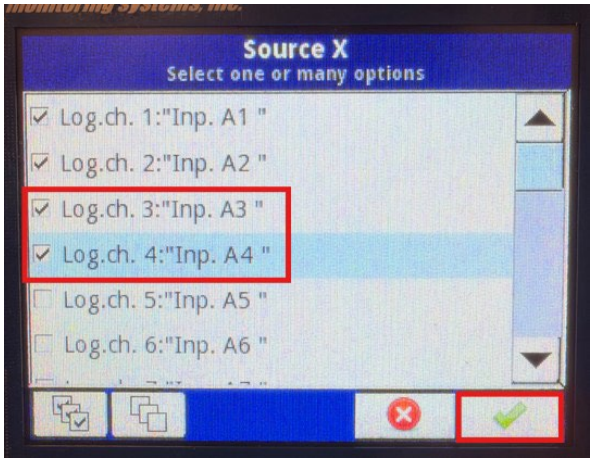

Figure 4.29. Inp. A3 and Inp. A4 added to Source X.

4.4 Configure the relay (Output 1)

The relay is configured under Built-in outputs. It is set to energize while its source, the MATH channel, is above a level between 0 and 1.

1. Open MENU > Device configuration > Built-in outputs (Figure 4.30). The page opens on Output 1, Out.C1 : Relay, with the mode disabled (Figure 4.31). Use the arrows to select a different relay if needed.

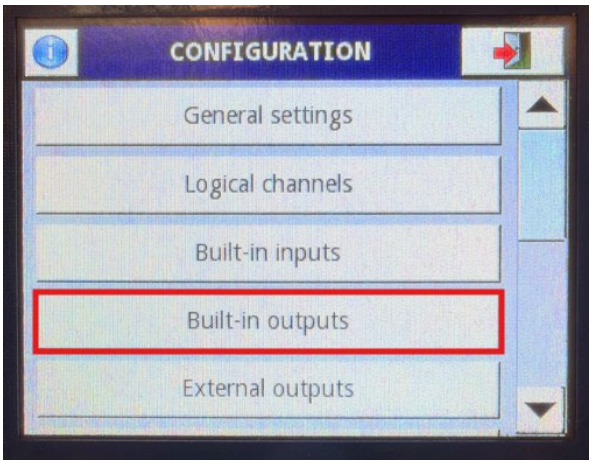

Figure 4.30. Built-in outputs on the CONFIGURATION menu.

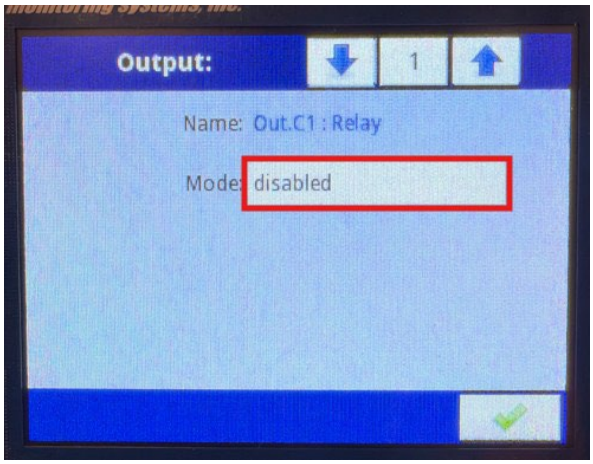

Figure 4.31. Output 1, Out.C1 : Relay, with the mode disabled as shipped.

2. Tap Mode and select above level (Figure 4.32).
3. Tap Source and select Log.ch.18 MATH (Figure 4.33).

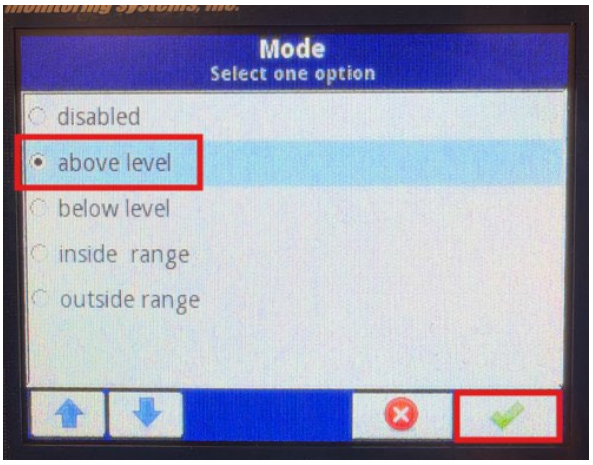

Figure 4.32. Mode list. Select above level.

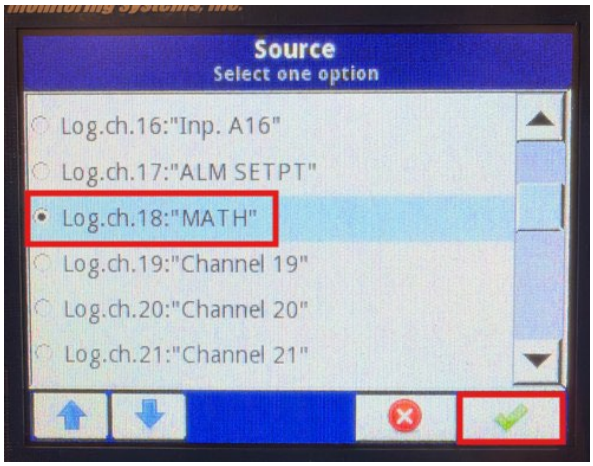

Figure 4.33. Source list. Select Log.ch.18 MATH.

4. Tap Alarm state and select immed. ON (Figure 4.34). Alarm state sets what the relay does while the source channel has no valid value, for example when MATH reads -LO- because a watched input is disconnected. With immed. ON a lost signal raises the alarm as well.
5. Scroll down to Levels. Leave Level mode at value and set Level to a number between 0 and 1, exclusive; the example uses 0.1 (Figure 4.35). The relay energizes while MATH, which reads 0 or 1, is above this level.

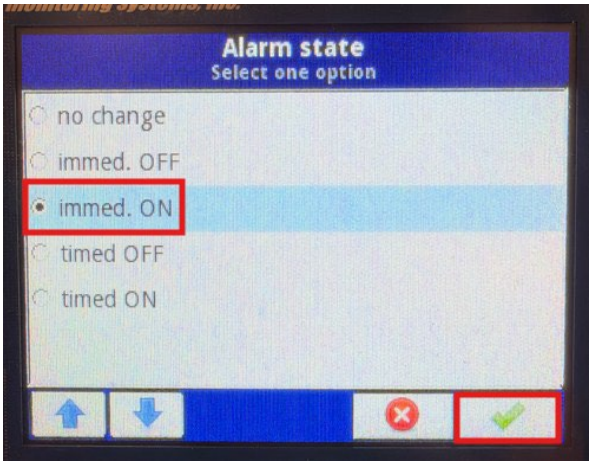

Figure 4.34. Alarm state list. Select immed. ON.

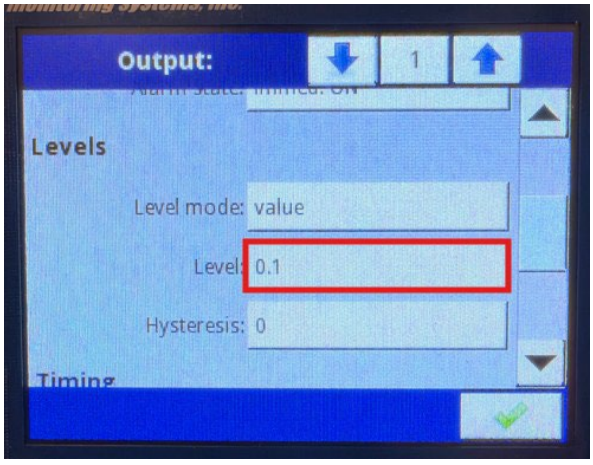

Figure 4.35. Level set to 0.1 under Levels.

6. Leave the menus and save.

Do not leave Level at 0. With the level at 0 the relay does not switch reliably when MATH changes between 0 and 1. Use any value between 0 and 1, such as 0.1 or 0.5.

4.5 Add a relay status tile with a red flashing highlight (channel 19)

The relay works at this point, but nothing on the home screen shows its state. A Hardware output monitor channel displays the relay state as 0 or 1, and a channel highlight makes the tile flash red while the math function is in alarm.

1. Open Logical channels and go to channel 19, the next unused channel (Figure 4.36). Rename it RELAY1 (Figure 4.37).

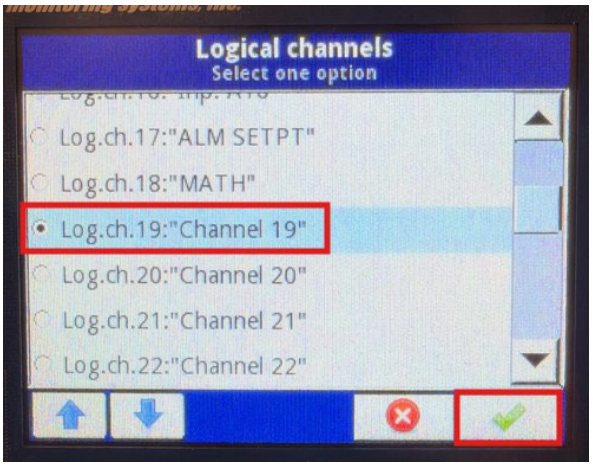

Figure 4.36. Channel list. Select Log.ch.19.

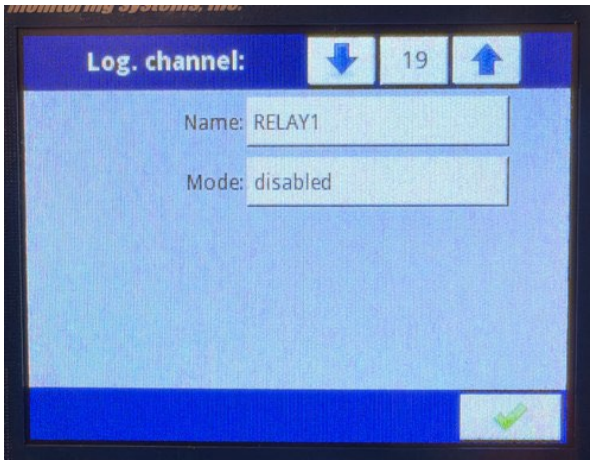

Figure 4.37. Channel 19 renamed RELAY1.

2. Tap Mode and select Hardware output monitor (Figure 4.38). Source defaults to Out.C1 : Relay, the relay configured in section 4.4; change it if you used a different output (Figure 4.39).

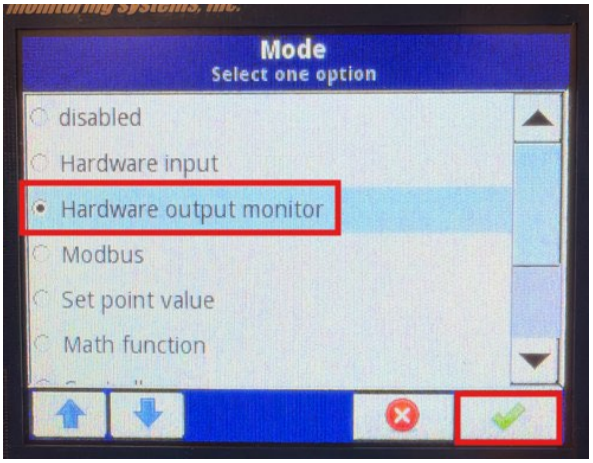

Figure 4.38. Mode list. Select Hardware output monitor.

Figure 4.39. Source defaults to Out.C1 : Relay.

3. Scroll to the bottom of the channel page and tap channel highlight (Figure 4.40). Highlight color 1 opens with the mode disabled. Tap Mode and select blinking (Figure 4.41). Blink period and Trig. hold time default to 1 sec.

Figure 4.40. The channel highlight button at the bottom of the channel page.

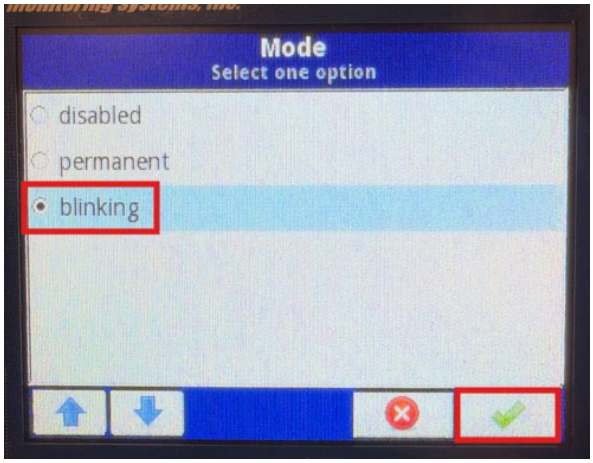

Figure 4.41. Highlight mode list. Select blinking.

4. Tap Trigger and select Log.ch.18 MATH (Figure 4.42).
5. Tap Alarm level and select highlight forced (Figure 4.43).

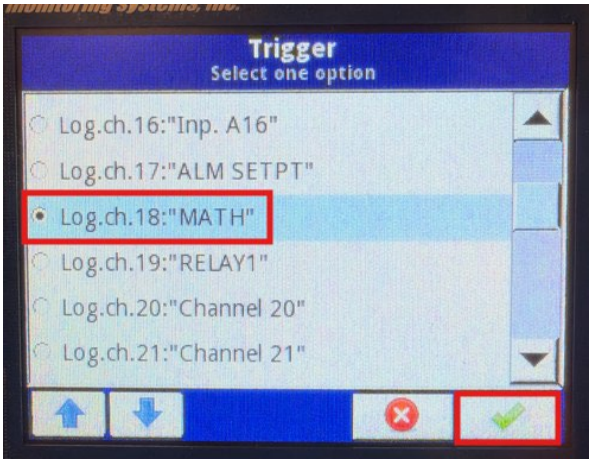

Figure 4.42. Trigger list. Select Log.ch.18 MATH.

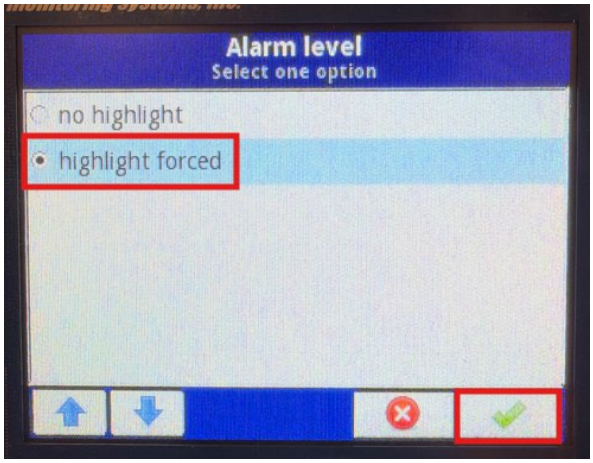

Figure 4.43. Alarm level list. Select highlight forced.

6. Tap Color. In the color selector the top rows set the text color and the bottom rows the tile background, and the Example bar previews the result. Select red in the bottom rows and confirm (Figure 4.44). The highlight page now shows Color on a red background (Figure 4.45).

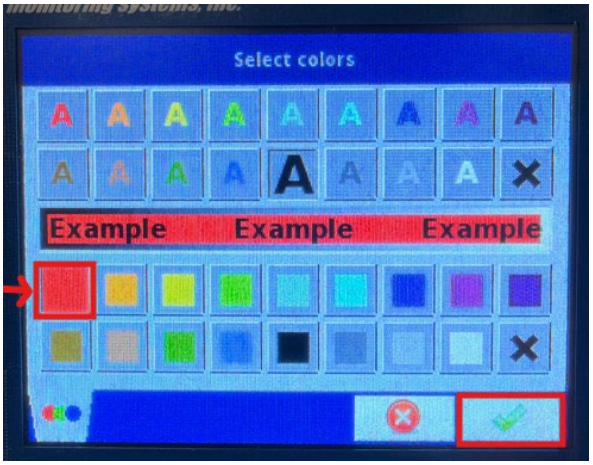

Figure 4.44. Color selector. Select red in the bottom rows for the tile background.

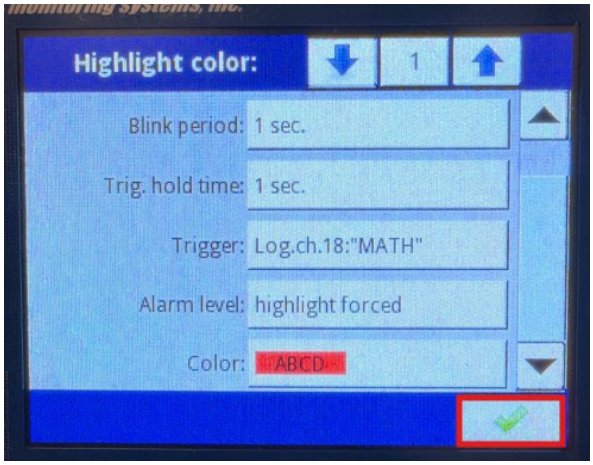

Figure 4.45. Highlight color 1 complete: blinking, 1 sec, trigger MATH, highlight forced, red.

7. Leave the menus and save.

Three highlight colors can be configured for each channel; this example uses only the first. A highlight can also be permanent instead of blinking, and any channel can be its trigger.

4.6 What the home screen shows

Figure 4.46 to Figure 4.49 show the finished setup with the set point at 18.0. In normal operation MATH and RELAY1 read 0. When A1 drops to 17.0, MATH and RELAY1 change to 1, the relay energizes and the

RELAY1 tile flashes red once a second. When A1 recovers to 18.8, MATH and RELAY1 return to 0, the relay releases and the flashing stops. Table 4.1 summarizes the tiles.

Figure 4.46. Normal operation: MATH 0, RELAY1 0.

Figure 4.47. A1 at 17.0, below the 18.0 set point: MATH 1, RELAY1 1. The tile is in the plain phase of the flash.

Figure 4.48. The same alarm one second later, with RELAY1 in the red phase of the flash.

Figure 4.49. A1 back at 18.8: MATH 0, RELAY1 0, flashing stopped.

Table 4.1. Home screen tiles in normal operation and in alarm (red alarm setup)

Tile	What it shows	Normal	In alarm
Input tiles (Inp. A1 and so on)	Live reading from one monitor, in % O2	Reading above the set point	Reading below the set point. The tile keeps its normal appearance.
ALM SETPT	Alarm set point, editable from the home screen	18.0 in the example	Unchanged
MATH	Alarm math function output	0	1

Tile	What it shows	Normal	In alarm
RELAY1	State of Output 1	0	1, tile flashing red

5 Green indicator: a relay stays energized while every monitor reads normal

Some installations want a green light that is on during normal operation and goes out on an alarm or a lost signal, instead of or in addition to a red light that comes on in alarm. The relay for the green light is energized while all watched monitors read above the set point, and it releases when any one of them reads below the set point, is disconnected or faults. The setup mirrors section 4 with three differences: the math function uses All X[i] > Y, the relay's Alarm state is immed. OFF, and the status tile has no highlight. This section starts from a controller freshly loaded with the default configuration, with monitors on inputs A1 and A2 (Figure 5.1).

Figure 5.1. Starting point: the default configuration with monitors on Inp. A1 and Inp. A2.

5.1 Create the alarm set point tile (channel 17)

Set up channel 17 exactly as in section 4.1: Mode Set point value, Edit button enabled, Edit range 0 to 25 (Figure 5.2), Precision 0.0, and the name ALM SETPT (Figure 5.3).

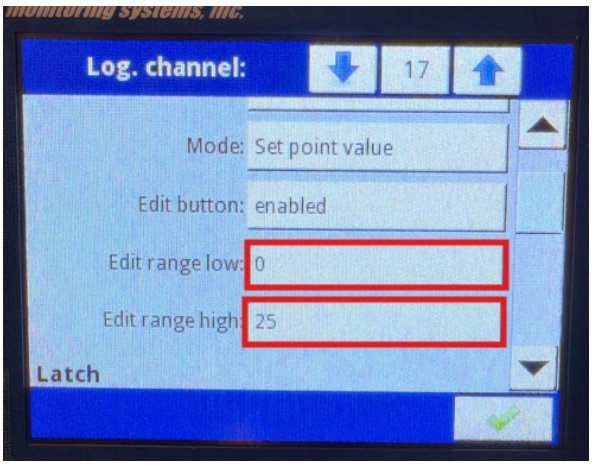

Figure 5.2. Edit range set to 0 and 25.

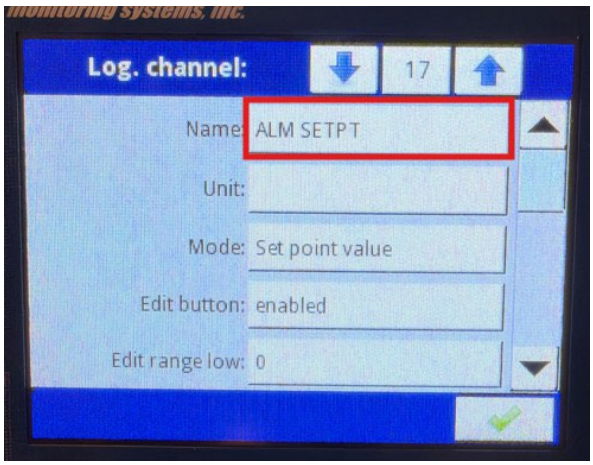

Figure 5.3. Channel 17 renamed ALM SETPT.

5.2 Create the green math function (channel 18)

1. Go to channel 18 and rename it GREEN MATH (Figure 5.4). Tap Mode and select Math function (Figure 5.5).

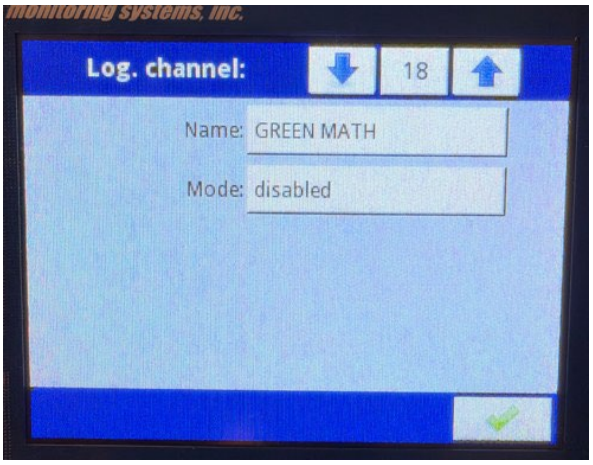

Figure 5.4. Channel 18 renamed GREEN MATH.

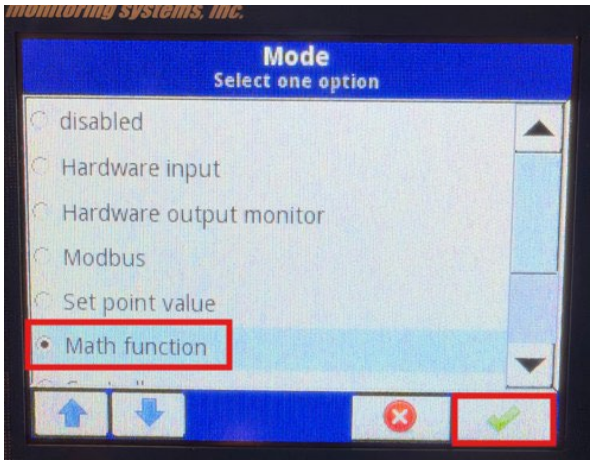

Figure 5.5. Mode list. Select Math function.

2. Tap the Function field (Figure 5.6) and, on the function page, select All X[i] > Y (Figure 5.7). This function outputs 1 only while every Source X input reads above Source Y, so it reads 1 in normal operation and 0 as soon as one monitor reads below the set point.

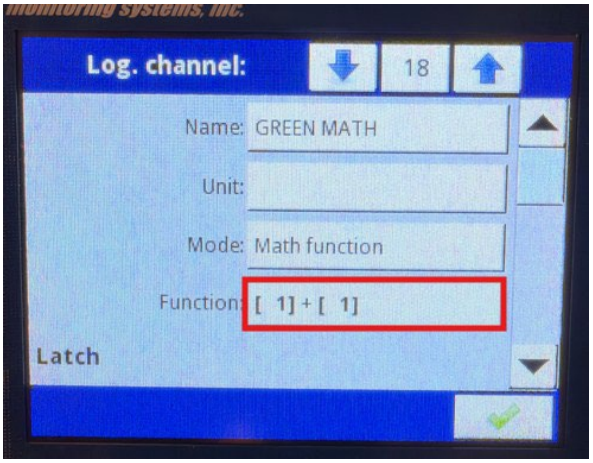

Figure 5.6. Function field with the default [1] + [1]. Tap it to open the function page.

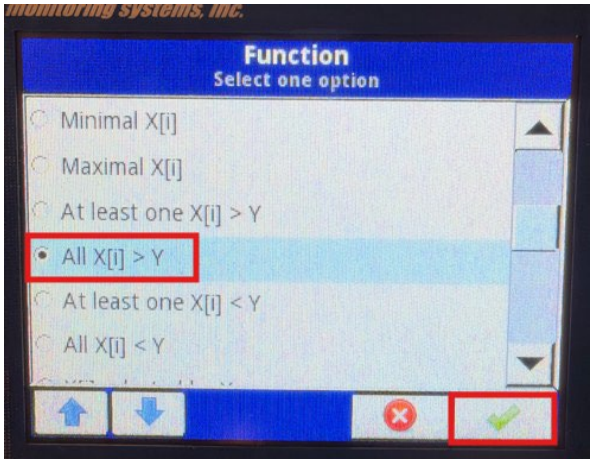

Figure 5.7. Function list. Select All X[i] > Y for O2 monitors.

3. Tap Source X and tick the inputs to watch; the example ticks Inp. A1 and Inp. A2 (Figure 5.8). Both must read above the set point for the output to stay 1.
4. Tap Source Y and select Log.ch.17 ALM SETPT (Figure 5.9). The page title reads All [1,2] > [17] (Figure 5.10).

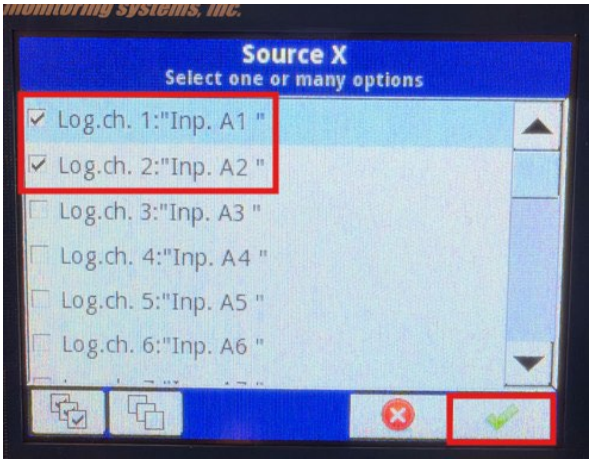

Figure 5.8. Source X with Inp. A1 and Inp. A2 ticked.

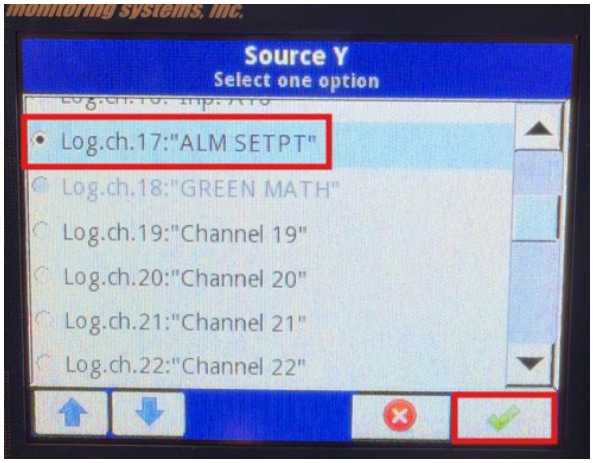

Figure 5.9. Source Y list. Select Log.ch.17 ALM SETPT.

5. Confirm with the check mark (Figure 5.11) and save when leaving the menus.

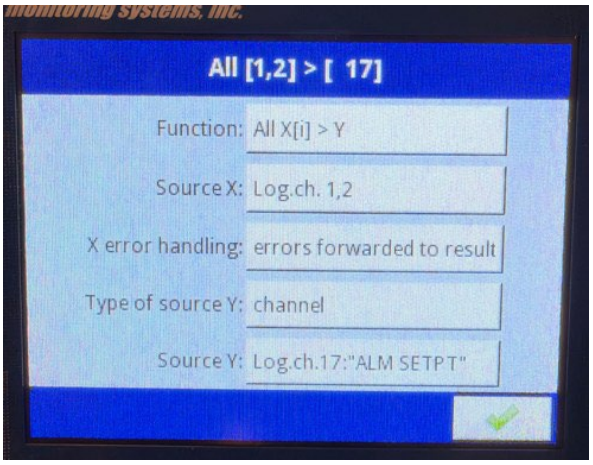

Figure 5.10. Function page complete: All [1,2] > [17].

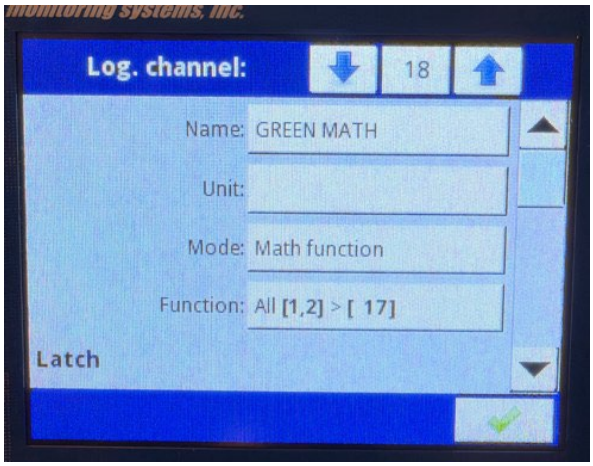

Figure 5.11. Channel 18 with the finished function.

For toxic and flammable gas monitors, select All X[i] < Y in step 2: for these monitors, normal operation is every reading below the set point.

5.3 Configure the relay (Output 1)

Open Built-in outputs and configure Output 1 as in section 4.4 with two settings changed (Figure 5.12): Source is Log.ch.18 GREEN MATH, and Alarm state is immed. OFF, so the relay releases when GREEN MATH has no valid value, for example when a watched input is disconnected. Mode stays above level, and Level is any value between 0 and 1; the example uses 0.5 (Figure 5.13). The relay is energized while GREEN MATH reads 1.

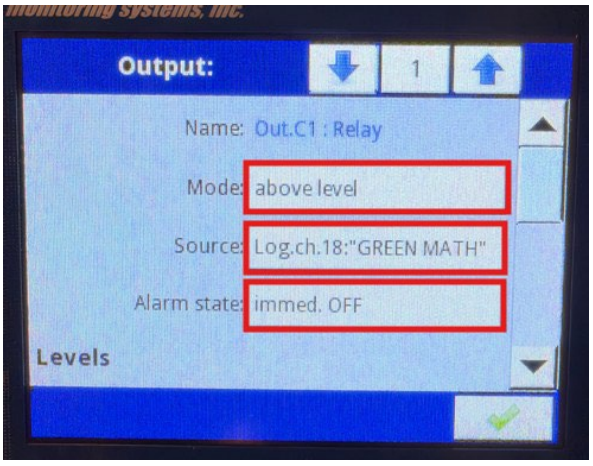

Figure 5.12. Output 1: mode above level, source GREEN MATH, alarm state immed. OFF.

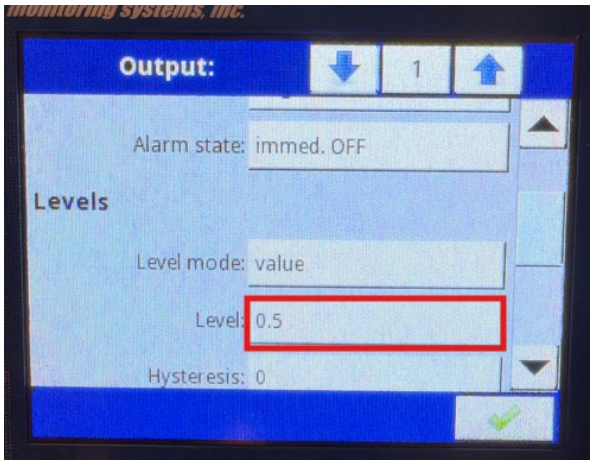

Figure 5.13. Level set to 0.5.

5.4 Add a relay status tile (channel 19)

Go to channel 19 in Logical channels (Figure 5.14) and set Mode to Hardware output monitor (Figure 5.15). Source defaults to Out.C1 : Relay. The example keeps the default name, Channel 19; rename it if you prefer. No highlight is configured for the green indicator, though one can be added as in section 4.5.

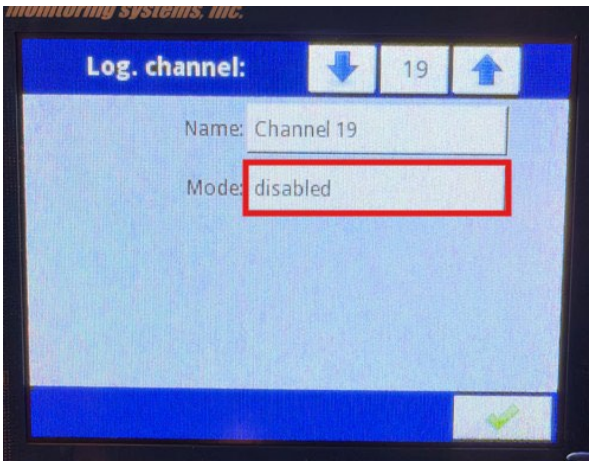

Figure 5.14. Channel 19 before configuration.

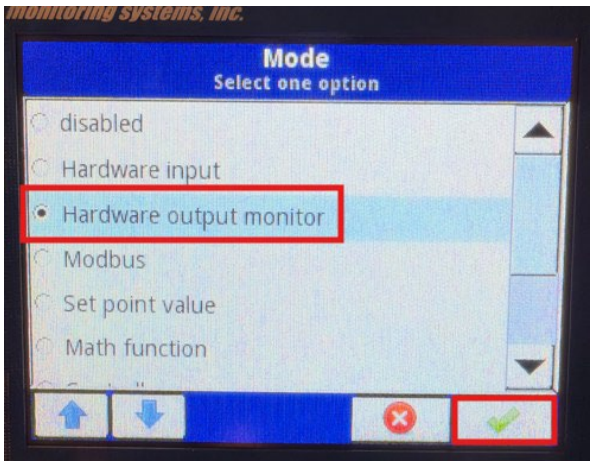

Figure 5.15. Mode list. Select Hardware output monitor.

5.5 What the home screen shows

Figure 5.16 to Figure 5.20 show the finished setup with the set point at 18.0. In normal operation GREEN MATH and Channel 19 read 1 and the relay is energized. When A1 drops to 16.2, GREEN MATH changes to 0 and the relay releases, so the green light goes out. When A1 recovers to 18.7, both return to 1. If a watched input is disconnected or its monitor faults, GREEN MATH reads -LO- and the relay releases; when the input is reconnected, GREEN MATH returns to 1 and the relay energizes again. Table 5.1 summarizes the states.

Figure 5.16. Normal operation: GREEN MATH 1, Channel 19 (relay) 1.

Figure 5.17. A1 at 16.2, below the set point: GREEN MATH 0, relay 0.

Figure 5.18. A1 back at 18.7: GREEN MATH 1, relay 1.

Figure 5.19. A1 disconnected: GREEN MATH -LO-, relay 0.

Figure 5.20. A1 reconnected: GREEN MATH 1, relay 1.

Table 5.1. Green indicator states

Condition	GREEN MATH	Channel 19 (relay)	Green light
All watched monitors above the set point	1	1	On
Any watched monitor below the set point	0	0	Off
Watched input disconnected or monitor fault	-LO-	0	Off

6 Reference

6.1 Settings summary

Table 6.1. Settings for the red alarm and the green indicator

Setting	Red alarm (section 4)	Green indicator (section 5)
Channel 17	ALM SETPT: Set point value, Edit button enabled, Edit range 0 to 25, Precision 0.0	Same as the red alarm
Channel 18 mode	Math function, named MATH	Math function, named GREEN MATH
Function (O2 monitors)	At least one X[i] < Y	All X[i] > Y
Source X	The watched inputs (example: Log.ch. 1,2)	The watched inputs (example: Log.ch. 1,2)
Source Y	Log.ch.17 ALM SETPT	Log.ch.17 ALM SETPT
Output 1 mode	above level	above level
Output 1 source	Log.ch.18 MATH	Log.ch.18 GREEN MATH
Output 1 alarm state	immed. ON	immed. OFF
Output 1 level	0.1 (any value between 0 and 1)	0.5 (any value between 0 and 1)
Channel 19	RELAY1: Hardware output monitor, source Out.C1 : Relay	Hardware output monitor, source Out.C1 : Relay
Channel 19 highlight	Blinking, trigger MATH, highlight forced, red	None

6.2 Comparison functions by monitor type

Table 6.2. Math function to select for each monitor type

Monitor type	Alarm condition	Red alarm function	Green indicator function
O2 depletion (0 to 25% O2)	Reading below the set point	At least one X[i] < Y	All X[i] > Y
Toxic or flammable gas	Reading above the set point	At least one X[i] > Y	All X[i] < Y

6.3 Notes

- Set point changes. Tap the ALM SETPT tile on the home screen to change the set point; it takes effect at once. The edit range entered in section 4.1 limits the values accepted.

- Lost signals. A disconnected input reads -LO-. With X error handling at errors forwarded to result, the math function reads -LO- too, and the relay takes the state chosen under Alarm state (sections 4.4 and 5.3).
- Nothing latches. Math functions, relays and highlights clear on their own when the readings return to normal. The Latch section on the channel page and the Timing section on the output page are left at their defaults in this guide.
- More than one set point or relay. Each math function can have its own set point tile and relay, and a further math function can combine several math functions, for example to switch one relay when any of them reads 1. A red alarm and a green indicator can run side by side on the same controller using two relays.
- Starting over. Load the 8 CHANNEL DEFAULT file (section 3) to return the controller to the factory configuration.