

Netmon : Aux Trips

Netmon Aux Trips is an optional extra function in Netmon monitor units. It is used to give mains detection in addition to detection of mains failure to the Dicam master unit power supplies.

A Netmon may have up to 20 Aux Trips (and/or 20 Aux Sensors - see Aux Sensors data sheet.)

Optionally, the Netmon can also trigger dropouts related to the Aux Trips.

What it does

Mains Detectors are connected to each mains circuit to be monitored, and wired to Dicam sensor inputs. As long as mains is present, each Mains Detector signals "mains present" to the sensor input and the "trip" is "OK".

If there is no mains to the detector, or if the detector is disconnected, no "mains present" signal is given, and the Netmon detects a "Trip Failure". After a delay, the Netmon gives a Trip failure alarm.

Individual trips can be "bypassed" - to ignore mains present or absent - as required.

How it works

The Mains Detectors (MD2 modules) are connected to sensor inputs on the Netmon or networked Dicam units such as Slave units or other control units. (Often, "spare" inputs are used, which saves wiring.)

Readings from the mains detectors are read by the Netmon, either directly from its inputs or over the network. When using remote inputs, it's essential that the networked Dicam unit is operating correctly - switched on and communicating properly.

The Netmon gives its own "name" to each "Trip". Aux Trip 7 might be connected to Unit 11, input 3, for example.

(In some places, the Netmon shows the connection point as well as the name - for example, TRIP07 may show CH:11/3 (meaning Unit 11, Input 3).

For each "trip reading", the Netmon checks it is giving a value corresponding to mains present. If it gets a failure level reading, or no reading at all, it shows a "trip fail".

After a delay, the Netmon gives a Trip failure alarm. The alarm is always given at the Netmon, not at the Dicam unit where the detector is installed.

The usual trip failure setting is one minute, but it can be adjusted to longer, or no delay can be set. (Note : the same delay setting is applied to all trip detectors.)

Checking Trip Status Readings

Check Trip Status readings regularly to make sure the circuit is being detected correctly.

To check Trip Status, go to the SENSORS menu. Trips are shown *after* Aux Sensors, if you have any.

As you turn the knob in the Sensors menu, you can read each trip in turn. There could be up to 20 aux trips. You'll see a display such as :

TRIP01
OK

This is a normal display.

TRIP01 is the "name" of the sensor as far as the Netmon is concerned. (In this case, Aux Trip 1.)

Below the Sensor name is the current "status" of trip.

In this case, it shows "OK" which means mains is present, so there is no alarm for this Aux Trip.

TRIP01
FAIL

This is a danger sign - there is no mains to the detector, or it is disconnected. The Netmon is in alarm for this Trip. Investigate immediately.

TRIP01
FAIL BYPASSED

This is a danger sign - there's no mains to the detector, or no reading. But you won't get an alarm for this sensor because it is bypassed. Check whether it should be bypassed.

TRIP01
OK BYPASSED

This is a danger sign. The trip has got mains, but someone has bypassed it anyhow. Check whether it should be bypassed.

Bypassing a Trip

Sometimes it's necessary to "Bypass" a Trip - that means to ignore whether or not the detector has mains. For example, when a circuit is being serviced.

CAUTION : When a Trip is Bypassed, there is NO ALARM for that Trip. Use this feature ONLY when ABSOLUTELY necessary.

TAKE OTHER PRECAUTIONS for the safety of the stock if a Trip is Bypassed.

To check if any trips are "Bypassed" go to Settings : Sensor Bypasses. In normal use it should say e.g.

SENS07	BYPASS
CH: 11/3	NO

This means the sensor is being used normally. (It's not bypassed.)

To remove the bypass (return to normal operation), press the button (NO changes to YES.)

SENS07	BYPASS
CH: 11/3	YES

The trip reading from this detector is now ignored. To un-bypass the trip, press the button again.

Clearing Sensor Bypasses

To clear all Bypasses and return the system to full alarm status, go to Settings : Clear Bypasses.

Press the button once. The display shows CLEARED briefly. You have now cleared all Sensor and Unit bypasses.

To clear an individual Bypasses, see above.

When you get an Aux Trip alarm

During normal use, the Netmon shows SYSTEM OK in the Keypoint window.

When the Netmon detects an alarm condition, SYSTEM OK changes to !!ALARMS!!. Press the button to go into the ALARMS menu. This menu is only shown when there is an alarm.

In the Alarms menu, turn the knob to view the different alarms detected. The Netmon may show Unit alarms, as well as SENSor alarms.

For example, it may show :

ALARMS: TRIP01
TRIP FAILURE

This indicates that mains has failed to the sensor.

Alternatively, it may show :

ALARMS: TRIP01
SENSOR FAILURE

If you press the button, it will also show NO SENSORS and TRIP FAILURE. This indicates that there is no reading from the sensor. The cause is that the Netmon is receiving no reading for this trip - for example, the Dicam unit where it is connected is switched off, or not communicating on the network.

Once an alarm has been detected for an Aux Trip, it remains in memory until you clear it. For example, mains may have been off (for longer than the delay), but has now returned. To check the current state of the trip, use RETURN from this menu, and go to the SENSORS menu.

To clear/reset the alarm from this trip go to the bottom of the alarms menu :

ALARMS:
CLEAR & RETURN

To clear/reset all alarms, press the button on this item. Alarms may come back immediately, but for Trips, it may come back after a minute or more (because of the Trip delay).

If you get an alarm ALWAYS check the room or the mains circuits being monitored. (Dropouts may be released.)

WARNING : Depending on your Netmon set up, you may get Alarm indications on the Netmon that do not trigger your siren, Fastcall unit, etc. If you're not sure, check with your installer or see Alarm Trigger Setup.

Routine Testing

Under the Welfare of Livestock Regulations, you are required to Test alarms and backup ventilation provision EVERY WEEK.

See the main section on routine testing of a Netmon, and read these additional notes for testing of Aux Sensor functions.

Note : Weekly checking and testing is **compulsory** but we recommend you check readings and settings **every day** for maximum safety.

Weekly Test for Aux Trips /Dropouts

- 1 Go to the SENSORS menu and check the trip status.
- 2 If your Aux Trips also have Dropouts, go to the Netmon : Test Outputs menu, and set each drop-

out (e.g. TRIP01DO) to 100%. This will make the dropout release.

Wait a few seconds, then exit the Test Outputs menu. Dropouts will return to automatic operation (so the magnets are now energised again), but they should have released.

Go to each room and check that the dropout has released. If it has not released, clean/adjust and go back to the Netmon and repeat the procedure.

Dropouts

As well as detecting and alarming for Aux Trips, the Netmon can control "Dropouts". Dropouts are usually magnets which release when an alarm is detected.

As with Aux Sensors and Trips, they can be connected to outputs on remote units on the network.

If you have Aux Sensor Dropouts, they will be shown in the TEST : OUTPUTS menu. You will find for example:

OUTPUT	CH: 3/7
TRIP01DO	0%

This means the dropout for TRIP01 is connected to Unit 3, output 7. Several sensors and/or trips might use the same output, In this case, the dropout will release if any of the sensors or trips has an alarm. In this case, you might see, say, both SENS01DO and TRIP01DO shows CH:3/7.

If your unit shows something like this, it means there is no dropout for this sensor :

OUTPUT	CH: NONE
TRIP01DO	

Configuring Aux Trips

Setting up Aux Trips takes great care, as it uses networking facilities extensively. We strongly recommend this is only carried out by trained and experienced Dicam installers.

Aux Trips are usually wired using "spare" sensor channels on the network. Since sites vary so widely, it's essential to make a detailed plan before you start.

- 1 Make a plan of the site showing the Dicam units, complete with addresses, and showing the spare input and output channels on each unit.
- 2 Work out the shortest/most efficient wiring from the desired Aux Trip locations (and any other remote inputs such as Aux Sensors) to the spare channels.
- 3 WRITE DOWN a list showing the Input Channel to be used for each Aux Trip such as :

TRIP	UNIT	CH	
1	3	6	
2		3	7
3		4	4
etc.			

- 4 Connect the MD2 detectors to these sensor inputs, and check the detector is reading correctly by measuring sensor voltage (see MD2 instructions).

Note : It is not possible to read the sensor on the display at these units, unless they are "Slave I/O" units.

- 5 At each of the units where you have connected an Aux Trip, go to I/O Config : Inputs Networked.

For the channels in your list, select NETWORK = YES. For example, if following the list above, at Unit 3, set :

INPUT	NETWORK
5	NO
6	YES
7	YES
8	NO

(Press the button to toggle from NO/YES.)

- 6 At the Netmon, go to Config : Monitor Config : Sensors/Trips.

TRIP01	DROPOUT
CH:NONE	NONE

Follow the list you prepared. E.g. If you were following the list shown above - Select TRIP01 and set it to CH:3/6.

(See below for configuring Aux Trip Dropouts.)

- 7 Go back to the User menu : Test : Sensors. For each of the trips you have set up, check that :

- A) The channel shown is the right one
- B) The sensor is reading correctly

If the sensor is not reading, first check that network communication is functional to the unit shown - go to the UNITS menu.

Then go to the unit and double check the sensor voltage. (If necessary, look for a BAD SENSORS window.)

8 If required, adjust the Trip Delay.

9 Give a copy of this leaflet to the User, along with a list of channels used for each Aux Trip/Sensor. Make sure you explain the workings of the system fully.

Configuring Aux Trip Dropouts

As with Aux Trip Inputs, Aux Trip Dropouts can use spare channels on the network.

Aux Trips don't usually have dropouts. But if they do, they require an output driver (e.g. usually a MAG1) for each circuit.

Note : A single output channel can act as the dropout for several Aux Sensors and/or Aux Trips BUT ONLY Aux Sensors/Trips. DO NOT set a channel as the output from any other Dicam control unit.

Hint : While setting up dropouts, you will generate alarm warnings. You might find it useful to use Clear Alarms All Units = YES temporarily. After you've set up the dropouts, make sure you set it back to number

Hint : If you don't have many dropouts, you might set them up all in one go. If you have a lot, it's better to set them up one or two at a time, testing as you go.

1 As before, make a detailed list of the Aux Trips and the Output Channels you are going to use

e.g. :

TRIP UNIT	CH	DROPOUT	
1	3	6	3/6
2	3	7	3/6
3	4	4	4/5
etc.			

2 Connect the Output Driver (e.g. MAG1) and magnet(s) to the driver to the output channels you are going to use.

3 Go to each of the Dicam unit addresses shown. In I/O Config : Output Types, set these channels to TYPE = NORMON. E.g. Using the list shown above, at Unit 3, set Output Channel 6 = NormOn.

Note : Once you have done this, you will find that the units show "Output Timeout" alarm. This is because you have set up the channel, but not yet set up the device.

4 In Netmon : Monitor Config : Sensors/Trips, set the output channels according to the list you've prepared e.g. Set TRIP01 Dropout = 3/6.

5 Clear alarms in individual units and check operation of outputs.

Using Netmon : User menu : Test Outputs :

Set the Dropout to 100% : e.g. Set TRIP01DO = 100%. Check it has released.

Set Dropout = 0% - check it has energised

Note : If more than one Aux Sensor/Trip D/O is using the same output channel, you must set all of these sensors to 0% before it will energise.