IO Config : Global Channel Adjustments

Applies to : Programs 016-144 and greater

Timeout

Default = 8 seconds *(6 to 240)*

Applies to :

Remote Input Devices

Remote Output Devices

Remotely used Output Channels

Startup

Determines the time allowed for :

Incoming readings from remote sensors (sensors connected to other Dicam units) **and**

Incoming instructions for output channels **and**

Incoming affirm from unit carrying this unit's remote outputs **and**

Startup (please wait) delay

If any timeout expires due to network failure or excessive interference, and error message will result.

Example :

Outside sensor on Un/Ch 30/1 = reading must be received from Unit 30 within 8 seconds (otherwise error = Sensor failure)

Example

Output channel 8 on this unit being controlled from another unit on network = instruction for channel 8 must be received within 8 seconds (otherwise error = Output Timeout)

Example

This unit has device "Fan 4" controlling an output on Unit 7 = must receive "Status Ok" message within 8 seconds (otherwise error = Output Failure)

Standard network setup = Cycle 2 seconds, so normally messages are sent/received every 2 seconds and timeouts will not occur.

On heavily congested networks, Timeout may need to be increased e.g. To 15 seconds. This will also increase the "Startup" time.

Phase Lead

Default = 75 *(0 to 225)*

Applies to : All output channels

Phase Lead sets the timing of the mains switching signals relative to detected mains zero .

Setting may need to be increased on heavily disturbed mains.

Fan Start

Default = 4 seconds *(0 to 60)*

Applies to : Fan2wr, Fan3wr, Fan-HIPF

Fan Start determines the "Full Power" period when a speed control output is started.

When a speed controlled fan output is started (previously being at 0%), the output is switched full on briefly. This is to help ensure the fan over comes bearing resistance, before the output is reduced to a reduced level.

Most fans require only a few seconds of full power - the fan is not expected to get up to full speed during this time.

With larger fans, or fans operating in cold conditions, it may be necessary to increase the setting.

Ram Run +

Default = 12 seconds

Applies to : Ram and Shaft

Ram Run + sets the "Overrun" for Ram and Shaft outputs.

Ram and Shaft outputs are controlled using "dead reckoning" and the "full stroke" time set in Output Setup.

Ram Run + allows for small deviations and accumulated errors. Used when driving to 0% or 100%.

Example

Ram/Shaft set with stroke = 120 seconds. Now at 25% moving to 0%. Nominal stroke required = 30 seconds (25% of 120 sincerely). Actual stroke given = 42 seconds (30 seconds + 12 seconds overrun.

Slow motors and motors prone to "drift" may need a larger setting.

Pulse Size

Default = 150 (0 to 150)

Applies to : Fan2wr, Fan3wr, Fan-HIPF

Pulse size determines the size/type of triac triggering pulse in phase cut outputs.

By default (Pulse size = 150), triacs are fired with a very wide control pulse. This repeatedly fires the triac (if it should prove necessary) to make sure “latch” is established or re-established. Triac firing is stopped just before mains zero crossing (see also Phase Lead).

Wide pulse is particularly required on very small mains loads, where triac latch is not achieved immediately.

In some conditions and/or certain loads (badly regulatable fan motors and/or heavily disturbed mains) wide pulse firing may lead to poor regulation, lamp flickering and/or “half waving”.

In these cases, “narrow pulse” firing may be required - a setting of 10 is recommended as a starting point.

Note : With a narrow pulse, it is hard to see any response on either the “channel” led or a “dummy led test plug” - the output may appear to be off, but is working normally.

Note : Global settings

The settings listed here are “global” - that is, they apply to all the channel types as applicable. It is not possible to set different values for different channels.