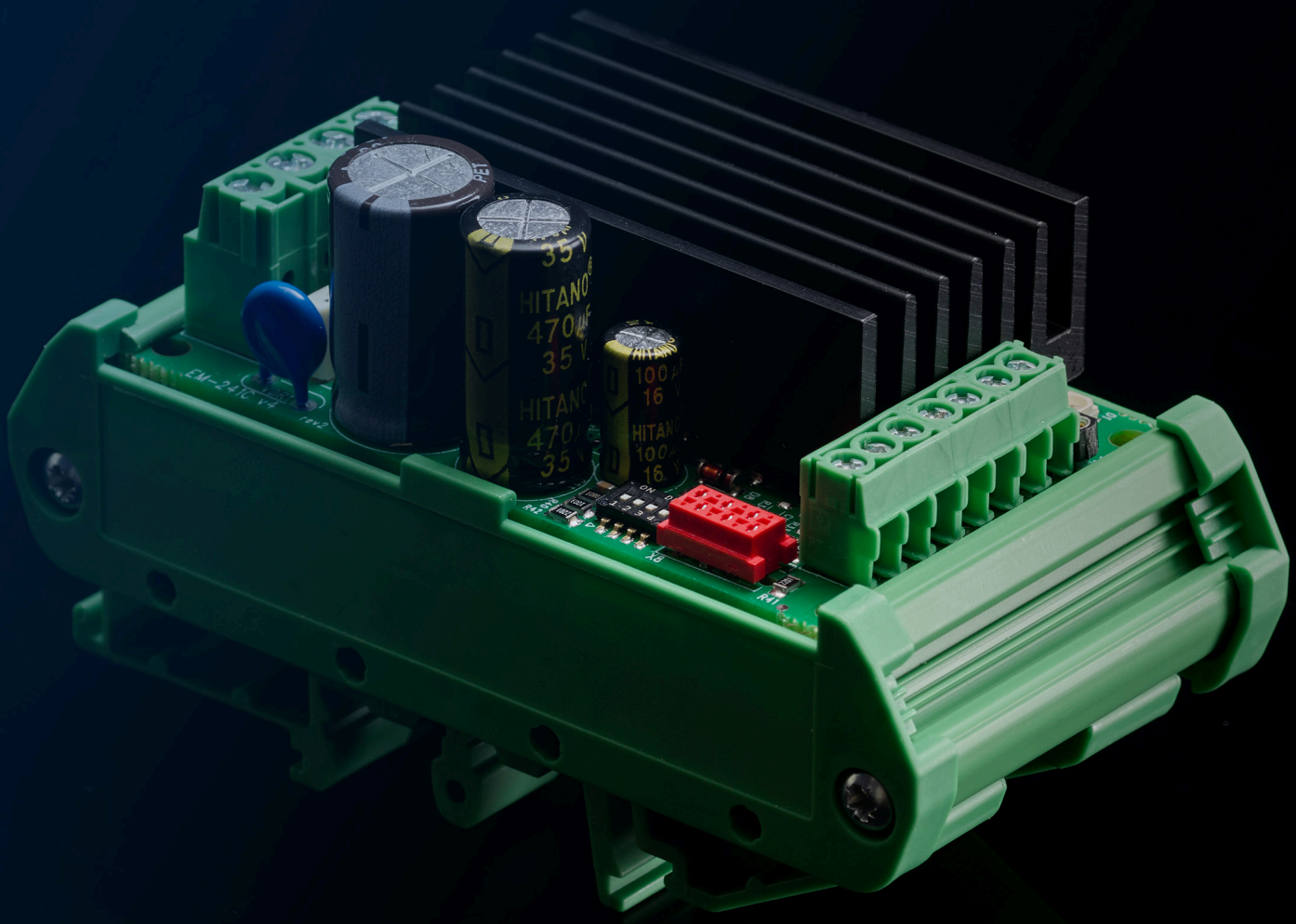
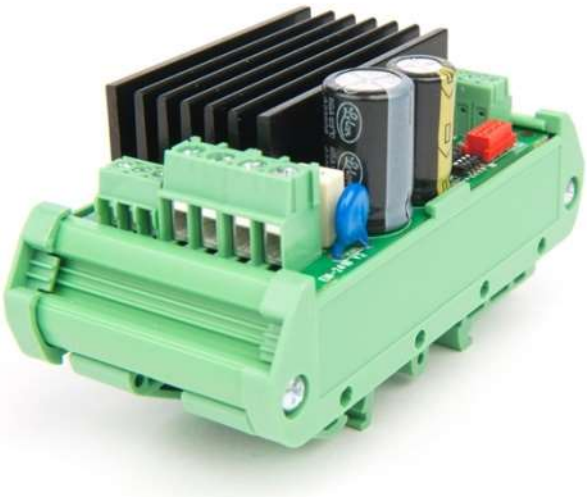
AS23 Actuator Controller

The AS23 is used as an electronic speed controller and current sensing device for a DC actuator. This unit uses actuator feedback for adjustable end stop position. This also gives adjustable acceleration and deceleration raps.





AS23 Actuator Controller

Description

The AS23 is used as an electronic speed controller and current sensing device for a DC actuator. This unit uses actuator feedback for adjustable end stop position. This also gives adjustable acceleration and deceleration raps.

The AS23 performs an automatic current stop if the motor is in an unforeseen overload situation. When the adjusted current level is exceeded the unit stops the actuator, in either direction of stroke, protecting the actuator from overload and the application from mechanical damage.

The sensitivity of this, as well as the many other functions of this controller are set with the Digital Interface Unit.

Key Features

- Digitally adjustable current sensing in both directions of stroke.
- In the event of the actuator tripping, it will travel in the opposite direction for a pre-set period of time.
- A signal can be generated in the event of a trip situation.
- The actuator speed can be controlled, from 0-100% of the rated speed of the actuator, in either direction of movement.
- A soft start, and soft finish can be programmed (dependent on suitable actuator).
- 10 -35v DC Supply.





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Functions of the AS23, and how to set the parameters

Each of the functions of the AS23 are programmed via the Digital Interface Unit (DIU). This simply plugs into the AS23 controller, to allow you to set, and adjust each parameter, the settings are saved, the DIU is then removed to prevent these settings being inadvertently altered.

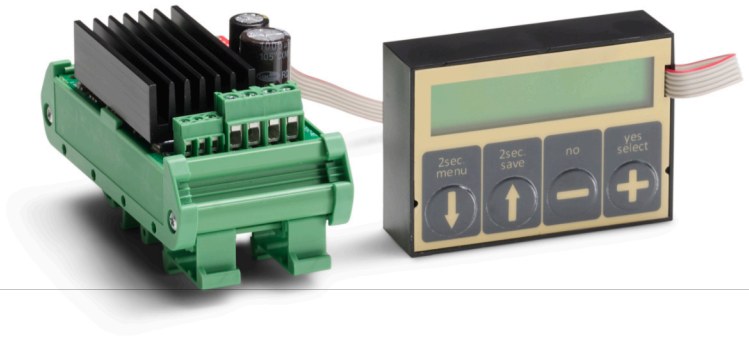
No	Parameter	Options	Default	Description
1	Command Mode	0-1	0	0= Press and hold to drive - forward or reverse 1 = One touch operation – will then drive forward and reverse to limit switches after one touch
2	Start condition combinations	0-3	1	Actuator will only drive in opposite direction when tripped on over current
3	Input logic combinations	0-3	0	Do not change– refer to IDGB
4	Run speed - 1	0-100%	100%	Normal running speed
5	Run speed - 2	0-100%	50%	Selectable secondary speed
6	Current limit – Forward 0.1 A – 20A	1-200	30	Forward direction trip protection
7	Current limit – Reverse 0.1 A – 20A	1-200	30	Reverse direction trip protection
8	Trip combinations	0-3	1	Trips on over current
9	Trip delay	0-255ms	20	Over current trips after 20ms
10	Fault output combinations	0-3	1	Output signal when tripped on over current
11	Over voltage limit	15-40V	35	Do not change – refer to IDGB
12	Load compensation	0-255	0	Do not change – refer to IDGB
13	Timeout	0-255s	0	Do not change – refer to IDGB
14	Reset for start and hour counter	0-1	0	Reset for time and hour count
15	Start ramp 0-5 seconds	0-500	100	Time to accelerate to full speed
16	Stop ramp 0-5 seconds	0-500	100	Time to decelerate to stop
17	Start kick	0-200ms	0	Do not change – refer to IDGB
18	Current trip auto reverse 0-5 seconds	0-500	0	Actuator will drive in opposite direction for so many seconds following a current overload trip
19	Reverse count limit	0-65000	1	Electronic home limit
20	Forward count limit	0-65000	1000	Electronic fully extended limit
21	Reverse limit advance	0-5000	100	Electronic position to start deceleration ramp in reverse direction
22	Forward limit advance	0-5000	100	Electronic position to start deceleration ramp in forward direction
23	Home run initialisation	0-2	0	Press forward and reverse command for 5 seconds to initialise home run
24	PWM frequency	1-2	1	Reduces audible noise from motor

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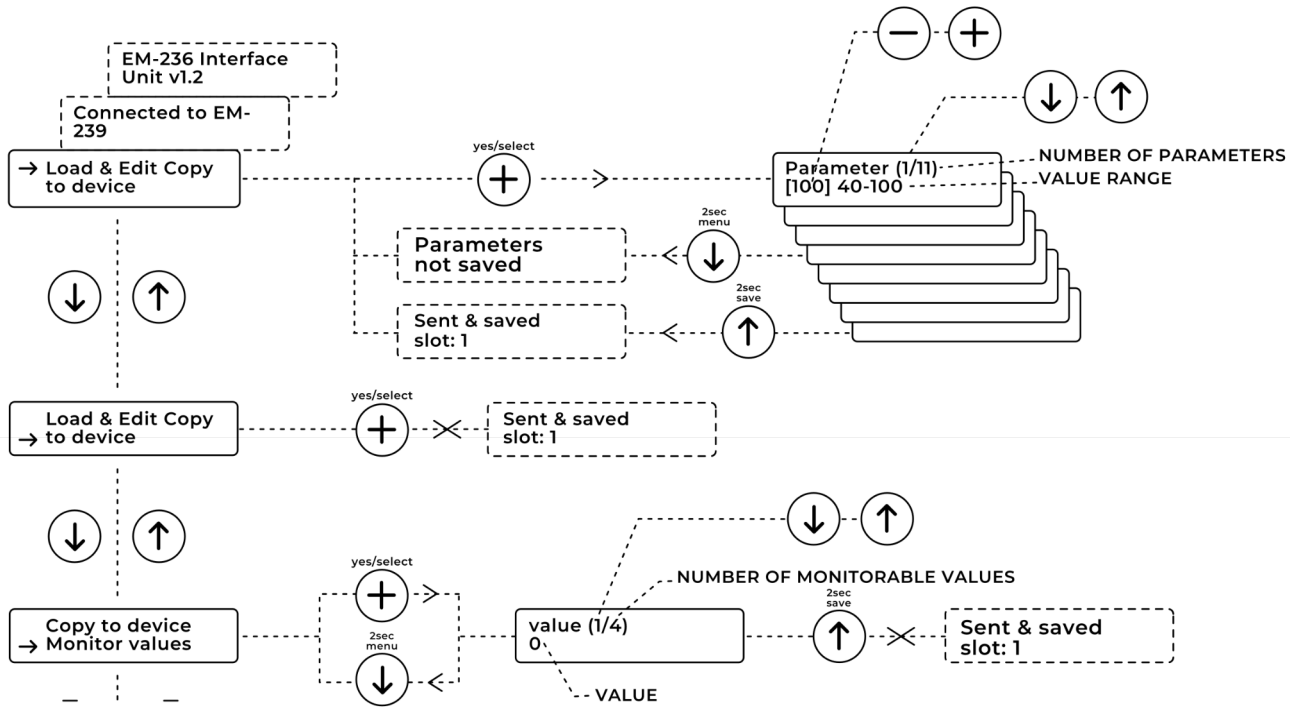
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Digital Interface Unit DIU



Connecting it to a powered driver unit



Start Up

The DIU is started up by connecting to the AS23 Load & Edit This will pick up the parameters from the AS23.

Load & Edit

Parameters will be displayed and you can scroll and edit these with the DIU. After editing a value, it will blink three times before it is valid.

NOTE. Edited parameter list is only in the DIU until you save. After saving (by pressing the SAVE button for 2 seconds) new edited parameters will be sent to the AS23 and stored in its memory.

Copy to Device

This will copy all the parameters within the DIU to the Controller in one command.

Monitor Values

This will enable the user to monitor various dynamic values during the use of the AS23.

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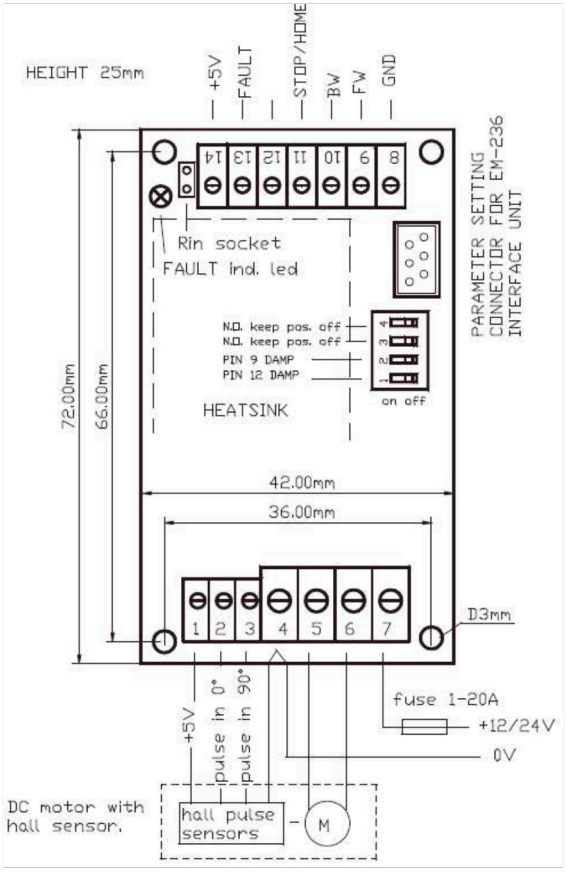
In the event of a fault, the LED located on the AS23 will flash to signify the following faults –

Power on.	One blink
Current on limit.	LED on
Current trip.	Fast blinking...
Zero-current trip.	Long blink- short pause...
Over-voltage.	4 x blink - pause...
Overheat.	Short blink - long pause...
Timeout.	3 x blink + long blink...
Fault input.	2 x short + 1x long blink...

Connections

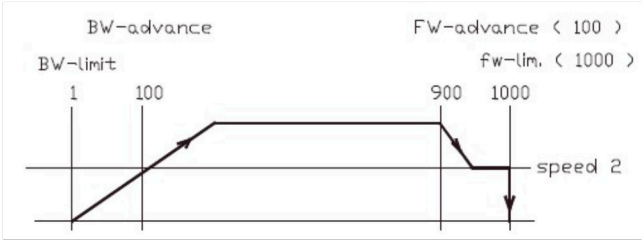
Supply voltage must be filtered DC of 10-35V, and ripple should be less than 30% at full load.

CAUTION ! Wrong polarity can damage the unit.
CAUTION ! Unit doesn't have an internal fuse, so an external fuse should be added if fuse required.



Actuator Performance Example

In this example the parameters have been set to the default values.



Home Run = Pule Count Reset

The hall sensor pulse count need to be reset for new installations. Initialising the home run will start the actuator running in the reverse direction at set speed 2. When the actuator hits the inward limit switch the counter is reset to 0.

Run the actuator to other end of stroke and check the forward position pulse count, this value should be set in parameter 20, forward count limit.

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View AS23 Current Limiter Online Visit:
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Contact

Our specialist team are always ready to listen and help, please drop us an email or call to talk with the team.

Address.

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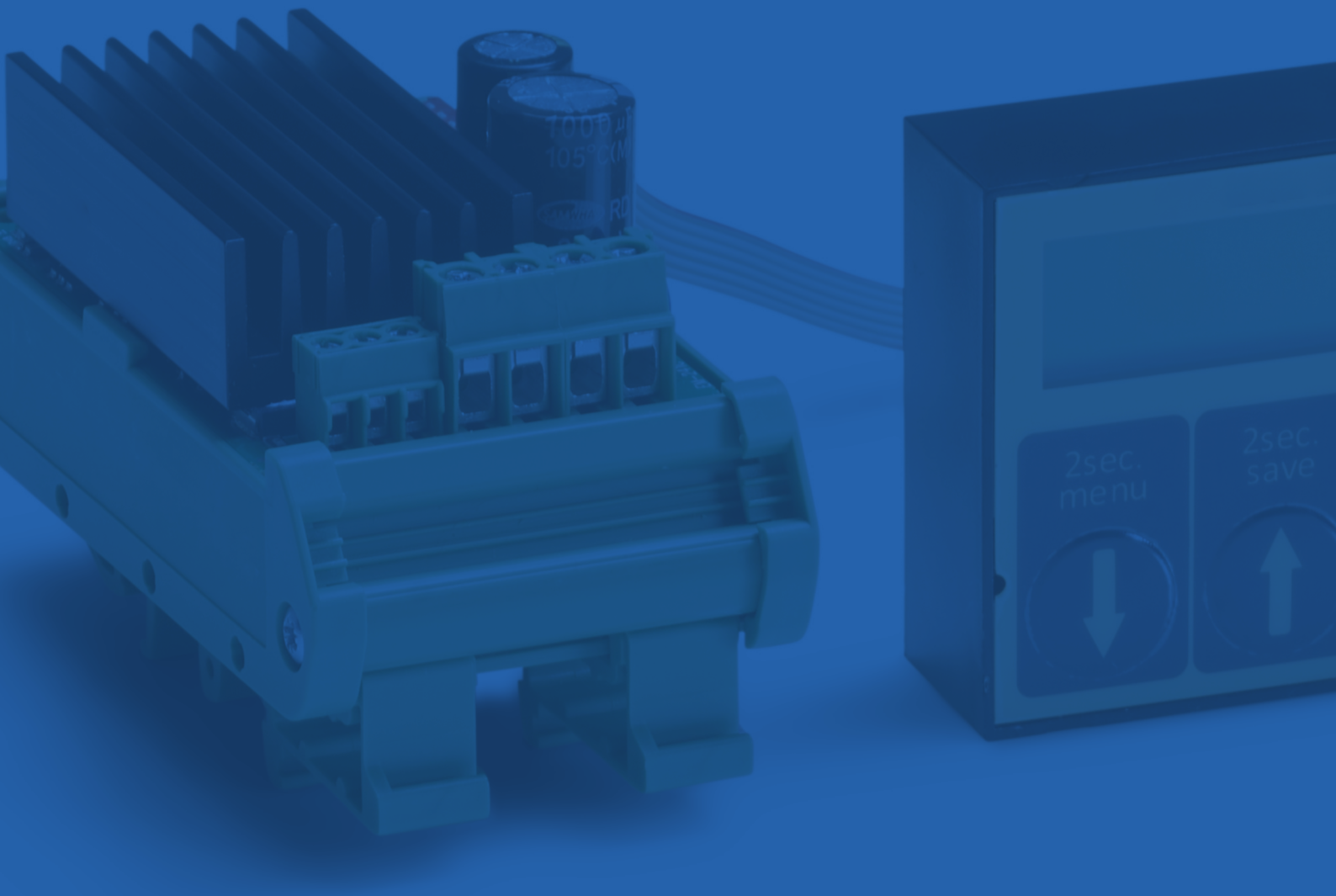
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