easyE-i

the intelligent actuator

Bansbach easylift

Integrated Controller

The new „intelligent“ in-line Actuator

In-line actuators with integrated controller (easyE-i) enable the use of MODBUS RTU on an RS485 serial communication. One of the most powerful standards. The easyE-i options provide everything from simple maintenance, control and installation, to a wide range of customizable settings and feedback that will help tailor the movement solution to your specific needs and application.

Integrated controller functions:

- Adjustable start / stop ramp
- Adjustable current limit
- Internal temperature protection
- Industrial interface MODBUS RTU on RS485
- Internal stroke limitation
- Plug & Play solution with i-Connect-Box / i-Connect-Box DIN

Specifications:

- Temperature: Operation: - 20 °C to + 70 °C; Storage: - 40 °C to + 70 °C
- Cable specification: Ø 4,8mm cable for easyE-35i (2 x AWG22 + 6 x AWG28), also available for Harsh Environment version
  Ø 6,8mm cable for easyE-50i/60i (2x AWG16 + 6 x AWG26), also available for Harsh Environment version, easyE-35i on request
- Bending Radius: 15 x cable diameter

Cable length for easyE-i-line with 12 VDC motor is limited to 5m, 24 VDC motor is limited to 9m.
The IP classification covers the actuator including cable and cable gland. Connector (if mounted) or open ends are not part of the certification.
For other mechanical data like forces, speed and so on please refer to standard easyE-35/50/60 datasheet.

Configurations:

Configurations	**SDB** (S2-1) Single Actuator Direction Control Basic IO	**SDH** (S2-1+hall) Single Actuator Direction Control Hall Output	**SDP** (S2-1+pos.out) Single Actuator Direction Control Position Output	**SPP** (S2-2) Single Actuator Position Control Position Output	**SBS** (bus based) Single Actuator BUS Control Status / Control IO	**MDO** (synchronization) Multiple Actuators Direction Control Override
Configuration letter	A	B	C	D	E	F
Voltage 12/24 VDC	✓	✓	✓	✓	✓	✓
Direction in/out	✓	✓	✓	-	-	✓
5/10 VDC ref. output	-	-	-	✓	-	-
Stop input	-	-	-	-	✓	-
Override input	-	-	-	-	-	✓
Error output	-	-	-	-	✓	-
Analog position input	-	-	-	✓	-	-
Analog position output	-	-	✓	-	-	-
Stop input / Pos. OK output	-	-	-	✓	-	-
Hall Output	-	✓	-	-	-	-

Electrical Wiring:

Configurations	SDB	SDH	SDP	SPP	SBS	MDO
Key letter	A	B	C	D	E	F
Color						
Yellow (2)	RS485 TX +A	RS485 TX +A	RS485 TX +A	RS485 TX +A	RS485 TX +A	RS485 TX +A
Green (1)	RS485 RX -B	RS485 RX -B	RS485 RX -B	RS485 RX -B	RS485 RX -B	RS485 RX -B
Orange (3)	GND Signal	Hall B output	GND Signal	GND Signal	GND Signal	GND Signal
Black (4)	GND Power	GND Power	GND Power	GND Power	GND Power	GND Power
White (7)	Not used	Hall A output	Position output	5-10V reference	Not used	Override
Brown (6)	Dir. IN	Dir. IN	Dir. IN	Pos ok/stop input	Error out	Dir. IN
Blue (5)	Dir. OUT	Dir. OUT	Dir. OUT	Position input	Stop input	Dir. OUT
Red (8)	Power 12/24V	Power 12/24V	Power 12/24V	Power 12/24V	Power 12/24V	Power 12/24V

Numbers refers to the 8-pin Molex minifit plug, not screw terminal on i-Connect-Box DIN

Electrical Data

- **Max. Current load:**

easyE-**35i:**	**24 VDC** permanent magnet motor	*(max. current: 1.8 A, max. voltage: 28 VDC)*
	12 VDC permanent magnet motor	*(max. current: 3.6 A, max. voltage: 14 VDC)*
easyE-**50i:**	**24 VDC** permanent magnet motor	*(max. current for ratio C-D-E-F: 8 A, ratio G: 7 A, ratio H: 4,5 A, max. voltage: 28 VDC)*
	12 VDC permanent magnet motor	*(max. current for ratio C-D-E-F: 16 A, ratio G: 14 A, ratio H: 9 A, max. voltage: 14 VDC)*
easyE-**60i:**	**24 VDC** permanent magnet motor	*(max. current: 11,5 A, max. voltage: 28 VDC)*

- **Idle current:** Approx. 25 mADC
- **Current trip delay:** 20 ms
- **PWM frequency:** 25 kHz
- **Digital inputs:** Active low
- **Supply voltage:** 12 VDC (min. 12 VDC @ full load, max. 14 VDC) or
  24 VDC (min. 24 VDC @ full load, max. 28 VDC) (max. ripple <10% @ full load)
- **Serial data line:** RS485 asynchronous, point to point or multi-point, 2 wire half-duplex
- **Communication:** Modbus RTU
- **Baud rate:** 115200 bps
- **Com setup:** 8 Bit, Parity-None, Stop bit -1

Recommendations and warnings

- Always connect easyE-i-line to a power supply that matches the nominal voltage of the actuator, also during update and parameter setting.
- Most switches are active low and to be pulled down to GND (Signal GND) for activation.

Disclaimer

Bansbach products are continuously developed, built, and tested for highest requirements and reliability but it is always the responsibility of the customer to validate and test the suitability of our products in a given application and environment. Bansbach is not liable for any expenses due to change in normative, standards, Regulation or directive. We do our utmost to provide accurate and up-to-date information at all times. In spite of that, Bansbach cannot be held responsible for any errors in the documentation. Specifications are subject to change without prior notice. For more information, please visit our website at www.bansbach.de

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