# EBN853 (Contrac)
## Electronic unit

# For continuous control of Contrac actuators RHD and RSD

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**Processor-controlled electronic unit according to the frequency converter principle**

—

**Power supply 115 V AC or 230 V AC**

—

**Conventional signal interface (0/4 to 20 mA / 24 V)**

—

**Digital communication via RS232 and HART**

—

**Additional functions such as process controller, maintenance computer, programmable characteristics**

—

**Simple configuration and parameter setting via graphical user interface**

—

**Torque and speed variation**

—

**PROFIBUS DP**

—

**Field mount housing in high IP rating IP 66**

—

# Brief description

The electronic unit builds the interface between the actuator and the control system.

During continuous positioning, the electronic unit varies the motor torque continuously until the actuator force and the control valve force are balanced. High response sensitivity and high positioning accuracy with short positioning time ensure an excellent control quality and a long actuator life.

## Operating principles

The actuator continuously responds to a set point signal. The motor is permanently under voltage (operating mode S9 - 100 % stall-proof according to IEC 60034-1 / EN 60034-1) and gently increases or reduces the torque on the electronic unit in proportion to the ΔY signal (the difference between the Y set point and the Y position signal).

The actuator is not subject to temperature derating, i.e., there are no restrictions, even at the maximum permissible ambient temperature. Where a state of balance exists, the actuator force and process force are equivalent and the actuator keeps the final control element in the required position.

The classification of the 'S9 - 100 % overload protected' Contrac actuator in accordance with IEC 60034-1 / EN 60034-1 by far exceeds the requirements for the highest class, 'continuous modulation, class D' in accordance with EN 15714-2.

The Contrac actuator offers extensive process optimization capabilities thanks to its high-precision and highly dynamic operation.

## Electronic unit

Electronic units are available for assembly in the field near the actuator, remotely in a mounting rack or for integrated assembly (smallest actuator type). In addition to the terminals, the electronic unit contains the microprocessor, frequency converter for motor control, analog and binary inputs and outputs, PROFIBUS® or HART® communication interfaces, the commissioning and service field and a plug connection to connect a PC.

No matter what the motor power of the respective actuator is, all electronic units are supplied single-phase by 230 V or 115 V mains supply (50 Hz or 60 Hz).

The commissioning and service field enables the end positions and direction of rotation to be set on the actuator. Moreover, status information is displayed using LEDs. Push buttons can be used to operate the actuator and set the operating mode (Automatic, Out of Service).

## Analog signal and power input

For analog control, the set point entry is received from the control system through a 0 to 20 mA or 4 to 20 mA current value. Signal monitoring is possible. Should the signal leave the pre-defined limits, the actuator will perform the set safety procedure (e. g. 'Lock in last position' or 'Drive to safety position').

The position feedback is also given through a 0 to 20 mA or 4 to 20 mA feedback signal. There are 3 digital inputs and 3 digital outputs available in addition to the analog signal.

If a digital input is activated, it will take priority over the set point signal (manual mode takes priority over automatic mode).

The following digital input configurations are possible:

| Configuration | Digital input 1 | Digital input 2 | Digital input 3 |
|---|---|---|---|
| OFF | No function | No function | No function |
| Manual intervention | Manual mode / Automatic mode switching | Travel command in OPEN direction | Travel command in CLOSE direction |
| Rapid traverse | Rapid traverse mode / Automatic mode switching | Rapid traverse travel command in OPEN direction | Rapid traverse travel command in CLOSE direction |
| Step controller | ON / OFF step controller activation | Step controller pulses in OPEN direction | Step controller pulses in CLOSE direction |

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# ... Brief description

## ... Analog signal and power input

The digital output function is freely selectable for each output. The following functions are available:

| Function | Description |
| --- | --- |
| Ready to operate | Signaling of device status. |
| Signal end position 0 % | Actuator has reached the 0 % position. |
| Signal end position 100 % | Actuator has reached the 100 % position. |
| Signal limit value 1 rising | While the signal level is rising, the actuator has reached the position defined as limit value 1. |
| Signal limit value 1 falling | While the signal level is falling, the actuator has reached the position defined as limit value 1. |
| Signal limit value 2 rising | While the signal level is rising, the actuator has reached the position defined as limit value 2. |
| Signal limit value 2 falling | While the signal level is falling, the actuator has reached the position defined as limit value 2. |
| Collective failure | Drive function is no longer given. The actuator is no longer available. |
| Collective alarm | Parameters in the Contrac interface system have adopted values, which make a failure in the near future likely. The actuator remains functional. |
| Local operation | The actuator is operated via the local control station (ISF) |
| Rapid traverse + direction | Actuator is moving at rapid traverse speed in + direction (only for 2-motor version). |
| Rapid traverse control –direction | Actuator is moving at rapid traverse speed in – direction (only for 2-motor version). |

## Step controller operation

In the 'step controller' operating mode the incoming control commands are received as pulses at digital inputs 2 and 3 these are upward-integrated into an internal memory. The memory uses these pulses to generate an 'artificial' internal set point which the actuator then follows. This process is as easy on the control valve and actuator operation as the analog control process.

## Rapid traverse mode

The actuator is operated exactly in the same operating mode as in the analog control mode. On activation of digital inputs 2 or 3, the actuator moves at twice the rated operating speed and half the torque in the corresponding direction. Just before the end position is reached, the actuator travel speed is automatically switched back to the set speed, at which the remaining distance is covered.

## Speed

Contrac actuators offer different speed adjustments for both directions, independently of actuator torque or actuator force. Furthermore, a speed characteristics curve can be set with three different speed values for each direction.
The actuator speed is steplessly adapted to the rate of change in speed of the set point value. This ensures a highly dynamic and extremely precise control process. In order to preserve the control valve, the actuator speed is automatically reduced before the end position is reached.

## Torque/Force

The torque and actuator force setting options are comparable to the speed setting options. 50 %, 75 % and 100 % of the rated output value can be selected. The electronic unit alters the motor actuation according to the selected value.

## Set point monitoring

The set point can be monitored for compliance with the adjustable limit values. Should the set point exceed the upper limit value or fall below the lower limit value, the actuator will perform the previously defined safety action. 'Lock in current Position' or 'Move to pre-defined safety position' are available as safety actions.

## Ambient conditions

### Temperature
Different temperature versions are available, dependent on the actuator type.
The power-up period is not subject to derating, i.e. even at the maximum permissible ambient temperature, the actuator ensures maximum control precision and dynamics during a power-up period of 100 %.

### Corrosion protection
Contrac actuators and electronic units have been designed for operation in extreme ambient conditions. They satisfy the requirements of atmospheric corrosivity category C5-I (highly polluted industrial atmospheres) for protection against external corrosion in accordance with DIN EN 15714 (Electric actuators for industrial valves – Basic requirements), and EN ISO 12944-2:1998 (Paints and varnishes. Corrosion protection of steel structures by protective paint systems. Classification of environments).
Electronic cabinet modules satisfy the requirements of category C1 (low pollution) as per EN ISO 12944-2:1998 (Paints and varnishes. Corrosion protection of steel structures by protective paint systems. Classification of environments).

### Maintenance interval
Contrac actuators and electronic units exceed the service life requirements for the highest class D, 'continuous modulation', as per DIN EN 15714 (Electric actuators for industrial valves – Basic requirements). The actuators remain maintenance-free for up to 10 years under 'normal' load.

### Expected service life of the device
With proper use and consideration of relevant environmental conditions, the service life of the Contrac actuators and electronic units can reach approx. 10 years.

Regular maintenance work and / or proper repairs by ABB Service, along with the use of ABB spare parts, can extend the service life of the Contrac actuators and electronic units.

# Communication

The PROFIBUS DP®, PROFIBUS DP®/V1 or HART® communication protocols are available for digital communication.

## PROFIBUS®

PROFIBUS DP® is an international, open field bus protocol which has been standardized in the field bus standard EN 50170. On a cyclic basis, the master reads the input information from the slaves and writes the output information to the slaves. In addition to this cyclic data transfer of the process representation (e. g. setpoint and actual value), Profibus DP also provides powerful functions for diagnostics and commissioning. PROFIBUS DP/V1 additionally offers the acyclic transfer of data for the configuration of slaves, for example. Data traffic is monitored through the monitoring functions on the master and slave sides. In addition to PROFIBUS® data transfer, ABB Contrac actuators provide two configurable binary outputs to for example signal that the end position has been reached. The two configurable digital outputs can be used independently of the bus communication.

## HART®

Contrac actuators also offer the option of using the HART® communication protocol for configuration and parameterization while operation is in progress. HART®-FSK communication enables simultaneous analog set point transmission and digital communication without additional installation. The HART signal is modulated on to the 4 to 20 mA analog set point signal. The HART® protocol works with Frequency Shift Keying (FSK) technology, based on the Bell 202 communication standard.

## FDI – Field Device Integration

The Device Type Driver for Contrac actuators is based on FDI technology and can either be integrated in a control system or loaded onto a PC with the ABB Ability™ Field Information Manager (FIM).
This allows you to work with the same user interface in the commissioning phase, during operation, and for service tasks involving monitoring the device, parameterization, and reading out data.

## DTM

The DTM (Device Type Manager) for Contrac actuators is based on FDT / DTM technology (FDT 1.2 / 1.2.1) and can either be integrated into a control system or loaded on a PC with an FDT framework application. This allows you to work with the same user interface in the commissioning phase, during operation, and for servicing tasks, involving monitoring the device, setting parameters, and reading out data. Communication is based on HART® protocol or PROFIBUS® communication. Reading out data from the device has no effect on the operation in progress. Newly set parameters are saved in the non-volatile memory directly upon download to the device, and become active immediately.

## EDD

Similar to DTM, the EDD (Electronic Device Description) provides the option of configuration and parameterization of the device through HART® communication by using a handheld terminal or an EDD integrated in the system.

# — Specification

## General information

| EBN853 | |
|---|---|
| IP rating | IP 66 in accordance with IEC 60529 / EN 60529 |
| | NEMA 4X in accordance with CAN / CSA22.2 No. 94 |
| Humidity | ≤ 95% annual average; condensation not permitted |
| Ambient temperature | −25 to 55 °C (−13 to 131 °F) |
| Transport and storage temperature | −25 to 70 °C (−13 to 158 °F) |
| Long-term storage temperature | −25 to 40 °C (−13 to 104 °F) |
| Mounting position | On vertical mounting plate, lateral cable gland, left |
| Vibration stress | Maximum 150 Hz: acceleration: 1 g (in accordance with EN 60068-2-6, Table C.2) |
| Paint | 2-layer component epoxy (RAL 9005, black) |
| Electrical connection | Mains supply via screw terminals; all other connections made via screw-type plug connectors |
| | Connection cable between electronic unit and actuator tightly fastened to the electronic unit, from the actuator side using a connector to the connection to the actuator. Maximum cable length 100 m (328 ft). |
| | In actuators in explosion-proof design, the connection cable is tightly fastened to the actuator without a connector through the screw terminals. |
| | Optional, loose cable set supplied acc. to length requirements |
| Weight | 11 kg (24 lbs) |

## Power supply

| EBN853 | | | | |
|---|---|---|---|---|
| Supply voltage (standard actuators) | 115 V AC (94 to 130 V) or 230 V AC (190 to 260 V); 47.5 to 63 Hz; single-phase | | | |
| Supply voltage (Ex actuators) | 115 V AC (94 to 127 V) or 230 V AC (190 to 253 V); 47.5 to 63 Hz; single-phase | | | |
| Current consumption at the electronic unit (AC 115 V / AC 230 V) | Actuator | $I_{max}$ at 115 V | $I_{max}$ at 230 V | $I_{pos}$ (115 V + 230 V): approx. 40 to 50 % of $I_{max}$ |
| | RHD250-10 | 1.8 A | 0.9 A | |
| | RHD500-10 | 2.2 A | 1.1 A | |
| | RHD800-10 | 5.0 A | 2.5 A | |
| | RHD1250-12 | 5.0 A | 2.5 A | |
| | RHD2500-25 | 5.0 A | 2.5 A | |
| | RHD4000-40 | 5.8 A | 2.7 A | |
| | RHD8000-80 | 5.0 A | 2.5 A | |
| | | | | |
| | RSD10-5.0 | 2.2 A | 1.1 A | |
| | RSD10-10.0 | 3.6 A | 1.8 A | |
| | RSD20-5.0 | 3.6 A | 1.8 A | |
| | RSD20-7.5 | 4.8 A | 2.4 A | |
| | RSD50-3.0 | 5.0 A | 2.5 A | |
| | RSD100-1.5 | 5.0 A | 2.5 A | |
| | RSD200-0.7 | 5.0 A | 2.5 A | |
| External fuse for electronic unit | 16 A; time-lag | | | |

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## ... Specification

## Communication

| Conventional communication | |
|---|---|
| Analog input | 0 / 4 to 20 mA; internal load: 300 Ω |
| Analog output | 0 / 4 to 20 mA, electrically isolated, max. load 500 Ω |
| 3 digital inputs, 1 to 3 | Digital 0: −3 to 5 V or open, electrically isolated |
| | Digital 1: 12 to 35 V, electrically isolated |
| 3 digital outputs, 1 to 3 | Potential-free relay contact, max. 60 V, 150 mA |
| Digital communication | RS232 for commissioning and service, with optional FSK / HART® or PROFIBUS DP® |
| Default settings | see Table **Conventional communication** on page 10. |
| Voltage output $U_V$ | 24 V, 15 mA, electrically isolated, for scanning external contacts, or similar applications |
| Connection for transmitter (optional) | Supply for two-wire transmitter with activated process controller in Contrac |
| Individual settings | See data sheet 'DS/CONTRAC/SETTING' or available upon request. |

| PROFIBUS DP® Communication | |
|---|---|
| PNO ID no. | 0×9655 Actuators with DP/V0 communication (cyclic data traffic) |
| | 0×09EC Actuators with DP/V1 communication (cyclic and acyclic data traffic) |
| Communication protocol | PROFIBUS PA® Profile V3.0 Class B in accordance with IEC 50170 / EN 50170 (DIN 19245) |
| Bus cable | Twisted, shielded copper wire acc. to IEC 50170 / EN 50170 |
| Interface | EIA-485 (RS485) acc. to IEC 50170 / EN 50170 |
| Permissible baud rates | 93.75 Kbit/s |
| | 187.5 Kbit/s |
| | 500 Kbit/s |
| | 1500 Kbit/s |
| | Automatic baud rate detection |
| Bus address | 0 to 126, default address 126 |
| | Set Slave Address service is supported |
| Bus termination | Connectable active bus termination. Power supply from electronic unit |
| Block types | 1 analog input function block |
| | 1 transducer block |
| | 1 physical block |
| Failsafe | Failsafe function is supported. |
| | Configurable function for downtime of bus communication |
| | • Lock in last position |
| | • Drive to safety position |
| | • Adjust with last effective set point |
| | Adjustable time delay |
| Modules for cyclic communication | 8 standards-compliant modules and 3 manufacturer-specific modules are available.* |
| | SP (Short) |
| | SP (Long) |
| | RCAS_IN+RCAS_OUT |
| | SP+READBACK+POS_D |
| | SP+CHECKBACK |
| | SP+READBACK+POS_D+CHECKBACK |
| | RCAS_IN+RCAS_OUT+CHECKBACK |
| | SP+RCAS_IN+READBACK+RCAS_OUT+POS_D+CHECKBACK |
| | STANDARD |
| | SP+RB+MESSEING |
| | SP+RB+ENL_DIAG |
| Acyclic communication | Full parameterization and configurability via Master Class 2 and DTM |
| Default settings | see Table **PROFIBUS DP® communication** on page 10. |
| Digital outputs 1 and 2 | In addition to the PROFIBUS®-communication, there are 2 digital outputs. |
| | Potential-free relay contact, max. 60 V, 150 mA |
| | Default setting: |
| | Digital output 1 End position signal 0 % |
| | Digital output 2 End position signal 100 % |
| Individual settings | See data sheet 'DS/CONTRAC/SETTING' or available upon request. |

\* A full description of communication modules can be found in parameterization and configuration instructions 45/68-10

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# ... Specification

## Delivery status

The standard delivery scope includes metric cable entry threads with IP66 seal plugs. Optional NPT and PG adapters are available. The individual actuator configuration may vary from the standard setup above. This information can be displayed via the user interface. Unless otherwise specified by the user, the electronic units are delivered with the following standard configuration:

**Conventional communication**

| Parameter | Setting |
| --- | --- |
| Function selection | Positioner, parameter: set point |
| Set point function | Analog set point |
| Set point range | 4 to 20 mA |
| Set point characteristic | Linear; set point = position value |
| Actual value range | 4 to 20 mA |
| Nominal torque / rated force in ±direction | 100 % |
| Automatic speed in ±direction: | 100 % |
| Action in 0 % / 100 % end position | Keep leak-tight with nominal torque / rated force |
| Digital inputs | Digital input 1 Manual / Automatic switching, Digital input 2 / 3 Travel command ± |
| Digital outputs | Digital output 1 ready for operation / error message, Digital output 2 / 3 end position signaling 0 % / 100 % |
| Brake Away Function | Deactivated |
| Shut-off function | Deactivated |
| Positioning loop monitoring | Deactivated |
| Set point monitoring | Deactivated |
| Alarm Type | Deactivated |
| Action after restoration of power | Switch to Automatic |
| Working range of actuator | Not set |

**PROFIBUS DP® communication**

| Parameter | Setting |
| --- | --- |
| Function selection | Positioner, parameter: set point |
| Set point function | Digital |
| Set point range | 4 to 20 mA |
| Set point characteristic | Linear; set point = position value |
| Actual value range | Digital |
| Nominal torque / rated force in ±direction | 100 % |
| Automatic speed in ±direction: | 100 % |
| Action in 0 % / 100 % end position | Keep leak-tight with nominal torque / rated force |
| Digital outputs | Digital output 1 / 2 end position signal 0 % / 100 % |
| Brake Away Function | Deactivated |
| Shut-off function | Deactivated |
| Positioning loop monitoring | Deactivated |
| Communication monitoring | PROFIBUS DP® / V0: Activated Lock in last position PROFIBUS DP® / V1: Activated After delay time has elapsed (standard configuration 5 s) Lock in last position |
| Alarm Type | Deactivated |
| Action after restoration of power | Switch to Automatic |
| Working range of actuator | Not set |

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# Electrical connections

## Wire cross-sectional areas

| EBN853 – Screw terminals | |
|---|---|
| Motor/brake | fixed: 1.5 to 6 mm$^2$ (16 to 10 AWG) |
| | flexible: 0.2 to 4 mm$^2$ (24 to 12 AWG) |
| Mains | fixed: 1.5 to 6 mm$^2$ (16 to 10 AWG) |
| | flexible: 0.5 to 4 mm$^2$ (20 to 12 AWG) |
| Signals | fixed: 0.5 to 4 mm$^2$ (20 to 12 AWG) |
| | flexible: 0.5 to 2.5 mm$^2$ (20 to 14 AWG) |

## Cable glands

The actuators and electronic units are supplied without cable glands. Suited cable glands must be installed on site.

| Tap holes for cable glands | | | |
|---|---|---|---|
| | metric | optional | adapters for* |
| Signal cable | M20 × 1.5 (2 ×) | PG 16 (2 ×) | NPT ½ in (2 ×) |
| Motor cable | M25 × 1.5 (1 ×) | PG 21 (1 ×) | NPT ¾ in (1 ×) |

\* Adapter for PG or NPT thread must be ordered separately

**Note**
The on-site cable glands for the motor and signal cables must be produced in type of protection Ex 'e' (increased safety) and must ensure contact with the cable shielding.

## Selection of suited connection cables

Please observe the following information when selecting cables:
- Use shielded cables for the motor/brake cable, the sensor cable, and the signal cable to the control system/controller.
- Connect the shielding of the motor/brake cable and the sensor cable on both sides (to the actuator and to the Contrac electronic unit).
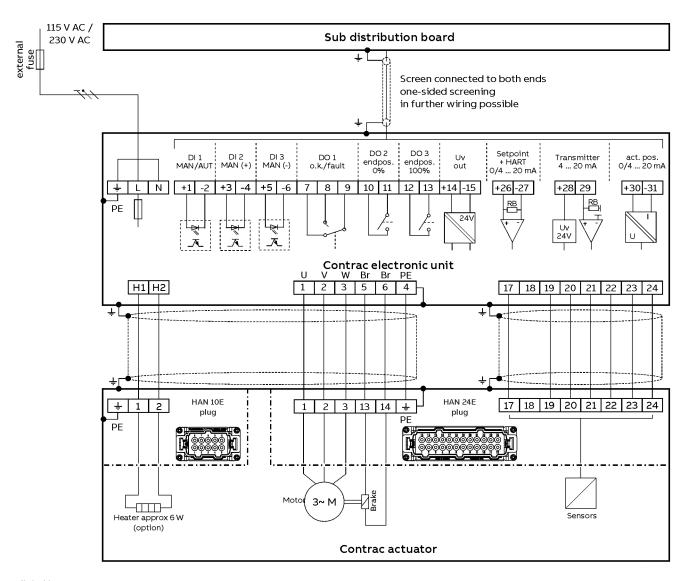
## ... Electrical connections

### Electronic Unit EBN853 (Contrac)

**Analog / Digital**

**Note**
The electrical connection is provided by a universal plug on the actuator and the screw terminals on the electronic unit.
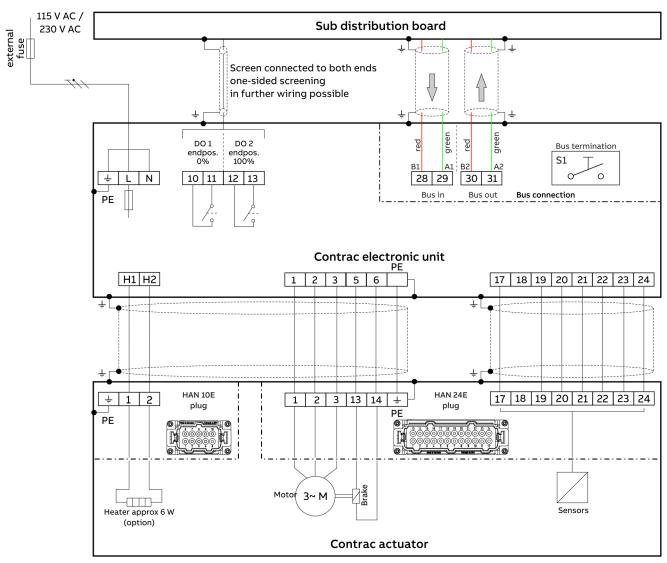


BE = digital input

BA = digital output

**Figure 1:   Control via analog input 0/4 to 20 mA, HART® communication or binary inputs**

**PROFIBUS DP®**

**Note**

The electrical connection is provided by a universal plug on the actuator and the screw terminals on the electronic unit.



BA = digital output

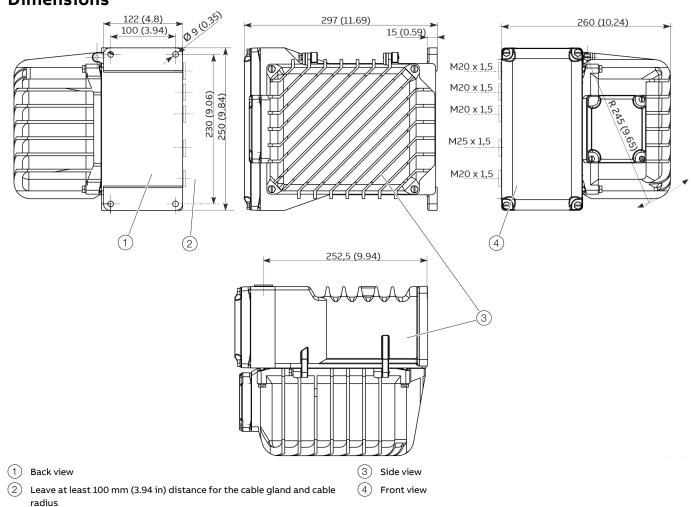**Figure 2:    Control via fieldbus PROFIBUS DP®**

# Dimensions



① Back view
② Leave at least 100 mm (3.94 in) distance for the cable gland and cable radius
③ Side view
④ Front view

**Figure 3:    Dimensions in mm (in)**

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# Ordering Information

## EBN853 for Standard Actuators

| Basic model | V68853 | XXXX | XXX | XXX | XXX | XXX | XXX | XXX |
|---|---|---|---|---|---|---|---|---|
| EBN853 Electronic Unit for Standard Actuators, for field installation | | | | | | | | |
| **Suitable for** | | | | | | | Continued see | |
| Linear Actuator RSD10-5,0/100 | | 2050 | | | | | next page | |
| Linear Actuator RSD10-5,0/300 | | 9150 | | | | | | |
| Linear Actuator RSD10-10,0/100 | | 2051 | | | | | | |
| Linear Actuator RSD10-10,0/300 | | 9151 | | | | | | |
| Linear Actuator RSD20-5,0/100 | | 2052 | | | | | | |
| Linear Actuator RSD20-5,0/300 | | 9152 | | | | | | |
| Linear Actuator RSD20-7,5/100 | | 2053 | | | | | | |
| Linear Actuator RSD20-7,5/300 | | 9153 | | | | | | |
| Linear Actuator RSD50-3,0/120 | | 3054 | | | | | | |
| Linear Actuator RSD50-3,0/300 | | 9154 | | | | | | |
| Linear Actuator RSD100-1,5/150 | | 2155 | | | | | | |
| Linear Actuator RSD100-1,5/300 | | 9155 | | | | | | |
| Linear Actuator RSD200-0,7/180 | | 5456 | | | | | | |
| Linear Actuator RSD200-0,7/300 | | 9156 | | | | | | |
| Part-Turn Actuator RHD250-10 | | 0103 | | | | | | |
| Part-Turn Actuator RHD500-10 | | 0104 | | | | | | |
| Part-Turn Actuator RHD800-10 | | 0105 | | | | | | |
| Part-Turn Actuator RHD1250-12 | | 0106 | | | | | | |
| Part-Turn Actuator RHD2500-25 | | 0107 | | | | | | |
| Part-Turn Actuator RHD4000-40 | | 0108 | | | | | | |
| Part-Turn Actuator RHD8000-80 | | 0109 | | | | | | |
| **Supply Voltage** | | | | | | | | |
| 230 V AC 1 Ph | | | 380 | | | | | |
| 115 V AC 1 Ph | | | 381 | | | | | |
| **Frequency** | | | | | | | | |
| 50 Hz | | | | 382 | | | | |
| 60 Hz | | | | 383 | | | | |
| **Digital Communication** | | | | | | | | |
| RS 232 | | | | | 384 | | | |
| RS 232 + HART® | | | | | 385 | | | |
| PROFIBUS DP® | | | | | 386 | | | |
| PROFIBUS DPV1® | | | | | 387 | | | |
| **Electrical Connection to Actuator** | | | | | | | | |
| Without cable (plug at standard actuator, terminal connection at Ex actuator) | | | | | | 335 | | |
| With 5 m (16 ft) cable end and 24-pole plug | | | | | | 690 | | |
| With 10 m (32 ft) cable end and 24-pole plug | | | | | | 691 | | |
| With 20 m (65 ft) cable end and 24-pole plug | | | | | | 692 | | |

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# … Ordering Information

## … EBN853 for Standard Actuators

| Main ordering information | | |
|---|---|---|
| EBN853 Electronic Unit for Standard Actuators, for field installation | **XXX** | **XXX** |
| **Ambient Temperature Range of Actuator** | | |
| −30 to 50 °C (−20 to 130 °F) | 341 | |
| −10 to 65 °C (15 to 150 °F) | 344 | |
| −1 to 85 °C (30 to 185 °F) (Only for RHD250 / RHD500 / RHD800 und RSD10 / RSD20) | 349 | |
| **Settings of Electronic Unit** | | |
| Standard settings (see technical data) | | 390 |
| Customer-specific settings (see data sheet 10/68-2.40 EN) | | 391 |

**Additional ordering information EBN853 for Standard Actuators**

| EBN853 Electronic Unit for Standard Actuators, for field installation | XXX | XXX | XXX | XXX | XXX | XXX | XXX | XXX | XXX | XXX | XXX |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Electrical Connection Thread** | | | | | | | | | | | |
| Set NPT adapter (junction metric / NPT thread) | 680 | | | | | | | | | | |
| Set PG adapter (junction metric / PG thread) | 681 | | | | | | | | | | |
| **Anti-condensation Heater in Actuator "ON"** | | | | | | | | | | | |
| Anti-condensation heater in actuator "ON" | | 359 | | | | | | | | | |
| **Identification on Data Label** | | | | | | | | | | | |
| (Alphanumeric, max. 32 characters) | | | 295 | | | | | | | | |
| **Data Label with US Units** | | | | | | | | | | | |
| Data label with US units | | | | 253 | | | | | | | |
| **F. No. of associated Actuator on Data Label of Electronic Unit** | | | | | | | | | | | |
| F. No. of associated actuator on data label of electronic unit | | | | | 297 | | | | | | |
| (Available only as "Special Requirement") | | | | | | | | | | | |
| **Factory Certificate 2.1 acc. to EN 10204** | | | | | | | | | | | |
| Factory certificate 2.1 acc. EN 10204 | | | | | | 291 | | | | | |
| **Certificate 3.1 acc. to EN 10204** | | | | | | | | | | | |
| Certificate 3.1 acc. EN 10204 | | | | | | | 292 | | | | |
| **UKCA** | | | | | | | | | | | |
| UKCA | | | | | | | | 293 | | | |
| **Handling of Certificates** | | | | | | | | | | | |
| Send via e-mail | | | | | | | | | GHP | | |
| Send via mail | | | | | | | | | GHD | | |
| Send via mail express | | | | | | | | | GHA | | |
| Send with instrument | | | | | | | | | GHS | | |
| Only archived | | | | | | | | | GHE | | |
| **Operating Instruction** | | | | | | | | | | | |
| German | | | | | | | | | | Z1D | |
| English | | | | | | | | | | Z1E | |
| Portuguese | | | | | | | | | | Z1P | |
| Italian | | | | | | | | | | Z1I | |
| French | | | | | | | | | | Z1F | |
| **Positioner / Controller Function** | | | | | | | | | | | |
| Positioner function | | | | | | | | | | | 238 |
| Process controller function | | | | | | | | | | | 239 |

## Accessories

| Description | Ordering number |
|---|---|
| RHD(E) / RSD(E) / PME / LME Save & Restore Tool ECOM700 for Contrac electronic units with software version ≥ 2.0 | 3KXE911100L0001 |
| RHD(E) / RSD(E) / PME / LME Save & Restore Tool ECOM688 for Contrac electronic units with software version < 2.0 | 3201110 |
| RHD(E) / RSD(E) / PME / LME PC connection cable, 3 m cable with 9-pole Sub-D connector and 9-pole Sub-D female connector | 746349 |

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# Trademarks

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