



Data-Pool Values

MP-capable SR actuators

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Data-Pool general notes

General information

- The device supports the MP Data-Pool functional profile. All available data points are managed in a data pool and accessible with MP read/write commands
- This document describes all public data pool values of the device. It's divided into operation values and service values
- The MP Data-Pool functional profile is specified in the MP Cooperation Documentation. The document is provided to Belimo MP-Partners
- See the technical datasheet for technical information about the device itself

Configuration

MP-Bus Configuration data are not password protected. No Login is required.

Tool Belimo Assistant 2

Basically the device can be operated via MP-Bus with factory settings. If one of the below listed functions is requested, parameterization via Belimo Assistant 2 and Operating Mode = MP-Bus is required.

- Sensor conversion
- Bus Fail Watchdog Function
- Mechanical Adjustment

See Service Section on the device datasheet for connection details.

Identification

The connected type can be identified by its series number:

Prefix	Profile type	Profile category	Type	Remark
2	12	1	MP-capable SR actuator	

Interface version

This description is valid for these models:

Product model number	Remark
..24SR..	
..24-SR..	Check datasheet for support of MP-Bus capability.

Timing of MP-Bus queries

Client implementations typically poll the server in cycles (MP1, MP2, MP3, ...). Reading all data pool values of this node in one cycle are not recommended, because it would reduce the overall MP-Bus performance.

Recommendation:

- Split up the queries into several cycles (e.g. 3 queries per cycle)
- Adjust repetition rates (reading values) according to the rate of change of the value

Signed integer

Signed integers are represented as two's complement.

Example:

Value of ID40 = 1111 1101 1111 0010₂ = -526₁₀

Actual value

= value * scaling factor * unit

= -526 * 0.01 * unit

= -5.26 unit

Values overview

Operation

ID	Name	Access
10	Setpoint Rel [%]	R / W
12	Position Rel [%]	R
13	Position Degree	R
14	Override	R / W
1001	Device Status Information	R
1004	Input Y3 Analog	R

Definition Access: R = Read, W = Write

Service

ID	Name	Access
1050	MinPosition Rel	R / W
1051	MidPosition Rel	R / W
1052	MaxPosition Rel	R / W
1053	Motion Direction	R / W
1055	Location	R / W
50003	Device String	R

Definition Access: R = Read, W = Write



All writeable datapoints with ID >1000 (configuration data) are persistent and are **not** supposed to be written on a regular basis. Designated data points are highlighted in colour in the document.

Values descriptions

Control and general settings

These data-pool values can be used to control and configure the fundamental functionalities and read the corresponding feedback values of the Actuator.

ID	Description Comments	Values	Unit	Scaling	Number of Bytes	Access
10	Setpoint Rel The setpoint is relative to the Operating Range. It is scaled between Min and Max limitations. Note: The value shall be written cyclically.	0...10'000	%	0.01	2	R / W
12	Position Rel Position relative to the Nominal range.	0...10'000	%	0.01	2	R
13	Position Degree The absolute position refers to the actual position within the Mechanical Range.	Rotary: 0...9'500 [°] Linear: 0...60'000 [mm]	°, mm	0.01	2	R
14	Override Overrides the setpoint with defined values. Override reset to None after 120 s. Note: The value shall be written cyclically.	0: None 1: Open 2: Close 3: Min 4: Mid 5: Max 6: – 7: Stop 8: Close Fast 9: Open Fast	–	1	1	R / W

Definition Access: R = Read, W = Write

Service

Writing configuration parameters causes the actuator to restart.
Therefore, the Setpoint Position Rel and Override Control values must be written cyclically.

ID	Description Comments	Values	Unit	Scaling	Number of Bytes	Access
1050	MinPosition Rel Minimum limitation of the Operating range. Relative to adapted nominal Range. Min has to be \leq Max -20%	0...10'000	%	0.01	2	R / W
1051	MidPosition Rel Adjustable value between Min...Max for moving to a defined position via override function. Default: 50%	0...10'000	%	0.01	2	R / W
1052	MaxPosition Rel Maximum limitation of the Operating range. Relative to adapted nominal Range. Max has to be \geq Min +20%	0...10'000	%	0.01	2	R / W
1053	Motion Direction Allows to invert the motion direction. 0: CW (Clockwise) 1: CCW (Counterclockwise)	0: Normal 1: Reversed	-	1	1	R / W
1055	Location	String	-	-	16	R / W
50003	Device String Belimo material string that corresponds to the product model number.	String	-	-	22	R

Definition Access: R = Read, W = Write

Conversion of sensor signals

This data-pool value can be used to read values related to the additional Sensor Input on Y3.

ID	Description Comments	Values	Unit	Scaling	Number of Bytes	Access
1004	Input Y3 Analog Value of active sensor signal connected to Input Y3. Sensor configuration with Belimo Assistant 2 required.	0...11'000	Volt	0.001	2	R

Definition Access: R = Read, W = Write

Health state

This data-pool value show the actual health status of the device.

ID	Description Comments	Range / Enumeration	Unit	Scaling	Number of Bytes	Access
1001	Device Status Information 3: Manual override lever is pressed or hand crank plugged. 5: Position can not be reached. 6: Position outside the nominal range. 9: Timeout for the bus fail watchdog expired	Bit: 0: – 1: – 2: – 3: Gear train disengaged 4: – 5: Position not reached 6: Position out of range 7: – 8: – 9: Bus fail action active 10: – 11: – 12: – 13: – 14: – 15: – 16: Adaptation in progress	–	1	4	R

Definition Access: R = Read, W = Write

All inclusive.

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