



2-way EPIV V4 DN 15...50

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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 process values and configuration 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.

Identification The connected type can be identified by its series number:

Prefix	Profile Type	Profile Category	Type
2	2	35	EP...R2+...

Configuration Configuration data are not password protected. No Login is required.

Timing of MP-Bus queries Master implementations typically poll the slaves 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
- Prevent from reading unused data pool values

Signed integer Signed integers are represented as two's complement.

Example

Value of ID40 = $1111'1101'1111'0010_2 = -526_{10}$

Actual Value = Value * Scaling factor * Unit = $-526 * 0.01 * ^\circ\text{C} = -5.26\text{ }^\circ\text{C}$



All writeable datapoints with ID >100 (configuration data) are persistent and are not supposed to be written on a regular base.

Data-Pool Values Overview

	ID	Name	R/W
Process	10	Setpoint [%]	R/W
	11	Command	R/W
	12	Relative Position [%]	R
	13	Absolute Position [°]	R
	14	Override	R/W
	15	Sensor 1 Value [mV] [-]	R
	16	Setpoint Analog [%]	R
	19	Relative Volumetric Flow [%]	R
	20	Absolute Volumetric Flow [l/s]	R
	26	Glycol Concentration [%]	R
	29	Temperature [°C]	R
	51	Total Volume [m ³]	R
Configuration	110	Malfunction & Service information	R
	111	Control Mode	R/W
	115	Bus Fail Action	R/W
	116	Communication Watchdog [s]	R/W
	117	Setpoint Source	R/W
	120	Sensor 1 Type	R/W
	125	Vmin [%]	R/W
	129	Vmax [%]	R/W
	133	Vnom [l/s]	R
	200	Meter Serial Number (Part 1)	R
201	Meter Serial Number (Part 2)	R	

Data-Pool Values

Process Data

Nr	Description	Unit	Scaling	Values	Size	R/W
10	<p>Setpoint</p> <p>The setpoint refers to the demanded position or flow according to the selected control mode. It is scaled between Min and Max limits.</p> <p>The setpoint is active, if the setpoint is controlled by bus (Setpoint Source = Bus)</p>	%	0.01	0...10'000	2	R/W
11	<p>Command</p> <p>Initiation of actuator functions for service. After command is sent, value changes back to None (0)</p>	-	-	0: None 1: - 2: Sync	1	R/W
12	Relative Position	%	0.01	0...10'000	2	R
13	Absolute Position	°	0.01	0...9'600	2	R
14	<p>Override Control</p> <p>Overriding the setpoint with defined values</p>			0: None 1: Open Valve 2: Close Valve 3: Min Flow 4: - 5: Max Flow 6: Nom Flow 7: - 8: - 9: - 10: - Motor Stop	1	R/W
15	<p>Sensor 1 Value</p> <p>Current value of sensor 1, depending on setting of "Sensor 1 Type" (ID 120)</p>	mV -	1	0...65'535	2	R
16	<p>Setpoint Analog</p> <p>Shows the setpoint in % if the actuator is controlled by analog signal (ID 117)</p>	%	0.01	0...10'000	2	R
19	<p>Relative Volumetric Flow</p> <p>Related to "Nominal Volumetric Flow" (ID 133)</p>	%	0.01	0...15'000	2	R
20	Absolute Volumetric Flow	l/s	0.01	0...10'000	2	R
26	Glycol Concentration	%	0.01	0...10'000	2	R
29	Temperature	°C	0.01	-2'000...12'000	2	R
51	Total Volume	m ³	0.01	0...21'474'836	4	R

Configuration Data

Nr	Description	Unit	Scaling	Values	Size	R/W
110	Malfunction & Service information	-	-	Bit 0: No communication to actuator Bit 1: Gear disengaged Bit 2: Actuator cannot move Bit 3: Reverse flow Bit 4: Flow setpoint not reached Bit 5: Flow with closed valve Bit 6: Actual flow > Vnom Bit 7: Flow measurement error Bit 8: - Bit 9: Integrated temperature error Bit 10: - Bit 11: Freeze warning Bit 12: Glycol detected Bit 13: - Bit 14: - Bit 15: Bus watchdog triggered	2	R
111	Control Mode	-	-	0: Position Control 1: Flow Control 2: -	1	R/W
115	Bus Fail Action Defines the action in case a communication watchdog is triggered (see ID 116)	-	-	0: None 1: Open Valve 2: Close Valve 3: Max Flow 4: Min Flow 5: - 6: Stop	1	R/W
116	Communication Watchdog Each datapool access (read or write) will reset the watchdog timer. If the watchdog is triggered the action according to ID 115 will be executed.	s	1	30...3'600 Default: 120	2	R/W
117	Setpoint Source Defines whether the setpoint is controlled by the analog input signal on wire 3 or the MP-Bus	-	-	0: Analog 1: Bus	1	R/W
120	Sensor 1 Type If Setpoint Source (ID 117) is analog (Hybrid mode), the Sensor 1 Type can be set to Active (1) to see the Setpoint Analog in mV.	-	-	0: None 1: Active 2: - 3: - 4: Switch	1	R/W
125	Vmin The min setpoint in % is related to Vnom (ID 133) and considered when Control Mode = Flow Control	%	0.01	0...Vmax	2	R/W
129	Vmax The max setpoint in % is related to Vnom (ID 133) and considered when Control Mode = Flow Control	%	0.01	2'500...10'000	2	R/W
133	Vnom Nominal volumetric flow	l/s	0.01	0...10'000	2	R
200	Meter Serial Number (Part 1)	-	-	0...2'147'483'647	4	R
201	Meter Serial Number (Part 2)	-	-	0...2'147'483'647	4	R