



MP-Bus Data-Pool Values

MP  **BUS**[®]

Flow Sensor 22PF-1U..

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BELIMO[®]

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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	1	36	22PF-..

Configuration

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

Timing of MP-Bus queries

Client implementations typically poll the servers 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 0010₂ = -526₁₀

Actual value
 = value * scaling factor * unit
 = -526 * 0.01 * unit
 = **-5.26 unit**

Data-Pool values overview

Process

ID	Name	Access
15	Sensor 1 Value [mV] [Ω] [-]	R
19	Relative Volumetric Flow [%]	R
20	Absolute Volumetric Flow [l/s]	R
22	Absolute Volumetric Flow in selected unit	R
26	Glycol Concentration [%]	R
29	Temperature [°C]	R
51	Total Volume [m ³]	R

Configuration

ID	Name	Access
110	Malfunction & Service information	R
120	Sensor 1 Type	R / W
133	FS (Full scale) [l/s]	R
151	Unit Selection Flow	R / W
200	Flow Meter Serial Number First Digits	R
201	Flow Meter Serial Number Last Digits	R

Definition Access: R = Read, W = Write



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

Data-Pool values

Process data

No.	Description Comments	Unit	Scaling	Values	Size	Access
15	Sensor 1 value Current value of sensor 1, depending on setting of "Sensor 1 Type" (ID 120)	mV –	1	0...65'535	2	R
19	Relative volumetric flow Relative Volumetric Flow in % of "FS" (full scale) Related to "FS" (full scale) (ID 133)	%	0.01	0...15'000	2	R
20	Absolute volumetric flow	l/s	0.01	0...10'000	2	R
22	Absolute volumetric flow in selected unit → based on selection in ID 151	UnitSel	0.001	0...360'000	4	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

No.	Description Comments	Unit	Scaling	Values	Size	Access
110	Malfunction and service information Value is bit-coded. More than one bit can be set to 1. Not all bits mentioned in the enumeration are used for this product range. 3: Reverse flow: Wrong flow direction. 6: Flow actual exceeds FS: Actual flow exceeds FS (designed nominal flow) 7: Flow measurement error: Airbubbles, water contamination, not specified fluid used. 9: Flowbody temperature error: Temperature sensor defect. 11: Freeze warning: Water/glycol used tends to freeze. 12: Glycol detected: Medium, contains glycol although not set.	–	–	Bitmask = 0: – 1: – 2: – 3: Reverse flow 4: – 5: – 6: Flow actual exceeds FSI 7: Flow measurement error 8: – 9: Flowbody temperature error 10: – 11: Freeze warning 12: Glycol detected 13: – 14: – 15: –	2	R
120	Sensor 1 type Additional sensor input	–	–	0: None 1: Active 2: – 3: – 4: Switch	1	R / W
133	FS (full scale)	l/s	0.01	0..10'000	2	R
151	Unit selection flow	–	1	0: m ³ /s 1: m/h 2: l/s 3: l/min 4: l/h 5: gpm 6: cfm	4	R
200	Flow Meter serial number first digits	–	–	0..2'147'483'647	4	R
201	Flow Meters serial number last digits	–	–	0..2'147'483'647	4	R

Definition Access: R = Read, W = Write

Note: According to the present configuration settings of the product (e.g. DN size) the HVAC application may perform a size limitation within the indicated MP-Bus value range. Each product may have different HVAC value size limitations.

All inclusive.

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