8.8.1.3 Mnemonic Value Request Message Contents

Figure 8-20 below shows a UML object diagram of the Mnemonic Value Request Message with its required, optional, and dependent fields.
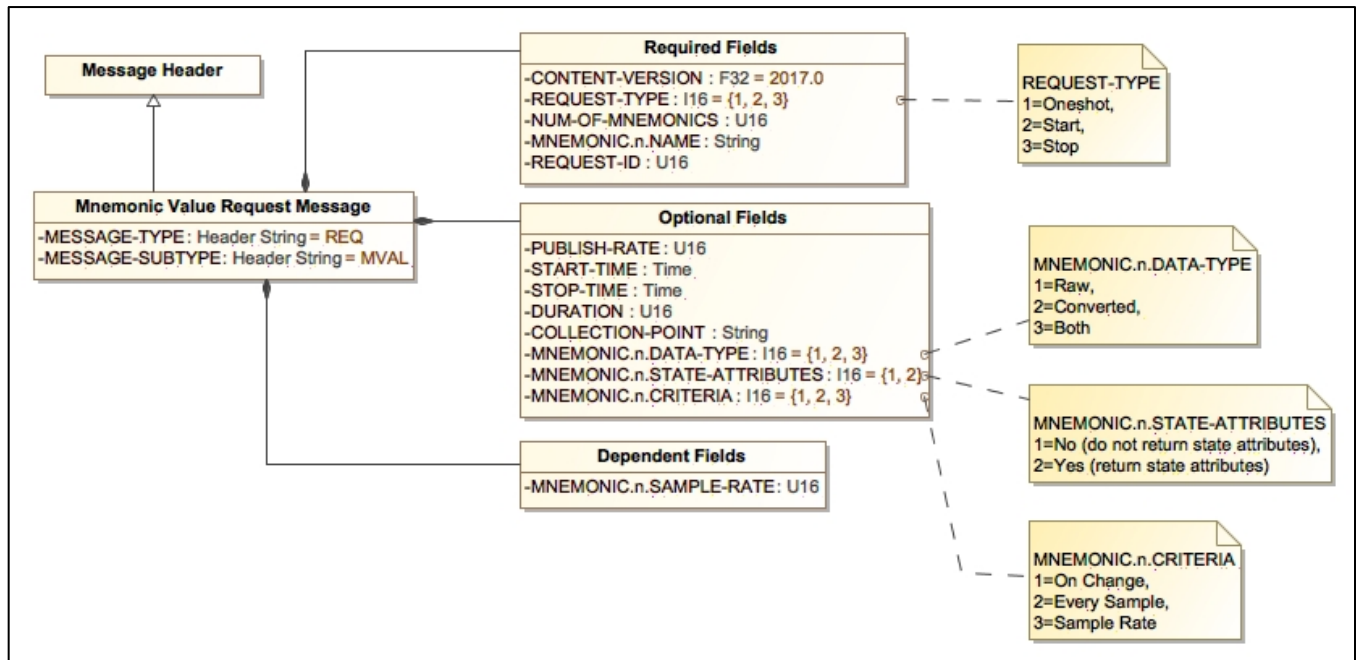

Figure 8-20. Mnemonic Value Request Message Diagram

Table 8-99 below describes additional field names, values, and notes for the Mnemonic Value Request Message.

Table 8-99. Mnemonic Value Request Message Additional Information

Field Name	Value/Description		Notes
CONTENT-VERSION	2017		Version Number for this message content description
REQUEST-TYPE	**Value**	**Description**	Identifies the type of mnemonic value request message
	1	Oneshot	
	2	Start	
	3	Stop	
PUBLISH-RATE	0+		Identifies the rate, in number of seconds, which the Mnemonic Value Data messages are published. Zero means the server should publish the data as fast as possible. Default rate = 5 seconds.
START-TIME			Requested start time of the mnemonic values.
STOP-TIME			Requested stop time of the mnemonic values.
DURATION	**Value**	**Description**	Length of time from "now", in seconds, for the request to be active, after which the data messages will automatically cease.
	1+		
COLLECTION-POINT			Receiver, device, point, path, etc. where data was received. Used to distinguish data simultaneously received at multiple collection points.

Field Name	Value/Description		Notes
REQUEST-ID			ID to identify the request message - if different request messages have the same value, the request is a replacement; else, it is a new request
NUM-OF-MNEMONICS	1+		Total Number of mnemonics being requested. Required only for Oneshot and Start.
MNEMONIC.n.NAME	"n" starts at "1"		Name of the mnemonic. Required only for Oneshot and Start.
MNEMONIC.n.DATA-TYPE	**Value**	**Description**	Indicates the data type to be returned, either the raw value, or the converted value (Engineering Units or Text converted), or both. Defaults to both.
	1	Raw	
	2	Converted	
	3	Both	
MNEMONIC.n.STATE-ATTRIBUTES	**Value**	**Description**	Indicates if State Attributes (flags, limits, static flag, and data quality) are to be returned. Defaults to No.
	1	No	
	2	Yes	
MNEMONIC.n.CRITERIA	**Value**	**Description**	Identification of when data should be provided for the mnemonic. Includes either upon change of data (value, flags or status), or every sample, or at a specified sampling rate. The default Criteria is "Change" only data.
	1	Change (value, flags, status)	
	2	Every Sample	
	3	Sample Rate	
MNEMONIC.n.SAMPLE-RATE	1+	milliseconds	If CRITERIA is specified as "Sample Rate", this field will specify the data sampling rate for the mnemonic.

Oneshot Request

A REQUEST-TYPE of "Oneshot" will result in one set of mnemonic data being returned - the most recent value. No further updates will occur. For a "Oneshot" request the following fields or options **are not** meaningful:

- PUBLISH-RATE
- DURATION
- MNEMONIC.n.CRITERIA
- MNEMONIC.n.SAMPLE-RATE

Start and Stop Request

The REQUEST-TYPE of "Start" and "Stop" are used for streaming the data in multiple messages. If the MNEMONIC.n.CRITERIA are not specified in the Mnemonic Value Request Message, then the criteria will default to a value of 1 for Change only data.

Additionally, if the publish rate is not specified a default publish rate of 5 seconds will be used. A specified publish rate of zero is a request for the data to be published at the fastest rate possible by the data server/provider. The data provider may have a predetermined maximum publish rate, for example, no faster than 1 message per second, or it may decide to make an on-the-spot calculation of its capabilities based upon its current publishing responsibilities.

For example, the data provider may know that it is limited to an output rate of 1 megabyte per second. If it is currently near its maximum output rate and after calculating the additional load of