Modbus

Summary of the register meaning

Modbus

- ***Technical knowledge***

Modbus TCP Mapping

Holding Register (4x)	Description	Data Type	Class ID	Inst ID	Attr ID
1 – 2	Discrete Inputs	DWORD	0x64	0x01	1
3 – 4	Barcode Scanner Status	DWORD	0x64	0x01	2
5	Item Sequence Number	UINT	0x64	0x01	3
6	Item Total Size	UINT	0x64	0x01	4
7	Fragment Sequence Number	UINT	0x64	0x01	5
8	Fragment Size	UINT	0x64	0x01	6
9 – 233	Fragment Data	USINT[450]	0x64	0x01	7
234 – 235	Discrete Outputs	DWORD	0x64	0x01	8
236	Last Item Sequence Number	UINT	0x64	0x01	9
237	Last Fragment Sequence Num-ber	UINT	0x64	0x01	10
238 – 239	Output Status	DWORD	0x64	0x01	11
240	Output Item Sequence Number	UINT	0x64	0x01	12
241	Output Item Total Size	UINT	0x64	0x01	13
242 – 466	Output Data	USINT[450]	0x64	0x01	14
467	Last Output Item Sequence Number	UINT	0x64	0x01	15

Not implemented

Modbus

- ***Technical knowledge***

Modbus TCP Mapping

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1 - 2	Discrete Inputs	DWORD	0x64	0x01	1
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7	Fragment Sequence Number	UINT	0x64	0x01	5
8	Fragment Size	UINT	0x64	0x01	6
9 - 233	Fragment Data	USINT[450]	0x64	0x01	7
234 - 235	Discrete Outputs	DWORD	0x64	0x01	8
236	Last Item Sequence Number	UINT	0x64	0x01	9
237	Last Fragment Sequence Number	UINT	0x64	0x01	10
238 - 239	Output Status	DWORD	0x64	0x01	11
240	Output Item Sequence Number	UINT	0x64	0x01	12
241	Output Item Total Size	UINT	0x64	0x01	13
242 - 466	Output Data	USINT[450]	0x64	0x01	14
467	Last Output Item Sequence Number	UINT	0x64	0x01	15

Get register (to read)

Every barcode received by the base has a progressive number.

This number must be saved by the customer's applicative and used for the *confirm* step

Modbus

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8	Fragment Size	UINT	0x64	0x01	6
9 – 233	Fragment Data	USINT[450]	0x64	0x01	7
234 – 235	Discrete Outputs	DWORD	0x64	0x01	8
236	Last Item Sequence Number	UINT	0x64	0x01	9
237	Last Fragment Sequence Num-ber	UINT	0x64	0x01	10
238 – 239	Output Status	DWORD	0x64	0x01	11
240	Output Item Sequence Number	UINT	0x64	0x01	12
241	Output Item Total Size	UINT	0x64	0x01	13
242 – 466	Output Data	USINT[450]	0x64	0x01	14
467	Last Output Item Sequence Number	UINT	0x64	0x01	15

Get register (to read)

Size (in byte) of the data received

Modbus

- ***Technical knowledge***

Modbus TCP Mapping

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1 - 2	Discrete Inputs	DWORD	0x64	0x01	1
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7	Fragment Sequence Number	UINT	0x64	0x01	5
8	Fragment Size	UINT	0x64	0x01	6
9 - 233	Fragment Data	USINT[450]	0x64	0x01	7
234 - 235	Discrete Outputs	DWORD	0x64	0x01	8
236	Last Item Sequence Number	UINT	0x64	0x01	9
237	Last Fragment Sequence Number	UINT	0x64	0x01	10
238 - 239	Output Status	DWORD	0x64	0x01	11
240	Output Item Sequence Number	UINT	0x64	0x01	12
241	Output Item Total Size	UINT	0x64	0x01	13
242 - 466	Output Data	USINT[450]	0x64	0x01	14
467	Last Output Item Sequence Number	UINT	0x64	0x01	15

Get register (to read)

Frame number of the received data.
If a barcode is lower than 450bytes, this number is always 1

If the barcode is greater, this number represent the “page” to read to get the whole data

Modbus

- ***Technical knowledge***

Modbus TCP Mapping

Holding Register (4x)	Description	Data Type	Class ID	Inst ID	Attr ID
1 - 2	Discrete Inputs	DWORD	0x64	0x01	1
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8	Fragment Size	UINT	0x64	0x01	6
9 - 233	Fragment Data	USINT[450]	0x64	0x01	7
234 - 235	Discrete Outputs	DWORD	0x64	0x01	8
236	Last Item Sequence Number	UINT	0x64	0x01	9
237	Last Fragment Sequence Number	UINT	0x64	0x01	10
238 - 239	Output Status	DWORD	0x64	0x01	11
240	Output Item Sequence Number	UINT	0x64	0x01	12
241	Output Item Total Size	UINT	0x64	0x01	13
242 - 466	Output Data	USINT[450]	0x64	0x01	14
467	Last Output Item Sequence Number	UINT	0x64	0x01	15

Get register (to read)

Frame size
Data size of the frame currently available

Modbus

- ***Technical knowledge***

Modbus TCP Mapping

Holding Register (4x)	Description	Data Type	Class ID	Inst ID	Attr ID
1 - 2	Discrete Inputs	DWORD	0x64	0x01	1
3 - 4	Barcode Scanner Status	DWORD	0x64	0x01	2
5	Item Sequence Number	UINT	0x64	0x01	3
6	Item Total Size	UINT	0x64	0x01	4
7	Fragment Sequence Number	UINT	0x64	0x01	5
8	Fragment Size	UINT	0x64	0x01	6
9 - 233	Fragment Data	USINT[450]	0x64	0x01	7
234 - 235	Discrete Outputs	DWORD	0x64	0x01	8
236	Last Item Sequence Number	UINT	0x64	0x01	9
237	Last Fragment Sequence Number	UINT	0x64	0x01	10
238 - 239	Output Status	DWORD	0x64	0x01	11
240	Output Item Sequence Number	UINT	0x64	0x01	12
241	Output Item Total Size	UINT	0x64	0x01	13
242 - 466	Output Data	USINT[450]	0x64	0x01	14
467	Last Output Item Sequence Number	UINT	0x64	0x01	15

Get register (to read)

Frame data
If the barcode is lower than 450bytes, this is the whole data.

If the barcode is greater then 450bytes, every fragment contains part of the data. All the fragments must be read to get the whole data

Modbus

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Modbus TCP Mapping

Holding Register (4x)	Description	Data Type	Class ID	Inst ID	Attr ID
1 - 2	Discrete Inputs	DWORD	0x64	0x01	1
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5	Item Sequence Number	UINT	0x64	0x01	3
6	Item Total Size	UINT	0x64	0x01	4
7	Fragment Sequence Number	UINT	0x64	0x01	5
8	Fragment Size	UINT	0x64	0x01	6
9 - 233	Fragment Data	USINT[450]	0x64	0x01	7
234 - 235	Discrete Outputs	DWORD	0x64	0x01	8
236	Last Item Sequence Number	UINT	0x64	0x01	9
237	Last Fragment Sequence Number	UINT	0x64	0x01	10
238 - 239	Output Status	DWORD	0x64	0x01	11
240	Output Item Sequence Number	UINT	0x64	0x01	12
241	Output Item Total Size	UINT	0x64	0x01	13
242 - 466	Output Data	USINT[450]	0x64	0x01	14
467	Last Output Item Sequence Number	UINT	0x64	0x01	15

Set register (to write)

Item sequence number must be written here for confirm of the data.

It means the previous data has managed and the customer is ready for a new data

Confirm is mandatory: without confirm, or with a wrong confirm, no other data will be received

Modbus

- ***Technical knowledge***

Modbus TCP Mapping

Holding Register (4x)	Description	Data Type	Class ID	Inst ID	Attr ID
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7	Fragment Sequence Number	UINT	0x64	0x01	5
8	Fragment Size	UINT	0x64	0x01	6
9 – 233	Fragment Data	USINT[450]	0x64	0x01	7
234 – 235	Discrete Outputs	DWORD	0x64	0x01	8
236	Last Item Sequence Number	UINT	0x64	0x01	9
237	Last Fragment Sequence Number	UINT	0x64	0x01	10
238 – 239	Output Status	DWORD	0x64	0x01	11
240	Output Item Sequence Number	UINT	0x64	0x01	12
241	Output Item Total Size	UINT	0x64	0x01	13
242 – 466	Output Data	USINT[450]	0x64	0x01	14
467	Last Output Item Sequence Number	UINT	0x64	0x01	15

Set register (to write)

In case of a barcode greater than 450bytes, the data is collected reading all the frames part of the whole data transmission.

Every frame must be confirmed before to receive a new one

In case of a barcode shorter than a single fragment, the confirm of the fragment is not required; it is enough to confirm the item sequence number

Modbus

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Modbus TCP Mapping

Holding Register (4x)	Description	Data Type	Class ID	Inst ID	Attr ID
1 - 2	Discrete Inputs	DWORD	0x64	0x01	1
3 - 4	Barcode Scanner Status	DWORD	0x64	0x01	2
5	Item Sequence Number	UINT	0x64	0x01	3
6	Item Total Size	UINT	0x64	0x01	4
7	Fragment Sequence Number	UINT	0x64	0x01	5
8	Fragment Size	UINT	0x64	0x01	6
9 - 233	Fragment Data	USINT[450]	0x64	0x01	7
234 - 235	Discrete Outputs	DWORD	0x64	0x01	8
236	Last Item Sequence Number	UINT	0x64	0x01	9
237	Last Fragment Sequence Number	UINT	0x64	0x01	10
238 - 239	Output Status	DWORD	0x64	0x01	11
240	Output Item Sequence Number	UINT	0x64	0x01	12
241	Output Item Total Size	UINT	0x64	0x01	13
242 - 466	Output Data	USINT[450]	0x64	0x01	14
467	Last Output Item Sequence Number	UINT	0x64	0x01	15

Set register (to write)

Buffer used to transmit towards the base.

It could be used to send command to the base or to send 2-ways messages to the gun

A progressive number has to be assigned to every sequence (*output item sequence number*)

The size of the message has to be described (*output item total size*)

Data (*Output data*)

Confirm the previous item has sent toward the base (*last output item sequence number*). You cannot send a new 2-ways message to the gun until the previous one has confirmed.