Electric Drives and Controls | Hydraulics | Linear Motion and Assembly Technologies | Pneumatics | Service

Rexroth Bosch Group

VT-HACD-DPQ
Digital Controller for electro-hydraulic Injection Molding Machines

RE 30146-03-Z/08.07

Start-up DeviceNet Interface

Contents

1 Introduction

1.1 Document

Version: 1.0

1.2 General

Bodac may be used to configure the bus tables. The bus tables de-fine which parameters are mapped in the Transmit and the Receive screens. The mapped parameters in the Transmit screen are sent to the master from the VT-HACD-DPQ while the mapped parameters in the Receive screen are sent by the master to the VT-HACD-DPQ.

This configuration of the bus tables will be refered to as Mapping in the remainder of this document.

This manual only describes the installation and operation of the controller in respect to the Fieldbus system. Information regarding the commissioning of the controller using BODAC can be found in the manual “Installation and operation of the HACD-DPQ controller card”. A list of available documentation can be found in the chapter “Additional documentation”.

The examples used in this manual to show the commissioning of the VT-HACD-DPQ-1-2X/V0/1-D-0 are done with Allen Bradley products.

Additional documentation

"VT-HACD-DPQ-1 Digital Closed-Loop Control Electronics For Injection MoldingMachines" has apart from this manual additional documentation.

It includes:

- RE-sheet "RE 30 146".
- Document RE30 146-B: "VT-HACD-DPQ Digital Closed-Loop Control Electronics For Injection Molding Machines: Installation and Operation”
- Document RE 30 146-01-B: " VT-HACD-DPQ Digital Closed-Loop Contral Electronics For Injection Molding Machines: Start-up and Operation"
- Document RE 30 146-U: „Declaration on environmental compatibility in the field of EMC, climate and mechanical stress“
- Internet: www.boschrexroth.com/HACD-DPQ

Signs and symbols used in this document

The following signs and symbols are used in this manual:

- ➢ Activity symbol: The text following this sign describes activities. These are to be performed from top to bottom in the order indicated.
- ✓ Result symbol: The text following this sign describes the result of an action.

After this symbol you will find notes and useful tips for optimal usage of the controller card.

Following this symbol you will find references to additional documentation.

Warning symbols

Special safety notes are provided at the relevant locations. These are indicated by the following symbols.

General hazard potential

Indicates a potentially hazardous condition which, if not avoided, could result in death or serious injury.

If the hazard source can be specifically indicated, the corresponding pictogram will be used.

Electrical current hazard

This symbol refers to a hazardous condition caused by electrical current which, if not avoided, could result in death or serious injury.

Equipment damage

This symbol pertains to actions which could result in damage to equipment.

2 Requirements

2.1 Mapping

Mapping requirements:

- PC with WIN NT/2000, with an available COM port or one of the specified USB/RS232 converters
- BODAC (Version 487 and up)
- HACD-DPQ Card with DeviceNet (e.g. VT-HACD-DPQ-1-2X/V0/1-D-0)
- Experience with DeviceNet
- PLC or Industrial PC with a DeviceNet Master

Only personnel familiar with DeviceNet and the HACD-DPQ should configure the VT-HACD-DPQ-2X/V0/1-D-0.

DeviceNet connections and cabling has to conform to the DeviceNet specifications developed by the ODVA (Open DeviceNet Vendor Association).

WheTermination of 120 Ohm is necessary at both ends of the trunk..

The HACD-DPQ can only be used as a slave.

For detailed information on the DeviceNet connectionn, cabling and termination requirements please refer to the ODVA DeviceNet specification.

3 DeviceNet

3.1 General

DeviceNet is a communications link mainly used in industrial applications. It can use fast, cyclical data exchange with pre-defined parameters or communicate specific parameters using “Explicit Messaging”.

Different parameters can be defined using the transmit and receive screens in the BODAC Busmanager. Parameters are either 2 bytes or 4 bytes. A maximum of 16 parameters (4 bytes per parame-ter=64bytes) can be configured in both the DeviceNet Transmit and DeviceNet Receive screen. The screens in BODAC are used for the fast cyclical communication.

Both the parameter map (See Chapter 5) and the EDS (Electronic Data Sheet) file are needed to use the VT-HACD-DPQ-1-1X/V0/1-D-0.

This controller is a class 2 DeviceNet device. Communication with the VT-HACD-DPQ can be achieved using Transmit and Receive screens or „Explicit Messaging“.

With “Explicit Messaging” the following information is needed to communicate:

Service Get single attribute (0E hex)
Set single attribute (10 hex)

Class Parameter Object (F)

Instance HACD-DPQ Parameter number (From the memory map)

Attribute Always 1

The transfer of the parameters is done in the internal dataformat of the VT-HACD-DPQ. On the PLC side this internal dataformat has to be converted to engineering units. The limits of the parameters have to be monitored on the PLC side.

3.2 Configure DeviceNet communications using BODAC

Configure DeviceNet by selecting the DeviceNet screen that is located in the configure pulldown menu of the Main screen.

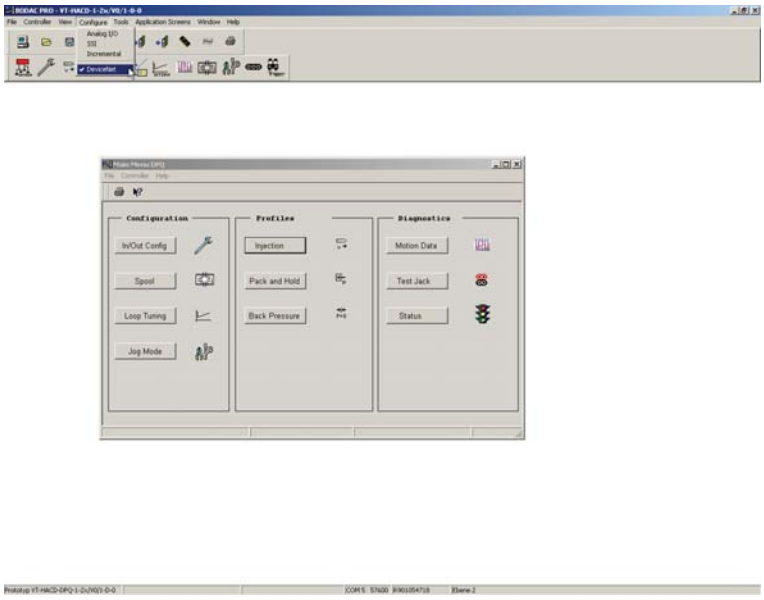

Fig. 1 Main screen VT-HACD-DPQ-1-1X/V0/1-D-0

3.3 ID, Baudrate and Active Bus

After selecting DeviceNet the following screen will appear in which the user has to configure the ID (Address) and Baudrate using the available pull down menu's.

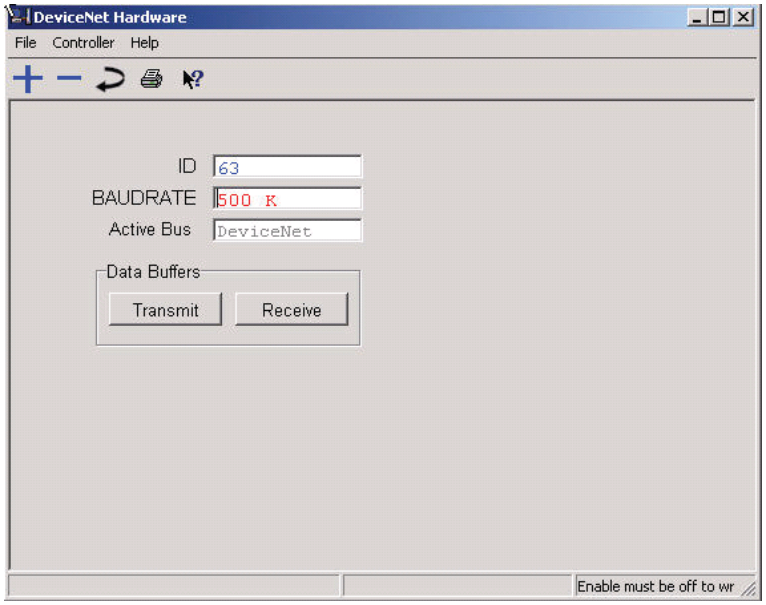

Fig. 2 DeviceNet Hardware screen

ID Configuring the address of the HACD-DPQ is done in software using the DeviceNet congiguration screen. The address allowed lies between 1 and 63 (default address). Once the ID has been configured this information needs to be stored in the card using the “Write Parame-ters to HACD-DPQ” icon and the user will be prompted for writing the changes to FLASH when exiting the DeviceNet Hardware screen. After the save to FLASH is complete the user is prompted that the card will be reinitialized.

When configuring the ID the user has to ensure that every DeviceNet device connected to the bus has a unique ID.

Baudrate This is the rate with which the data is transmitted and received over DeviceNet. The VT-HACD-DPQ supports 125kBit, 250kBit and 500kBit. The default setting for the Baudrate is 125kBit.

The Baudrate of all DeviceNet devices on the trunk need to be equal.

Active Bus Indicates the active bus supported on the VT-HACD-DPQ the user is connected to.

4 Data definition

4.1 Example

The parameters defined in the Transmit and Receive screen in BODAC also have to be defined at the PLC side. We will demonstrate this with an example.

The following parameters have to be transferred:

Data to the HACD-DPQ:

4 Byte INJ. POSITION 4	BUS ID=1013
2 Byte INJ. VELOCITY 1	BUS ID=1292
4 Byte HOLDING: TIME 1	BUS ID=952

Data from the HACD-DPQ:

4 Byte POSITION FB	BUS ID=2755
4 Byte PRESSURE FB	BUS ID=2757
2 Byte DISCRETE OUTPUTS	BUS ID=2782

The Transmit (Data from the HACD-DPQ : HACD-DPQ → PLC) and Receive (Data to the HACD-DPQ : HACD-DPQ ← PLC) screens are used to define the parameters. The fast cyclic mode in DeviceNet is used to commu-nicate the information when using these screens. A maximum of 16 items (64 bytes of data) for both Transmit and Receive can be se-lected.

4.2 Definition of data from the HACD-DPQ

The table on the left of the Transmit screen contains all the pa-rameters that can be transferred from the VT-HACD-DPQ to the master using the fast cyclic communication. 2 and 4 byte values can be chosen. In the figure below is the configuration of our example.

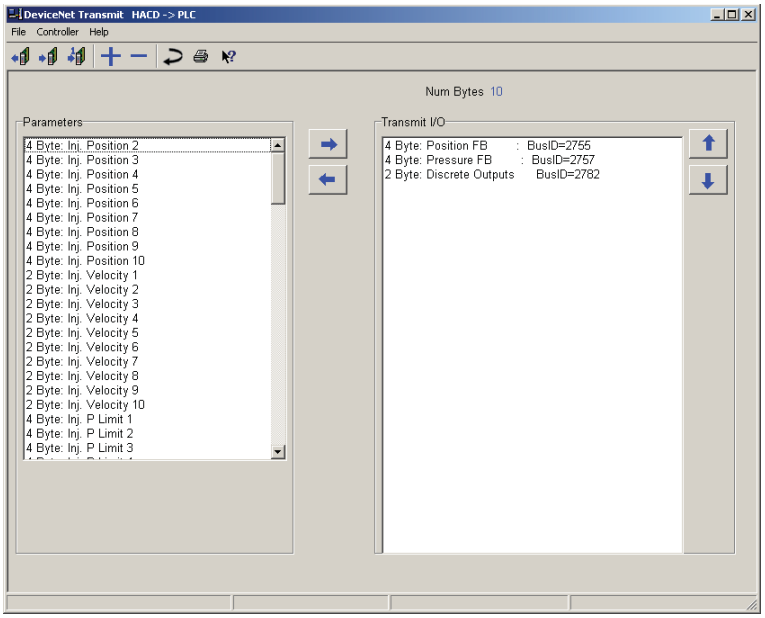

Fig. 3 DeviceNet Transmit HACD-DPQ → PLC screen

4.3 Definition of data to the HACD-DPQ

Data to the HACD-DPQ also has to be configured in the busmanager. Below again is the configuration of our example.

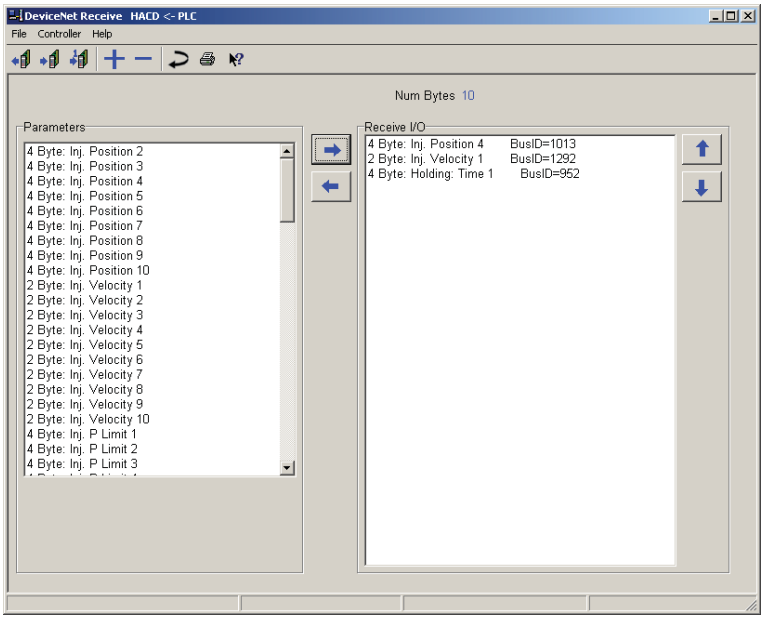

Fig. 4 DeviceNet Transmit HACD-DPQ ←PLC screen

After successful configuration of the mapping parameters the data has to be written to FLASH for permanent storage in the HACD-DPQ.

4.4 Establishing DeviceNet Communication with the HACD-DPQ

The following is a description of how to connect to a controller based on the HACD-DPQ controller using DeviceNet. In our example we are using software packages like Rockwell RSNetworx and RSLinx along with a communication card like the Rockwell 1784-PCD inter-face. The user has to be familiar with these software packages and hardware to be able to successfully set-up the VT-HACD-DPQ and the DeviceNet scanner.

The EDS file for the controller will have to be registered using RSNetworx. The parameter map is located in Chapter 5 of this manual.

The EDS file can be downloaded from the Bosch Rexroth Homepage.
www.boschrexroth.com/HACD

Remember that 24 VDC is needed to power the bus. The bus power must be used to power the VT-HACD-DPQ.

Start RSLinx and browse the bus with the interface being used. The VT-HACD-DPQ will have a default node ID of 63. After the browse is complete the screen should look similar to the following.

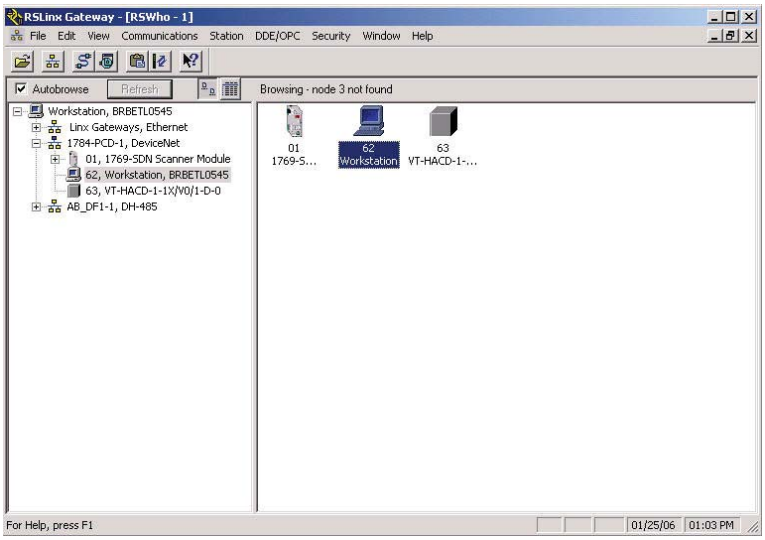

Fig. 5 : RSLinx Gateway screen.

After this the user has to start RS Networx. Start a browse of the DeviceNet network by going online. After the browse is complete RS Networx will display the DeviceNet network with all the devices that were detected. The following screen illustrates this.

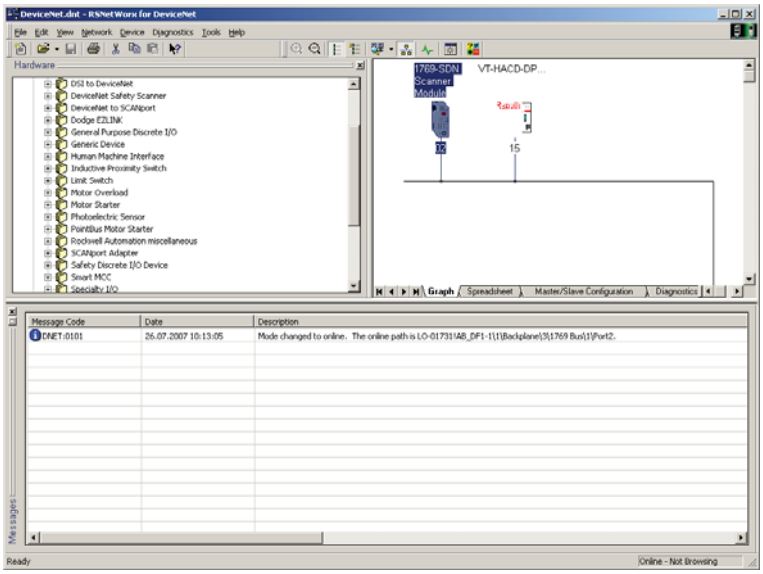

Fig. 6 : RS Networx for DeviceNet screen.

After establishing that the VT-HACD-DPQ is connected to the DeviceNet network and is recognized by the software a Node Commission to the controller has to be performed. In the menu bar of the “RS Net-worx for DeviceNet” screen under Tools “Node Commissioning” may be performed if not previously done using BODAC. The program prompts you to browse for the device that needs to be com-missioned. After completion the program will return with the follow-ing screen.

The Address and Data rate shown in the above screen have to match the setting of the DeviceNet Hardware screen.

To view the HACD-DPQ controller parameters and read-only values over DeviceNet double click the controller from the RSNetworx online screen and select the Parameters tab. Now perform an upload. After the upload a list of all the items in the EDS file should appear in the DeviceNet Parameter screen.

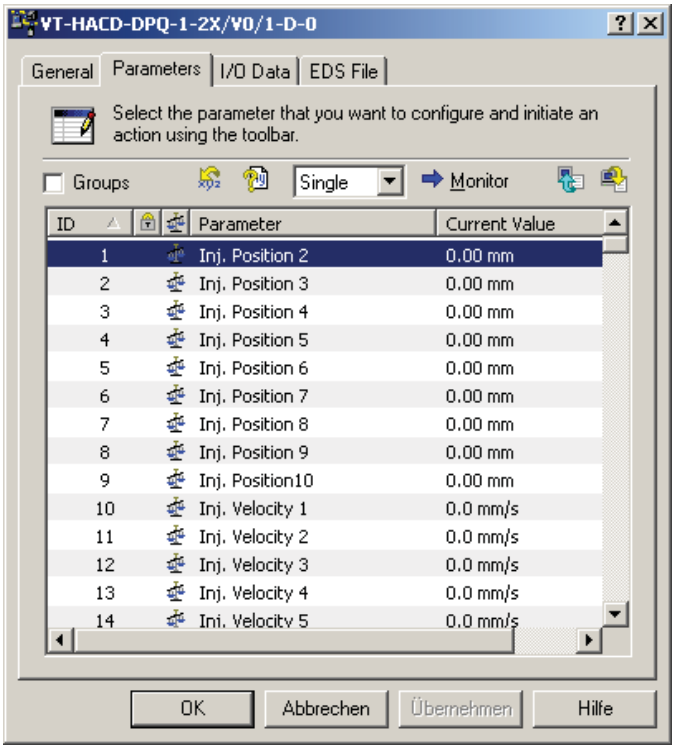

Fig. 7 : RSNetworx parameter screen .

4.5 Scaling of the data transferred

The data transferred has the internal dataformat of the HACD-DPQ. Therefor all data to and from the HACD-DPQ has to be converted on the PLC side. Scale and offset are needed for conversion. Scale and offset can be different for every parameter and can be found in the EDS file.

The conversion can be calculated using the following formula's:

PLC → HACD-DPQ:

(Engineering units – offset) * scale = internal dataformat HACD-DPQ

HACD-DPQ → PLC:

(Internal dataformat HACD-DPQ/ scale) + offset = Engineering units

4 Data definition

Engineering unit = Technical unit

For transferring the value 4.0 of Inj. P Limit 6 to the HACD-DPQ the following values can be found in the parameter table:

Name		Inj. P Limit 6	
Object nr.	Index	1176	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

(4,0 – 0) * 327,67 = 1310,68 (decimal)

This value is mathematically rounded (= 1311) and converted to a hexadecimal value (= 0x051F). Now the value can be transferred.

Monitoring of the parameter limits (min/max value) has to be done in the PLC. Values outside the defined limits can result in incorrect values on the HACD-DPQ (e.g. overflow could lead to a negative number instead of a high positive number).

Data definition 4

5 History Parameter

With the history parameters you have the possibility to get worthful informations of every shot of the injection process to proof quality for example.

For every process cycle the data values for position, pressure and time are stored inside the card at the beginning of each step. You can read them at the end of each cycle, before they will be deleted (overwritten) by the start of the next shot.

To get the time for one step you can read out the value of the step you need and the following one. Subtract both values and you get the time the card had been in this step.

For a better understanding of the bus parameters and how to calculate important values there is the following table for description:

	Segment		Segment	
Profile Event	Start Data	End Data	Start Data	End Data
INJECTION Start Position	Hist. Pos.FB 2	-	-	-
INJECTION Step 1 Velocity	Hist. Pos.FB 1	Hist. Pos.FB 3	Hist. Time 1	Hist. Time 3
INJECTION Step 2 Velocity	Hist. Pos.FB 3	Hist. Pos.FB 4	Hist. Time 3	Hist. Time 4
INJECTION Step 3 Velocity	Hist. Pos.FB 4	Hist. Pos.FB 5	Hist. Time 4	Hist. Time 5
INJECTION Step 4 Velocity	Hist. Pos.FB 5	Hist. Pos.FB 6	Hist. Time 5	Hist. Time 6
INJECTION Step 5 Velocity	Hist. Pos.FB 6	Hist. Pos.FB 26	Hist. Time 6	Hist. Time 26
INJECTION Step 6 Velocity	Hist. Pos.FB 26	Hist. Pos.FB 27	Hist. Time 26	Hist. Time 27
INJECTION Step 7 Veocity	Hist. Pos.FB 27	Hist. Pos.FB 28	Hist. Time 27	Hist. Time 28
INJECTION Step 8 Velocity	Hist. Pos.FB 28	Hist. Pos.FB 29	Hist. Time 28	Hist. Time 29
INJECTION Step 9 Velocity	Hist. Pos.FB 29	Hist. Pos.FB 30	Hist. Time 29	Hist. Time 30
INJECTION Step 10 Velocity	Hist. Pos.FB 30	Hist. Pos. FB 13	Hist. Time 30	Hist. Time 13
TRANSFER Hydraulic Pressure	Hist. Pres.FB 13	-	-	-
TRANSFER Position	Hist. Pos. FB 13	-	-	-
TRANSFER Mold Cavity Pressure	Hist. Pres CMD 13	-	-	-

History Parameter 5

Mold FILL Time	-	-	Hist. Time 1	Hist. Time 13
PACK AND HOLD Step 1 Start Position	Hist. Pos. FB 13	-	Hist. Time 13	Hist. Time 14
PACK AND HOLD Step 2 Start Position	Hist. Pos.FB 14	-	Hist. Time 14	Hist. Time 15
PACK AND HOLD Step 3 Start Position	Hist. Pos.FB 15	-	Hist. Time 15	Hist. Time 16
PACK AND HOLD Step 4 Start Position	Hist. Pos.FB 16	-	Hist. Time 16	Hist. Time 17
PACK AND HOLD Step 5 Start Position	Hist. Pos.FB 17	-	Hist. Time 17	Hist. Time 23
CUSHION Position	Hist. Pos.FB 18	-	-	-

The numbers correspond to the block numbers described in the RE30146-01-B documentation.

6 Busparameter

Analog Vel Max

Name		Analog Vel Max	
Object nr.	Index	3180	0
Bytes	Units	4	mm/s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

BackP: Decomp Rate 2

Name		BackP: Decomp Rate 2	
Object nr.	Index	1350	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	10,5	0

BackP: Decomp Rate 3

Name		BackP: Decomp Rate 3	
Object nr.	Index	1353	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	10,5	0

BackP: Decomp Rate 4

Name		BackP: Decomp Rate 4	
Object nr.	Index	1362	0
Bytes	Units	2	bar/sec
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	10,5	0

BackP: I-Window on

Name		BackP: I-Window on	
Object nr.	Index	1830	0
Bytes	Units	4	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

BackP: Press D 2

Name		BackP: Press D 2	
Object nr.	Index	2118	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	640
Scale	Offset	1	0

6 Busparameter

BackP: Press D 3

Name		BackP: Press D 3	
Object nr.	Index	2121	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	640
Scale	Offset	1	0

BackP: Press D 4

Name		BackP: Press D 4	
Object nr.	Index	2130	0
Bytes	Units	2	Hz
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	640
Scale	Offset	1	0

BackP: Press I 2

Name		BackP: Press I 2	
Object nr.	Index	1734	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	30000
Scale	Offset	1	0

BackP: Press I 3

Name		BackP: Press I 3	
Object nr.	Index	1737	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	30000
Scale	Offset	1	0

BackP: Press I 4

Name		BackP: Press I 4	
Object nr.	Index	1746	0
Bytes	Units	2	ms
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	30000
Scale	Offset	1	0

BackP: Press P 2

Name		BackP: Press P 2	
Object nr.	Index	1638	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	99,99
Scale	Offset	128	0

6 Busparameter

BackP: Press P 3

Name		BackP: Press P 3	
Object nr.	Index	1641	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	99,99
Scale	Offset	128	0

BackP: Press P 4

Name		BackP: Press P 4	
Object nr.	Index	1650	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	99,99
Scale	Offset	128	0

BackP: Press Rate 2

Name		BackP: Press Rate 2	
Object nr.	Index	1254	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	10,5	0

BackP: Press Rate 3

Name		BackP: Press Rate 3	
Object nr.	Index	1257	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	10,5	0

BackP: Press Rate 4

Name		BackP: Press Rate 4	
Object nr.	Index	1266	0
Bytes	Units	2	bar/sec
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	10,5	0

BackP: Vel. Ramp 2

Name		BackP: Vel. Ramp 2	
Object nr.	Index	1253	0
Bytes	Units	2	%/sec
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	10,5	0

BackPress: Position3

Name		BackPress: Position3	
Object nr.	Index	1061	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

BackPress: Position4

Name		BackPress: Position4	
Object nr.	Index	1064	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

BackPress: Press 2

Name		BackPress: Press 2	
Object nr.	Index	1158	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

BackPress: Press 3

Name		BackPress: Press 3	
Object nr.	Index	1161	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

BackPress: Press 4

Name		BackPress: Press 4	
Object nr.	Index	1170	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

Cavity Press Max

Name		Cavity Press Max	
Object nr.	Index	2532	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-100	100
Scale	Offset	1	0

Cavity Press Max Fau

Name		Cavity Press Max Fau	
Object nr.	Index	2551	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-150	150
Scale	Offset	163,83	0

Cavity Press Max Uni

Name		Cavity Press Max Uni	
Object nr.	Index	2559	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

Cavity Press Min

Name		Cavity Press Min	
Object nr.	Index	2521	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-100	100
Scale	Offset	16383,5	0

Cavity Press Min Fau

Name		Cavity Press Min Fau	
Object nr.	Index	2543	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-150	150
Scale	Offset	163,83	0

Cavity Press Range

Name		Cavity Press Range	
Object nr.	Index	2509	0
Bytes	Units	1	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0
Description		+/-100% = 0x00 0~100% = 0x01	

Cavity Press Type

Name		Cavity Press Type	
Object nr.	Index	2499	0
Bytes	Units	1	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0
Description		+/-10V = 0x00 0~10V = 0x01 0~20mA = 0x02 4~20mA = 0x03	

6 Busparameter

Cavity Pressure AI3:

Name		Cavity Pressure AI3:	
Object nr.	Index	2752	0
Bytes	Units	4	[bar]
Access		Read Only	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	2000
Scale	Offset	327,67	0

Cyl Pos CMD Max Uni

Name		Cyl Pos CMD Max Uni	
Object nr.	Index	2561	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

Cyl Pos FB Max

Name		Cyl Pos FB Max	
Object nr.	Index	2534	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-100	100
Scale	Offset	1	0

Cyl Pos FB Max Fau

Name		Cyl Pos FB Max Fau	
Object nr.	Index	2553	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-150	150
Scale	Offset	163,83	0

Cyl Pos FB Min

Name		Cyl Pos FB Min	
Object nr.	Index	2523	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-100	100
Scale	Offset	16383,5	0

Cyl Pos FB Min Fau

Name		Cyl Pos FB Min Fau	
Object nr.	Index	2545	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-150	150
Scale	Offset	163,83	0

Cyl Pos FB Range

Name		Cyl Pos FB Range	
Object nr.	Index	2511	0
Bytes	Units	1	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0
Description		+/-100% = 0x00 0~100% = 0x01	

Cyl Pos FB Type

Name		Cyl Pos FB Type	
Object nr.	Index	2501	0
Bytes	Units	1	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0
Description		+/-10V = 0x00 0~10V = 0x01 0~20mA = 0x02 4~20mA = 0x03	

Cyl. Area Ratio

Name		Cyl. Area Ratio	
Object nr.	Index	22	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-31,9	31,9
Scale	Offset	1024,01	0

Decompres.: Limit-

Name		Decompres.: Limit-	
Object nr.	Index	2739	0
Bytes	Units	2	%
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-100	100
Scale	Offset	327,7	0

Decompres.: Limit+

Name		Decompres.: Limit+	
Object nr.	Index	2727	0
Bytes	Units	2	%
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-100	100
Scale	Offset	327,7	0

Decompres.: Offset

Name		Decompres.: Offset	
Object nr.	Index	2703	0
Bytes	Units	2	%
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-100	100
Scale	Offset	327,7	0

Decompres.: Scale

Name		Decompres.: Scale	
Object nr.	Index	2715	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-99,9	99,9
Scale	Offset	128	0

Discrete Inputs

Name		Discrete Inputs	
Object nr.	Index	2779	0
Bytes	Units	2	
Access		Read Only	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	511
Scale	Offset	1	0

Discrete Outputs

Name		Discrete Outputs	
Object nr.	Index	2782	0
Bytes	Units	2	
Access		Read Only	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	255
Scale	Offset	1	0
Description		DO1 = 0x01 DO2 = 0x04 DO3 = 0x08 DO4 = 0x10 DO5 = 0x20 DO6 = 0x40 DO7 = 0x80 OK = 0x02	

DO1: Veloc. Profile

Name		DO1: Veloc. Profile	
Object nr.	Index	2479	0
Bytes	Units	1	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0
Description		HIGH = 0x00 LOW = 0x01	

DO3: Back Pressure

Name		DO3: Back Pressure	
Object nr.	Index	2482	0
Bytes	Units	1	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0
Description		HIGH = 0x00 LOW = 0x01	

DO4: Inject Forward

Name		DO4: Inject Forward	
Object nr.	Index	2483	0
Bytes	Units	1	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0
Description		HIGH = 0x00 LOW = 0x01	

6 Busparameter

DO7: At Press Delay

Name		DO7: At Press Delay	
Object nr.	Index	2478	0
Bytes	Units	2	sec
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		0	60
Scale	Offset	500	0

DO7: At Press Level

Name		DO7: At Press Level	
Object nr.	Index	2471	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

FWD: BackPress 1

Name		FWD: BackPress 1	
Object nr.	Index	3068	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		0	1
Scale	Offset	128	0

FWD: BackPress 2

Name		FWD: BackPress 2	
Object nr.	Index	3071	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		0	1
Scale	Offset	128	0

FWD: BackPress 3

Name		FWD: BackPress 3	
Object nr.	Index	3080	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		0	1
Scale	Offset	128	0

FWD: Inject

Name		FWD: Inject	
Object nr.	Index	3011	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		0	1
Scale	Offset	128	0

6 Busparameter

Hist. Pos.FB 1

Name		Hist. Pos.FB 1	
Object nr.	Index	3543	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		-100	5000
Scale	Offset	327,67	0

Hist. Pos.FB 13

Name		Hist. Pos.FB 13	
Object nr.	Index	3555	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		-100	5000
Scale	Offset	327,67	0

Hist. Pos.FB 14

Name		Hist. Pos.FB 14	
Object nr.	Index	3556	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		-100	5000
Scale	Offset	327,67	0

Hist. Pos.FB 15

Name		Hist. Pos.FB 15	
Object nr.	Index	3557	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		-100	5000
Scale	Offset	327,67	0

Hist. Pos.FB 16

Name		Hist. Pos.FB 16	
Object nr.	Index	3558	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		-100	5000
Scale	Offset	327,67	0

Hist. Pos.FB 17

Name		Hist. Pos.FB 17	
Object nr.	Index	3559	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		-100	5000
Scale	Offset	327,67	0

6 Busparameter

Hist. Pos.FB 18

Name		Hist. Pos.FB 18	
Object nr.	Index	3560	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		-100	5000
Scale	Offset	327,67	0

Hist. Pos.FB 2

Name		Hist. Pos.FB 2	
Object nr.	Index	3544	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		-100	5000
Scale	Offset	327,67	0

Hist. Pos.FB 26

Name		Hist. Pos.FB 26	
Object nr.	Index	3568	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		-100	5000
Scale	Offset	327,67	0

Hist. Pos.FB 27

Name		Hist. Pos.FB 27	
Object nr.	Index	3569	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		-100	5000
Scale	Offset	327,67	0

Hist. Pos.FB 28

Name		Hist. Pos.FB 28	
Object nr.	Index	3570	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		-100	5000
Scale	Offset	327,67	0

Hist. Pos.FB 29

Name		Hist. Pos.FB 29	
Object nr.	Index	3571	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		-100	5000
Scale	Offset	327,67	0

Hist. Pos.FB 3

Name		Hist. Pos.FB 3	
Object nr.	Index	3545	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		-100	5000
Scale	Offset	327,67	0

Hist. Pos.FB 30

Name		Hist. Pos.FB 30	
Object nr.	Index	3572	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		-100	5000
Scale	Offset	327,67	0

Hist. Pos.FB 5

Name		Hist. Pos.FB 5	
Object nr.	Index	3547	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		-100	5000
Scale	Offset	327,67	0

Hist. Pos.FB 6

Name		Hist. Pos.FB 6	
Object nr.	Index	3548	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		-100	5000
Scale	Offset	327,67	0

Hist. Pres CMD 13

Name		Hist. Pres CMD 13	
Object nr.	Index	3427	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

Hist. Pres.FB 13

Name		Hist. Pres.FB 13	
Object nr.	Index	3587	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

Hist. Time 1

Name		Hist. Time 1	
Object nr.	Index	3319	0
Bytes	Units	4	s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		0	999
Scale	Offset	500	0

Hist. Time 13

Name		Hist. Time 13	
Object nr.	Index	3331	0
Bytes	Units	4	s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		0	999
Scale	Offset	500	0

Hist. Time 14

Name		Hist. Time 14	
Object nr.	Index	3332	0
Bytes	Units	4	s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		0	999
Scale	Offset	500	0

Hist. Time 15

Name		Hist. Time 15	
Object nr.	Index	3333	0
Bytes	Units	4	s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		0	999
Scale	Offset	500	0

Hist. Time 16

Name		Hist. Time 16	
Object nr.	Index	3334	0
Bytes	Units	4	s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		0	999
Scale	Offset	500	0

Hist. Time 17

Name		Hist. Time 17	
Object nr.	Index	3335	0
Bytes	Units	4	s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		0	999
Scale	Offset	500	0

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Hist. Time 23

Name		Hist. Time 23	
Object nr.	Index	3341	0
Bytes	Units	4	
Access		Read Only	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		0	999
Scale	Offset	500	0

Hist. Time 26

Name		Hist. Time 26	
Object nr.	Index	3344	0
Bytes	Units	4	s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		0	999
Scale	Offset	500	0

Hist. Time 27

Name		Hist. Time 27	
Object nr.	Index	3345	0
Bytes	Units	4	s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		0	999
Scale	Offset	500	0

Hist. Time 28

Name		Hist. Time 28	
Object nr.	Index	3346	0
Bytes	Units	4	s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		0	999
Scale	Offset	500	0

Hist. Time 29

Name		Hist. Time 29	
Object nr.	Index	3347	0
Bytes	Units	4	s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		0	999
Scale	Offset	500	0

Hist. Time 3

Name		Hist. Time 3	
Object nr.	Index	3321	0
Bytes	Units	4	s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		0	999
Scale	Offset	500	0

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Hist. Time 30

Name		Hist. Time 30	
Object nr.	Index	3348	0
Bytes	Units	4	s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		0	999
Scale	Offset	500	0

Hist. Time 4

Name		Hist. Time 4	
Object nr.	Index	3322	0
Bytes	Units	4	s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		0	999
Scale	Offset	500	0

Hist. Time 5

Name		Hist. Time 5	
Object nr.	Index	3323	0
Bytes	Units	4	s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		0	999
Scale	Offset	500	0

Hist. Time 6

Name		Hist. Time 6	
Object nr.	Index	3324	0
Bytes	Units	4	s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		0	999
Scale	Offset	500	0

Holding: Pressure 1

Name		Holding: Pressure 1	
Object nr.	Index	1137	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

Holding: Pressure 2

Name		Holding: Pressure 2	
Object nr.	Index	1140	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

Holding: Pressure 3

Name		Holding: Pressure 3	
Object nr.	Index	1143	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

Holding: Pressure 4

Name		Holding: Pressure 4	
Object nr.	Index	1146	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

Holding: Pressure 5

Name		Holding: Pressure 5	
Object nr.	Index	1149	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

Holding: Time 1

Name		Holding: Time 1	
Object nr.	Index	952	0
Bytes	Units	4	s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	999,99
Scale	Offset	500	0

Holding: Time 2

Name		Holding: Time 2	
Object nr.	Index	953	0
Bytes	Units	4	s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	999,99
Scale	Offset	500	0

Holding: Time 3

Name		Holding: Time 3	
Object nr.	Index	954	0
Bytes	Units	4	s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	999,99
Scale	Offset	500	0

Holding: Time 4

Name		Holding: Time 4	
Object nr.	Index	955	0
Bytes	Units	4	s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	999,99
Scale	Offset	500	0

Holding: Time 5

Name		Holding: Time 5	
Object nr.	Index	956	0
Bytes	Units	4	s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	999,99
Scale	Offset	500	0

Holding: Vel.Limit 1

Name		Holding: Vel.Limit 1	
Object nr.	Index	1136	0
Bytes	Units	4	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		-100	100
Scale	Offset	327,67	0

Holding: Vel.Limit 2

Name		Holding: Vel.Limit 2	
Object nr.	Index	1139	0
Bytes	Units	4	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		-100	100
Scale	Offset	327,67	0

Holding: Vel.Limit 3

Name		Holding: Vel.Limit 3	
Object nr.	Index	1142	0
Bytes	Units	4	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		-100	100
Scale	Offset	327,67	0

Holding: Vel.Limit 4

Name		Holding: Vel.Limit 4	
Object nr.	Index	1145	0
Bytes	Units	4	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		-100	100
Scale	Offset	327,67	0

Holding: Vel.Limit 5

Name		Holding: Vel.Limit 5	
Object nr.	Index	1148	0
Bytes	Units	4	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		-100	100
Scale	Offset	327,67	0

INCR: Direction

Name		INCR: Direction	
Object nr.	Index	2686	0
Bytes	Units	1	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0

INCR: Home Mode

Name		INCR: Home Mode	
Object nr.	Index	2688	0
Bytes	Units	3	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0

INCR: Home Offset

Name		INCR: Home Offset	
Object nr.	Index	2691	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

INCR: Input Range

Name		INCR: Input Range	
Object nr.	Index	2683	0
Bytes	Units	1	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0
Description		SINGLE ENDED 5V = 0x00 DIFFERENTIAL = 0x01 SE 24V = 0x02	

INCR: Mode

Name		INCR: Mode	
Object nr.	Index	2685	0
Bytes	Units	1	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0

INCR: Resolution

Name		INCR: Resolution	
Object nr.	Index	2692	0
Bytes	Units	2	count/mm
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	32767
Scale	Offset	1	0

INCR: Zero Channel

Name		INCR: Zero Channel	
Object nr.	Index	2684	0
Bytes	Units	1	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0
Description		NONE = 0x00 RISING EDGE = 0x01 FALLING EDGE = 0x02	

Inj. Accel.Ramp

Name		Inj. Accel.Ramp	
Object nr.	Index	1388	0
Bytes	Units	2	s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	65
Scale	Offset	500	0

Inj. P Limit 1

Name		Inj. P Limit 1	
Object nr.	Index	1101	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

Inj. P Limit 10

Name		Inj. P Limit 10	
Object nr.	Index	1188	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

Inj. P Limit 2

Name		Inj. P Limit 2	
Object nr.	Index	1107	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

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Inj. P Limit 3

Name		Inj. P Limit 3	
Object nr.	Index	1110	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

Inj. P Limit 4

Name		Inj. P Limit 4	
Object nr.	Index	1113	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

Inj. P Limit 5

Name		Inj. P Limit 5	
Object nr.	Index	1116	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

Inj. P Limit 6

Name		Inj. P Limit 6	
Object nr.	Index	1176	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

Inj. P Limit 7

Name		Inj. P Limit 7	
Object nr.	Index	1179	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

Inj. P Limit 8

Name		Inj. P Limit 8	
Object nr.	Index	1182	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

Inj. P Limit 9

Name		Inj. P Limit 9	
Object nr.	Index	1185	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

Inj. Position 10

Name		Inj. Position 10	
Object nr.	Index	1088	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		-100	5000
Scale	Offset	327,67	0

Inj. Position 2

Name		Inj. Position 2	
Object nr.	Index	1004	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		-100	5000
Scale	Offset	327,67	0

Inj. Position 3

Name		Inj. Position 3	
Object nr.	Index	1010	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		-100	5000
Scale	Offset	327,67	0

Inj. Position 4

Name		Inj. Position 4	
Object nr.	Index	1013	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		-100	5000
Scale	Offset	327,67	0

Inj. Position 5

Name		Inj. Position 5	
Object nr.	Index	1016	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		-100	5000
Scale	Offset	327,67	0

Inj. Position 6

Name		Inj. Position 6	
Object nr.	Index	1019	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		-100	5000
Scale	Offset	327,67	0

Inj. Position 7

Name		Inj. Position 7	
Object nr.	Index	1079	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		-100	5000
Scale	Offset	327,67	0

Inj. Position 8

Name		Inj. Position 8	
Object nr.	Index	1082	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		-100	5000
Scale	Offset	327,67	0

Inj. Position 9

Name		Inj. Position 9	
Object nr.	Index	1085	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		-100	5000
Scale	Offset	327,67	0

Inj. Velocity 1

Name		Inj. Velocity 1	
Object nr.	Index	1292	0
Bytes	Units	2	mm/s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	10,5	0

Inj. Velocity 10

Name		Inj. Velocity 10	
Object nr.	Index	1379	0
Bytes	Units	2	mm/s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	10,5	0

6 Busparameter

Inj. Velocity 2

Name		Inj. Velocity 2	
Object nr.	Index	1298	0
Bytes	Units	2	mm/s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	10,5	0

Inj. Velocity 3

Name		Inj. Velocity 3	
Object nr.	Index	1301	0
Bytes	Units	2	mm/s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	10,5	0

Inj. Velocity 4

Name		Inj. Velocity 4	
Object nr.	Index	1304	0
Bytes	Units	2	mm/s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	10,5	0

Inj. Velocity 5

Name		Inj. Velocity 5	
Object nr.	Index	1307	0
Bytes	Units	2	mm/s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	10,5	0

Inj. Velocity 6

Name		Inj. Velocity 6	
Object nr.	Index	1367	0
Bytes	Units	2	mm/s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	10,5	0

Inj. Velocity 7

Name		Inj. Velocity 7	
Object nr.	Index	1370	0
Bytes	Units	2	mm/s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	10,5	0

Inj. Velocity 8

Name		Inj. Velocity 8	
Object nr.	Index	1373	0
Bytes	Units	2	mm/s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	10,5	0

Inj. Velocity 9

Name		Inj. Velocity 9	
Object nr.	Index	1376	0
Bytes	Units	2	mm/s
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	10,5	0

Inj.: Vel.ActiveDamp

Name		Inj.: Vel.ActiveDamp	
Object nr.	Index	46	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	255,9
Scale	Offset	128	0

Inj.: Velocity D

Name		Inj.: Velocity D	
Object nr.	Index	2060	0
Bytes	Units	2	Hz
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	640
Scale	Offset	1	0

Inj.: Velocity P

Name		Inj.: Velocity P	
Object nr.	Index	1580	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	99,99
Scale	Offset	128	0

Injection: Limit-

Name		Injection: Limit-	
Object nr.	Index	91	0
Bytes	Units	2	%
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-100	100
Scale	Offset	327,7	0

6 Busparameter

Injection: Limit+

Name		Injection: Limit+	
Object nr.	Index	88	0
Bytes	Units	2	%
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-100	100
Scale	Offset	327,7	0

Injection: Offset

Name		Injection: Offset	
Object nr.	Index	169	0
Bytes	Units	2	%
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-100	100
Scale	Offset	327,7	0

Injection: Scale

Name		Injection: Scale	
Object nr.	Index	82	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-99,9	99,9
Scale	Offset	128	0

Jog Mode: Limit-

Name		Jog Mode: Limit-	
Object nr.	Index	2733	0
Bytes	Units	2	%
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-100	100
Scale	Offset	327,7	0

Jog Mode: Limit+

Name		Jog Mode: Limit+	
Object nr.	Index	2721	0
Bytes	Units	2	%
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-100	100
Scale	Offset	327,7	0

Jog Mode: Offset

Name		Jog Mode: Offset	
Object nr.	Index	2697	0
Bytes	Units	2	%
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-100	100
Scale	Offset	327,7	0

6 Busparameter

Jog Mode: Scale

Name		Jog Mode: Scale	
Object nr.	Index	2709	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-99,9	99,9
Scale	Offset	128	0

JogMode:Pres.Backw.

Name		JogMode:Pres.Backw.	
Object nr.	Index	1155	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

JogMode:Pres.Forward

Name		JogMode:Pres.Forward	
Object nr.	Index	1152	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

JogMode:Vel.Backward

Name		JogMode:Vel.Backward	
Object nr.	Index	1154	0
Bytes	Units	4	%
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		-100	100
Scale	Offset	327,67	0

JogMode:Vel.Forward

Name		JogMode:Vel.Forward	
Object nr.	Index	1151	0
Bytes	Units	4	%
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		-100	100
Scale	Offset	327,67	0

OUT1: Range

Name		OUT1: Range	
Object nr.	Index	2515	0
Bytes	Units	1	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0
Description		+/-100% = 0x00 0~100% = 0x01	

6 Busparameter

OUT1: Type

Name		OUT1: Type	
Object nr.	Index	2505	0
Bytes	Units	1	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0
Description		+/-10V = 0x00 0~10V = 0x01 0~20mA = 0x02 4~20mA = 0x03	

OUT2: BackPress Lim-

Name		OUT2: BackPress Lim-	
Object nr.	Index	2737	0
Bytes	Units	2	%
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		-100	0
Scale	Offset	327,7	0

OUT2: Decomp Limit-

Name		OUT2: Decomp Limit-	
Object nr.	Index	2740	0
Bytes	Units	2	%
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		-100	0
Scale	Offset	327,7	0

OUT2: Inject Limit-

Name		OUT2: Inject Limit-	
Object nr.	Index	92	0
Bytes	Units	2	%
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		-100	0
Scale	Offset	327,7	0

OUT2: Jog Limit-

Name		OUT2: Jog Limit-	
Object nr.	Index	2734	0
Bytes	Units	2	%
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		-100	0
Scale	Offset	327,7	0

Output Mode

Name		Output Mode	
Object nr.	Index	3115	0
Bytes	Units	2	
Access		Read Only	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	16
Scale	Offset	1	0
Description		INJECTION = 0x01 JOG MODE = 0x02 P+H/Back P = 0x03 DECOMPRESS = 0x04	

6 Busparameter

PaH/BackPres: Limit-

Name		PaH/BackPres: Limit-	
Object nr.	Index	2736	0
Bytes	Units	2	%
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-100	100
Scale	Offset	327,7	0

PaH/BackPres: Limit+

Name		PaH/BackPres: Limit+	
Object nr.	Index	2724	0
Bytes	Units	2	%
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-100	100
Scale	Offset	327,7	0

PaH/BackPres: Offset

Name		PaH/BackPres: Offset	
Object nr.	Index	2700	0
Bytes	Units	2	%
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-100	100
Scale	Offset	327,7	0

PaH/BackPres: Scale

Name		PaH/BackPres: Scale	
Object nr.	Index	2712	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-99,9	99,9
Scale	Offset	128	0

PaH: act.Damp. Freq.

Name		PaH: act.Damp. Freq.	
Object nr.	Index	44	0
Bytes	Units	2	Hz
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	640
Scale	Offset	1	0

PaH: act.Damp. Gain

Name		PaH: act.Damp. Gain	
Object nr.	Index	47	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	99,99
Scale	Offset	128	0

6 Busparameter

PaH: Decomp Rate 1

Name		PaH: Decomp Rate 1	
Object nr.	Index	1329	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	10,5	0

PaH: Decomp Rate 2

Name		PaH: Decomp Rate 2	
Object nr.	Index	1332	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	10,5	0

PaH: Decomp Rate 3

Name		PaH: Decomp Rate 3	
Object nr.	Index	1335	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	10,5	0

PaH: Decomp Rate 4

Name		PaH: Decomp Rate 4	
Object nr.	Index	1338	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	10,5	0

PaH: Decomp Rate 5

Name		PaH: Decomp Rate 5	
Object nr.	Index	1341	0
Bytes	Units	2	bar/sec
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	10,5	0

PaH: I-Window on

Name		PaH: I-Window on	
Object nr.	Index	1773	0
Bytes	Units	4	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

PaH: Press Rate 2

Name		PaH: Press Rate 2	
Object nr.	Index	1236	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	10,5	0

PaH: Press Rate 3

Name		PaH: Press Rate 3	
Object nr.	Index	1239	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	10,5	0

PaH: Press Rate 4

Name		PaH: Press Rate 4	
Object nr.	Index	1242	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	10,5	0

PaH: Press Rate 5

Name		PaH: Press Rate 5	
Object nr.	Index	1245	0
Bytes	Units	2	bar/sec
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	10,5	0

PaH: Pressure D

Name		PaH: Pressure D	
Object nr.	Index	2061	0
Bytes	Units	2	Hz
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	640
Scale	Offset	1	0

PaH: Pressure I

Name		PaH: Pressure I	
Object nr.	Index	1677	0
Bytes	Units	2	ms
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	30000
Scale	Offset	1	0

6 Busparameter

PaH: Pressure P

Name		PaH: Pressure P	
Object nr.	Index	1581	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	99,99
Scale	Offset	128	0

Pos Max Length

Name		Pos Max Length	
Object nr.	Index	2812	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

Position AI5:

Name		Position AI5:	
Object nr.	Index	2753	0
Bytes	Units	4	[mm]
Access		Read Only	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	1000
Scale	Offset	327,67	0

Position Error :

Name		Position Error :	
Object nr.	Index	2769	0
Bytes	Units	4	[mm]
Access		Read Only	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		-1000	1000
Scale	Offset	327,67	0

Position FB :

Name		Position FB :	
Object nr.	Index	2755	0
Bytes	Units	4	[mm]
Access		Read Only	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	1000
Scale	Offset	327,67	0

Post.Decomp: Positio

Name		Post.Decomp: Positio	
Object nr.	Index	1096	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

6 Busparameter

Post.Decomp: Velocit

Name		Post.Decomp: Velocit	
Object nr.	Index	1190	0
Bytes	Units	4	%
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		-100	100
Scale	Offset	327,67	0

Pre.Decomp: Position

Name		Pre.Decomp: Position	
Object nr.	Index	1070	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

Pre.Decomp: Velocity

Name		Pre.Decomp: Velocity	
Object nr.	Index	1166	0
Bytes	Units	4	%
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		-100	100
Scale	Offset	327,67	0

Pres Max Inject

Name		Pres Max Inject	
Object nr.	Index	2813	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

Press CMD Max

Name		Press CMD Max	
Object nr.	Index	2530	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-100	100
Scale	Offset	1	0

Press CMD Max Fau

Name		Press CMD Max Fau	
Object nr.	Index	2549	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-150	150
Scale	Offset	163,83	0

6 Busparameter

Press CMD Max Uni

Name		Press CMD Max Uni	
Object nr.	Index	2557	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

Press CMD Min

Name		Press CMD Min	
Object nr.	Index	2519	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-100	100
Scale	Offset	16383,5	0

Press CMD Min Fau

Name		Press CMD Min Fau	
Object nr.	Index	2541	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-150	150
Scale	Offset	163,83	0

Press CMD Range

Name		Press CMD Range	
Object nr.	Index	2507	0
Bytes	Units	1	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0
Description		+/-100% = 0x00 0~100% = 0x01	

Press CMD Type

Name		Press CMD Type	
Object nr.	Index	2497	0
Bytes	Units	1	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0
Description		+/-10V = 0x00 0~10V = 0x01 0~20mA = 0x02 4~20mA = 0x03	

Press FB #1 Max

Name		Press FB #1 Max	
Object nr.	Index	2531	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-100	100
Scale	Offset	1	0

6 Busparameter

Press FB #1 Max Fau

Name		Press FB #1 Max Fau	
Object nr.	Index	2550	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-150	150
Scale	Offset	163,83	0

Press FB #1 Max Uni

Name		Press FB #1 Max Uni	
Object nr.	Index	2558	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

Press FB #1 Min

Name		Press FB #1 Min	
Object nr.	Index	2520	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-100	100
Scale	Offset	16383,5	0

Press FB #1 Min Fau

Name		Press FB #1 Min Fau	
Object nr.	Index	2542	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-150	150
Scale	Offset	163,83	0

Press FB #1 Range

Name		Press FB #1 Range	
Object nr.	Index	2508	0
Bytes	Units	1	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0
Description		+/-100% = 0x00 0~100% = 0x01	

Press FB #1 Type

Name		Press FB #1 Type	
Object nr.	Index	2498	0
Bytes	Units	1	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0
Description		+/-10V = 0x00 0~10V = 0x01 0~20mA = 0x02 4~20mA = 0x03	

6 Busparameter

Press FB #2 Max

Name		Press FB #2 Max	
Object nr.	Index	2533	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-100	100
Scale	Offset	1	0

Press FB #2 Max Fau

Name		Press FB #2 Max Fau	
Object nr.	Index	2552	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-150	150
Scale	Offset	163,83	0

Press FB #2 Max Uni

Name		Press FB #2 Max Uni	
Object nr.	Index	2560	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

Press FB #2 Min

Name		Press FB #2 Min	
Object nr.	Index	2522	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-100	100
Scale	Offset	16383,5	0

Press FB #2 Min Fau

Name		Press FB #2 Min Fau	
Object nr.	Index	2544	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-150	150
Scale	Offset	163,83	0

Press FB #2 Range

Name		Press FB #2 Range	
Object nr.	Index	2510	0
Bytes	Units	1	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0
Description		+/-100% = 0x00 0~100% = 0x01	

6 Busparameter

Press FB #2 Type

Name		Press FB #2 Type	
Object nr.	Index	2500	0
Bytes	Units	1	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0
Description		+/-10V = 0x00 0~10V = 0x01 0~20mA = 0x02 4~20mA = 0x03	

Press Loop CMD :

Name		Press Loop CMD :	
Object nr.	Index	2761	0
Bytes	Units	4	[bar]
Access		Read Only	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	200
Scale	Offset	327,67	0

Press: PostDecompres

Name		Press: PostDecompres	
Object nr.	Index	1191	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

Press: PreDecompress

Name		Press: PreDecompress	
Object nr.	Index	1167	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

PressOver: BackPr. 1

Name		PressOver: BackPr. 1	
Object nr.	Index	2972	0
Bytes	Units	1	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0

PressOver: BackPr. 2

Name		PressOver: BackPr. 2	
Object nr.	Index	2975	0
Bytes	Units	1	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0

PressOver: BackPr. 3

Name		PressOver: BackPr. 3	
Object nr.	Index	2984	0
Bytes	Units	1	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0

PressOver: Inject

Name		PressOver: Inject	
Object nr.	Index	2915	0
Bytes	Units	1	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0

Pressure CMD AI1:

Name		Pressure CMD AI1:	
Object nr.	Index	2746	0
Bytes	Units	4	[bar]
Access		Read Only	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	200
Scale	Offset	327,67	0

Pressure Error :

Name		Pressure Error :	
Object nr.	Index	2770	0
Bytes	Units	4	[bar]
Access		Read Only	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		-200	200
Scale	Offset	327,67	0

Pressure FB :

Name		Pressure FB :	
Object nr.	Index	2757	0
Bytes	Units	4	[bar]
Access		Read Only	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	200
Scale	Offset	327,67	0

Pressure FB#1 AI2:

Name		Pressure FB#1 AI2:	
Object nr.	Index	2748	0
Bytes	Units	4	[bar]
Access		Read Only	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	200
Scale	Offset	327,67	0

6 Busparameter

Pressure FB#2 AI4:

Name		Pressure FB#2 AI4:	
Object nr.	Index	2749	0
Bytes	Units	4	[bar]
Access		Read Only	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	200
Scale	Offset	327,67	0

Program Block

Name		Program Block	
Object nr.	Index	2768	0
Bytes	Units	2	
Access		Read Only	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	32
Scale	Offset	1	1
Description		1 = Inject Profile Step 1 2 = Start Inject / Jog + 3 = Inject Profile Step 2 4 = Inject Profile Step 3 5 = Inject Profile Step 4 6 = Inject Profile Step 5 7 = 8 = Start Post Decompress/ Jog - 9 = Transfer Optimisation 10 = 11 = Transfer Hydraulic Pressure 12 = Transfer Cylinder Position 13 = Holding Pressure Step 1 14 = Holding Pressure Step 2 15 = Holding Pressure Step 3 16 = Holding Pressure Step 4 17 = Holding Pressure Step 5 18 = Jog Forward 19 = Jog Retract 20 = Back Pressure Step 1 21 = Back Pressure Step 2 22 = 23 = Pre-Decompression 24 = Back Pressure Step 3 25 = Decomp Complete / Fault 26 = Inject Profile Step 6 27 = Inject Profile Step 7 28 = Inject Profile Step 8 29 = Inject Profile Step 9 30 = Inject Profile Step 10 31 = Post Decompression 32 = Transfer external Signal	

6 Busparameter

Program Status

Name		Program Status	
Object nr.	Index	3113	0
Bytes	Units	2	
Access		Read Only	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	100
Scale	Offset	0	0
Description		0x0101 Stopp 0x0001 Pause 0x0000 Aktiv	

Screw Speed 2

Name		Screw Speed 2	
Object nr.	Index	1157	0
Bytes	Units	4	%
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		-100	100
Scale	Offset	327,67	0

Screw Speed 3

Name		Screw Speed 3	
Object nr.	Index	1160	0
Bytes	Units	4	%
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		-100	100
Scale	Offset	327,67	0

Screw Speed 4

Name		Screw Speed 4	
Object nr.	Index	1169	0
Bytes	Units	4	%
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		-100	100
Scale	Offset	327,67	0

Set SSI/INCR to zero

Name		Set SSI/INCR to zero	
Object nr.	Index	2687	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	1
Scale	Offset	1	0

Shot Size Position

Name		Shot Size Position	
Object nr.	Index	2470	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

6 Busparameter

Spare AI7 Max

Name		Spare AI7 Max	
Object nr.	Index	2536	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-100	100
Scale	Offset	1	0

Spare AI7 Max Fau

Name		Spare AI7 Max Fau	
Object nr.	Index	2555	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-150	150
Scale	Offset	163,83	0

Spare AI7 Max Uni

Name		Spare AI7 Max Uni	
Object nr.	Index	2563	0
Bytes	Units	4	%
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	1000
Scale	Offset	327,67	0

Spare AI7 Min

Name		Spare AI7 Min	
Object nr.	Index	2525	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-100	100
Scale	Offset	16383,5	0

Spare AI7 Min Fau

Name		Spare AI7 Min Fau	
Object nr.	Index	2547	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-150	150
Scale	Offset	163,83	0

Spare AI7 Range

Name		Spare AI7 Range	
Object nr.	Index	2513	0
Bytes	Units	1	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0
Description		+/-100% = 0x00 0~100% = 0x01	

Spare AI7 Type

Name		Spare AI7 Type	
Object nr.	Index	2503	0
Bytes	Units	1	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0
Description		+/-10V = 0x00 0~10V = 0x01 0~20mA = 0x02 4~20mA = 0x03	

Spare AI8 Max

Name		Spare AI8 Max	
Object nr.	Index	2537	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-100	100
Scale	Offset	1	0

Spare AI8 Max Fau

Name		Spare AI8 Max Fau	
Object nr.	Index	2556	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-150	150
Scale	Offset	163,83	0

Spare AI8 Max Uni

Name		Spare AI8 Max Uni	
Object nr.	Index	2564	0
Bytes	Units	4	%
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	1000
Scale	Offset	327,67	0

Spare AI8 Min

Name		Spare AI8 Min	
Object nr.	Index	2526	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-100	100
Scale	Offset	16383,5	0

Spare AI8 Min Fau

Name		Spare AI8 Min Fau	
Object nr.	Index	2548	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-150	150
Scale	Offset	163,83	0

Spare AI8 Range

Name		Spare AI8 Range	
Object nr.	Index	2514	0
Bytes	Units	1	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0
Description		+/-100% = 0x00 0~100% = 0x01	

Spare AI8 Type

Name		Spare AI8 Type	
Object nr.	Index	2504	0
Bytes	Units	1	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0
Description		+/-10V = 0x00 0~10V = 0x01 0~20mA = 0x02 4~20mA = 0x03	

SSI: Data

Name		SSI: Data	
Object nr.	Index	2678	0
Bytes	Units	1	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0
Description		BINARY = 0x00 GRAY = 0x01	

SSI: Home Mode

Name		SSI: Home Mode	
Object nr.	Index	2679	0
Bytes	Units	3	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0

SSI: Nb. of bits

Name		SSI: Nb. of bits	
Object nr.	Index	2677	0
Bytes	Units	2	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		1	25
Scale	Offset	1	0

SSI: Offset

Name		SSI: Offset	
Object nr.	Index	2682	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		not available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

6 Busparameter

SSI: Resolution

Name		SSI: Resolution	
Object nr.	Index	2681	0
Bytes	Units	4	count/mm
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-400000	400000
Scale	Offset	1	0

Status

Name		Status	
Object nr.	Index	3190	0
Bytes	Units	2	
Access		Read Only	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	65535
Scale	Offset	0	0
Description		Highbyte = Error Flags Bits 15 = Error|Error 8 Bits 14 = Error|Error 7 Bits 13 = Error|Error 6 Bits 12 = Error|Error 5 Bits 11 = Error|Error 4 Bits 10 = Error|Error 3 Bits 09 = Error|Error 2 Bits 08 = Error|Error 1 Lowbyte =fault number No Fault = 255 AI1 Stopp = 0 AI2 Stopp = 1 AI3 Stopp = 2 AI4 Stopp = 3 AI5 Stopp = 4 AI6 Stopp = 5 INC Encoder A = 14 INC Encoder B = 15 Timeout Stopp = 16 SSI Stopp = 17 Trigger Stopp = 18 LC1<>LFB1 Stopp = 19 LC1<>LFB1 Stopp = 20 Checksum memory = 22 Memory fault = 23 24V Power = 24 +/-10V, 5V Source = 25 DO1 Short = 26 DO2 Short = 27 DO3 Short = 28 DO4 Short = 29 DO5 Short = 30 DO6 Short = 31 DO7 Short = 32 DO8 Short = 33	

	Max Counter Freq = 34

Transfer Cavity Pres

Name		Transfer Cavity Pres	
Object nr.	Index	2901	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

Transfer Hydr.Pos.

Name		Transfer Hydr.Pos.	
Object nr.	Index	2903	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

Transfer Hydr.Press

Name		Transfer Hydr.Press	
Object nr.	Index	2902	0
Bytes	Units	4	bar
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

Transfer Position

Name		Transfer Position	
Object nr.	Index	2900	0
Bytes	Units	4	mm
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	5000
Scale	Offset	327,67	0

Trigger

Name		Trigger	
Object nr.	Index	3199	0
Bytes	Units	4	
Access		Read/Write	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	2147483648
Scale	Offset	1	0
Description		Injection/Jog + = 0x00000001 Post-Decomp/JOG- = 0x00000040 Back Pressure = 0x08000000 Transfer = 0x80000000	

Valve Output 1 :

Name		Valve Output 1 :	
Object nr.	Index	2775	0
Bytes	Units	4	[%]
Access		Read Only	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		-100	100
Scale	Offset	327,67	0

6 Busparameter

Valve Output 2 :

Name		Valve Output 2 :	
Object nr.	Index	2776	0
Bytes	Units	4	[%]
Access		Read Only	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		-100	100
Scale	Offset	327,67	0

Valve Output 3 :

Name		Valve Output 3 :	
Object nr.	Index	2777	0
Bytes	Units	4	[%]
Access		Read Only	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		-100	100
Scale	Offset	327,67	0

Vel Loop CMD :

Name		Vel Loop CMD :	
Object nr.	Index	2760	0
Bytes	Units	4	[mm]
Access		Read Only	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		0	1000
Scale	Offset	327,67	0

Vel. CMD Max

Name		Vel. CMD Max	
Object nr.	Index	2535	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-100	100
Scale	Offset	1	0

Vel. CMD Max Fau

Name		Vel. CMD Max Fau	
Object nr.	Index	2554	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-150	150
Scale	Offset	163,83	0

Vel. CMD Min

Name		Vel. CMD Min	
Object nr.	Index	2524	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-100	100
Scale	Offset	16383,5	0

6 Busparameter

Vel. CMD Min Fau

Name		Vel. CMD Min Fau	
Object nr.	Index	2546	0
Bytes	Units	2	V
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		-150	150
Scale	Offset	163,83	0

Vel. CMD Range

Name		Vel. CMD Range	
Object nr.	Index	2512	0
Bytes	Units	1	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0
Description		+/-100% = 0x00 0~100% = 0x01	

Vel. CMD Type

Name		Vel. CMD Type	
Object nr.	Index	2502	0
Bytes	Units	1	
Access		Read/Write	
Value Acceptance		only with deactivated enabling	
Busmanager		not available	
Min./Max. Value		0	0
Scale	Offset	0	0
Description		+/-10V = 0x00 0~10V = 0x01 0~20mA = 0x02 4~20mA = 0x03	

Velocity CMD AI6:

Name		Velocity CMD AI6:	
Object nr.	Index	2754	0
Bytes	Units	4	[mm/s]
Access		Read Only	
Value Acceptance		also with active enabling	
Busmanager		available	
Min./Max. Value		-100	100
Scale	Offset	327,67	0

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