XKOYO405 Driver Manual

Koyo DL405 PLC Family Communications Driver

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1. Introduction

CPKSoft Engineering assumes no responsibility for any errors that may appear in this document. If you have any suggestions for improvements or amendments or have found errors in this publication, please notify us.

This driver is included with all unlimited licenses of TAS-HMITalk. It is not sold separately. It requires the TAS-HMITalk ActiveX to work, therefore it cannot be used as a stand-alone driver.

If you use this driver in your applications, you need to include the xkoyo405.tlk in the set of files that you distribute. This file must be located in the same folder where the hmitalk.ocx file is registered in order to be found by the activex when the applications are executed.

The source-code for the xkoyo405.tlk driver is available in plain-C language for additional USD 299 if you own a license of TAS-HMITalk 8.04 or higher.

Refer to the following link to visit the xkoyo405 driver page at CPKSoft Engineering website: http://www.cpksoft.com/tabid/55/ProductID/61/PageIndex/1/Default.aspx.

Visit this link if you want to see a complete list of drivers that are currently available for TAS-HMITak: http://www.cpksoft.com/Drivers/tabid/55/Default.aspx.

Also, refer to this link if you are interested in purchasing a license of the most recent version of TAS-HMITalk: http://www.cpksoft.com/Products/tabid/54/Default.aspx.

We welcome your comments about this document. You can reach us by e-mail at contact @ cpksoft.com.

2. Driver details

2.1. Driver overview

XKOYO405 driver allows you to connect to KOYO Direct PLCs, Series 405, using DirectNet (hexa-mode) protocol.

2.2. Supported devices

This driver can communicate with these devices, but is not necessarily limited to this list:

KOYO Direct Logic DL405 Series
KOYO Direct Logic DL430 PLC
KOYO Direct Logic DL440 PLC

3. Command list

3.1. Read Timer/Counter/Accumulator and V-Memory in Binary Mode

Description of this command:

Reads the timer/counter/accumulator and V-Memory values in binary mode.

Type of data handled by this command:

Analog Input

Number of points accepted by this command:

1-128

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

49

Meaning of the DriverP2 parameter:

Start address. In this case HMITalk1.DriverP2 must have a value according to:

- TMR : from 1 to 128 (V00000 to V00177)
- CNT : from 513 to 640 (V01000 to V01177)
- V Memory: from 769 to 4096 (V01400 to V07777)

Meaning of the DriverP3 parameter:

0

3.2. Read Remote Input/Xs/Cs/Ys and Stage Status in Binary Mode

Description of this command:

Reads the remote input/Xs/Cs/Ys and stage status values in binary mode.

Type of data handled by this command:

Analog Input

Number of points accepted by this command:

1-128

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

49

Meaning of the DriverP2 parameter:

Start address. In this case HMITalk1.DriverP2 must have a value according to:

- GX : from 16385 to 16416 (V40000 to V40037)
- X : from 16641 to 16660 (V40400 to V40423)
- Y : from 16705 to 16724 (V40500 to V40523)
- C : from 16769 to 16798 (V40600 to V40777)
- Stage Status: from 16897 to 16920 (V41000 to V41027)

Meaning of the DriverP3 parameter:

0

3.3. Read Timer Status/Counter Status/Special Relay 1 and Special Relay 2 in Binary Mode

Description of this command:

Reads the timer status/counter status/special relay 1 and special relay 2 values in binary mode.

Type of data handled by this command:

Analog Input

Number of points accepted by this command:

1-128

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

49

Meaning of the DriverP2 parameter:

Start address. In this case HMITalk1.DriverP2 must have a value according to:

- TMR Status : from 16961 to 16968 (V41100 to V41107)
- CNT Status : from 16993 to 17000 (V41140 to V41147)
- Spec.Relay 1: from 17025 to 17030 (V41200 to V41205)
- Spec.Relay 2: from 17039 to 17049 (V41215 to V41230)

Meaning of the DriverP3 parameter:

0

3.4. Read Remote Inputs/Xs/Special Relay 1 and Special Relay 2 in Bit Mode

Description of this command:

Reads the remote inputs/Xs/special relay 1 and special relay 2 values in bit mode.

Type of data handled by this command:

Digital Input

Number of points accepted by this command:

1-128

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

50

Meaning of the DriverP2 parameter:

Start address. In this case HMITalk1.DriverP2 must have a value according to:

- GX : from 1 to 64 (GX000 to GX777)
- X : from 257 to 296 (X000 to X477)
- Spec.Relay : from 385 to 434 (SP000 to SP617)

Meaning of the DriverP3 parameter:

0

3.5. Read Ys/Cs/Stage Status and Timer/Counter Status in Bit Mode

Description of this command:

Reads the Ys/Cs/stage status and timer/counter status values in bit mode.

Type of data handled by this command:

Digital Input

Number of points accepted by this command:

1-128

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

51

Meaning of the DriverP2 parameter:

Start address. In this case HMITalk1.DriverP2 must have a value according to:

- GY : from 0 to 256 (GY0000 to GY3777)
- Y : from 257 to 296 (Y000 to Y477)
- C : from 385 to 444 (C000 to C737)
- Stage : from 641 to 688 (S000 to S577)
- Timer Status : from 769 to 784 (T000 to T177)
- Counter Status: from 833 to 848 (CT000 to CT177)

Meaning of the DriverP3 parameter:

0

3.6. Read Input/Output in Words and Binary Mode

Description of this command:

Reads the input/output values in word and binary mode.

Type of data handled by this command:

Analog Input

Number of points accepted by this command:

1-250

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

51

Meaning of the DriverP2 parameter:

Start address. HMITalk1.DriverP2 must have the 8 bit- "package number" accessed, where:

Meaning of the DriverP2 parameter:

(n/8)+1 , where "n" is the I/O bit number (decimal) which heads each PLC group of 8 bits. For example: for the group of I/O bits from 136 to 143 (dec.):

Meaning of the DriverP2 parameter:

(136/8)+1=18

Meaning of the DriverP3 parameter:

0

3.7. Read Scratch Pad Memory in Binary Mode

Description of this command:

Reads the scratch pad memory values in binary mode.

Type of data handled by this command:

Analog Input

Number of points accepted by this command:

1-128

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

54

Meaning of the DriverP2 parameter:

Start address.

Meaning of the DriverP3 parameter:

0

3.8. Read Ladder Memory in Binary Mode

Description of this command:

Reads the ladder memory values in binary mode.

Type of data handled by this command:

Analog Input

Number of points accepted by this command:

1-128

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

55

Meaning of the DriverP2 parameter:

Start address.

Meaning of the DriverP3 parameter:

0

3.9. Read Communication Errors in Binary Mode

Description of this command:

Reads the communication errors values in binary mode.

Type of data handled by this command:

Analog Input

Number of points accepted by this command:

1-128

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

57

Meaning of the DriverP2 parameter:

Start address.

Meaning of the DriverP3 parameter:

0

3.10. Read Input/Output in Bit Mode

Description of this command:

Reads the input/output values in bit mode.

Type of data handled by this command:

Digital Input

Number of points accepted by this command:

1-250

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

89

Meaning of the DriverP2 parameter:

Start address. HMITalk1.DriverP2 must have the 8 bit- "package number" accessed, where:

Meaning of the DriverP2 parameter:

(n/8)+1 , where "n" is the I/O bit number (decimal) which heads each PLC group of 8 bits. For example: for the group of I/O bits from 136 to 143 (dec.):

Meaning of the DriverP2 parameter:

(136/8)+1=18

Meaning of the DriverP3 parameter:

0

3.11. Write Timer/Counter/Accumulator and V-Memory in Binary Mode

Description of this command:

Writes the timer/counter/accumulator and V-Memory values in binary mode.

Type of data handled by this command:

Analog Output

Number of points accepted by this command:

1-125

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

49

Meaning of the DriverP2 parameter:

Start address. In this case HMITalk1.DriverP2 must have a value according to:

- TMR : from 1 to 128 (V00000 to V00177)
- CNT : from 513 to 640 (V01000 to V01177)
- V Memory: from 769 to 4096 (V01400 to V07777)

Meaning of the DriverP3 parameter:

0

3.12. Write Remote Input/Xs/Cs/Ys and Stage Status in Binary Mode

Description of this command:

Writes the remote input/Xs/Cs/Ys and stage status values in binary mode.

Type of data handled by this command:

Analog Output

Number of points accepted by this command:

1-125

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

49

Meaning of the DriverP2 parameter:

Start address. In this case HMITalk1.DriverP2 must have a value according to:

- GX : from 16385 to 16416 (V40000 to V40037)
- X : from 16641 to 16660 (V40400 to V40423)
- Y : from 16705 to 16724 (V40500 to V40523)
- C : from 16769 to 16798 (V40600 to V40777)
- Stage Status: from 16897 to 16920 (V41000 to V41027)

Meaning of the DriverP3 parameter:

0

3.13. Write Timer Status/Counter Status/Special Relay 1 and Special Relay 2 in Binary Mode

Description of this command:

Writes the timer status/counter status/special relay 1 and special relay 2 values in binary mode.

Type of data handled by this command:

Analog Output

Number of points accepted by this command:

1-125

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

49

Meaning of the DriverP2 parameter:

Start address. In this case HMITalk1.DriverP2 must have a value according to:

- TMR Status : from 16961 to 16968 (V41100 to V41107)
- CNT Status : from 16993 to 17000 (V41140 to V41147)
- Spec.Relay 1: from 17025 to 17030 (V41200 to V41205)
- Spec.Relay 2: from 17039 to 17049 (V41215 to V41230)

Meaning of the DriverP3 parameter:

0

3.14. Write Remote Inputs/Xs/Special Relay 1 and Special Relay 2 in Bit Mode

Description of this command:

Writes the remote inputs/Xs/special relay 1 and special relay 2 values in bit mode.

Type of data handled by this command:

Digital Output

Number of points accepted by this command:

1-8

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

50

Meaning of the DriverP2 parameter:

Start address. In this case HMITalk1.DriverP2 must have a value according to:

- GX : from 1 to 64 (GX000 to GX777)
- X : from 257 to 296 (X000 to X477)
- Spec.Relay : from 385 to 434 (SP000 to SP617)

Meaning of the DriverP3 parameter:

0

3.15. Write Ys/Cs/Stage Status and Timer/Counter Status in Bit Mode

Description of this command:

Writes the Ys/Cs/stage status and timer/counter status values in bit mode.

Type of data handled by this command:

Digital Output

Number of points accepted by this command:

1-8

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

51

Meaning of the DriverP2 parameter:

Start address. In this case HMITalk1.DriverP2 must have a value according to:

- GY : from 0 to 256 (GY0000 to GY3777)
- Y : from 257 to 296 (Y000 to Y477)
- C : from 385 to 444 (C000 to C737)
- Stage : from 641 to 688 (S000 to S577)
- Timer Status : from 769 to 784 (T000 to T177)
- Counter Status: from 833 to 848 (CT000 to CT177)

Meaning of the DriverP3 parameter:

0

3.16. Write Input/Output and Binary Mode

Description of this command:

Writes the input/output values in word and binary mode.

Type of data handled by this command:

Analog Output

Number of points accepted by this command:

1-125

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

51

Meaning of the DriverP2 parameter:

Start address. HMITalk1.DriverP2 must have the 8 bit- "package number" accessed, where:

Meaning of the DriverP2 parameter:

(n/8)+1 , where "n" is the I/O bit number (decimal) which heads each PLC group of 8 bits. For example: for the group of I/O bits from 136 to 143 (dec.):

Meaning of the DriverP2 parameter:

(136/8)+1=18

Meaning of the DriverP3 parameter:

0

3.17. Write Scratch Pad Memory in Binary Mode

Description of this command:

Writes the scratch pad memory values in binary mode.

Type of data handled by this command:

Analog Output

Number of points accepted by this command:

1-125

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

54

Meaning of the DriverP2 parameter:

Start address.

Meaning of the DriverP3 parameter:

0

3.18. Write Ladder Memory in Binary Mode

Description of this command:

Writes the ladder memory values in binary mode.

Type of data handled by this command:

Analog Output

Number of points accepted by this command:

1-125

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

55

Meaning of the DriverP2 parameter:

Start address.

Meaning of the DriverP3 parameter:

0

3.19. Write Communication Errors in Binary Mode

Description of this command:

Writes the communication errors values in binary mode.

Type of data handled by this command:

Analog Output

Number of points accepted by this command:

1-125

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

57

Meaning of the DriverP2 parameter:

Start address.

Meaning of the DriverP3 parameter:

0

3.20. Write Input/Output in Bit Mode

Description of this command:

Writes the input/output values in bit mode.

Type of data handled by this command:

Digital Output

Number of points accepted by this command:

1-8

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

89

Meaning of the DriverP2 parameter:

Start address. HMITalk1.DriverP2 must have the 8 bit- "package number" accessed, where:

Meaning of the DriverP2 parameter:

(n/8)+1 , where "n" is the I/O bit number (decimal) which heads each PLC group of 8 bits. For example: for the group of I/O bits from 136 to 143 (dec.):

Meaning of the DriverP2 parameter:

(136/8)+1=18

Meaning of the DriverP3 parameter:

0

3.21. Read Timer/Counter/Accumulator and V-Memory in BCD Mode

Description of this command:

Reads the timer/counter/accumulator and V-Memory values in BCD mode.

Type of data handled by this command:

Analog Input

Number of points accepted by this command:

1-128

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

49

Meaning of the DriverP2 parameter:

Start address. In this case HMITalk1.DriverP2 must have a value according to:

- TMR : from 1 to 128 (V00000 to V00177)
- CNT : from 513 to 640 (V01000 to V01177)
- V Memory: from 769 to 4096 (V01400 to V07777)

Meaning of the DriverP3 parameter:

1

3.22. Read Remote Input/Xs/Cs/Ys and Stage Status in BCD Mode

Description of this command:

Reads the remote input/Xs/Cs/Ys and stage status values in BCD mode.

Type of data handled by this command:

Analog Input

Number of points accepted by this command:

1-128

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

49

Meaning of the DriverP2 parameter:

Start address. In this case HMITalk1.DriverP2 must have a value according to:

- GX : from 16385 to 16416 (V40000 to V40037)
- X : from 16641 to 16660 (V40400 to V40423)
- Y : from 16705 to 16724 (V40500 to V40523)
- C : from 16769 to 16798 (V40600 to V40777)
- Stage Status: from 16897 to 16920 (V41000 to V41027)

Meaning of the DriverP3 parameter:

1

3.23. Read Timer Status/Counter Status/Special Relay 1 and Special Relay 2 in BCD Mode

Description of this command:

Reads the timer status/counter status/special relay 1 and special relay 2 values in BCD mode.

Type of data handled by this command:

Analog Input

Number of points accepted by this command:

1-128

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

49

Meaning of the DriverP2 parameter:

Start address. In this case HMITalk1.DriverP2 must have a value according to:

- TMR Status : from 16961 to 16968 (V41100 to V41107)
- CNT Status : from 16993 to 17000 (V41140 to V41147)
- Spec.Relay 1: from 17025 to 17030 (V41200 to V41205)
- Spec.Relay 2: from 17039 to 17049 (V41215 to V41230)

Meaning of the DriverP3 parameter:

1

3.24. Read Input/Output in Words and BCD Mode

Description of this command:

Reads the input/output values in word and BCD mode.

Type of data handled by this command:

Analog Input

Number of points accepted by this command:

1-250

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

51

Meaning of the DriverP2 parameter:

Start address. HMITalk1.DriverP2 must have the 8 bit- "package number" accessed, where:

Meaning of the DriverP2 parameter:

(n/8)+1 , where "n" is the I/O bit number (decimal) which heads each PLC group of 8 bits. For example: for the group of I/O bits from 136 to 143 (dec.):

Meaning of the DriverP2 parameter:

(136/8)+1=18

Meaning of the DriverP3 parameter:

1

3.25. Read Scratch Pad Memory in BCD Mode

Description of this command:

Reads the scratch pad memory values in BCD mode.

Type of data handled by this command:

Analog Input

Number of points accepted by this command:

1-128

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

54

Meaning of the DriverP2 parameter:

Start address.

Meaning of the DriverP3 parameter:

1

3.26. Read Ladder Memory in BCD Mode

Description of this command:

Reads the ladder memory values in BCD mode.

Type of data handled by this command:

Analog Input

Number of points accepted by this command:

1-128

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

55

Meaning of the DriverP2 parameter:

Start address.

Meaning of the DriverP3 parameter:

1

3.27. Read Communication Errors in BCD Mode

Description of this command:

Reads the communication errors values in BCD mode.

Type of data handled by this command:

Analog Input

Number of points accepted by this command:

1-128

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

57

Meaning of the DriverP2 parameter:

Start address.

Meaning of the DriverP3 parameter:

1

3.28. Write Timer/Counter/Accumulator and V-Memory in BCD Mode

Description of this command:

Writes the timer/counter/accumulator and V-Memory values in BCD mode.

Type of data handled by this command:

Analog Output

Number of points accepted by this command:

1-125

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

49

Meaning of the DriverP2 parameter:

Start address. In this case HMITalk1.DriverP2 must have a value according to:

- TMR : from 1 to 128 (V00000 to V00177)
- CNT : from 513 to 640 (V01000 to V01177)
- V Memory: from 769 to 4096 (V01400 to V07777)

Meaning of the DriverP3 parameter:

1

3.29. Write Remote Input/Xs/Cs/Ys and Stage Status in BCD Mode

Description of this command:

Writes the remote input/Xs/Cs/Ys and stage status values in BCD mode.

Type of data handled by this command:

Analog Output

Number of points accepted by this command:

1-125

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

49

Meaning of the DriverP2 parameter:

Start address. In this case HMITalk1.DriverP2 must have a value according to:

- GX : from 16385 to 16416 (V40000 to V40037)
- X : from 16641 to 16660 (V40400 to V40423)
- Y : from 16705 to 16724 (V40500 to V40523)
- C : from 16769 to 16798 (V40600 to V40777)
- Stage Status: from 16897 to 16920 (V41000 to V41027)

Meaning of the DriverP3 parameter:

1

3.30. Write Timer Status/Counter Status/Special Relay 1 and Special Relay 2 in BCD Mode

Description of this command:

Writes the timer status/counter status/special relay 1 and special relay 2 values in BCD mode.

Type of data handled by this command:

Analog Output

Number of points accepted by this command:

1-125

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

49

Meaning of the DriverP2 parameter:

Start address. In this case HMITalk1.DriverP2 must have a value according to:

- TMR Status : from 16961 to 16968 (V41100 to V41107)
- CNT Status : from 16993 to 17000 (V41140 to V41147)
- Spec.Relay 1: from 17025 to 17030 (V41200 to V41205)
- Spec.Relay 2: from 17039 to 17049 (V41215 to V41230)

Meaning of the DriverP3 parameter:

1

3.31. Write Input/Output in Words and BCD Mode

Description of this command:

Writes the input/output values in word and BCD mode.

Type of data handled by this command:

Analog Output

Number of points accepted by this command:

1-125

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

51

Meaning of the DriverP2 parameter:

Start address. HMITalk1.DriverP2 must have the 8 bit- "package number" accessed, where:

Meaning of the DriverP2 parameter:

(n/8)+1 , where "n" is the I/O bit number (decimal) which heads each PLC group of 8 bits. For example: for the group of I/O bits from 136 to 143 (dec.):

Meaning of the DriverP2 parameter:

(136/8)+1=18

Meaning of the DriverP3 parameter:

1

3.32. Write Scratch Pad Memory in BCD Mode

Description of this command:

Writes the scratch pad memory values in BCD mode.

Type of data handled by this command:

Analog Output

Number of points accepted by this command:

1-125

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

54

Meaning of the DriverP2 parameter:

Start address.

Meaning of the DriverP3 parameter:

1

3.33. Write Ladder Memory in BCD Mode

Description of this command:

Writes the ladder memory values in BCD mode.

Type of data handled by this command:

Analog Output

Number of points accepted by this command:

1-125

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

55

Meaning of the DriverP2 parameter:

Start address.

Meaning of the DriverP3 parameter:

1

3.34. Write Communication Errors in BCD Mode

Description of this command:

Writes the communication errors values in BCD mode.

Type of data handled by this command:

Analog Output

Number of points accepted by this command:

1-125

Meaning of the DriverP0 parameter:

Indicates the station number (1-223).

Meaning of the DriverP1 parameter:

57

Meaning of the DriverP2 parameter:

Start address.

Meaning of the DriverP3 parameter:

1

3.35. Equivalence with PLCs Series 305

(allows you to set combined networks)

Commands with HMITalk1.DriverP1 = 49:
Series 305 Series 405 ---------- ---------- R600 to R677 V000 to V077 R400 to R577 V100 to V177

Two PLC 305 Data Register bytes correspond to one PLC 405 word in the V-Memory. Example: V100 corresponds to R401 (MSB), R400 (LSB)

Commands with HMITalk1.DriverP1 = 51: See Host-Link Protocol Manual 4-12, 4-13 y 4-14.

4. Appendices

4.1. Error messages

The following list shows all the possible error messages that can be returned by the protocol driver during a failed communication in the 'DriverStatus' property.

This list does not include some error messages that can be returned by the activex component while attempting to establish a connection.

[1005] DRIVER (Internal): Invalid driver stage
[1300] PROTOCOL (Timeout): No answer
[1404] PROTOCOL (Format): Error receiving acknowledge
[1405] PROTOCOL (Format): Error receiving expected EOT
[1406] PROTOCOL (Format): Error receiving first acknowledge
[1407] PROTOCOL (Format): Error receiving header acknowledge
[1420] PROTOCOL (Format): NAK or EOT received from device
[1421] PROTOCOL (Format): Negative acknowledge received from device
[1433] PROTOCOL (Format): Validation error in device response
[2186] CONFIG (NumValues): Too many values (max=128)
[2203] CONFIG (NumValues): Too many values (max=250)
[2235] CONFIG (NumValues): Too many values (max=8)
[3020] CONFIG (P0): Invalid device address (1-223)
[3508] CONFIG (P1): Invalid command
[4099] CONFIG (P2): Invalid start address
[4543] CONFIG (P3): Invalid mode

4.2. Keywords list

The following list shows a set of words directly related to this driver.

"Communications, Direct, DL405, DL430, DL440, KOYO, Logic, PLC, Series".