Eilersen
The Weighing Experts

5024G / 5026G Options Guide Serial Modbus

5024G / 5026G LCD weighing terminal

Serial Modbus option: Direct RS485 connection

Software: StdLim.140630.8v3s
Doc. no.: StdLim-140630-8v3-OG-SerialModbus-eng
Date: 2026-11-02
Rev.: 8v3

Contact:
Eilersen Electric A/S
Kokkedal Industripark 4
DK-2980 Kokkedal
Denmark
www.eilersen.com
info@eilersen.com
Tel: +45 49 180 100
Fax: +45 49 180 200

Contents

Contents 2

Introduction 4

How to 4

– Configure RS485 Serial Modbus communication protocol 4

Enable Serial Modbus protocol 4

– Configure Serial Modbus settings 5

Modbus Baudrate 5

Modbus serial Setting 5

Modbus Address 6

Modbus Mode 6

Modbus Format 6

– Monitor Modbus communication status 6

Protocol description 7

– Modbus communication using PPO 7

MDS_PCA 8

PNU 9

PVA 9

CTW/STW 9

MRV/MAV 9

– Communication overview (Modbus data registers) 10

– RS – Reference Value Selector, MRV – Main Reference Value 11

– AS – Actual Value Selector, MAV – Main Actual Value 11

– CTW – Control Word 11

– STW – Status Word 12

– Parameters 13

Trouble shooting 14

Appendices 15

Appendix A – Screens overview 15

Appendix B – Electrical connection of 5024G to Serial Modbus 16

Rear view of a 5024G terminal 16

RS485 communication connector on a 5024G 16
Appendix C – Electrical connection of 5026G to Serial Modbus 17
Rear view of a 5026G terminal 17
RS485 communication connector on a 5026G 17
Appendix D – Reading of Modbus data 18
Telegram format (Read Holding Register – 1 point) 18
Telegram format (Read Holding Register – 2 points) 18
Appendix E – Writing of Modbus data 19
Telegram format (Preset Multiple Registers – 1 register) 19
Telegram format (Preset Multiple Registers – 2 registers) 20
Revision History 21
Contact 22
Security 22
Coordinated Vulnerability Disclosure Policy 22
Information 22

Introduction

This document describes the use of the RS485 Serial Modbus option on the 5024G eller 5026G Weighing Terminal from Eilersen Electric. With the software version stated on the front page and with the Serial Modbus option enabled the system can communicate on RS485 with an external controller/PLC using Modbus (RTU or ASCII) protocol, where the 5024G / 5026G terminal acts as a Modbus slave.

With the stated software version installed the 5024G / 5026G terminal can transfer 7 output word registers (14 output bytes) from the Modbus master to the 5024G / 5026G terminal and transfer 7 input word registers (14 input bytes) from the 5024G / 5026G terminal to the Modbus master.

Exchange of data between 5024G / 5026G terminal and the external controller/PLC is made according to the profile/protocol described later (see ***Protocol description***).

This manual only describes the Serial Modbus option. For general information on the operation of the 5024G / 5026G please see the 'Users guide'.

How to

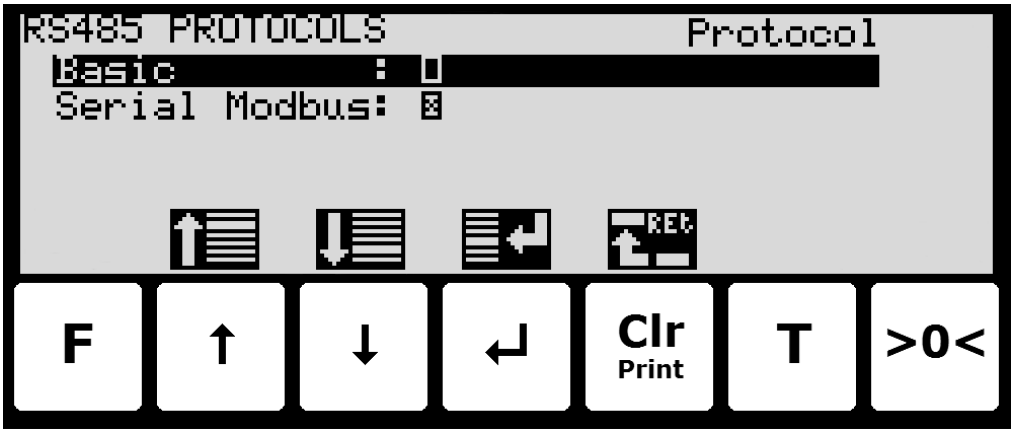
– Configure RS485 Serial Modbus communication protocol

The used RS485 channel on the 5024G / 5026G weighing terminal must be connected to the seriel Modbus master according to the description in ***Appendix B – Electrical connection of 5024G to Serial Modbus*** or ***Appendix C – Electrical connection of 5026G to Serial Modbus***.

The terminal can perform Modbus communication on its RS485 serial communication connector if the Serial Modbus protocol is enabled.

Enable Serial Modbus protocol

The Serial Modbus protocol must be enabled. This can be done in the **RS485 PROTOCOLS** screen shown below.

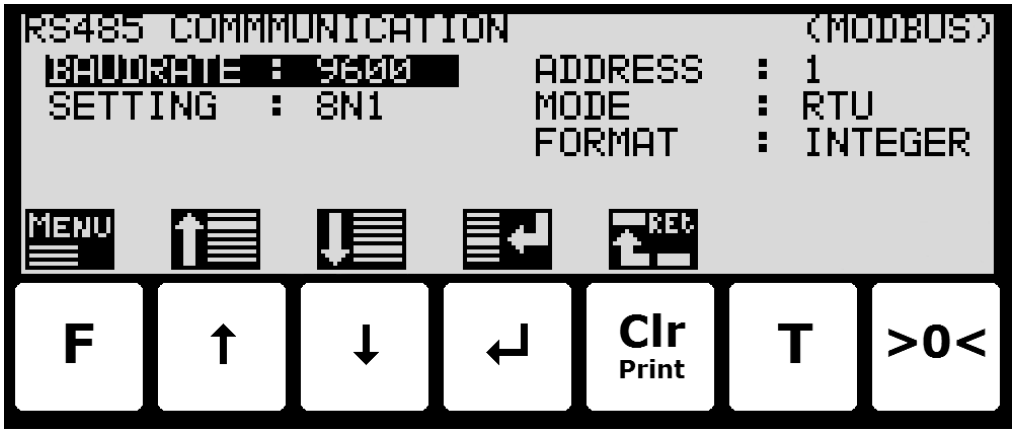


In the **RS485 PROTOCOLS** screen the '**Serial Modbus**' parameter is selected using the cursor, and ↵ is pressed to enable or disable the Serial Modbus protocol. An **X** in the corresponding box indicates the protocol is enabled.

NOTE: It is **ONLY** the shown **Serial Modbus** protocol that may be enabled.

– Configure Serial Modbus settings

Modbus communication settings such as Baudrate, Databits, Stopbits, Parity, Address, Mode and Format are shown and can be set in the **RS485 COMMUNICATION** screen:



Modbus Baudrate

The Modbus **BAUDRATE** is used to specify the actually used baudrate on the RS485 Modbus network. The Modbus baudrate can be set to a wide variety of commonly used baud rates in the interval 1200 bps to 115200 bps.

Modbus serial Setting

The Modbus **SETTING** is used to specify the actual serial settings used on the RS485 Modbus network. The Modus settings can be set to a wide range of combinations all defined and indicated by 3 characters with the following format:

<D> <P> <S>

where:

<D> indicates the number of Databits and can be set to '**7**' or '**8**'.

<P> indicates the Parity and can be set to '**N**' (None), '**E**' (Even) or '**O**' (Odd).

<S> indicates the number of Stopbits and can be set to '**1**' or '**2**'.

Hence '**8N1**' would indicate 8 Databits, No Parity and 1 Stopbit.

Please notice that depending on the selected Modbus mode described below, this puts certain restraints on the used Modbus setting as follows:

In **ASCII** mode the following should be used:

7 databits.

1 stopbit if Parity is used (Even or Odd).

2 stopbit if Parity is NOT used (None).

In **RTU** mode the following should be used:

8 databits.

1 stopbit if Parity is used (Even or Odd).

2 stopbit if Parity is NOT used (None).

Modbus Address

The Modbus **ADDRESS** is used to identify the 5024G / 5026G weighing terminal on the RS485 Modbus network. Please notice that the address must be unique and different for each unit on the RS485 Modbus network. The address can be set from 0 to 31.

Modbus Mode

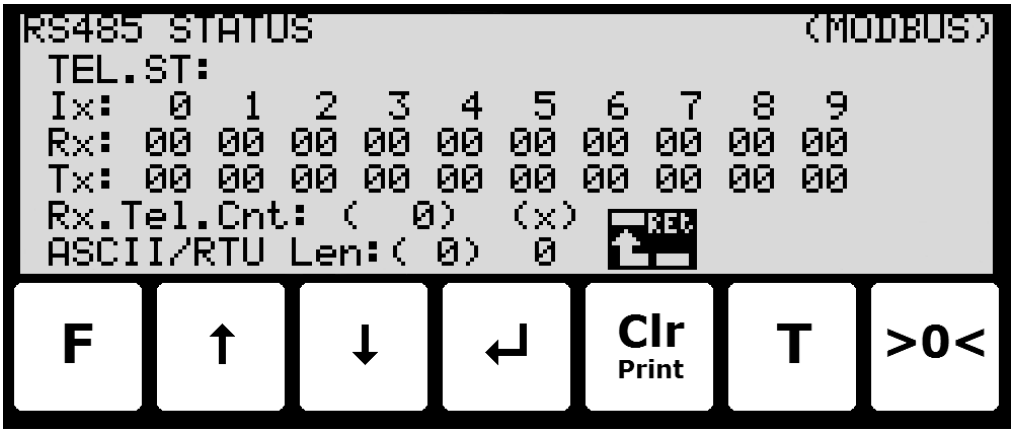
The Modbus **MODE** is used to determine the communication form on the RS485 Modbus network. The Modbus mode can be set to **ASCII** mode or **RTU** (binary) mode depending on the used Modbus communication form. Please refer to separate literature for a description of the two modes. Please notice that the selected Modbus mode sets limits on what serial settings should be used as described above.

Modbus Format

The Modbus **FORMAT** is used to specify the representation of the data registers transferred on the Modbus. The Modbus format can be set to '**INTEGER**' format (32 bit signed integer) or '**FLOAT**' format (32 bit IEEE754 floating point). Normally '**INTEGER**' format is selected. If '**FLOAT**' is selected only 4 byte data registers (32 bit registers) are represented as floating point; i.e. 2 byte data registers (16 bit registers) are still represented as integers.

– Monitor Modbus communication status

In the **RS485 STATUS** screen, the status of the Modbus communication can be read:



The shown Modbus communication data are solely for internal use during trouble shooting.

Protocol description

– Modbus communication using PPO

The Modbus communication is made using a *'parameter-process data object'* (PPO) consisting of 7 output word registers followed by 7 input word registers. This object is used during both reception and transmission of data. The structure consists of the following registers:

Starting Address	Holding Register	Number of Points/Registers	Byte Count	Register Type	Register Content
Write data (From Modbus master to 5024G / 5026G):					
0	40001	1	2	2, Rd/Wr	MDS_PCA
1	40002	1	2	2, Rd/Wr	PNU
2	40003	2	4	4, Rd/Wr	PVA
4	40005	1	2	2, Rd/Wr	CTW
5	40006	2	4	4, Rd/Wr	MRV
Read data (From 5024G / 5026G to Modbus master):					
7	40008	1	2	2, Rd	MDS_PCA
8	40009	1	2	2, Rd	PNU
9	40010	2	4	4, Rd	PVA
11	40012	1	2	2, Rd	STW
12	40013	2	4	4, Rd	MAV

where:

MDS_PCA stands for Mode Selector and Parameter Characteristics

PNU stands for Parameter Number

PVA stands for Parameter Value

CTW stands for Control Word

MRV stands for Main Reference Value

STW stands for Status Word

MAV stands for Main Actual Value

In the following the meaning of the individual registers of the object is explained further.



IMPORTANT: During transfer/reception of data (i.e. the MAV) it is up to the master (the PLC) to ensure consistent data, when a parameter consisting of several word registers is read/updated and when AS/MAV or RS/MRV is read/set.

MDS_PCA

The MDS part is the most significant byte (MSB) of the MDS_PCA register, and indicates which value is to be transferred as **Main Reference Value** (MRV) and as **Main Actual Value** (MAV).

The PCA part is the least significant byte (LSB) of the MDS_PCA register and determines (along with the PNU and PVA registers) what is to happen with a given parameter.

MDS								**PCA**							
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
RS				AS				RC							

RS: Reference value selector (Values: 0..15)

AS: Actual value selector (Values: 0..15)

RC: Request/Response Characteristics (Values: 0..255)

MDS contains an RS part for selection of **Main Reference Value** (MRV) and an AS part for selection of **Main Actual Value** (MAV).

The PCA part contains an RC part for 'request' and 'response' indication during write and read.

RC is used by the master to tell the slave which ’request’ is desired. Similarly, the slave uses RC to inform the master the status of the received 'request' (’response’).

The contents of RC has the following function during ’request:

REQUEST	FUNCTION
0	No request
1	Request parameter value
2	Change parameter value in word register (2 bytes)
3	Change parameter value in double word register (4 bytes)
Others	*Reserved for future use*

The contents of RC has the following function during response:

RESPONSE	FUNCTION
0	No response
1	Transfer parameter value in word register (2 bytes)
2	Transfer parameter value in double word register (4 bytes)
3	Request rejected (incl. Error#, see later)
4	Cannot be serviced by PCA, PNU and PVA interface
Others	*Reserved for future use*

PNU

The PNU part indicates the parameter number of the parameter to be read/changed. The parameters and their function are described below.

PVA

The PVA part contains a double word for reception and transmission of parameter values. The PVA part transfers single word parameters in the least significant word (LSW).

If the slave rejects a request from the master the RC part assumes the value 3 (see above) and the error number itself is transferred in the least significant word (LSW) of the PVA register. The following error indications are possible:

ERROR #	CAUSE
0	Illegal command for this PNU or PNU not used.
1	*Reserved for future use*
2	Upper or lower limit exceeded

CTW/STW

During communication from the master to the slave a Control Word (CTW) is used. Using the Control Word (CTW) it is possible to tell the slave how to react as different commands can be transferred to the slave.

During communication from the slave to the master a Status Word (STW) is used. Using the Status Word (STW) it is possible for the master to gain information on the status of the slave.

MRV/MAV

During communication from the master to the slave a **Main Reference Value** (MRV) is used; a setpoint. Using the RS defines exactly which value is transferred as MRV.

During communication from the slave to the master a **Main Actual Value** (MAV) is used; the actual value. Using the AS defines exactly which value is transferred as MAV.

– Communication overview (Modbus data registers)

Below is a complete list of data registers available on 5024G / 5026G weighing terminal. The list specifies the *Starting Address*, the *Holding Register*, the *Number of Points/Registers*, the *Byte Count*, the *Register Type* (register size in bytes and if it's a Read/Write register) as well as the *Register Content*.

Starting Address	Holding Register	Number of Points/Registers	Byte Count	Register Type	Register Content
Write data (From Modbus master to 5024G / 5026G):					
0	40001	1	2	2, Rd/Wr	MDS_PCA
1	40002	1	2	2, Rd/Wr	PNU
2	40003	2	4	4, Rd/Wr	PVA
4	40005	1	2	2, Rd/Wr	CTW
5	40006	2	4	4, Rd/Wr	MRV
Read data (From 5024G / 5026G to Modbus master):					
7	40008	1	2	2, Rd	MDS_PCA
8	40009	1	2	2, Rd	PNU
9	40010	2	4	4, Rd	PVA
11	40012	1	2	2, Rd	STW
12	40013	2	4	4, Rd	MAV

Please note the following:

1. All weights are transferred as shown in the display without a decimal point (i.e. 300.0 kg is transferred as 3000 and 67.2 kg is transferred as 672).
2. All negative numbers are transferred as 2-complement numbers.
3. Actual unit and decimal point position can be read from the appropriate parameter.
4. In Modbus communication the **M**ost **S**ignificant **B**yte (MSB) of a word is first.
5. In Modbus communication the **L**east **S**ignificant **W**ord (LSW) of a double word is first.
6. When reading/transferring data consisting of multiple holding registers (such as gross and net weight in the MAV part) it is up to the Modbus master to ensure consistent data (data originate from the same telegram). This is typically done by performing a "Read Holding Register" command requesting the read of 2 points (for a double word such as gross or net weight) and then determining the actual result from the response telegram. In similar way the transfer of a double word parameter should be done using a single "Preset Multiple Registers" command requesting the write/update of 2 registers.

– RS – Reference Value Selector, MRV – Main Reference Value

RS **Reference Value Selector**	**MRV** **Main Reference Value**
0	*Not used*
Others	*Not used*

– AS – Actual Value Selector, MAV – Main Actual Value

AS **Actual Value Selector**	**MAV** **Main Actual Value**
0	*Not used*
1	Actual gross weight
2	Actual net weight
Others	*Not used*

Actual gross weight is the actual gross weight on the 5024G / 5026G terminal.

Actual net weight is the actual net weight on the 5024G / 5026G terminal.

– CTW – Control Word

Bit	**Function**
0	Zero
1	Autotare (zero of net weight)
2	Start dosing
3	Stop dosing
4	Registration
Others	*Not used*

Zero must be activated if a zero of the gross weight is desired.

Autotare must be activated if a zero of the net weight is desired.

Start dosing must be activated if a start of dosing is desired.

Stop dosing must be activated if a dosing is to be stopped before the fine limit is reached. If the terminal is set to perform automatic registration on time this will take place afterwards.

Registration must be activated if a registration of the actual net weight is desired. Any dosing in progress will be aborted before registration.

– STW – Status Word

Bit	Function
0	Weight reading not possible
1	Zero OK
2	Zero not possible
3	Autotare OK
4	Autotare not possible
5	Start dosing OK
6	Start dosing not possible
7	Stop dosing OK
8	Stop dosing not possible
9	Registration OK
10	Registration not possible
11	Fine dosing
12	Coarse dosing
13	Steady
14	Registration ready
15	OK – always ON

Weight reading not possible is active when the 5024G / 5026G terminal is unable to determine weight. NOTE: This bit is also activated if unbalance is detected (UNBALANCED warning), LIMP Mode is activated (LIMP MODE warning) or a load cell is overloaded (LC OL warning). See Users Guide for further information.

Zero OK is active when zero was possible.*)

Zero not possible is active when zero was NOT possible.*)

Autotare OK is active when autotare was possible.*)

Autotare not possible is active when autotare was NOT possible.*)

Start dosing OK is active when start of dosing was possible.*)

Start dosing not possible is active when start of dosing was NOT possible.*)

Stop dosing OK is active when stop of dosing was possible.*)

Stop dosing not possible is active when stop of dosing was NOT possible.*)

Registration OK is active when registration of net weight was possible.*)

Registration not possible is active when registration of net weight was NOT possible.*)

Fine dosing is active during dosing until the fine limit (pos. adjusted for afterflow) is reached.

Coarse dosing is active during dosing when the net weight is below the coarse limit.

Steady is active when the weight reading is steady, corresponding to the steady symbol in the **NORMAL** screen.

Registration ready is active when a registration is ready. The bit is cleared when a new dosing is started.

OK – always ON is always activated. Can be used as a control of the communication.

Bits marked with *) are cleared again when the corresponding request bit is cleared.

– Parameters

NO	TYPE	PARAMETER
1	4, R	Actual gross weight
2	4, R	Actual net weight
3	4, RW	Fine limit
4	4, RW	Coarse limit
5	-	*Not used*
6	4, R	Last registered amount
7	4, R	Total dosed amount
8	4, R	Total number of weighings
10	2, R	Unit *0: kg* *1: lbs* *2: gram*
11	2, R	Decimal point position
20 – 35	2, R	Load cell-Status[x]
40 – 55	4, R	Load cell-Gross[x]
Others		*Not used*

Actual gross weight is the actual gross weight on the 5024G / 5026G terminal.

Actual net weight is the actual net weight on the 5024G / 5026G terminal.

Fine limit contains the fine limit used during dosing.

Coarse limit contains the coarse limit used during dosing.

Last registered amount contains the result (registration) of the last dosing.

Total dosed amount contains the total dosed amount.

Total number of weighings contains the total number of weighings.

Unit indicates the unit used in the display reading. It should be used to scale weight indications received/transmitted using the Modbus communication.

Decimal point position indicates the number of digits after the decimal point in the display reading. It should be used to scale weight indications received/transmitted using the Modbus communication.

Load cell-Status[x] contains the actual status for load cell x.

Load cell-Gross[x] contains the actual gross signal (not zeroed) on load cell x.

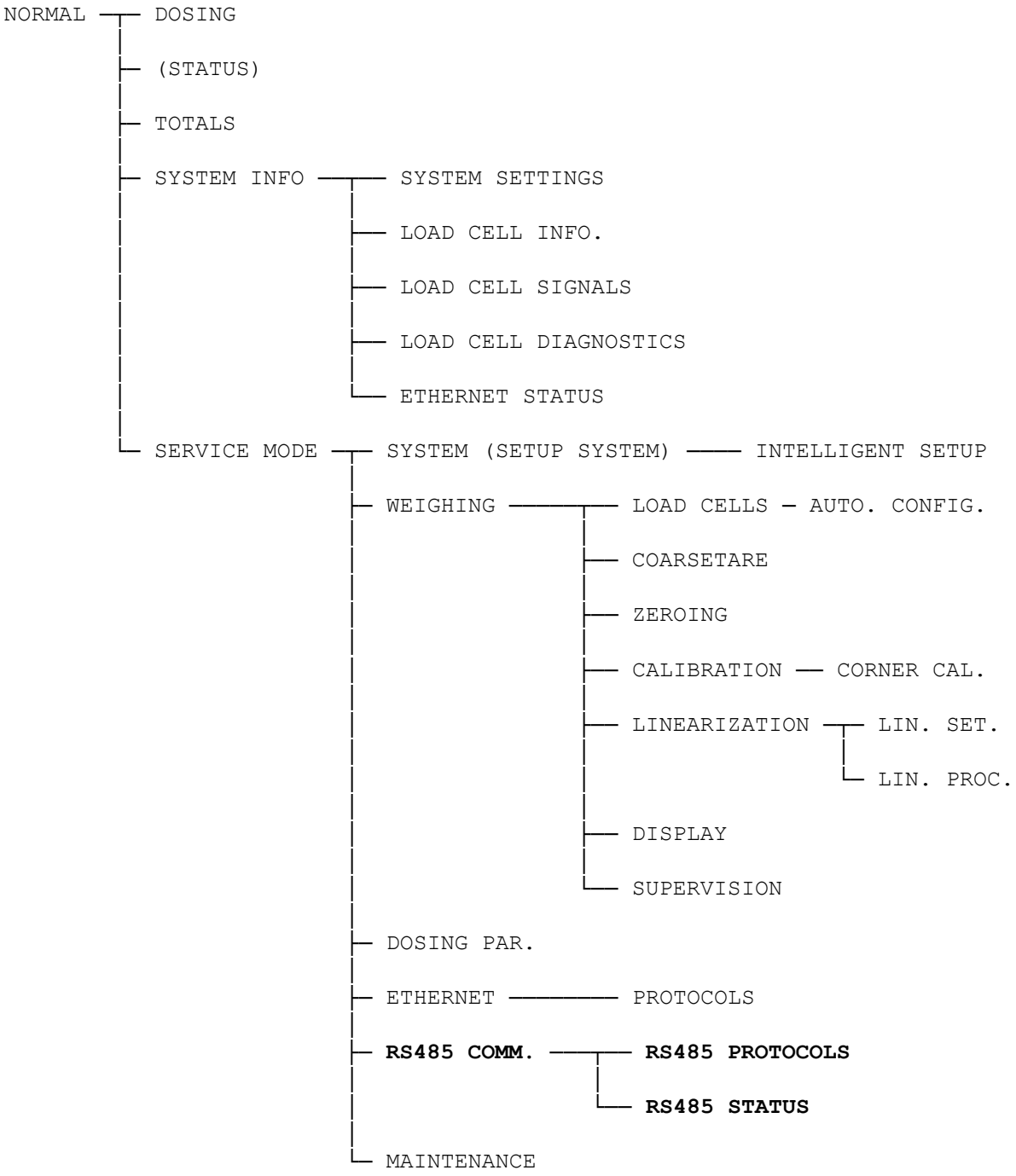
Trouble shooting

Problem	**Explanation and possible solutions**
PLC unable to receive/transmit data from/to 5024G / 5026G	Check connection between PLC and 5024G / 5026G terminal is ok (see below). Check configuration of 5024G / 5026G terminal is ok (see below). Check configuration of Serial Modbus master (PLC) is ok (see below).
No connection between PLC and 5024G / 5026G terminal	Check the RS485 cabling between 5024G / 5026G and PLC is made correctly. Check the RS485 cable is not damaged. Check the 5024G / 5026G (in the **RS485 COMMUNICATION** screen) and the PLC are configured correctly to the same serial settings. Check the correct protocol has been enabled in the **RS485 PROTOCOLS** screen.
Wrong configuration of 5024G / 5026G terminal	Check parameters in the **RS485 COMMUNICATION** screen are configured correctly: - Check "***BAUDRATE***" and "***SETTING***" parameters are set correct. - Check "***ADDRESS***" parameter matches the desired Modbus address. - Check "***MODE***" parameter is set correct (RTU / ASCII). - Check "***FORMAT***" parameter is set correct (INTEGER / FLOAT). Check the **Serial Modbus** protocol has been enabled in the **RS485 PROTOCOLS** screen.
Wrong configuration of PLC	Check the PLC is configured correctly. In this application 7 output word registers and 7 input word registers are used. Check the PLC is configured with correct parameters matching the configuration on 5024G / 5026G terminal.
Values change rapidly between random values	Check the Modbus master (PLC) uses correct data format: - in word registers **M**ost **S**ignificant **B**yte (MSB) is first, and **L**east **S**ignificant **B**yte (LSB) is last. - in double words **L**east **S**ignificant **W**ord (LSW) is first, and **M**ost **S**ignificant **W**ord (MSW) is last. - is correct "***FORMAT***" selected (INTEGER / FLOAT) ?
Implemented protocol does not behave as expected	Compare implemented Modbus protocol (PLC program) with the Modbus protocol description above. For instance, check if the **OK – always ON** bit in **STW** is ON as expected.

Appendices

Appendix A – Screens overview

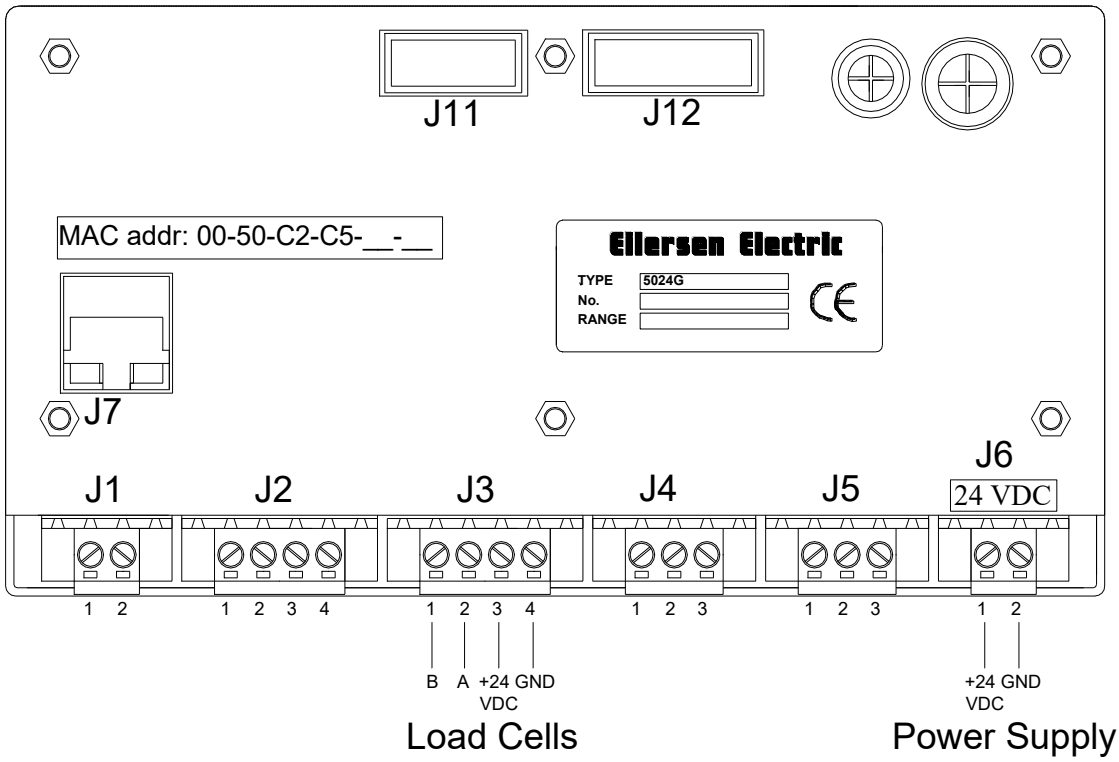
The system has the following screens, which are selected using the menu system.



Appendix B – Electrical connection of 5024G to Serial Modbus

The following describes the electrical connection of the 5024G terminal to Serial Modbus using a RS485 connection on a **5024G** terminal.

Rear view of a 5024G terminal



RS485 communication connector on a 5024G

The 3 pin RS485 serial communication connector (J4) on the backside of the 5024G terminal is the connector that is used to connect the 5024G system to the serial Modbus master. This connector has the following connections:

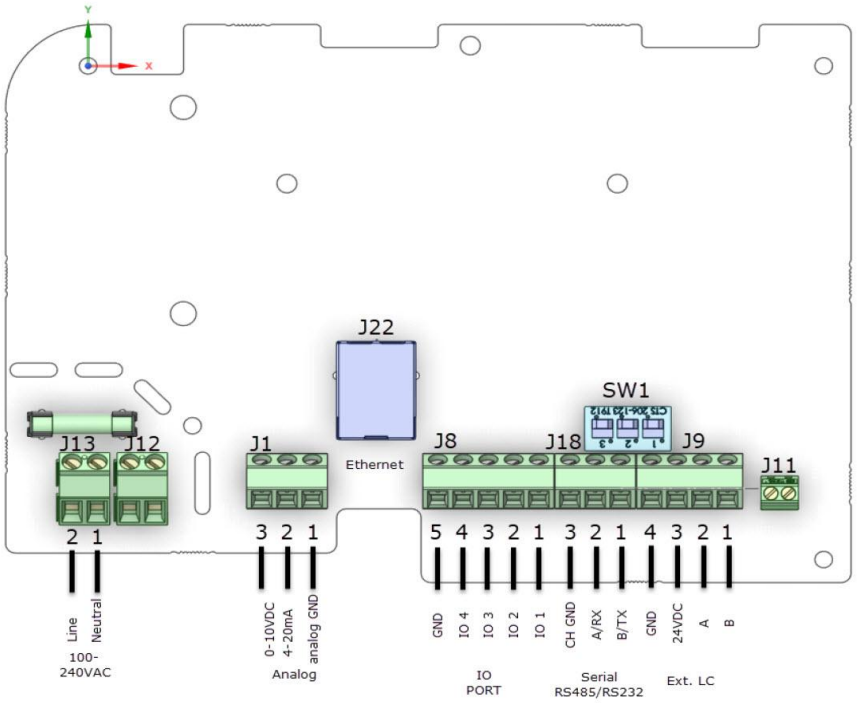
J4 pin	Function	Connection
1	**RS485-B** (negative line)	**Serial Modbus master:** RS485-B
2	**RS485-A** (positive line)	**Serial Modbus master:** RS485-A
3	**RS485-GND**	**Serial Modbus master:** RS485-GND

Please notice: A and B line definitions may be switched on external equipment. Especially on Siemens equipment and a few other German manufacturers A and B lines definitions are different.

Appendix C – Electrical connection of 5026G to Serial Modbus

The following describes the electrical connection of the 5026G terminal to Serial Modbus using a RS485 connection on a **5026G** terminal.

Rear view of a 5026G terminal



RS485 communication connector on a 5026G

The 3 pin RS485 serial communication connector (J18) on the backside of the 5026G terminal is the connector that is used to connect the 5026G system to the serial Modbus master. This connector has the following connections:

J18 pin	Function	Connection
1 (**B**)	**RS485-B** (negative line)	**Serial Modbus master:** RS485-B
2 (**A**)	**RS485-A** (positive line)	**Serial Modbus master:** RS485-A
3 (**GND**)	**RS485-GND**	**Serial Modbus master:** RS485-GND

Please notice: A and B line definitions may be switched on external equipment. Especially on Siemens equipment and a few other German manufacturers A and B lines definitions are different.

Appendix D – Reading of Modbus data

Modbus data registers on the 5024G / 5026G weighing terminal are read by the Modbus Master by performing a ”Read Holding Register” request (0x03) to the 5024G / 5026G weighing terminal. The *Holding Register* as well as the *Number of Points* used in the request is specified for each data register in the Modbus data register table shown earlier.

Telegram format (Read Holding Register – 1 point)

A ”Read Holding Register” command requesting the read of 1 point from start address 1 (Holding Register 40002) has the following telegram format:

	HEX	ASCII (chars)	RTU (binary)
Header:	xx	:	none
Slave Adr.:	xx	x x	xxxxxxxx
Function:	03	0 3	00000011
Start Adr.(H):	00	0 0	00000000
Start Adr. (L):	01	0 1	00000001
# of points (H):	00	0 0	00000000
# of points (L):	01	0 1	00000001
Error Check:	xx	LRC(2 bytes)	CRC(2 bytes)
Trailer:	xx	CR LF	none

To this request the 5024G / 5026G terminal responds with the following telegram:

	HEX	ASCII (chars)	RTU (binary)
Header:	xx	:	none
Slave Adr.:	xx	x x	xxxxxxxx
Function:	03	0 3	00000011
Byte Count:	02	0 2	00000010
Data0(H)	xx	x x	xxxxxxxx
Data0(L)	xx	x x	xxxxxxxx
Error Check:	xx	LRC(2 bytes)	CRC(2 bytes)
Trailer:	xx	CR LF	none

Telegram format (Read Holding Register – 2 points)

A ”Read Holding Register” command requesting the read of 2 points from start address 2 (Holding Register 40003) has the following telegram format:

	HEX	ASCII (chars)	RTU (binary)
Header:	xx	:	none
Slave Adr.:	xx	x x	xxxxxxxx
Function:	03	0 3	00000011
Start Adr.(H):	00	0 0	00000000
Start Adr. (L):	02	0 2	00000010
# of points (H):	00	0 0	00000000
# of points (L):	02	0 2	00000010
Error Check:	xx	LRC(2 bytes)	CRC(2 bytes)
Trailer:	xx	CR LF	none

To this request the 5024G / 5026G terminal responds with the following telegram:

	HEX	ASCII (chars)		RTU (binary)
Header:	xx	:		none
Slave Adr.:	xx	x	x	xxxxxxxx
Function:	03	0	3	00000011
Byte Count:	04	0	4	00000100
Data0(H)(LSW)	xx	x	x	xxxxxxxx
Data0(L)(LSW)	xx	x	x	xxxxxxxx
Data1(H)(MSW)	xx	x	x	xxxxxxxx
Data1(L)(MSW)	xx	x	x	xxxxxxxx
Error Check:	xx	LRC(2 bytes)		CRC(2 bytes)
Trailer:	xx	CR	LF	none

Appendix E – Writing of Modbus data

Modbus data registers on the 5024G / 5026G weighing terminal are written by the Modbus Master by performing a ”Preset Multiple Registers” request (0x10) to the 5024G / 5026G weighing terminal. The *Holding Register*, the *Number of Registers* as well as the *Byte Count* used in the request is specified for each data register in the Modbus data register table shown earlier.

Telegram format (Preset Multiple Registers – 1 register)

A ”Preset Multiple Registers” command requesting the write/update of 1 register from start address 0 (Holding Register 40001) has the following telegram format:

	HEX	ASCII (chars)		RTU (binary)
Header:	xx	:		none
Slave Adr.:	xx	x	x	xxxxxxxx
Function:	10	1	0	00010000
Start Adr.(H):	00	0	0	00000000
Start Adr. (L):	00	0	0	00000000
# of registers (H):	00	0	0	00000000
# of registers (L):	01	0	1	00000001
Byte Count:	02	0	2	00000010
Data0(H)	xx	x	x	xxxxxxxx
Data0(L)	xx	x	x	xxxxxxxx
Error Check:	xx	LRC(2 bytes)		CRC(2 bytes)
Trailer:	xx	CR	LF	none

To this request the 5024G / 5026G terminal responds with the following telegram:

	HEX	ASCII (chars)		RTU (binary)
Header:	xx	:		none
Slave Adr.:	xx	x	x	xxxxxxxx
Function:	10	1	0	00010000
Start Adr.(H):	00	0	0	00000000
Start Adr. (L):	00	0	0	00000000
# of registers (H):	00	0	0	00000000
# of registers (L):	01	0	1	00000001
Error Check:	xx	LRC(2 bytes)		CRC(2 bytes)
Trailer:	xx	CR	LF	none

Telegram format (Preset Multiple Registers – 2 registers)

A ”Preset Multiple Registers” command requesting the write/update of 2 registers from start address 6 (Holding Register 40007) has the following telegram format:

	HEX	ASCII (chars)		RTU (binary)
Header:	xx	:		none
Slave Adr.:	xx	x	x	xxxxxxxx
Function:	10	1	0	00010000
Start Adr.(H):	00	0	0	00000000
Start Adr. (L):	06	0	6	00000110
# of registers (H):	00	0	0	00000000
# of registers (L):	02	0	2	00000010
Byte Count:	04	0	4	00000100
Data0(H)(LSW)	xx	x	x	xxxxxxxx
Data0(L)(LSW)	xx	x	x	xxxxxxxx
Data1(H)(MSW)	xx	x	x	xxxxxxxx
Data1(L)(MSW)	xx	x	x	xxxxxxxx
Error Check:	xx	LRC(2 bytes)		CRC(2 bytes)
Trailer:	xx	CR	LF	none

To this request the 5024G / 5026G terminal responds with the following telegram:

	HEX	ASCII (chars)		RTU (binary)
Header:	xx	:		none
Slave Adr.:	xx	x	x	xxxxxxxx
Function:	10	1	0	00010000
Start Adr.(H):	00	0	0	00000000
Start Adr. (L):	06	0	6	00000110
# of registers (H):	00	0	0	00000000
# of registers (L):	02	0	2	00000010
Error Check:	xx	LRC(2 bytes)		CRC(2 bytes)
Trailer:	xx	CR	LF	none

Revision History

Date	Author	Rev.	*Update*
2023-08-29	HJA	6v6	*Initial document created and adapted.* *(based on StdLim-140630-6v6-OG-ModbusTCP-eng)*
2024-09-02	HJA	6v7	*Added LINEARIZATION SETTINGS screen.* *Added LINEARIZATION PROCEDURE screen.*
2025-02-26	HJA	6v8	*Updated references to software ID.*
2025-09-29	HJA	6v9	*Added steady bit to STW.*
2025-10-22	HJA	7v0	**Weight reading not possible** bit is also activated if UNBALANCED or LIMP MODE is activated.
2026-01-20	HJA	7v1	*Updated references to software ID.*
2026-01-30	HJA	7v2	**Weight reading not possible** bit is also activated if a load cell is overloaded.
2026-03-25	HJA	8v0	*Program can now run on both 5024G and 5026G terminal.*
2026-04-15	HJA	8v1	*Inserted picture of 5026G.*
2026-04-29	HJA	8v2	*Updated references to software ID.*
2026-11-02	HJA	8v3	*Updated references to software ID.* *Coordinated Vulnerability Disclosure Policy added*

Contact

Security

Coordinated Vulnerability Disclosure Policy

Eilersen Electric A/S takes the security of our products seriously. We welcome reports from users who identify potential vulnerabilities in our products with digital elements, and we are committed to working with the reporting party to understand and resolve issues quickly.

Reporting a Vulnerability

If you believe you have found a security vulnerability in an Eilersen product, please report it to:

security@eilersen.com

Further information

https://eilersen.com/about-us/security

Information

With further questions or improvement suggestions please contact us:

Eilersen
The Weighing Experts

Eilersen Electric A/S
Kokkedal Industripark 4
DK-2980 Kokkedal
Denmark
www.eilersen.com
info@eilersen.com
Tel: +45 49 180 100
Fax: +45 49 180 200

Eilersen
The Weighing Experts