



# FIFE D-MAX / OI-TS

## Operating Instructions

---



When requesting service or spare parts, please have ready the following reference number.

Bitte halten Sie bei Service- oder Ersatzteilanfragen die folgende Referenznummer bereit.

Pour toute demande d'intervention ou de pièces détachées merci de nous communiquer la référence suivante.

Si prega citare il seguente riferimento in caso di richiesta di assistenza tecnica o parti di ricambio.

Para cualquier petición de servicio o repuestos le rogamos nos comuniquen la siguiente referencia.



<b>INSTRUCTION</b>	<b>1-1</b>
About these operating instructions . . . . .	1-1
Proper use . . . . .	1-2
Options . . . . .	1-2
Improper use . . . . .	1-2
Operating principle . . . . .	1-3
Modules . . . . .	1-3
Operating principle . . . . .	1-3
<b>SAFETY INSTRUCTIONS</b>	<b>2-1</b>
Important information . . . . .	2-1
Information about safety instructions . . . . .	2-1
Symbols . . . . .	2-2
Preventing hazards . . . . .	2-2
Installation and commissioning . . . . .	2-2
Operation . . . . .	2-3
Maintenance . . . . .	2-3
<b>INSTALLATION</b>	<b>3-1</b>
Transport and storage . . . . .	3-1
Scope of delivery . . . . .	3-1
Option . . . . .	3-1
Mounting . . . . .	3-2
Installation location of D-MAX Controller . . . . .	3-2
Mechanical fastening of D-MAX Controller . . . . .	3-2
Installation location of D-MAX operator interface OI-S . . . . .	3-3
Electrical connection . . . . .	3-5
Emergency Stop . . . . .	3-5
Power supply of D-MAX Controller . . . . .	3-5
Power supply of D-MAX operator interface OI-TS . . . . .	3-5
Connecting the sensors/drives . . . . .	3-5
Connections on the D-MAX 1 Controller . . . . .	3-7
Connections on the D-MAX 2 Controller . . . . .	3-7
LEDs on the D-MAX Controller . . . . .	3-8
<b>OPERATOR INTERFACE OI-TS</b>	<b>4-1</b>
OI-TS description . . . . .	4-1
Keys and Displays . . . . .	4-2
Header . . . . .	4-3
Select operator interface . . . . .	4-3
<b>OPERATING THE CONTROLLER</b>	<b>5-1</b>
User level . . . . .	5-1
Select devices/drives . . . . .	5-2
Select operating modes . . . . .	5-2
Select jobs . . . . .	5-2
Shift guide point . . . . .	5-3
Moving the Drive . . . . .	5-3
Menu level . . . . .	5-4
Job menu . . . . .	5-5
Servo-Center Transducer (????) Menu . . . . .	5-6
Setup Menu . . . . .	5-7
<b>COMMISSIONING</b>	<b>6-1</b>
Before commissioning . . . . .	6-1
Commissioning . . . . .	6-1

MENUS	7-1
2 Remote Control	7-1
3 Job	7-2
0 Calibrate sensors	7-2
1 Guidepoint	7-2
2 Auto Setup	7-2
3 Gain	7-3
4 OSC	7-3
5 PIC	7-3
6 ASC	7-3
7 Deadband	7-5
8 Polarity	7-5
9 SpeedGain Control	7-5
10 Actuator Speed	7-5
4 Servo-Center	7-6
1 Guidepoint	7-6
2 Gain	7-6
3 Polarity	7-6
5 Hardware	7-7
1 Sensors	7-7
1 Sensor S1 X5/1 ... 4 Sensor S4 X9/2	7-7
1 Calibration	7-8
2 Type	7-9
3 Field of View	7-9
4 Sensor Supervision	7-9
5 Current Range	7-9
5 Line Speed	7-10
7 Encoder...8 Motor Encoder	7-10
1 Calibration	7-11
2 Field of View	7-12
3 Search Reference	7-12
4 Clear Limits	7-13
5 Enc. Rotation/Meter	7-13
2 Actuator	7-13
3 Digital Inputs	7-13
4 Digital Outputs	7-13
1 Digital Output A...2 Digital Output B	7-13
1 Delay	7-14
2 <Set> State	7-14
3 <Cleared> State	7-14
6 Control	7-15
1 Modes	7-15
2 Jobs	7-15
3 Left/Right Keys	7-15
1 Jog Enable	7-15
2 Jog Direction	7-15
3 Jog Speed	7-16
4 Jog Soft Start	7-16
4 Remote Control	7-16
5 Unit	7-16
6 Hardlock	7-16
1 Hardlock State	7-16
2 Hardlock Gain	7-16
3 Hardlock Polarity	7-16
7 Administration	7-17
1 Names	7-17
2 Serial Number	7-17
3 FW Number	7-17
4 SW Number	7-17

5 Distributed System .....	7-17
1 Application .....	7-19
2 Sub Function .....	7-19
7 Backup .....	7-20
8 Restore .....	7-20
1 Restore from previous backup .....	7-20
2 Restore factory settings .....	7-20
8 Network .....	7-22
9 Service .....	7-24
1 Measurements .....	7-24
1 Sensors .....	7-24
2 Encoder .....	7-24
3 Digital Inputs ( Connection X1) .....	7-24
7 Measured Values .....	7-24
9 Sensor Current .....	7-24
2 Simulate Outputs .....	7-24
<b>MAINTENANCE</b> .....	<b>8-1</b>
Maintenance work .....	8-1
<b>DECOMMISSIONING</b> .....	<b>9-1</b>
Decommissioning .....	9-1
<b>TROUBLESHOOTING</b> .....	<b>10-1</b>
Troubleshooting Procedure .....	10-1
Display possibilities .....	10-1
Procedure .....	10-1
LEDs on the D-MAX Controller .....	10-2
D-MAX operator interface OI-TS .....	10-3
Icons in the display of the D-MAX operator interface .....	10-4
Faulty behaviour and setting errors .....	10-6
Possible causes for faulty behaviour .....	10-6
Faulty behaviour .....	10-9
<b>TECHNICAL DATA</b> .....	<b>11-1</b>
General information .....	11-1
D-MAX Controller .....	11-1
D-MAX operator interface OI-TS .....	11-1
Inputs and outputs of the D-MAX Controller .....	11-2
Parallel input matrix .....	11-3
Parallel output matrix .....	11-4
Jobs .....	11-4
Drives .....	11-5
Cable lengths .....	11-7
Standards .....	11-7
Accessories (optional) .....	11-8
Input devices .....	11-8
<b>APPENDIX A – OVERVIEW</b> .....	<b>12-1</b>
<b>APPENDIX B – SYMBOLS</b> .....	<b>13-1</b>
<b>APPENDIX C – TERMS</b> .....	<b>14-1</b>
<b>SERVICE</b> .....	<b>15-1</b>

---

# 1 INSTRUCTION

---

---

## About these operating instructions

These operating instructions describe the commissioning, operation and maintenance of the D-MAX system with an operator interface OI-TS and provide important instructions for proper use.

These operating instructions are intended for both the system construction master as well as the operator who uses the D-MAX system in production. The Operating Instructions must be read and applied by everyone who is responsible for commissioning, operating or maintaining the D-MAX systems.

The Operating Instructions must be carefully kept and must always be available throughout the service life of the D-MAX system.



### Note:

These Operating Instructions describe basic operation of the D-MAX systems. Additions and customer-specific adaptations are found in Supplementary Operating Instructions in the system documentation.

If the customer's system consists of multiple D-MAX Controllers and/or operator interfaces, the instructions in these Operating Instructions must be performed separately for each module.

### Translation of the original Operating Manual:

This Operating Manual is a translation. The original Operating Manual was composed in German.

---

**Proper use**

The D-MAX system is used for position guiding of material webs and to guide

- control roller systems and
- unwind and wind-up systems.

The D-MAX system works in different functions:

- Edge guiding
- Center guiding
- Line guiding (edge or center guiding on printed lines).

The D-MAX system must only be used in accordance with its intended purpose and must be in flawless technical condition. Unauthorised conversions or changes to the D-MAX system are not permitted.

Any other use of the D-MAX system requires the prior approval of Fife-Tidland GmbH.



Note:

The modules of the D-MAX system must not be opened. If a module is opened, no claims under the warranty will be honoured.

**Options**

Customer-specific programming and different sensors and drives make it possible to adjust the D-MAX system to a wide variety of applications.

---

**Improper use**

- Operation outside of the technical specifications is not permitted.
- Operation in areas where there is a danger of explosions is prohibited.
- Any use other than the designated use is not permitted.

## Operating principle

The D-MAX system consists of various modules that can be combined depending on the specific application.

### Modules



Figure 1.1: D-MAX Controller

### D-MAX Controllers

- integrated into a guiding system or for wall mounting
  - D-MAX 1 Controller:  
for the drive of a control loop
  - D-MAX 2 Controller:  
For the drive of two independent control loops  
or  
one control loop with automatic sensor positioning

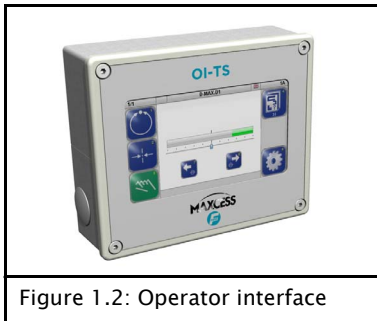


Figure 1.2: Operator interface

### D-MAX Operator interfaces

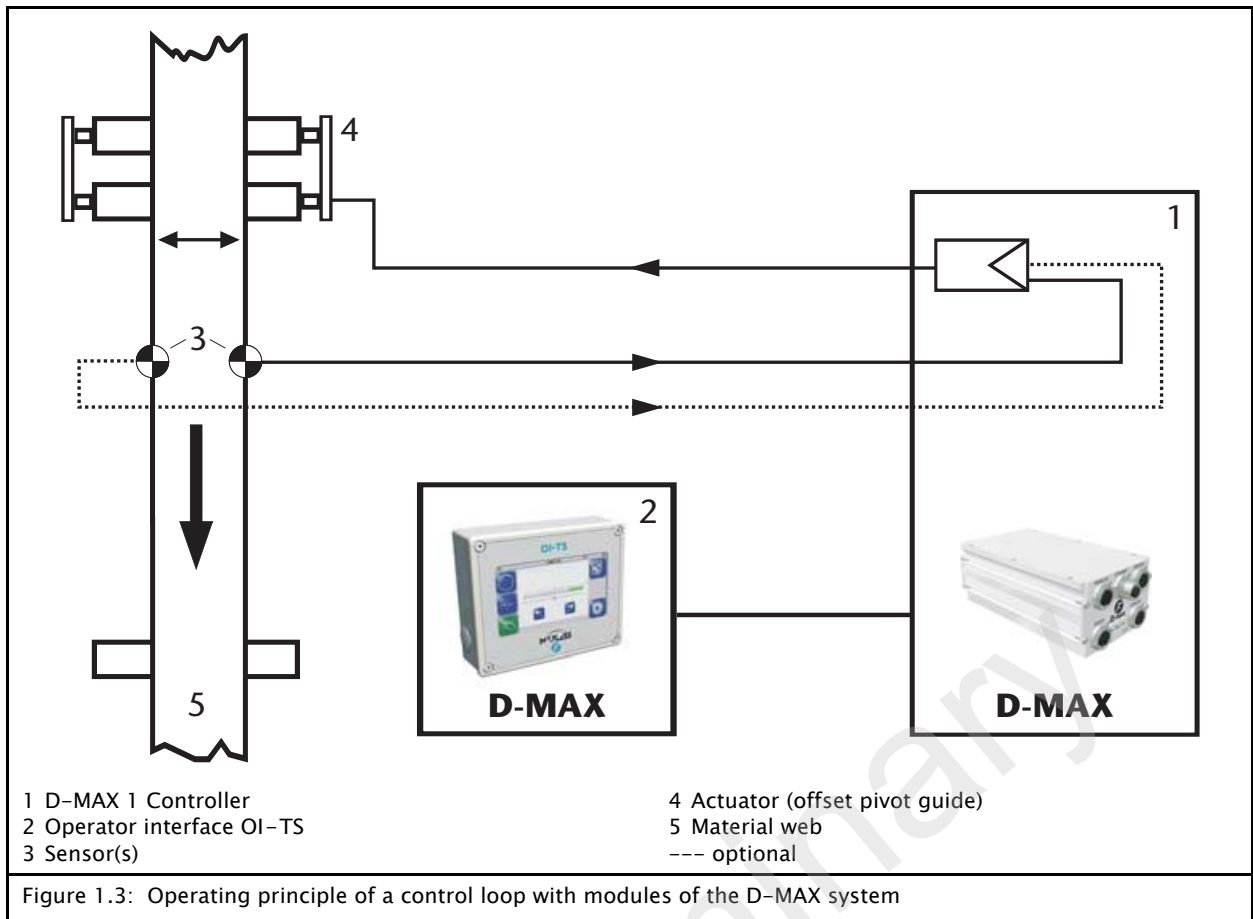
- Operator interface OI-S for desk installation or wall mounting:  
for operating a D-MAX 1 or D-MAX 2 Controller
- PC-based virtual operator interface

## Operating principle

*Figure 1.3* shows an example of edge guiding (optionally center guiding) with a D-MAX system. The D-MAX system consists of a D-MAX 1 Controller (1) and an operator interface OI-S (2).

A sensor (3) senses the web edge of a material web and determines the current position of the web. The D-MAX 1 Controller receives this information and guides the material web (5) by means of an actuator (4) so that it is always in the desired target position.





## 2 SAFETY INSTRUCTIONS

### Important information

Problem-free and reliable operation of the D-MAX system requires that the D-MAX system

- properly shipped and stored,
- properly mounted and placed in operation,
- properly used and carefully maintained.

Proper operation and careful maintenance will ensure a long service life for the D-MAX system.

Only persons who are acquainted with the installation, commissioning, operation and maintenance of the system and who possess the necessary qualifications for their activities may work on the D-MAX system.



Please note the following:

- The content of these operating instructions
- The safety instructions printed on the unit
- The requirements of the machine manufacturer
- National, state and local requirements for accident prevention and environmental protection

### Information about safety instructions

The safety instructions and symbols described in this section are used in these Operating instructions. They are used to avoid possible dangers for users and to prevent material damage.



#### SIGNAL WORD

Source of danger and its results.

⇒ Avoiding dangers

The signal word **WARNING** refers to the danger of moderate to severe bodily injuries.

The signal word **CAUTION** refers to the danger of slight to moderate bodily injuries or material damage.

## Symbols

**Warning/caution – dangerous area**

Reference to general hazards that may result in bodily injuries or damage to the device

**Warning/caution – danger due to crushing**

Refers to danger of injury caused by crushing

**Warning/caution – danger due to cutting**

Refers to danger of injury caused by cutting

**Additional symbols**

- This endash is followed by an enumeration.
- This dot is followed by a prompt to do something.

**Note:**

Reference to important information.

---

## Preventing hazards

### Installation and commissioning

- Damaged modules of the D-MAX system must not be installed or placed in operation.
- Assembly work must be performed while the machine is stopped and protected against being turned on again.
- All assembly tasks must only be performed when there is no electrical power in the system.
- The D-MAX system must only be placed in operation if everything is securely assembled.
- Electrical connections on the modules of the D-MAX system must only be made or disconnected when the electrical power is turned off. Failure to follow these instructions may result in damage to the D-MAX system.
- The parameters specified in Section *Technical Data* must be observed.

- Only replacement parts that have been approved by Fife-Tidland may be used.
- No changes may be made to the D-MAX system.
- Electrical lines must not be subjected to any mechanical loads.

### Operation



- Danger of injury by crushing  
⇒ Do not place your hands on or near moving parts (rollers, material web, etc.) during operation.



- Danger of injury due to cutting on the edge of the material web  
⇒ Do not place your hands on the edge of the (moving) material web during operation.

- D-MAX system modules damaged during operation must be decommissioned.

### Maintenance



- Danger of injury by crushing  
⇒ Maintenance work must only be performed on the D-MAX system when the power is turned off, the machine is stopped, and it is protected against being turned back on.

# 3 INSTALLATION

## Transport and storage

- Modules of the D-MAX system must be secured to prevent them from slipping during transport.
- The modules must be kept cool, clean and dry.
- Operator interfaces OI-TS must not be stored close to powerful magnetic fields. The electronic components of the device could be damaged.

## Scope of delivery



- D-MAX Controller  
The model designation, serial number, and the firmware and software numbers are on the rating plates on the housing.
- Operating Instructions

## Option



- Operator interface OI-TS  
The model designation and the serial number are on the rating plates on the housing. Die Firmware-Nummer ist auf der Seite des Gehäuses angebracht (see [figure 3.3, page 3-4](#)).
- Fastening materials for wall mounting
- Fastening material for installation in panel

## Mounting



### WARNING

⇒ All assembly tasks on the D-MAX system must be performed when there is no electrical power in the system.

⇒ Assembly tasks and mechanical settings must only be performed when the machine has been stopped and secured from being turned on again.

### Installation location of D-MAX Controller

- Protection class: IP54
- Operating temperature: 0°C ... 60°C
- Relative humidity: 10% to 90% non condensing
- Operating altitude above sea level: maximum 3000m
- On a fixed machine part or on a wall
- Not in places where there is a risk of explosions.

### Mechanical fastening of D-MAX Controller

- Built into a guiding system or
- With an assembly bracket (optional) for wall mounting (see [figure 3.1](#)) or
- On a DIN rail

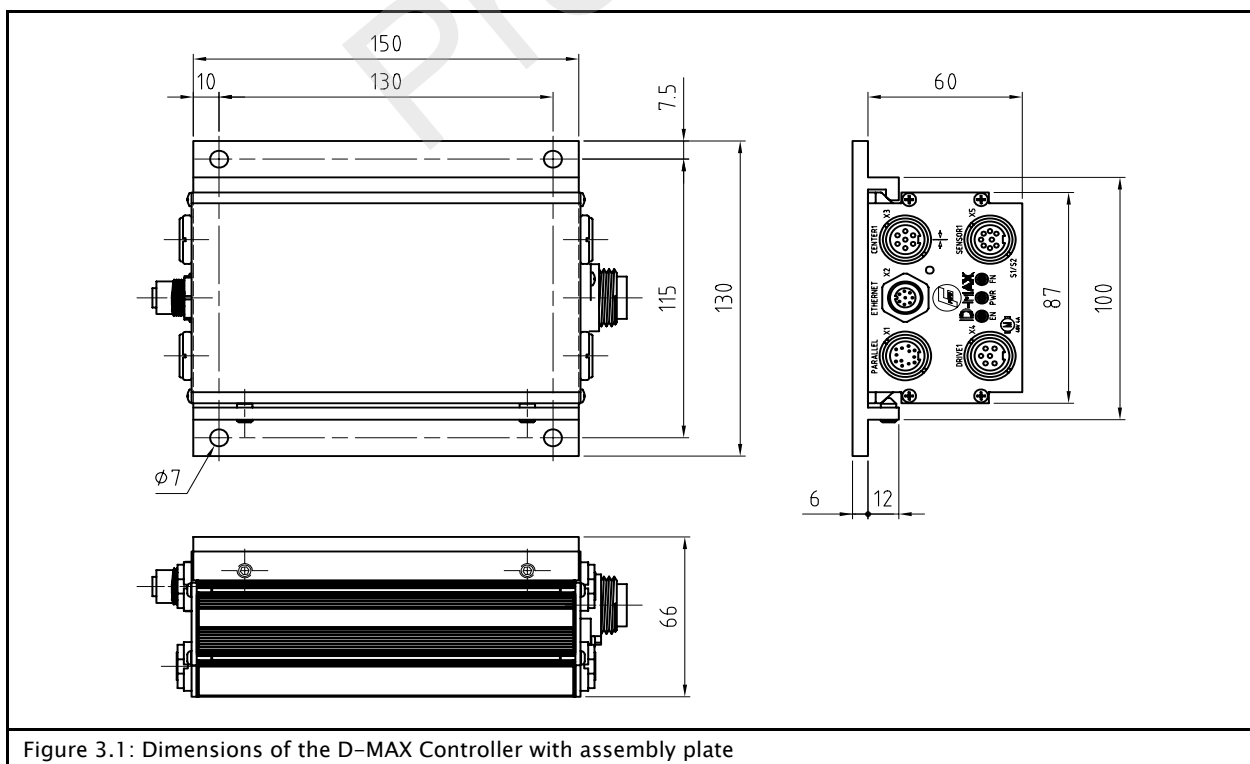
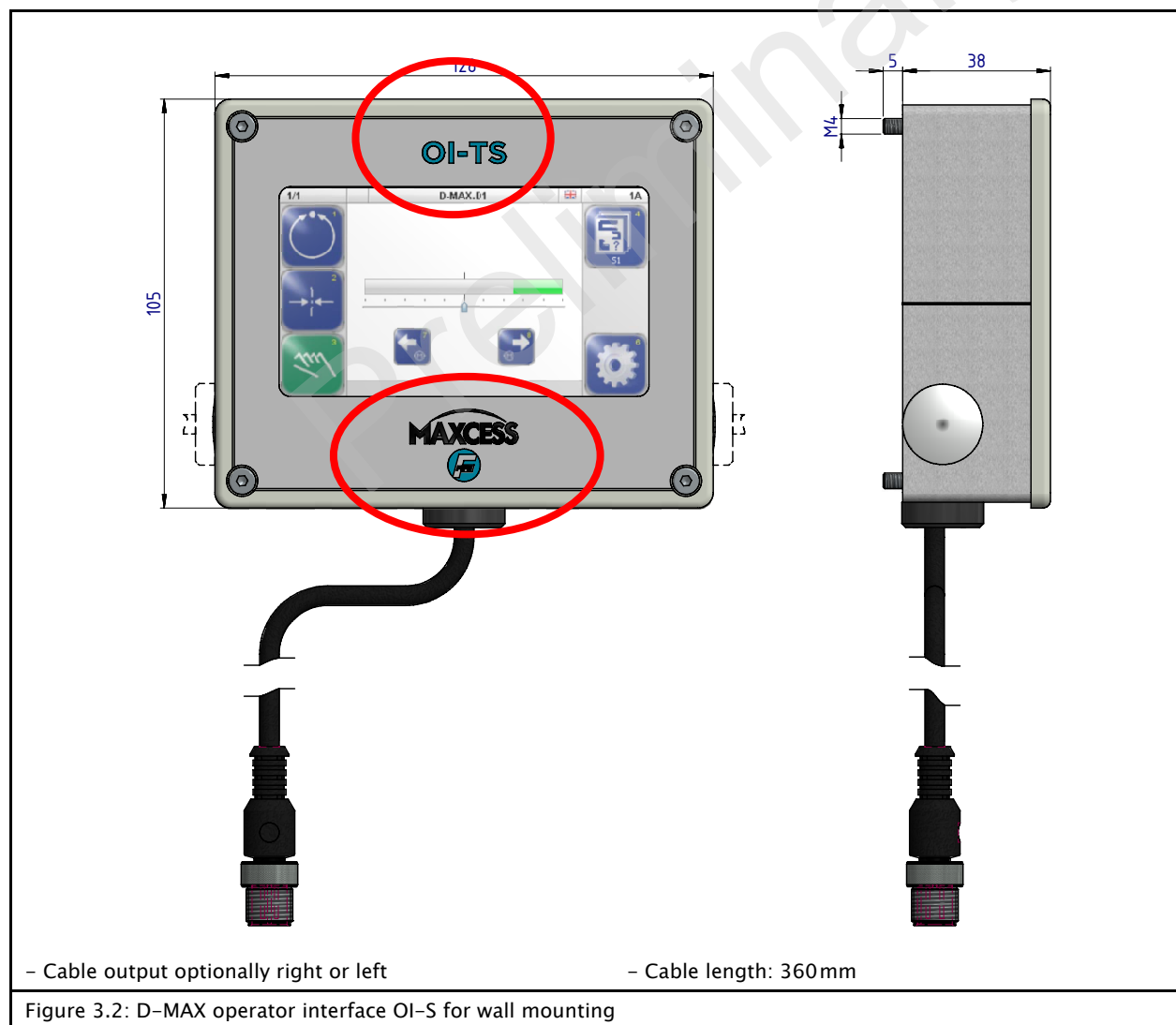
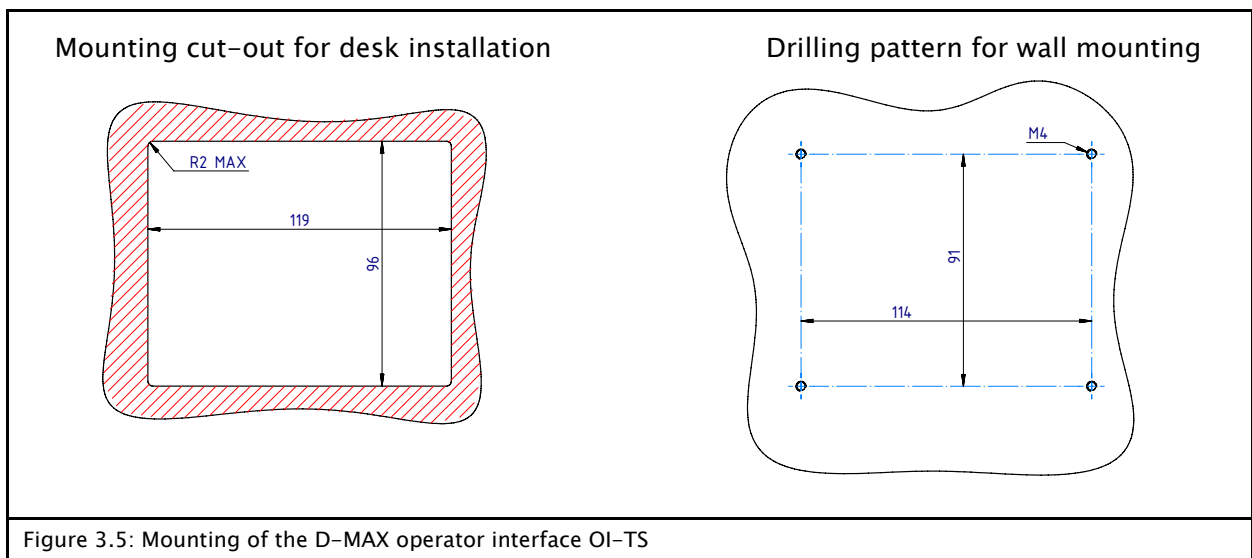
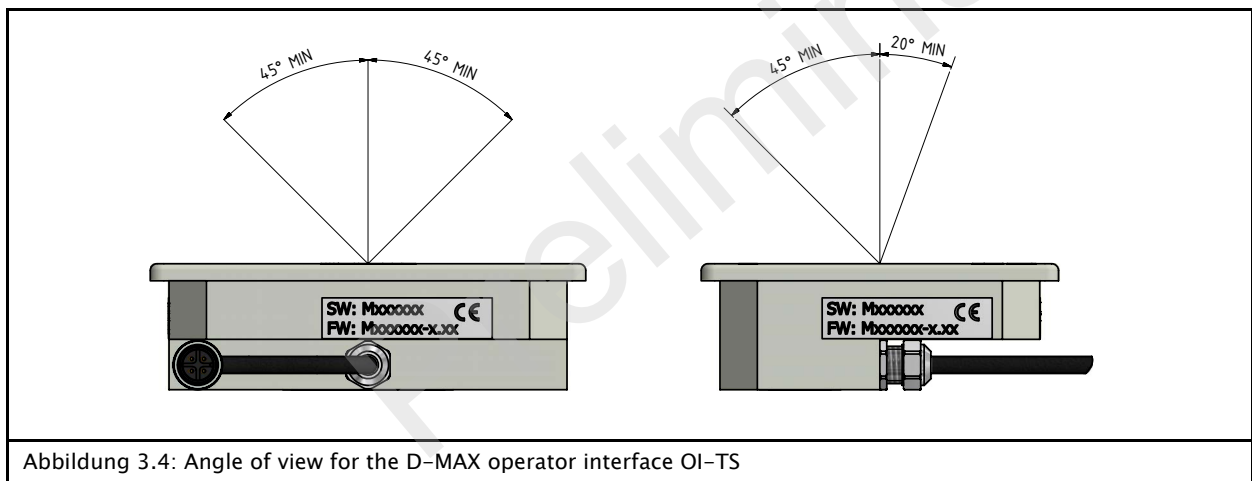
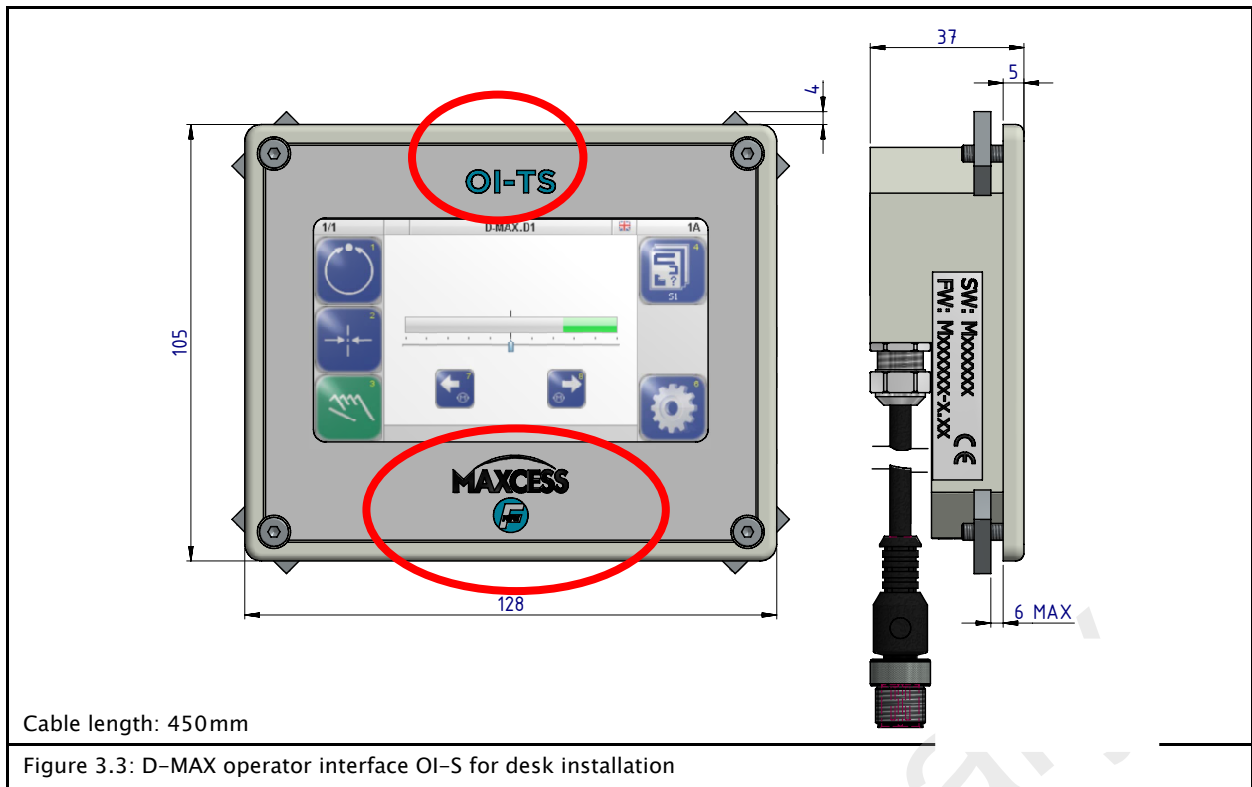


Figure 3.1: Dimensions of the D-MAX Controller with assembly plate

**Installation location of  
D-MAX operator interface  
OI-S**

- Protection class: IP64
- Operating temperature: 0°C ... 60°C
- Relative humidity: 10% to 95% non condensing
- Operating altitude above sea level: maximum 3000m
- On a fixed machine part or on a wall
- Protect from vibrations
- Do not place close to powerful magnetic fields:  
The electronic components may be damaged.
- Protect from falling objects:  
The operator interface can be damaged or an unintended switching process may be triggered.







---

## Electrical connection

---

**CAUTION:**

Electrical connections on the D-MAX system should always be made or disconnected while there is no electrical power in the system.

⇒ Failure to follow these instructions may result in damage to the D-MAX system.

---

### Emergency Stop

The „D-MAX Supplementary Operating Instructions – Safe shut-off of electromechanical actuators driven by a D-MAX Controller” in the system documentation must be observed.

### Power supply of D-MAX Controller

The D-MAX Controller has no power switch. Because of this, the power supply of the D-MAX Controller must be linked in to turn the flow of current to the machine on and off.

The D-MAX Controller must be connected to the power supply according to the information supplied at connector X6 of the controller (see [figure 3.7](#) and [figure 3.8](#)).

### Power supply of D-MAX operator interface OI-TS

The power supply for the D-MAX operator interface OI-TS is via the signal cable, which is connected to the web guide controller.

### Connecting the sensors/ drives

- Only sensors and drives approved by Fife-Tidland GmbH may be used.
- The technical data for sensors and drives must match the connection data for the D-MAX system (see [Technical Data, page 11-1](#)).
- Relevant operating instructions must be observed for installation and operation of sensors and drives.
- Sensors and drives must be connected to the D-MAX system according to the system diagram in the system documentation.



**Note:**

Ensure that two wires from the power supply line are connected to the D-MAX controller with a power supply in the permitted range from 24V to 48V.

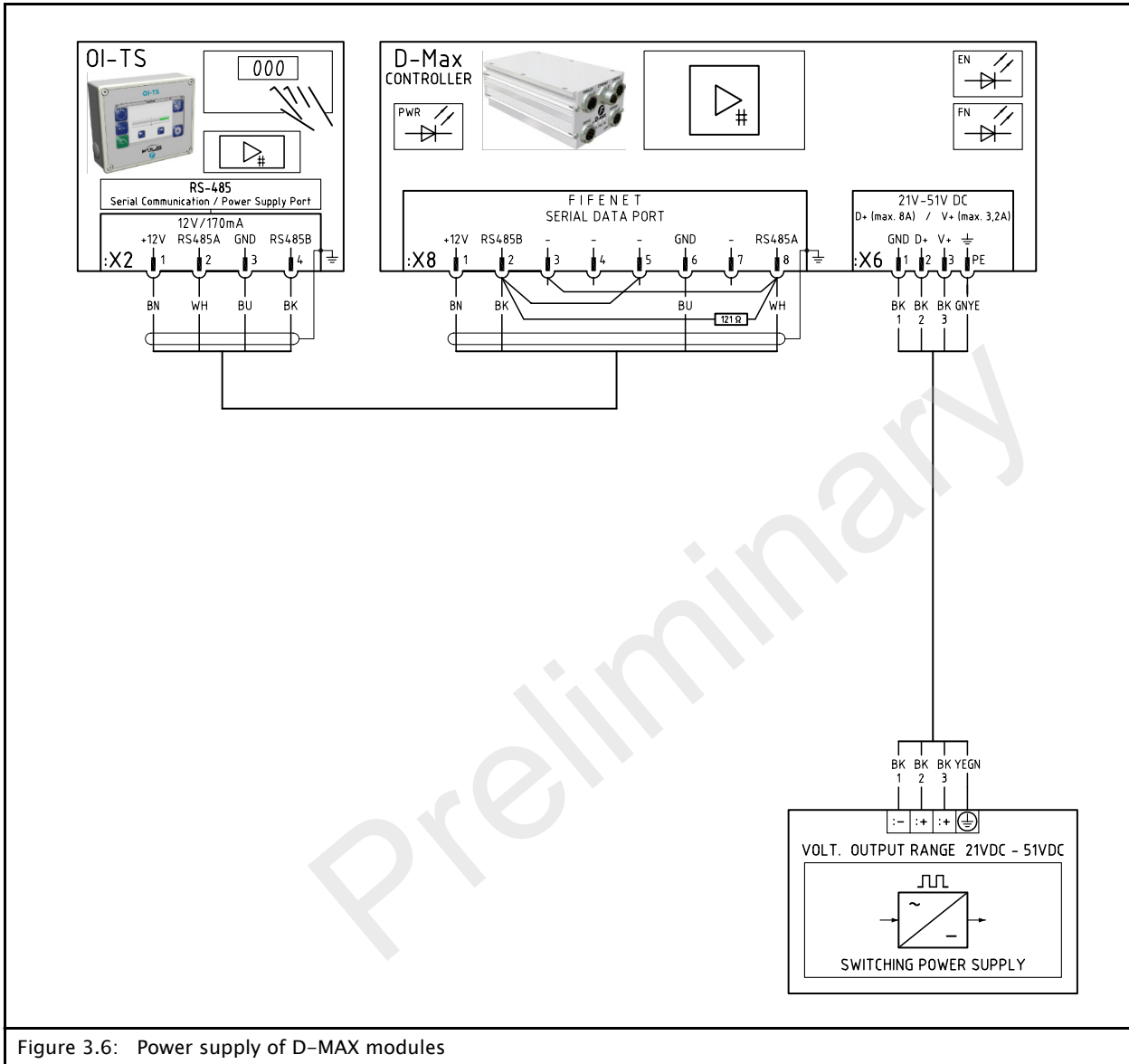


Figure 3.6: Power supply of D-MAX modules

**Connections on the D-MAX 1 Controller**

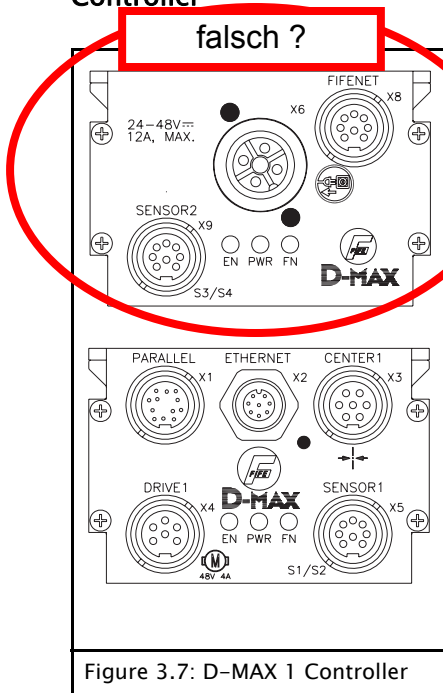


Figure 3.7: D-MAX 1 Controller

Connection	Designation
X1	Parallel inputs/outputs
X2	Ethernet
X3	Servo-center transducer 1 /Encoder 1
X4	Drive 1
X5	Sensor 1 (S1 / S2)
X6	Power supply voltage
X8	FifeNet/ OI-TS
X9	Sensor 2 (S3 / S4)

For technical details and additional information, please consult Section [11 Technical Data](#).

**Connections on the D-MAX 2 Controller**

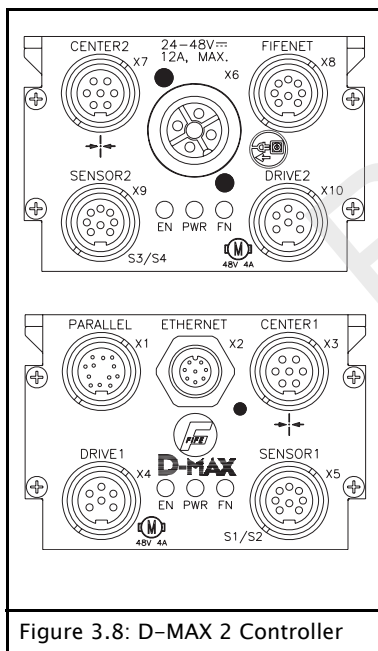


Figure 3.8: D-MAX 2 Controller

Connection	Designation
X1	Parallel inputs/outputs
X2	Ethernet
X3	Servo-center transducer 1 /Encoder 1
X4	Drive 1
X5	Sensor 1 (S1 / S2)
X6	Power supply voltage
X7	Servo-center transducer 2 /Encoder 2
X8	FifeNet/ OI-TS
X9	Sensor 2 (S3 / S4)
X10	Drive 2

For technical details and additional information, please consult Section [11 Technical Data](#).

### LEDs on the D-MAX Controller

LED	Status	Indicates
EN	Off	No Ethernet connection
	Green	Ethernet connection detected
	Green flashing	Connection detected and device is PTP Master
	Yellow	Either a 10mbps connection or a half-duplex connection is recognised
PWR	Off	No power supply
	Red	Power supply voltage too low, internal voltage outside tolerance or internal temperature too high
	Green	Power supply and temperature OK
	Yellow	No motor voltage
FN	Off	No external device is connected to connection X8
	Green	External device recognised at connection X8 (e.g. an operator interface OI-TS)

Additional information about error messages that are displayed may be found in Section [Troubleshooting, page 10-1](#).

## 4 OPERATOR INTERFACE OI-TS

### OI-TS description

The OI-TS operator interface has a touch screen.



#### CAUTION:

Danger of damaging the touch screen with pointed and/or hard objects (such as pens or screwdrivers).

⇒ The touch screen must only be operated with a finger or suitable touch screen stylus.



#### CAUTION:

Danger of the touch screen being operated accidentally by falling objects.

⇒ The operator interface must be protected against falling objects.

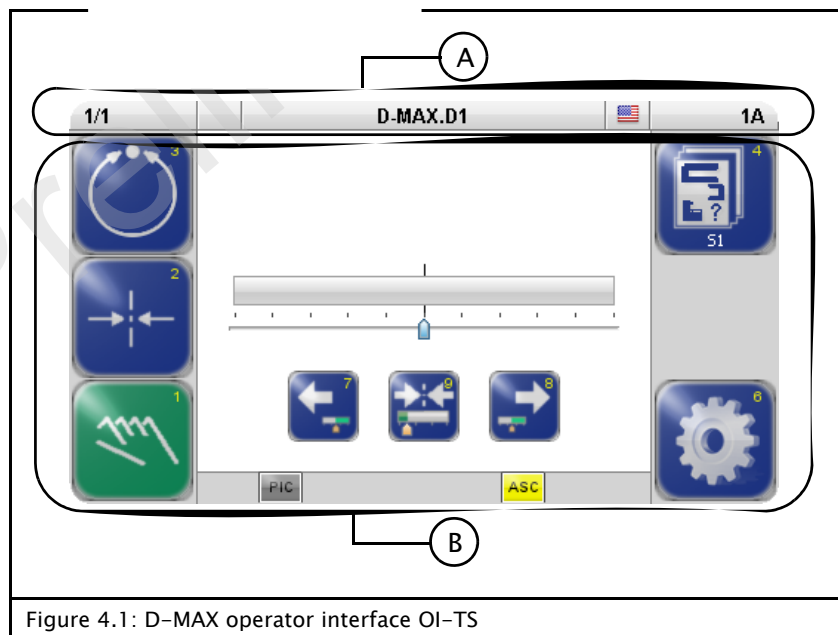


Figure 4.1: D-MAX operator interface OI-TS

#### A Header

- See [Header, page 4-3](#)

#### B Control area

- Contains all the keys and displays needed to operate the D-MAX system
- Changes depending on the menu selected (user level, menu level -> see [Operating the Controller, page 5-1](#))

**Keys and Displays**



The entry in a menu is accepted



The entry in a menu is rejected



Return to the previous menu level



or



Switch between the pages of a menu



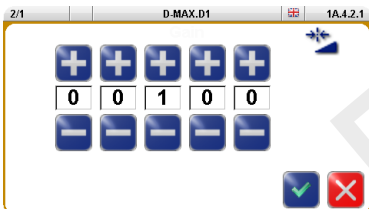
or



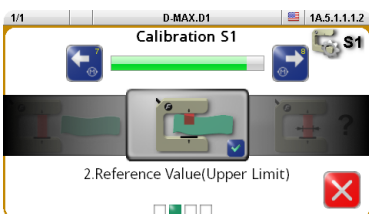
Keys represented in colors can be operated in the current operation state.  
Keys represented completely in gray cannot be operated in the current operation state.



Fields filled in with white show information and cannot be operated.



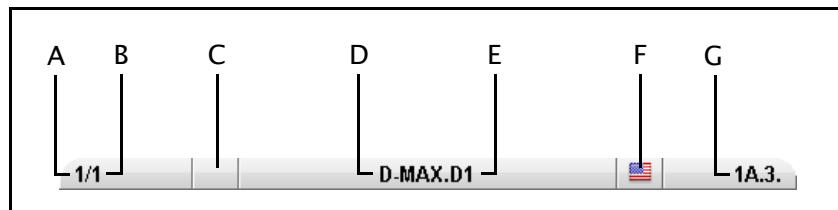
To enter numbers, touch the appropriate place and set the desired value with the + and - keys.



Sequences are a defined succession of menus to be processed by the user step by step.  
The next step can be reached by pressing the key in the middle of the display.

## Header

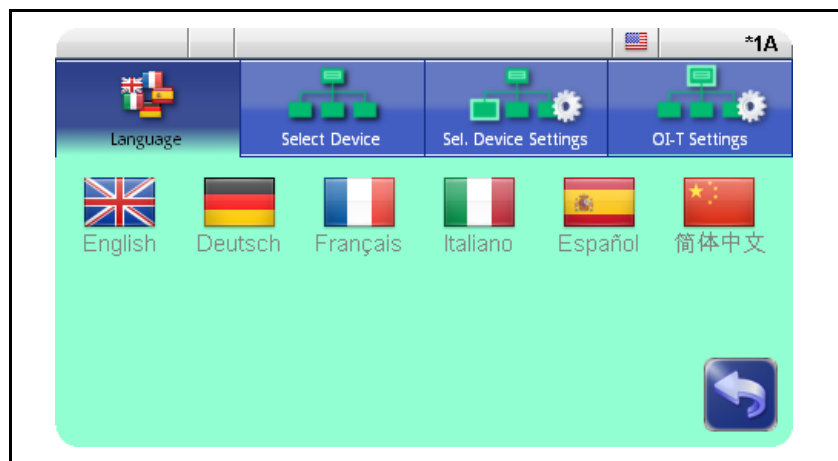
The header contains complete information about the D-MAX system. It is always available in this form.



- A Shows the currently selected D-MAX Controller
- B Shows the currently selected device of the D-MAX Controller if it is present in the D-MAX system:
  - 1 - Drive 1,
  - 2 - Drive 2,
  - 3 - Customer-specific system menu CM
  - 5 - Gateway
  - 7 - SE-46
  - 8 - SE-45
  - 9 - DAC-005
- C Not assigned
- D Shows the name of the D-MAX Controller (can be edited, see [1 Names, page 7-17](#))
- E Shows the name of the selected "device" (can be edited, see [1 Names, page 7-17](#))
- F Language selection
- G Menu identification  
Each menu has its own identification. This makes it possible to retrace every step in the control tree of the D-MAX system precisely.

## Select operator interface

- Touch the header





### 1 Language

Select the language for menu labels



### 2 Select Device

In the list of devices select the one you want to operate with the OI-TS



### 3 Select Device Settings

Set up the parameters of the selected device for the display



Parts of the display are mirrored, for example the bar graph or the Right and Left keys



Display not mirrored



### 4 OI-TS Settings

Set up the parameters of the OI-TS



Calibration of the touch screen

Calibration is required if the activity of the keys is not synchronous with the location that is displayed. The user is prompted to touch the screen at two points. Use of a suitable touch screen stylus is recommended to improve the accuracy of the calibration.



Test of the touch screen



Display of the OI-TS serial number



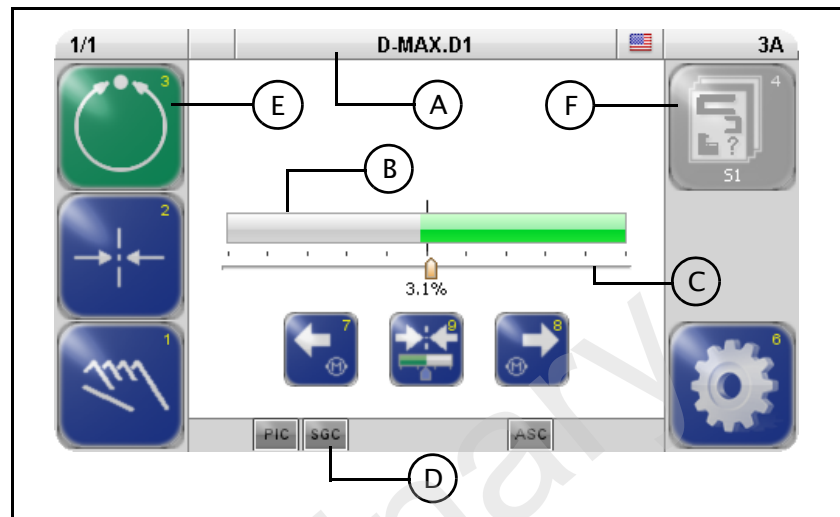
Display of the OI-TS firmware number



## 5 OPERATING THE CONTROLLER

### User level

All the functions required for normal operation of the D-MAX systems are available on the user level.



### Keys

- 1 select operating mode „Manual“
- 2 select operating mode „Servo-center“
- 3 select operating mode „Automatic“
- 4 Select available jobs (controller types)
- 5 Available for special applications only
- 6 Press and release: Open the *Job* menu for the current job  
Press and hold: Open the *Setup* menu
- 7 and 8 Operating mode „Automatic“: Move the guide point in the sensor field of view  
Operating mode „Manual“ and „Servo-center“: move drive
- 9 Operating mode „Automatic“: resetting the guide point
- A Header: select devices/drives

### Legend

- B Bar graph  
Operating mode „Automatic“ and „Manual“: signal level of the active sensor  
Operating mode „Servo-center“: signal level of the servo-center transducer
- C Guide point display  
Operating mode „Automatic“ and „Manual“: Guide point offset of the active sensor  
Operating mode „Servo-center“: Guide point offset on the servo-center transducer

- D Status line  
Symbols see [Appendix B – Symbols, page 13-1](#)
- E Green marked key  
Identifies the currently selected operation mode
- F Gray key:  
This key has no function in the current system status.

---

## Select devices/drives



The OI-TS can be used to operate various devices present in the network (D-MAX controllers and their drives, any system menus or gateways that are present).

- Touch the header and select menu 2 *Network*
- Select the device you want to operate with the OI-TS

---

## Select operating modes



### Automatic

The web course is guided by an actuator based on sensor information.

The bar graph represents the position of the material web in the sensor's field of view.



### Servo-center

The actuator is moved to the mechanical center position depending on the servo-center transducer. Then the control rollers are aligned parallel to the rollers of the customer system. The bar graph indicates the current position of the actuator in relation to the servo-center transducer.



### Manual

There is no guiding of the web course. The settings of the D-MAX system can be changed.

The bar graph represents the position of the material web in the sensor's field of view.

---

## Select jobs



Jobs are types of controllers that, in principle, are available in a D-MAX system.

From the large number of possible controller types, customer-specific programming selects the controller types that have the required functionality for the customer's application and makes them available (see [Jobs, page 11-4](#)).

Existing jobs can be [2 Jobs, page 7-15](#) limited or extended in the menu.

It is only possible to select another job on the user level in "Manual" and "Servo-center" operation modes.

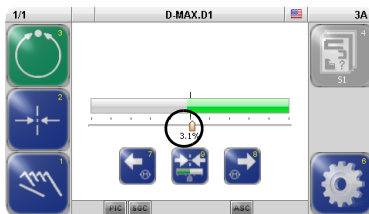
## Shift guide point

The guide point can be shifted within the sensor's field of view during ongoing operation in "Automatic" operating mode.



Note:

This is only possible if the parameter has been set up appropriately in menu [1 Jog Enable, page 7-15](#).



- Move the guide point to the desired position using the arrow keys 7 and 8

A cursor appears in the display at the location to which the guide point was moved, together with a numeric entry.

## Resetting the guide point



- Press key 9 to reset the guide point

The guide point is reset to 0. Details about the guide point are no longer displayed.

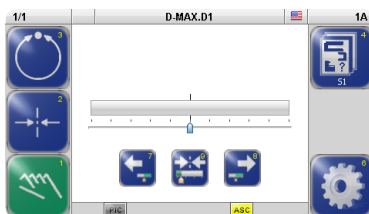


Note:

This parameter can also be set with menu *Job* (see page [7-2](#)).

## Moving the Drive

The drive can be moved in "Manual" operation mode.



- Move the drive to the desired position with arrow keys 7 and 8
- Key 9 (optional)  
The guide point is set to 0 or to the current sensor value.

---

**Menu level**

The parameters of the D-MAX system can be set for the relevant customer application in the menu level. They have been combined to form the following menu groups:

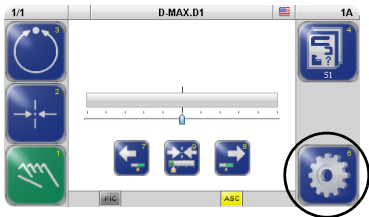
- Menu *Job* (page [5-5](#))
- Menu *Servo-center* (page [5-6](#))
- Menu *Setup* (page [5-7](#))

For an explanation of the menus for the individual parameters see section [Menus, page 7-1](#).

Preliminary

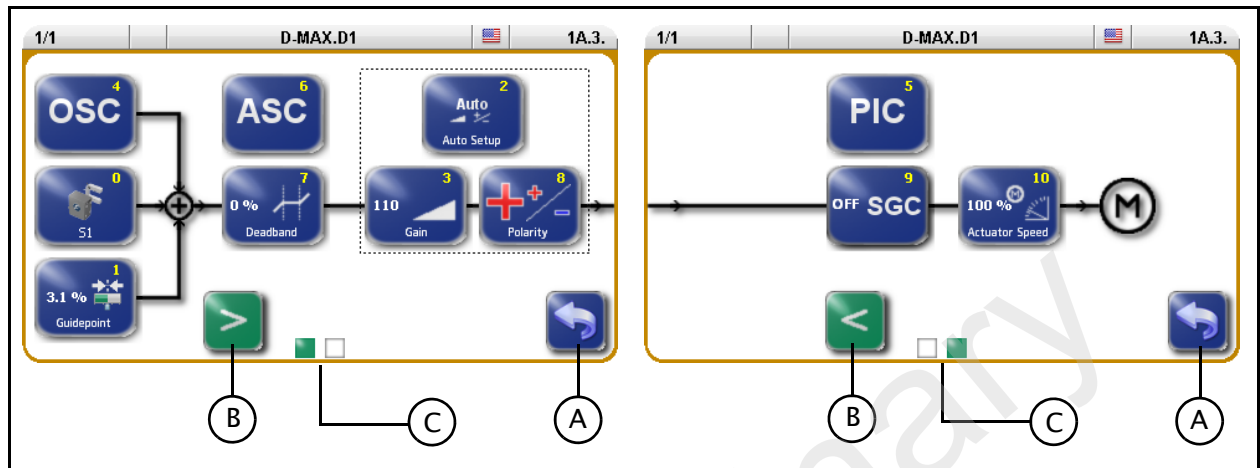
**Job menu**

Precondition:  
 "Manual" or "Automatic" operation mode is selected



- Press and release key 6 on the user level  
 Menus are available for setting up the parameters of the selected job.

Not all menus are available in the "Automatic" operation mode..



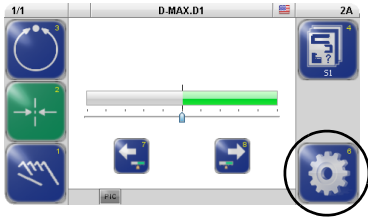
**Keys**

- 0 Calibrate sensor
- 1 Guidepoint
- 2 Auto Setup
- 3 Gain
- 4 OSC
- 5 PIC
- 6 ASC
- 7 Deadband
- 8 Polarity
- 9 SGC (Speed Gain Control)
- 10 Actuator Speed

**Legend**

- A Exit menu
- B Change page
- C Page display

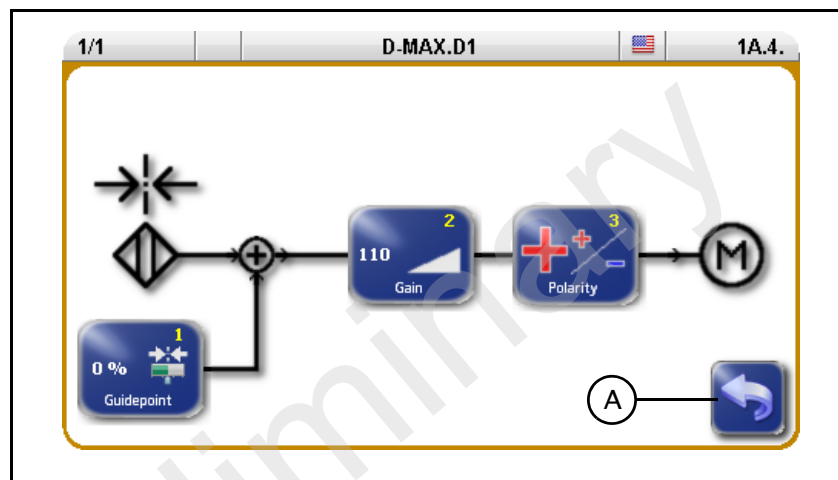
**Servo-Center Transducer (????) Menu**



Precondition:  
"Servo-center" operation mode is selected

- Press and release key 6 on the user level  
Menus are available for setting up the parameters of the servo-center transducer. (?????)

Not all menus are available in the "Servo-center" operation mode.  
The *Polarity* menu is only available if the Setup menu is selected in the "Manual" operation mode and then 4 Servo-center is selected.



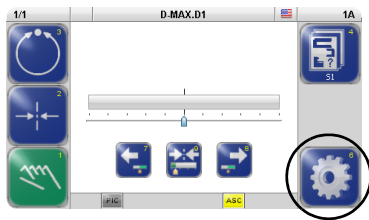
**Keys**

- 1 Guidepoint
- 2 Gain
- 3 Polarity

**Legend**

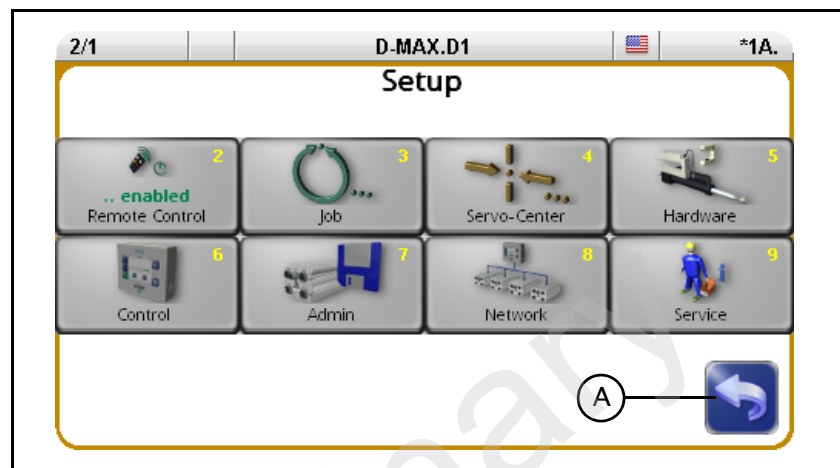
- A Exit menu

## Setup Menu



- Press and hold key 6 on the user level  
Menus are available for setting up the parameters of the selected job or D-MAX system.

Not all menus are available in the "Servo-center" and "Automatic" operation modes. Only the menus that can be operated in the current system status are displayed.



## Keys

- 2 Remote Control
- 3 Job  
Switch to the Job menu (see page 5-5)
- 4 Servo-Center  
Switch to the Servo-center transducer menu (see page 5-6)
- 5 Hardware
  - 1 Sensors
  - 2 Actuator
  - 3 Digital Inputs
  - 4 Digital Outputs
- 6 Control
  - 1 Modes
  - 2 Jobs
  - 3 Left/Right Keys
  - 4 Remote Control
  - 5 Unit
  - 6 Hardlock
- 7 Admin
  - 1 Names
  - 2 Serial Number
  - 3 FW Number
  - 4 SW Number
  - 5 Distributed System
  - 6 Backup
  - 7 Restore
- 8 Network

- 9 Service
  - 1 Measurements
  - 2 Simulate Outputs

Details regarding the menus are explained in section [Menus](#), [page 7-1](#) .

#### Legend

- A Exit menu

Preliminary



## 6 COMMISSIONING

### Before commissioning

The following assembly and electrical connection tasks must be performed before commissioning:

- The modules of the D-MAX system must be assembled properly.
- The modules of the D-MAX system must be properly connected to the power supply and integrated into the 'EMERGENCY STOP' circuit of the customer's system.
- The sensors and actuators must be properly connected to the D-MAX system.
- It is also important to become familiar with the basic operation of the operator interface OI-TS.

### Commissioning

Once all assembly and connection tasks have been checked and are in proper condition, the D-MAX system can be placed in operation.



#### WARNING:

Before commissioning, ensure that:

- ⇒ Commissioning of the D-MAX system is performed while the web is stopped.
- ⇒ No one is in the danger zone of the drives.



#### Note:

The D-MAX system has been preset to the customer application and checked before it leaves the factory. However, this does not apply to replacement part deliveries.



#### WARNING:

There is a risk of crushing and cutting injuries on the web material itself and/or due to the motion of the web.



- ⇒ Do not grasp moving parts (rollers, web, etc.) or anything close to them during commissioning.

- ⇒ Do not touch the edges of the material web.

To commission the D-MAX system, make the basic settings described in the following steps.



Note:

If the system documentation contains "D-MAX Supplementary Operating Instructions" or "D-MAX/OI-S Brief Operating Instructions" with a chapter on Commissioning, the commissioning sequence given there must be followed for the specific application.

#### 1. Turn on the electrical power

When the system is turned on, the last operating mode to be selected is active.

#### 2. Select the language

It may be necessary to change the language for menu guidance on the operator interface.

⇒ see menu [1 Language, page 4-4](#)

#### 3. Select drive (device)

⇒ see menu [2 Select Device, page 4-4](#)



Note:

Each drive must be set separately.

#### 4. Turn off *Remote Control*

If the Remote Control parameter is set to ON, this parameter must be set to OFF.

⇒ see menu [2 Remote Control, page 7-1](#)



#### 5. Select Manual mode

Switch the D-MAX system into Manual mode with the key 1 on the operator interface.

There is no guiding of the web course in Manual mode. Now the D-MAX system can be adjusted to the relevant application.

#### 6. Set the sensor type

Check and set the type of the connected sensor(s).

⇒ see [2 Type, page 7-9](#)

#### 7. Calibrate sensor(s)

Calibrate the connected sensor/sensors.

⇒ see [1 Calibration, page 7-8](#)

#### 8. Calibrate *LineSpeed*

If the LineSpeed parameter is being used, this parameter must be calibrated.

⇒ see menu [5 Line Speed, page 7-10](#)

**9. Set the *Polarity* for the Servo–Center operation mode**

⇒ see menu [3 Polarity, page 7-6](#)

**10. Set the *Gain* for the Servo–Center operation mode**

⇒ see menu [2 Gain, page 7-6](#)

**11. Calibrate the *Encoder/motor encoder***

If an encoder or motor encoder is used, it must be calibrated.

⇒ see menu [1 Calibration, page 7-11](#)



**12. Select job**

Select the job with the parameters to set with key 4.

⇒ see [Select jobs, page 5-2](#)

**13. Turn off the *OSC/PIC***

If the optional parameters 'OSC' or 'PIC' are found in the selected job, these parameters must first be switched to the OFF state (see also the Operating Instructions "D-MAX/OSC" or "D-MAX/PIC").

**14. Set *Polarity***

⇒ see menu [8 Polarity, page 7-5](#)

**15. Set *Gain***

⇒ see menu [3 Gain, page 7-3](#)



Note:

Instead of steps 14 and 15, an Auto Setup can also be performed.

⇒ see menu [2 Auto Setup, page 7-2](#)

**16. Turn on the *OSC/PIC***

If the optional parameters 'OSC' or 'PIC' are present, these parameters must be correctly set. To do this, perform the commissioning sequence as described in the relevant Operating Instructions.

**17. Set up additional jobs**

Steps 12 to 16 must be performed for each job.

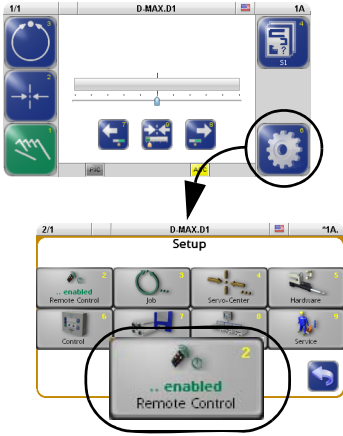
**18. Turn on *Remote Control***

If the Remote Control parameter has been turned off (see step 4), this parameter must be reset to ON

⇒ see menu [2 Remote Control, page 7-1](#)

# 7 MENUS

## 2 Remote Control



You can use the *Remote control* menu to lock an active remote control. Remote control can be initiated by:

- a parallel interface (X1)
- an application in a "distributed system" that administers various devices at the same time  
→ see menu [5 Distributed System, page 7-17](#)
- a Gateway to external fieldbus systems



**Note:**  
This menu is only available if remote control is present.

An asterisk (\*) appears before the menu identification representing remote control. The menu identification is in the header at the far right.



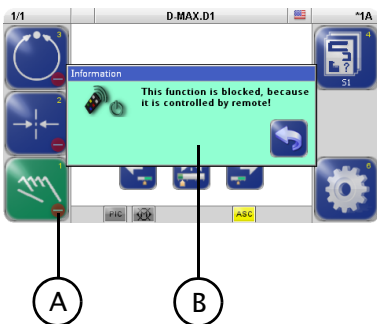
\* a remote control is active



(\*) a remote control is present, but has been locked by the menu itself



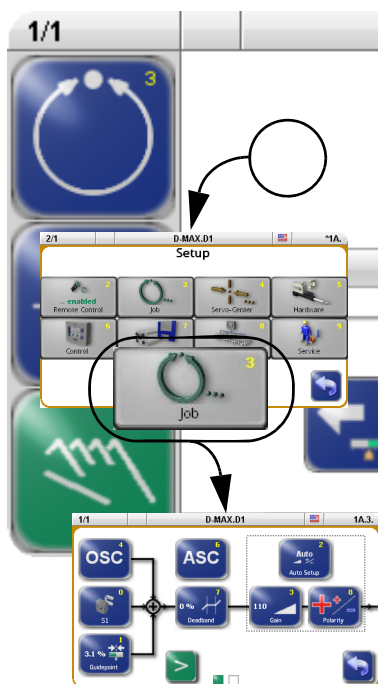
If there is no \* in the menu identification, no remote control is present.



A Identifies keys that are blocked by active remote control.

B Information appears if a user attempts to operate a locked key.

### 3 Job



This section is a description of menus that are used to set up the parameters of a job. A similar set of parameters is available for each job in the system. The settings of this job apply to "Automatic" mode.

However, the number of available parameters that can be set for a job depends on customer-specific programming of the D-MAX system.

Each job is identified by a capital letter in the status line.

**"Manual" mode:**

- All keys are available.

**"Automatic" mode:**

- Only selected keys are available.

**"Servo-center" mode:**

- These keys cannot be set.

**Precondition**

- the correct device / the correct drive is selected
- the correct job is selected

### 0 Calibrate sensors



The menu for calibrating the sensor that is used can be called directly.

→ see [1 Calibration, page 7-8](#)

### 1 Guidepoint



The guidepoint of the selected job can be adjusted for the corresponding drive with the *Guidepoint* menu.



Note:

The *Offset* parameter can also be set directly with keys 8 and 9 in "Automatic" operation mode on the user level.

→ see [Regelpunkt verschieben, page 5-14](#).

### 2 Auto Setup



The Auto Setup menu is used to calibrate parameters Gain (page [7-3](#)) and Polarity (page [7-5](#)) automatically for "Automatic" mode of the selected drive.

**WARNING:**

The drive moves during automatic setup.

⇒ There is a danger of body parts being crushed against the actuator.

**Note:**

The sensors must be calibrated before the automatic setup.

**3 Gain**

You can use the *Gain* menu to adjust the guide sensitivity of the selected drive.

**4 OSC**

You can use the *OSC* menu to select the optional oscillator 'OSC' of the D-MAX system.

The oscillator 'OSC' is only present in a job of the D-MAX system if the software has been programmed accordingly. Commissioning and operation are described in separate operating instructions.

**5 PIC**

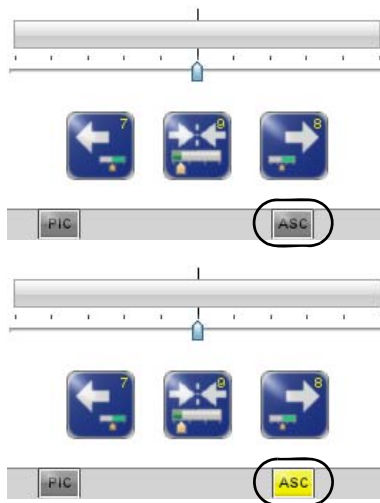
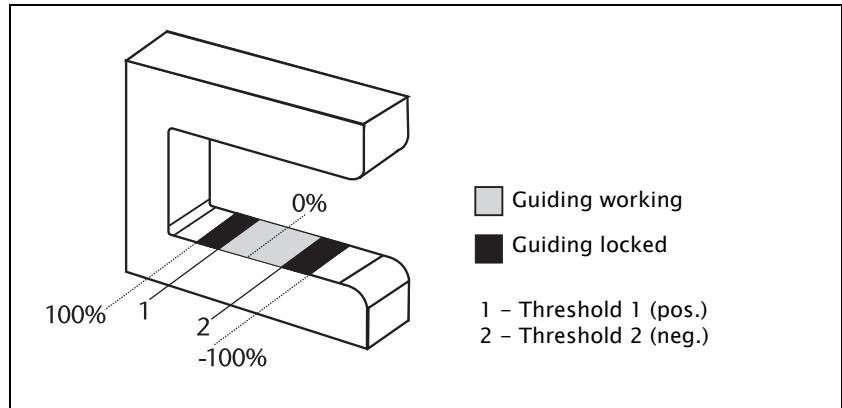
The PIC menu allows the user to control the web course even if there is no direct feedback available from the drive to the sensor.

The 'PIC' controller is only present in a job of the D-MAX system if the software has been programmed accordingly. Commissioning and operation are described in separate operating instructions.

**6 ASC**

You can use the ASC menu (Automatic Sensor Control) to

- activate and deactivate the ASC parameter and
- set up ASC threshold 1 or 2. These thresholds restrict the outward visual range of the sensor.



If the D-MAX system is in "Automatic" mode and the ASC parameter is activated, the web is guided as long as it is within the restricted field of view of the sensor. This is indicated by the gray "ASC" icon in the display.

If the web leaves the limited field of view of the sensor, guiding is blocked. This is indicated by the yellow "ASC" icon in the display.



**1 Turn ASC on or off**

The ASC parameter is activated or turned off.



**2 Enter the limit value**

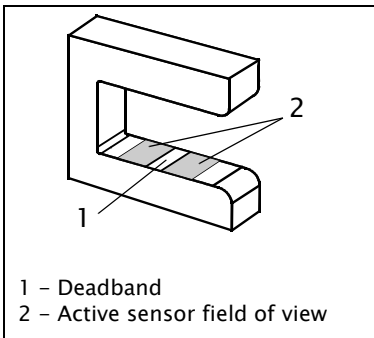
The value that is entered must be positive.  
Standard value = 90%



**3 Enter the limit value**

The value that is entered must be negative.  
Standard value = -90%

## 7 Deadband



You can use the *Deadband* menu to define an area around the guidepoint inside the sensor's field of view in which guiding is not active in "Automatic" mode.

- If the web edge is in the deadband (1), no guiding will be performed.
- If the web edge is in the area of the active field of view of the sensor (2), guiding is performed.

Standard value = 0%

A value of 0% means no active deadband is present.

A value of 100% means the sensor's entire field of view has been defined as deadband. This would not be a useful setting.

## 8 Polarity



The Polarity menu is used to set the guiding direction of the selected drive for "Automatic" mode.

## 9 Speed Gain Control



The *Speed Gain Control* menu is used to determine whether web speed will affect how guiding is performed.

The *Speed Gain Control* menu is only present in a job of the D-MAX system if the software has been programmed accordingly.



If the *Speed Gain Control* parameter is activated, guiding depends on web speed. This is indicated by the gray "SGC" icon in the display.

This icon flashes when the web speed is too low and no guiding is being performed.

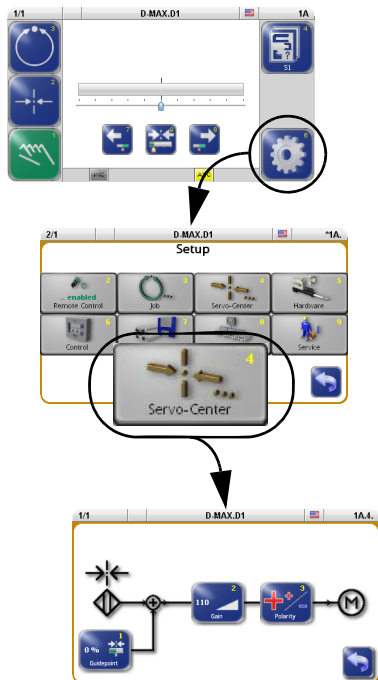
## 10 Actuator Speed



You can use the *Actuator Speed* menu to set the maximum speed of the motor on the selected drive.



## 4 Servo-Center



This section describes menus that are used to set up the properties for "Servo-Center" mode.

The availability of the "Offset" parameter depends on the customer-specific programming of the D-MAX system.

### "Manual" mode:

- All keys are available.

### "Servo-Center" mode:

- Only selected keys are available.

### "Automatic" mode:

- These keys cannot be set.

### 1 Guidepoint



You can use the *Guidepoint* to move the control point of the servo-center transducer of the selected drive.

If this information is not required for the relevant customer application, the parameter should be set to the default value=0. If it is necessary to enter another value, the process is described in "Supplementary Operating Instructions" and is included in the system documentation.

### 2 Gain



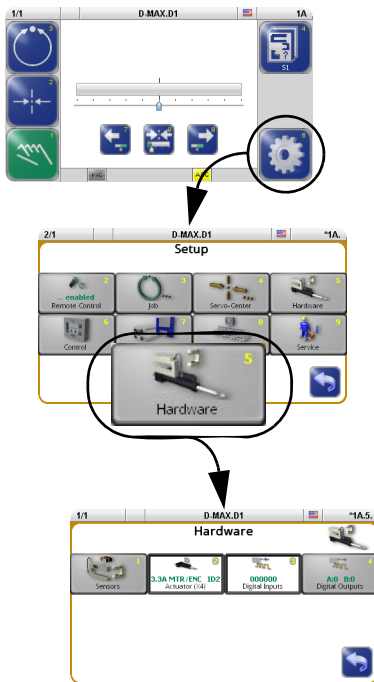
The *Gain* menu is used to set the guide sensitivity of the servo-center transducer for the "Servo-Center" operation mode on the selected drive.

### 3 Polarity



The *Polarity* menu is used to set the guide direction of the servo-center transducer for the "Servo-Center" operation mode on the selected drive.

## 5 Hardware



This section contains a description of menus that can be used to view and set up the properties of the connected input and output devices.

### "Manual" mode:

- All keys are available.

### "Servo-Center" mode:

- All keys are available.

### "Automatic" mode:

- Only selected keys are available.

## 1 Sensors



### 1 Sensor S1 X5/1

...

### 4 Sensor S4 X9/2



The analog sensors present in the system must be calibrated. Each sensor in the system must be calibrated on the controller to which the sensor is connected.

The sensors connected to connections S1 X5/1 to S4 X9/2 can be calibrated.



#### Note:

It is possible that special sensors are used in the customer's system, for example a capacitive sensor or a camera. Sensors of this type cannot be calibrated with the procedure described here. The information required for a calibration is available in a set of special operating instructions for the sensor or in "Supplementary Operating Instructions" in the system documentation.



#### Note:

All menus for all sensor connections are always available, even if the connections are not assigned. Therefore the connections that are used must be correctly selected.

Additional information may be found in the system diagram of the system documentation.



### 1 Calibration

The *Calibration* menu is used to calibrate the sensors to the contrast of the web material in use.



**WARNING:**

To calibrate a sensor, it may be necessary to move the material web inside the sensor's field of view by hand. There is a risk of being cut by the web and crushed against the actuator.



⇒ Do not touch the edges of the material web.

⇒ Perform the calibration operation only when the machine has been stopped and secured to prevent restart.



**Note:**

It is essential to follow the instructions for installation of the sensor in the corresponding Operating Instructions.



1. The reference value for the uncovered sensor must be determined. To do this, remove the material web completely from the sensor's field of view.
2. The reference value for the covered sensor must be determined. To do this, the sensor's field of view must be completely covered by the material web.
3. Optional:  
The field of view of the connected sensor is activated. For information about the field of view see an overview in the system documentation.  
If no other sensor type has been connected, the suggested value can be confirmed.
4. The result of the calibration is displayed and can be saved.



**Note:**

If an error occurs during the calibration, the error will appear in the menu and the calibration must be repeated.



### 2 Type

The *Type* menu specifies which sensor type is connected in the D-MAX system in use. Menus can be adapted to the sensor type and the analogue entries are set.

Type	Sensor type	Analogue sensor inputs	Effect on operation
SE-46	SE-46 line sensor	Set to 0-10 mA	If it is detected that the required parameters are set incorrectly, a message box appears when the Job menu opens with the option of setting those parameters correctly.
SE-26	SE-26 line sensor	No change	A special sequence for calibration is provided in item <i>0 Calibrate sensor</i> of the Job menu
---	All other sensors	No change	No special effects



### 3 Field of View

You can use the menu to scale the field of view of the connected sensor.



### 4 Sensor Supervision

You can use the Sensor Supervision menu to turn this parameter on and off.

The parameter is used to detect a faulty connection between the D-MAX Controller and a connected sensor. This parameter can only be evaluated if corresponding customer-specific programming is present.



### 5 Current Range

The *Current Range* menu shows in which range the sensor input on the D-MAX controller was configured according to the last valid sensor calibration.

**5 Line Speed**



The *Line Speed* menu is used to calibrate the analog Line Speed signal. This signal affects the guiding sensitivity of the drive. If appropriate customer-specific programming is present, this signal can also be used in other ways.



1. The reference value for the minimum web speed must be determined.  
To do this, the material web with the relevant application must be running at minimum web speed in the customer system.
2. The reference value for the maximum web speed must be determined.  
To do this, the material web with the relevant application must be running at maximum web speed in the customer system.
3. If the result determined from the reference values for web speed-dependent guiding can be used, the display shows "Successful!".

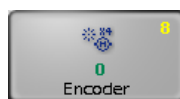


**Note:**  
If the result for guiding is too low, an error appears in the menu and the calibration must be repeated.

**7 Encoder**

...

**8 Motor Encoder**



An incremental position transducer (encoder/motor encoder) can be connected to each drive on the D-MAX to record positions. This makes position monitoring and evaluation possible.

In most applications, the encoder is used together with a sensor positioning system.



**Note:**  
Generally the encoder is already preset when it ships from the factory. Therefore a resetting is required only when replacement parts are installed.



Note:

The menus for the motor encoder are not present unless a corresponding motor is present on the selected drive.



### 1 Calibration

You can use the *Encoder* menu to calibrate a connected incremental position transducer (encoder/motor encoder) for the selected drive. The servo-center transducer assigned to this drive determines the reference position of the travel path.

---

#### WARNING:

The selected drive must be moved to calibrate the encoder.



There is a risk of being cut by the web and crushed against the actuator.

⇒ Do not touch the edges of the material web.



⇒ Perform the calibration operation only when the machine has been stopped and secured to prevent restart.



#### CAUTION:

Changing the encoder limits may result in danger of crushing or could damage the mechanical stops.

---



Note:

The servo center transducer must be positioned within the restricted travel path before it is possible to approach the servo-center position in "Servo-Center" mode.



1. The drive first moves to the servo-center position.
2. The drive moves to the servo-center position.



Note:

If the center position is not reached, the servo-center transducer itself must first be checked. The parameters of the [4 Servo-Center, page 7-6](#) must then be checked and reset, if required.

3. The value for the first limit must be determined. To do this move the drive with the arrow keys to the position of the first limit.
4. The value for the opposite limit must be determined. To do this move the drive to the position of the opposite limit.
5. Measure the distance between the two limits and enter it.
6. The calibration of the encoder was successful and the settings can be saved.



### 2 Field of View

The *Travel path* menu is used to correct the calibrated travel path of the encoder.

To do this the drive is moved to its limits and the distance between them is measured. The measured distance is then entered in this menu.



Note:

The encoder must be calibrated before this parameter can be set



### 3 Search Reference

You can use the *Search Reference* menu to recover lost thresholds without having to perform a calibration again. Limit values can be lost for example because the encoder was adjusted with the electrical power turned off.



**4 Clear Limits**

You can use the *Clear Limits* menu to delete limits that are present for the selected encoder.



**CAUTION:**

Deleting the encoder limits may result in additional danger of crushing or could damage the mechanical stops.



**5 Enc. Rotation/Meter**

This value is used to provide a suggestion for the distance traversed when calibrating the encoder (see [2 Field of View, page 7-12](#)).

**2 Actuator**



Shows the motor that is connected to the selected drive (see table on page [11-5](#))

**3 Digital Inputs**



Display of the 6 digital inputs

**4 Digital Outputs**



Configuration of the physical properties of digital outputs A and B

**1 Digital Output A**

...

**2 Digital Output B**



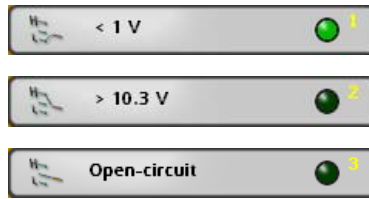
The outputs are automatically set to 'Set' or 'Cleared' depending on the configuration and current operating state.

A delay time can be defined for the transition from 'Cleared' to 'Set'.

To adjust the digital outputs for each of the components connected to them, the physical properties of the relevant state ('Set'/'Cleared') can be defined for each output A or B.



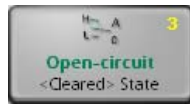
You can select individually for each state between:



1 Delay



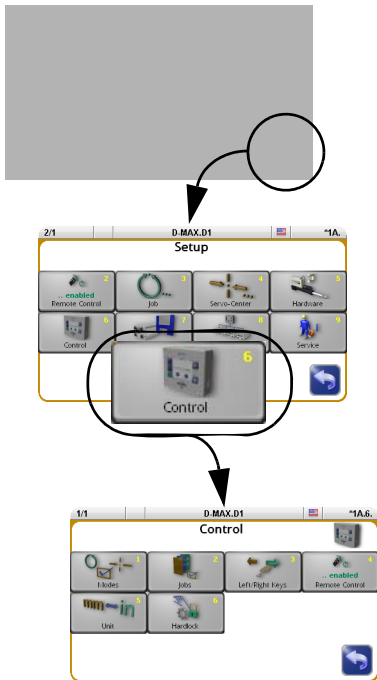
2 <Set> State



3 <Cleared> State

Preliminary

## 6 Control



This section includes information about menus that contain basic properties for operating the D-MAX Controller.

### "Manual" mode:

- All keys are available.

### "Servo Center" and "Automatic" mode:

- Only the *Remote Control* key is available.

### 1 Modes



Activate or deactivate the "Automatic" and "Servo-Center" operation modes



Note:  
"Manual" mode cannot be deactivated.

### 2 Jobs



Activate or deactivate jobs (see table [Jobs, page 11-4](#))

### 3 Left/Right Keys



Define different properties of the Right/Left keys



#### 1 Jog Enable



#### 2 Jog Direction



**3 Jog Speed**



**4 Jog Soft Start**

**4 Remote Control**



Turn *Remote Control* on and off (see also [2 Remote Control, page 7-1](#))

**5 Unit**



Setting up the desired length unit



Note:  
Rounding errors may occur when the unit changes.

**6 Hardlock**



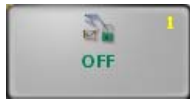
The *Hardlock* menu is used to set up three parameters. When the operating mode switches to "Manual" the position of the drive is kept active at that time by these three parameters.

Power is normally turned off to the drive in "Manual" mode. If general conditions are unfavourable in the customer system, it may happen that the drive is misadjusted while the power is turned off. To prevent this from happening, the drive can be kept active in "Manual" mode.



Note:  
This parameter can only be used if an encoder is available for the selected drive.

**1 Hardlock State**



Turn the Hardlock parameter on and off

**2 Hardlock Gain**



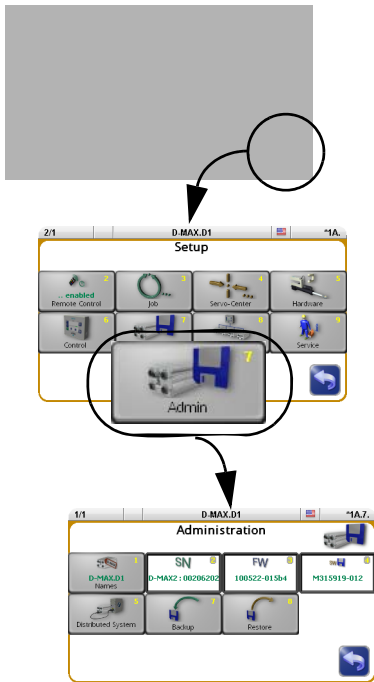
Set the gain for the Hardlock parameter

**3 Hardlock Polarity**



Set the polarity for the Hardlock parameter

## 7 Administration



This section includes a list of menus containing information about the D-MAX Controller. This information is required when ordering replacement parts or for service inquiries.

### "Manual" mode:

- All keys are available.

### "Servo Center" and "Automatic" mode:

- Only selected keys are available.

### 1 Names



The designation of the drive can be changed.

### 2 Serial Number



Shows the serial number of the D-MAX Controller

### 3 FW Number



Shows the firmware number of the D-MAX Controller

### 4 SW Number



Shows the software number of the D-MAX Controller

### 5 Distributed System



The parameters under the *Distributed System* menu are used to group the devices connected to a common network and their menu structures depending on how they are used and to display them selectively on a D-MAX operator interface.

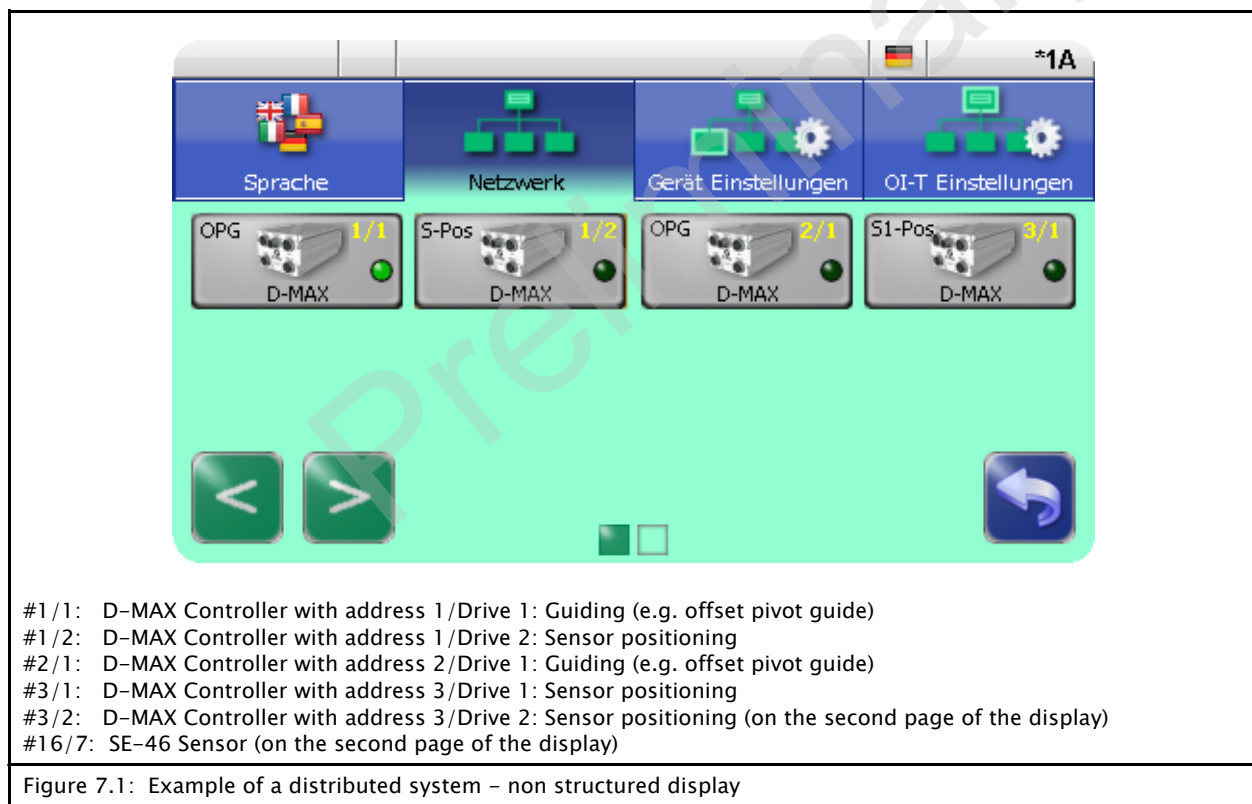
**Note:**

These parameters have no effect on how the connected devices operate. They are evaluated by the operator interfaces only to provide clearer display. Applications that are not set up or are assigned incorrectly have no effect on the functionality of devices.

*Figure 7.1* shows an example of a distributed system consisting of three D-MAX Controllers and a SE-46 sensor. Each individual element of the distributed system has its own menu structure. These elements must be operated from a separate operator interface OI-TS.

All devices present in the distributed system can be selected in operator interface OI-TS.

- Touch the header and select Network  
All the devices of the distributed system that are present in the network are displayed.



To be able to navigate effectively within such a complex network, individual "devices" and the corresponding menu structures are combined to form applications. Thus an application consists of several menu structures in a distributed arrangement (see *Figure 7.2*).

**1 Application**



The *Application* menu provides an orderly summary and names for the menu structures with distributed arrangement (n = 1 ... 255).

All the devices that belong to an application have the same number n.

**2 Sub Function**



Every device inside an application has a subfunction with its menu structure. The *Sub Function* menu gives a unique designation (n=0...255) to these menu structures.

Subfunction '0' must be assigned to a menu structure within each application. However, it may only be assigned once per application. This menu structure makes the main operation of this application available.

**Example** (*Figure 7.1* and *Figure 7.2*)

Device	Application	Sub Function
#1 / 1	1	0
#1 / 2	1	1
#2 / 1	2	0
#3 / 1	2	1
#3 / 2	2	2
#16 / 7	1	2

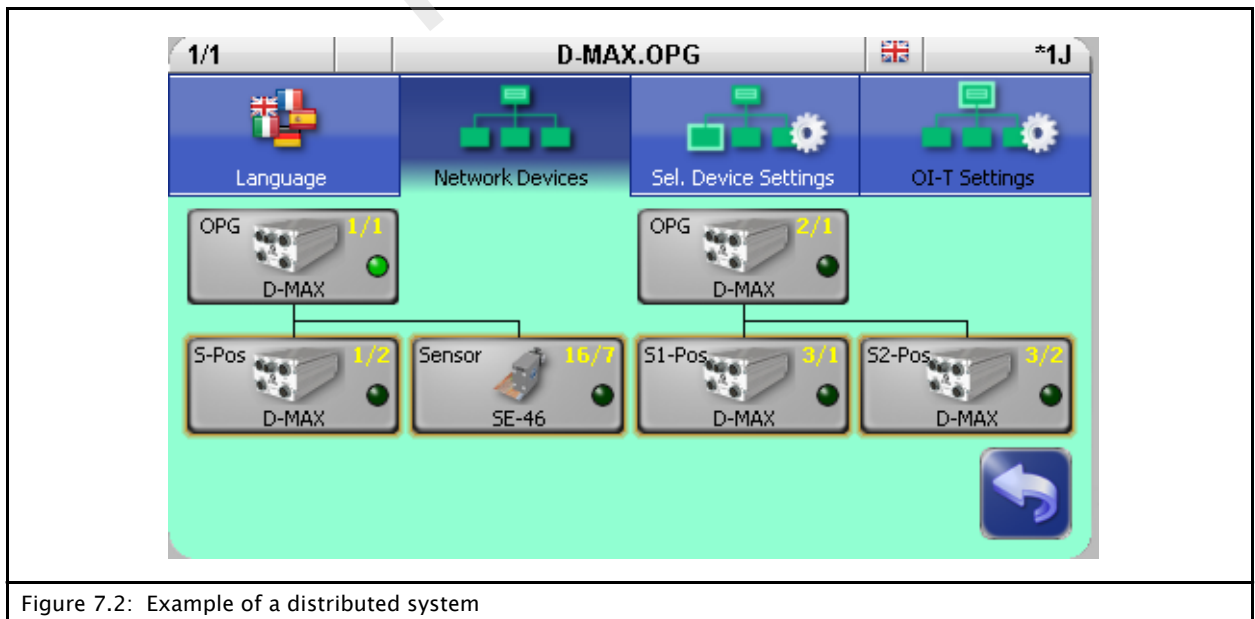


Figure 7.2: Example of a distributed system

**7 Backup**



You can use the *Backup* menu to save all current user settings of the D-MAX Controller to a backup copy in the module. If a backup has already been saved, the old values will be overwritten by the current ones.



Note:

A device is selected for a D-MAX 2 Controller from which the settings are saved simultaneously for Drives 1 and 2. Therefore 2 backups are not required.



Note:

On a D-MAX 2 processor, "Manual" operation mode must be selected on both drives.

**8 Restore**



You can use the *Restore* menu to set all settings of the D-MAX Controller to the values of a backup copy.



Note:

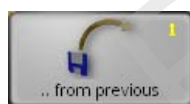
A device is selected for a D-MAX 2 Controller from which the settings are saved simultaneously for Drives 1 and 2. Therefore 2 backups are not required.



Note:

On a D-MAX 2 processor, "Manual" operation mode must be selected on both drives.

**1 Restore from previous backup**



The settings from a backup saved by the customer are restored.



Note:

If no backup has been performed yet in the D-Max system, this menu is not available.

**2 Restore factory settings**



The factory settings are restored.



Note:

This process must only be performed when it has been requested after consultation with an employee of Fife-Tidland GmbH.

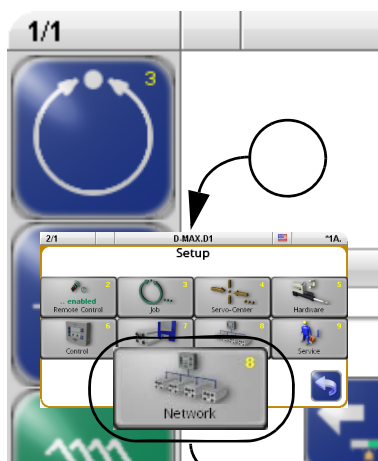
**Note:**

If nothing appears in the operator interface display after a restart, select a device with the header  
Then commissioning of the D-MAX Controller must be performed.

Preliminary



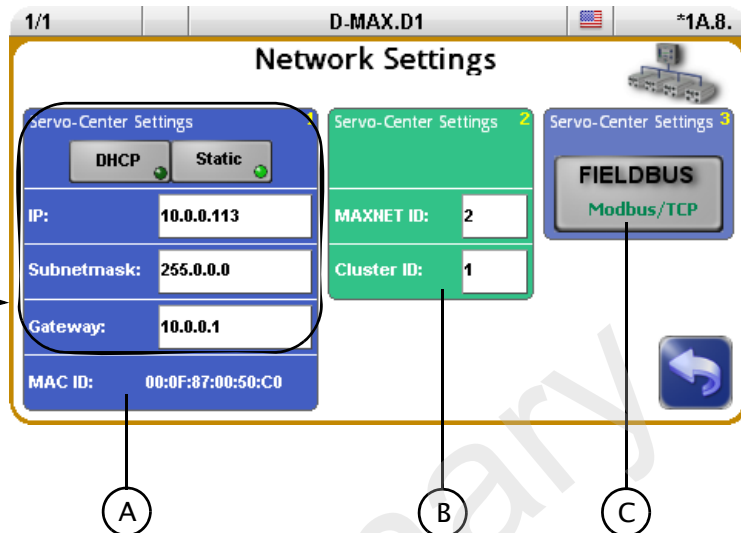
## 8 Network



You can use these menus to view network settings and make changes to them.

### Operating modes:

- Parameters are available in all operating modes.



### A Network Settings:

Display and change the network settings for TCP/IP, show the MAC-ID of the D-MAX controller

### B MAXNET Settings:

Display and change the network settings for MAXNET

The MAXNET ID is used for addressing of individual D-MAX devices.

The Cluster ID is used to

- operate identical systems in a network.
- operate more than 31 devices in a network

MAXNET address	MAXNET cluster	Use
Cannot be edited	Not visible	A system distributed over several devices and present once in the network
Cannot be edited	Visible and can be edited	A system distributed over several devices and present several times in the network
Can be edited	Visible and can be edited	Grouped independent drives (more than 31 are possible)
Can be edited	Not visible	Independent drives (maximum of 31 possible)



Note:

The MAXNET address/the MAXNET cluster address is only to be changed in accordance with the appropriate instructions in "Supplementary Operating Instructions" (see system documentation) or following consultation with a member of staff at Fife-Tidland GmbH.



Note:

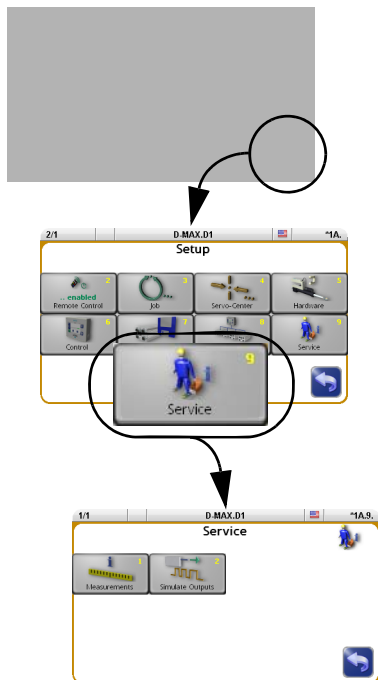
If nothing appears in the operator interface display after a restart, select a drive with the header.

**C Fieldbus (optional):**

Display of the fieldbus type and its properties

Preliminary

## 9 Service



The purpose of these menus is to show information about settings of the D-MAX system that is important for Customer Service.

### "Manual" mode:

- All keys are available.

### "Servo Center" and "Automatic" mode:

- Only selected keys are available.

## 1 Measurements



Display of values of the D-MAX system



### 1 Sensors



### 2 Encoder



### 3 Digital Inputs ( Connection X1)



### 7 Measured Values

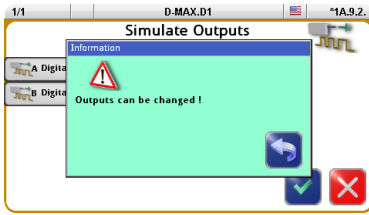


### 9 Sensor Current

## 2 Simulate Outputs



Used to test components connected to the digital outputs



---

**CAUTION:**

Actions may be initiated in the connected components!

---

Preliminary

---

## 8 MAINTENANCE

---



---

**WARNING:**

Danger of injury by crushing

⇒ Maintenance work must only be performed on the D-MAX system when the power is turned off, the machine is stopped, and it is protected against being turned back on.

---

---

### Maintenance work

No maintenance work is required on the D-MAX Controller or operator interface.

#### To clean the display on the operator interface:

Depending on how dirty the environment is, carefully wipe off the operator interface display at regular intervals with a soft dry cloth.

If the display becomes very dirty, a moist cloth can be used to clean it.

**Note:**

Do not use any solvents or aggressive cleaning agents to clean the display. Doing so could damage the display.

---

## 9 DECOMMISSIONING

---

---

### Decommissioning

1. Turn off the electrical power to the D-MAX system.
2. Remove all cables from the modules of the D-MAX system.
3. Disassemble the modules of the D-MAX system.
4. Modules of the D-MAX system can be stored according to the specified ambient conditions (see *Transport and storage, page 3-1*).

OR

The modules of the D-MAX system must be disposed of according to national requirements.

---

# 10 TROUBLESHOOTING

---

---

## Troubleshooting Procedure

The D-MAX system is capable of detecting errors as they occur and displaying them. The system also makes information available that may help exclude possible errors.

## Display possibilities

The following display possibilities are available on modules of the D-MAX system:

- LEDs on the front sides of the D-MAX Controller
- Icons in the display of the D-MAX operator interface

## Procedure

### 1. Check the LEDs on the individual modules of the D-MAX systems

see table [page 10-2](#)

### 2. Check the icons that appear in the display of the D-MAX operator interface

see table [page 10-4](#)

### 3. Check possible causes for faulty behaviour. Frequent causes are connections or settings on the D-MAX system

see table [page 10-6](#)

### 4. Check the faulty behaviour and possible causes. Often the cause is incorrect parameter settings

see table [page 10-9](#)



Note:

The Operating Instructions of other components (e.g. sensors and actuators) should also be consulted for troubleshooting purposes. If there is any customer-specific programming, refer to the "Supplementary Operating Instructions" as well.

## LEDs on the D-MAX Controller

While the device is being turned on, the LEDs on the D-MAX Controller are lit red briefly. This makes it possible to check their functionality. The LEDs indicate errors and/or show information about normal operation of the D-MAX Controller.

LED	Status	Indicates	Remedy
<b>Error messages</b>			
EN	Off	No Ethernet connection	Check plug and cable
	Yellow	10 mbps connection or half-duplex connection	Check switch and cable
PWR	Off	No power supply	Are the power supplies correctly connected to the X6?  see <a href="#">Electrical connection, page 3-5</a>
	Red	Power supply voltage too low, internal voltage outside tolerance or internal temperature too high	Check voltages and/or temperature  see <a href="#">7 Measured Values, page 7-24</a>
	Yellow	No motor voltage	Check motors voltages  see item 2 in <a href="#">7 Measured Values, page 7-24</a>
<b>Information</b>			
EN	Green	Ethernet connection detected	
	Green flashing	Connection detected and device is PTP Master	
PWR	Green	Power supply and temperature are OK	
FN	Green	External device was recognised (e.g an operator interface OI-TS)	



---







**D-MAX operator  
interface OI-TS**






Faulty behavior	Possible cause	Remedy
Incorrect actions are performed or none at all	The touch screen is calibrated incorrectly	Test the touch screen (see <i>Test of the touch screen, page 4-4</i> ) Recalibrate if necessary (see <i>Calibration of the touch screen, page 4-4</i> )

Preliminary

## Icons in the display of the D-MAX operator interface

The icons in the display of the D-MAX operator interface provide information about system states. These system states are not necessarily errors; they may also be intended operating states. Therefore these icons must be evaluated individually for troubleshooting to determine whether what seems to be an error may actually be a normal operating state of the D-MAX system.

Icon	Indicates	Possible error remedy
<b>Error messages</b>		
	No motor volta	Is the power supply correctly connected to X1?  Note: Two power supplies must be connected to the D-MAX Controller!  see <a href="#">Electrical connection, page 3-5</a>
	Power feedback through the motor (generator function of the motor)	Are external forces acting on the motor? Eliminate the external forces  Is the motor under heavy load?  This message appears briefly when heavy loads are being braked.
	Short circuit in the motor cable or motor	Check the motor cable or motor
	No motor detected or no motor connected	If a motor is connected, check the motor and/or cable.
	Error display	Check the voltages
	An error has been detected on the selected drive.	see <a href="#">7 Measured Values, page 7-24</a>
	A threshold of the travel path has been reached. It is only possible to move in one direction – away from this limit.	If this message appears even though no threshold has been reached, the thresholds have been moved.  To restore the basic values, switch to "Servo-center" mode and approach the servo-center position.  If the error persists, check the parameters in <a href="#">2 Gain, page 7-6</a> and <a href="#">3 Polarity, page 7-6</a> .
	The web speed for web speed-dependent guiding is equal to 0.	However, if the web speed is not equal to 0, check the signal for web speed.


Icon	Indicates	Possible error remedy
<b>Error messages</b>		
 and 	The ASC function on the selected drive has been activated and triggered and the motor is locked.	If locking was not intended, check the sensor signal and ASC thresholds.  see <a href="#">1 Sensors, page 7-24</a> and <a href="#">6 ASC, page 7-3</a>
	The motor is locked because of an external signal (e.g. PIOX, fieldbus, application control).	If you did not intend for the motor to be locked, check the digital inputs. It is possible that external locking is active  see <a href="#">3 Digital Inputs ( Connection X1), page 7-24</a>  If there is customer-specific programming, refer to the "Supplementary Operating Instructions" in the system documentation for information about the X1 parallel interface.
 or 	The D-MAX system is expecting commands from external devices.	The devices may not be connected to the network.  Check whether these devices are correctly connected to the network.

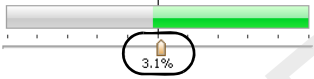
## Faulty behaviour and setting errors

Often the cause of incorrect or undesirable guiding behaviour is an incorrect setting on the D-MAX system. These errors can easily be eliminated by changing the appropriate settings on the D-MAX system.

### Possible causes for faulty behaviour

Errors caused by connections or settings on the D-MAX system can result in many kinds of faulty behaviour in the system. Often it is difficult to deduce the cause directly from a faulty behaviour. You should therefore check the possible causes in the following table and eliminate any that are present.

Possible causes for faulty behaviour	Remedy	Reference
No response on the desired drive. Wrong drive selected?	Select "Manual mode" and check whether the correct drive is selected.	<a href="#">Select devices/drives, page 5-2</a>
 An asterisk "(*)" appears in the header before the menu identification. Remote control is turned off.	Remote control is turned on. Remote control must be turned on to ensure complete operation.	see item <a href="#">2 Remote Control, page 7-1</a>
Is activation by means of the digital inputs possible?	Check the digital inputs.	see item <a href="#">3 Digital Inputs (Connection X1), page 7-24</a> in section <a href="#">5 Hardware</a>
Is activation by means of a fieldbus possible (e.g. Profibus, DeviceNet) ?	Den Feldbusstatus überprüfen.	see <a href="#">8 Network, page 7-22</a>
	Check the fieldbus data.	see <a href="#">8 Network, page 7-22</a> For more information about fieldbus data, refer to the "Supplementary Operating Instructions" in the system documentation.
Are the digital outputs being used?	Check the status (set/deleted) of the digital outputs.	see item <a href="#">4 Digital Outputs, page 7-13</a> in section <a href="#">5 Hardware</a>

Possible causes for faulty behaviour	Remedy	Reference
Sensors	Check the signals of the connected sensors(range $\pm 32767$ ).	see item <a href="#">1 Sensors, page 7-24</a> in section <a href="#">9 Service</a>
	It may be necessary to recalibrate the sensors.	see item <a href="#">1 Calibration, page 7-8</a> in section <a href="#">5 Hardware</a>
	See also the Operating Instructions for the relevant sensors	
Are encoders being used?	Check whether the encoders are 'counting'.	see item <a href="#">2 Encoder, page 7-24</a> in section <a href="#">9 Service</a>  For more information about the encoders, refer to the "Supplementary Operating Instructions" in the system documentation.
Are you using the correct motor?	Check the motor	see item <a href="#">2 Actuator, page 7-13</a> in section <a href="#">5 Hardware</a> and table <a href="#">Drives, page 11-5</a>  For further information about the motor refer to the system diagram in the system documentation.
 <p>A cursor appears below the bar graph at the location to which the guide point was moved, together with a numeric entry.</p>	<p>Is the offset of the guidepoint set the way you want it?</p> <p>Correct the guidepoint if necessary.</p>	<a href="#">Shift guide point, page 5-3</a>

Possible causes for faulty behaviour	Remedy	Reference
Incorrect results in displays or with web width measurements.	<p>The measurement range is not set or is set incorrectly.</p> <p>Check the measurement range of the sensors and/or encoders you are using.</p>	<p>see item <a href="#">3 Field of View, page 7-9</a> (Sensor) or item <a href="#">2 Field of View, page 7-12</a> (Encoder) in section <a href="#">5 Hardware</a></p> <p>For further information see the "Supplementary Operating Instructions" in the system documentation.</p>
	<p>The length unit is set incorrectly.</p> <p>Check the length unit.</p>	<p>see item <a href="#">5 Unit, page 7-16</a> in section <a href="#">6 Control</a></p>

Preliminary

**Faulty behaviour**

The table below shows examples of faulty behaviour, causes, and how to remedy the fault. Often the cause is incorrect parameter settings.

Faulty behaviour	Reason	Remedy	Reference
The drive is moving too fast or too slow.	The motor speed is not set correctly.	Adjust the motor speed	see item <a href="#">10 Actuator Speed, page 7-5</a> in section <a href="#">3 Job</a>
The drive does not move in "Automatic" mode.	The gain is set too low.	Increase the gain	see item <a href="#">3 Gain, page 7-3</a> in section <a href="#">3 Job</a>
	The drive is mechanically locked.	Free the drive and clean the area.	
The drive vibrates in the Automatic operating mode..	The gain is set too high.	Reduce the gain	see item <a href="#">3 Gain, page 7-3</a> in section <a href="#">3 Job</a>
	Cable connections are loose.	Check all cable connections to make certain they are securely fastened.	
The drive moves in the wrong direction in "Automatic" mode.	The polarity is set incorrectly.	Reverse the polarity	see item <a href="#">8 Polarity, page 7-5</a> in section <a href="#">3 Job</a>
	Wrong job selected.	Select "Manual: mode and check whether the correct job is selected.	see <a href="#">Select jobs, page 5-2</a>
The drive does not move in "Servo Center" mode.	The gain for the servo-center transducer is set too low.	Increase the gain	see item <a href="#">2 Gain, page 7-6</a> in section <a href="#">4 Servo-Center</a>
	The drive is at the stop because the polarity is set incorrectly.	Reverse the polarity for the "Servo-center" operation mode.	see item <a href="#">3 Polarity, page 7-6</a> in section <a href="#">4 Servo-Center</a>
The drive vibrates in the "Servo-center" operating mode.	The gain for the servo-center transducer is set too high.	Decrease the gain	see item <a href="#">2 Gain, page 7-6</a> in section <a href="#">4 Servo-Center</a>

Faulty behaviour	Reason	Remedy	Reference
The drive does not reach the servo-center position in "Servo Center" mode.	The polarity for the servo-center transducer is set incorrectly.	Reverse the polarity	see item <a href="#">3 Polarity</a> , page 7-6 in section <a href="#">4 Servo-Center</a>
	The servo-center transducer is not receiving a signal.	<p>Check the distance between the servo-center transducer and the measuring point.</p> <p><b>WARNING:</b> It may be necessary to move the actuator to adjust the servo-center transducer. There is a risk of cutting injuries on the web and crushing injuries on the actuator. ⇒ Do not touch the edges of the material web. ⇒ Perform the adjustment only when the machine is stopped and protected against being turned on.</p> <p>ISCT-03: about 1 mm ISCT-20: about 1.5 mm ISCT-21: about 2 mm ISCT-22: about 5 mm ISCT-23: about 10 mm</p>	



---

# 11 TECHNICAL DATA

---

---

## General information

### D-MAX Controller

#### Power supply

24 – 48V nominal  
21V minimum – 51V maximum

#### Maximum power consumption

##### D-MAX Controller – connection for control

50W maximum

##### D-MAX Controller – connection for drive

200W maximum at 24V or  
400W maximum at 48V

#### Dimensions

Length: 184mm (without cables)  
Width: 87mm  
Height: 60mm

#### Weight

1,0kg

#### Protection class

IP54 according to DIN EN 60529

#### Ambient conditions

Ambient temperature: 0°C to 60°C  
Relative humidity: 10% to 95% non-condensing  
Altitude above sea level: maximum 3000m

#### Maximum output current

4,0A / drive

### D-MAX operator interface OI-TS

#### Power supply

12 – 24V nominal  
10V minimum – 30V maximum

#### Maximum power consumption

20W maximum

#### Dimensions

Wall mounting: 128 x 105 x 38mm  
Desk installation: 128 x 105 x 33+5mm

**Weight**

0.6kg (only the OI-TS, without mounting accessories)

**Protection class**

IP64 according to DIN EN 60529

**Ambient conditions**

Ambient temperature: 0°C to 60°C

Relative humidity: 10% to 95% non-condensing

Altitude above sea level: maximum 3000m

---

**Inputs and outputs of  
the D-MAX Controller****Communication interface**

based on Ethernet - 100Mbps full duplex

**Electromechanical drive**

maximum 4A/drive

**Hydraulic servo-valve**

±50mA

with or without lock valve (24V or 48V, maximum 4A)

**Motor Power Amplifier MPA**

±10mA

with MPA locking signal

**Servo-center transducer**

Analog, inductive servo-center transducer

**Sensor input**

maximum ±20mA

Preset range 0 to 10mA

Sensor inputs can be calibrated individually

**Line Speed**

0 - 10mA

optional 0 - 20mA possible

**Power supply for accessory devices**

+12V ± 5%, 600mA\*

-12V ± 5%, 150mA\*

+5V ± 5%, 800mA\* (can be used for the lamp of a line sensor)

\* Total current

**Parallel interface**

6 digital inputs

Low-Pegel: 0 – 0,9V

High-Pegel: 3,6 – 24V; maximum power consumption  
6mA to ground

2 outputs

Optionally switching to positive or ground

Positive switching: 10.3V at 200mA (open commutator)

Ground switching: 1.0V at 500mA (open commutator)

Maximum voltage: 30V

Overcurrent and short-circuit protection

+ 12V available as auxiliary voltage

**Parallel input matrix**

Because of the option for customer-specific programming, there may be some deviations in the parallel input matrix. Customer-specific software adjustments of this type are described in the "Supplementary Operating Instructions" for the D-MAX system and are included in the system documentation.

Mode	Inputs					
	5	4	3	2	1	0
Locking, external	-	-	-	-	-	1
Automatic	-	-	0	0	1	-
Manual	-	-	0	1	0	-
Servo Center	-	-	1	0	0	-
Move drive left*	0	1	-	-	-	-
Move drive right*	1	0	-	-	-	-
RGPC left*	0	1	-	-	-	-
RGPC right*	1	0	-	-	-	-
RGPC RESET*	1	1	-	-	-	-

\* Inputs 4 and 5 for moving the drive in "Manual" and "Servo Center" modes  
RGPC functions in "Automatic" mode

0 = Low level

1 = High level

- = Either

## Parallel output matrix

Status	Outputs	
	B*	A*
LOSS OF NULL (Automatic mode)	-	1
Drive servo-centered (Servo-Center mode)	1	-

\* Parallel outputs are active Low  
 1 = Active  
 - = Either

## Jobs

	Job	Connection	Type of Guiding
<b>A</b>	S1	X5/1	Edge guiding*
<b>B</b>	S2	X5/2	Edge guiding*
<b>C</b>	S3	X9/1	Edge guiding*
<b>D</b>	S4	X9/2	Edge guiding*
<b>E</b>	S1 - S2	X5/1&2	Center guiding or slave guiding
<b>F</b>	S3 - S4	X9/1&2	Center guiding or slave guiding
<b>G</b>	S1 - S3	X5/1 & X9/1	Center guiding or slave guiding
<b>H</b>	S2 - S4	X5/2 & X9/2	Center guiding or slave guiding
<b>J</b>	X5	X5/2	Line center guiding
<b>K</b>	X9	X9/2	Line center guiding
<b>L</b>	X5	X5/1	Line edge guiding
<b>M</b>	X9	X9/1	Line edge guiding

\* It is possible that the sensor being used is already returning a center signal. In this case, center guiding will be performed.



## Note:

Because of the possibility of customer-specific programming, individual jobs cannot be present or cannot be used differently than listed in the table. Customer-specific software adjustments of this type are described in the "Supplementary Operating Instructions" for the D-MAX system and are included in the system documentation.

## Drives

Display content*	Current	**Nom. voltage	Motor / Valve	ID	Typical modules
1,3A MTR/ENC ID0	1,3 A	24 VDC	M352553 Motor encoder	Serien-ID 00	DS-25
2,0A MTR/ENC ID1	2,0 A	24 VDC	M332325 Motor encoder	Serien-ID 01	DS-70B
3,3A MTR/ENC ID2	3,3 A	24 VDC	M281466 Motor encoder	Serien-ID 02	DAB-1
3,3A MTR/ENC ID3	3,3 A	24 VDC	M352554 Motor encoder	Serien-ID 03	DLAB-3-6
0,8A MTR/ENC ID4	0,8 A	24 VDC	M348471 Motor encoder	Serien-ID 04	DPT-200
4,0A MTR/ENC ID6	4,0 A	24 VDC	M352554 Motor encoder	Serien-ID 06	DLAB-10
0,4A MTR/ENC ID7	0,4 A	24 VDC	M280791 Motor encoder	Serien-ID 07	DPT-150
0,6A MTR/ENC(EGH) ID8	0,6 A	48 VDC	M388282 Motor encoder	Serien-ID 08	DPT-200
0,6A NO TACH 2,05K	0,6 A	48 VDC	M352555 Motor (ohne Tacho)	2,05K	Tachless Symat 25
1,3A NO TACH 3,48K	1,3 A	48 VDC	M351418 Motor (ohne Tacho)	3,48K	Tachless Symat 50
0,2A NO TACH 5,11k	0,2 A	24 VDC	M319177	5,11K	PT 150
0,6A MOTOR 6,81K	0,6 A	48 VDC	M136114 Motor	6,81K	PT 200
0,6A MOTOR 8,66K	0,6 A	48 VDC	M136109 Motor	8,66K	Symat 25
8,0A MOTOR 11K	8,0 A	36 VDC	M137384 Motor	11K	AG-11, AB-12
1,3A MOTOR 14K	1,3 A	48 VDC	M136112 Motor	14K	Symat 50, Symat 70B
			M126687 Motor		Symat 50, Symat 70D
1,3A MOTOR 14K	1,3 A	48 VDC	M126688 Motor	14K	GAB-1, GAG-2, PT-200
1,6A MOTOR 16,9K	1,3 A***	48 VDC	M136103 Motor (1,6 A)	16,9K	GAB-1, GAG-2, PT-200, LAB-1A, Symat-KR, Symat-KTR, Symat-200
0,4A MOTOR 20,5K	0,4 A	48 VDC	M352556/ M352557 Motor	20,5K	NarroWeb 25
2,0A MOTOR 24,9K	2,0 A	48 VDC	M136111 Motor	24,9K	GAG-3, LAB-3A
2,6A MOTOR 30,1K	2,6 A	48 VDC	M146716 Motor	30,1K	LAB-10, LAB-10A

Display content*	Current	**Nom. voltage	Motor / Valve	ID	Typical modules
3,5A MOTOR 36,5K	3,5A	48 VDC	M126246 Motor M126687 Motor	36,5K	AB-1 LRA
1,0A MOTOR 44,2K	1,0 A	48 VDC	M352559 Motor M352560 Motor	44,2K	NarroWeb 50
50mA HYDR 64,9K	±50 mA	24 VDC	Hydraulic proportional valve	64,9K	
48V LVALVE 78,7K	0,6 A	48 VDC	Hydraulic proportional valve and 48 V locking valve	78,7K	
24V LVALVE 95,3K	1,2 A	24 VDC	Hydraulic proportional valve and 24 V locking valve	95,3K	
50mA HYDR AXC 121K	±50 mA	24 VDC	Hydraulic servo- valve	121K	
48V LVALVE AXC 154K	0,6 A	48 VDC	Hydraulic servo- valve	154K	
24V LVALVE AXC 205K	1,2 A	24 VDC	Hydraulic servo- valve	205K	
10mA MPA 287K	±10 mA	24 VDC	MPA Motor driver	287K	MPA-01/-02/-30
CUSTOM MTR 825K	Adjusted motor			825K	Not a motor from Fife
-	No motor or valve detected.			None	

\* see [2 Actuator, page 7-13](#)

\*\* The maximum possible mains power voltage on the D-MAX Controller is 51VDC. The D-MAX Controller regulates the voltage down to the necessary level required by the connected motor/valve.

\*\*\* 1,3A is used for the 1.6A motor.

**Cable lengths**

Connection	Cable lengths (maximum)
Sensors (except SE-26 / -26A)	50m
Sensor SE-26	15m
Sensor SE-26A	25m
Parallel interface	50m
Servo-center transducer	50m
Servo-valves	50m
Locking valve	50m
Drive	14m
RGPC-50	100m
Ethernet	100m
Operator interface OI-TS	50m

**Standards**

Modules of the D-MAX system have been engineered according to the standards and guidelines of the European Union. A declaration of conformity is available on file.

Modules of the D-MAX system are in compliance with the following standards:

EN 61326-1	Radiated Emissions	Class A
	Conducted Emissions	Class A
FCC 47 CFR Part 15		Class A
ANSI C63.4		Class A
EN 61000-4-2		4kV/8kV
EN 61000-4-3		10Vrms
EN 61000-4-4		2kV/1kV
EN 61000-4-5		2kV/1kV
EN 61000-4-6		3Vrms

---

**Accessories (optional)****Input devices****RGPC-50/51**

External input device for moving the guidepoint

**RCAL-20**

External input device for easier sensor calibration of edge sensors

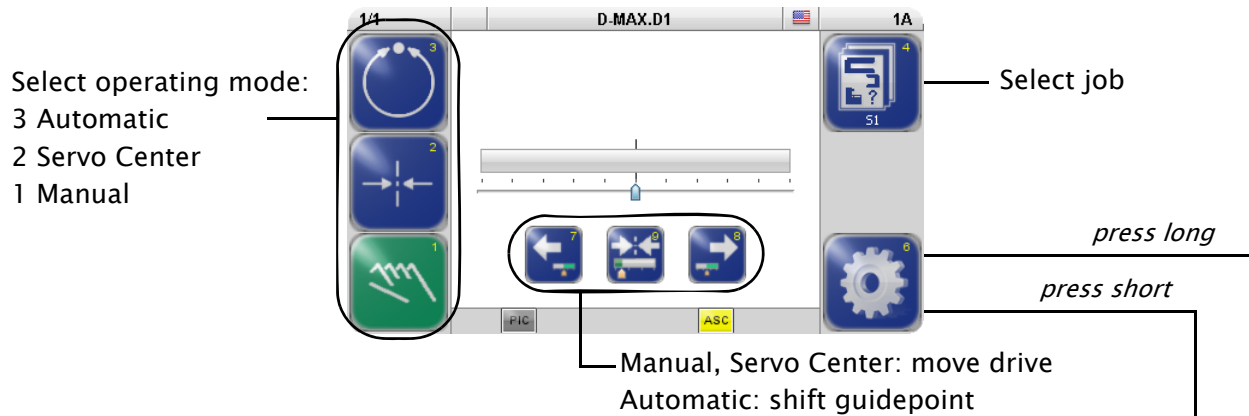
**RCAL-26**

External input device for easier sensor calibration of line sensor SE-26/SE-26A

Preliminary



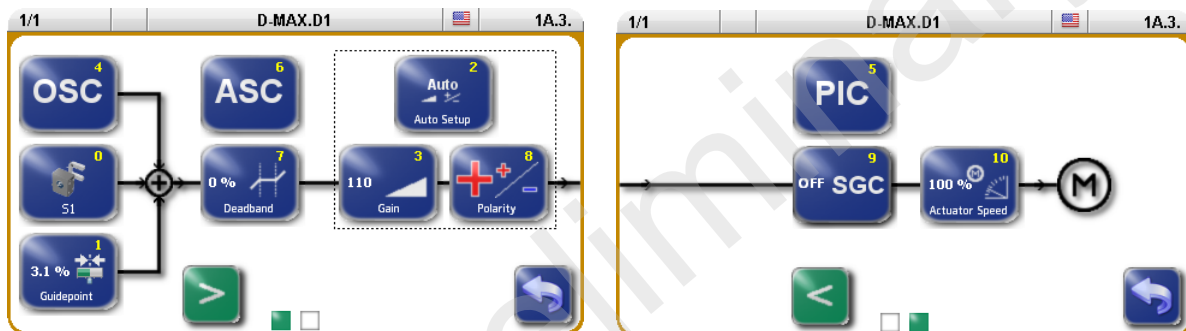
# 12 APPENDIX A – OVERVIEW



User level

Menu level

Job\*/Servo center transducer\*\* menu



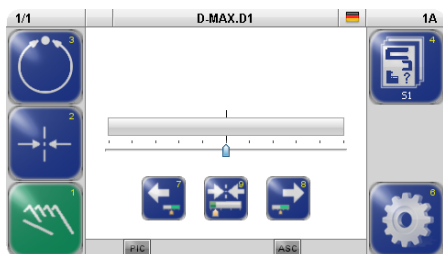
\*\* Operating mode Manual/Automatic

- 0 Calibrate sensor
- 1 Guidepoint
- 2 Auto Setup
- 3 Gain
- 4 OSC
- 5 PIC
- 6 ASC
- 7 Deadband
- 8 Polarity
- 9 SGC (Speed Gain Control)
- 10 Actuator Speed

\*\* Operating mode Servo Center

- 1 Guidepoint
- 2 Gain
- 3 Polarity

Setup menu\*\*\*





















- 2 Touch-Pad
- 3 Job
  - Switch to Job menu
- 4 Servo center
  - Switch to Servo center transducer menu

- 5 Hardware
  - 1 Sensors
  - 2 Actuator
  - 3 Digital Inputs
  - 4 Digital Outputs
- 6 Control
  - 1 Modes
  - 2 Jobs
  - 3 Keys
  - 4 Touch-Pad
  - 5 Unit
  - 6 Hardlock
- 7 Admin
  - 1 Names
  - 2 Serial Number
  - 3 FW Number
  - 4 SW Number

- 5 Distributed System
  - 6 Backup
  - 7 Restore
- 8 Network
  - 1 TCP/IP
  - 2 MAXNET
  - 4 MAC-ID
- 9 Service
  - 1 Measuring Points
  - 2 Set Digital Outputs

\*\*\* the set of menus depends on the selected operating mode and/or on the programming

## 13 APPENDIX B – SYMBOLS

Symbols	description
	Error display – This icon appears if an error is detected on the selected drive.
	The selected drive is expecting MAXNET data from a device, but does not receive any data. The device that should send MAXNET data is either not connected or not turned on.
	The selected drive expects data from a Gateway, but does not receive any data, since no data can be received on the Gateway.
	No motor was detected or no motor is connected.
	The motor current supply is outside the valid range.
	Motor backfeed overvoltage (generator function of the motor) or short circuit in the motor cable.
	The motor is locked
	The motor works at maximum motor current.
	The motor is actively locked in "Manual" mode (hardlock).
	The limit values of the encoder have been reached.
	RCAL is active on the selected drive. This symbol appears between the time when the first and second key on the RCAL-20/26 (optional device) is pressed.
	The optional oscillator 'OSC' is available in the selected job.
	The optional controller 'PIC' is available in the selected job.
	SGC: Guiding depends on the web speed. If this symbol is flashing, the web speed is equal to 0 and no guiding is being performed.
	ASC (Automatic Sensor Control) is activated.
	ASC is triggered. This icon appears if the ASC function has been activated and triggered on the selected drive.
 	ASC is triggered. These icons appear if the ASC function has been activated and triggered on the selected drive and the motor has been blocked.

---

## 14 APPENDIX C – TERMS

---

**ASC (Automatic Sensor Control)**

If the web is outside of the defined range of the sensor's field of vision, guiding is stopped.

**Automatic**

Operating mode

The web course is automatically corrected by an actuator based on sensor information.

**Automatic calibration**

The Gain and Polarity parameters are calibrated automatically.

**CM (Customised Menu)**

Customer-specific system menu This system menu is only present if the D-MAX controller has been programmed accordingly.

**Deadband**

A range is defined within the sensor's field of vision within which guiding is not active in "Automatic" mode.

**Device**

Devices refer to the drives on the D-MAX Controllers present on the network as well as any customer-specific CM system menus or Gateways.

**Drive**

The drive may be the motor of an actuator, for example, which provides the necessary correction within a control loop.

**Encoder**

Incremental position transducer to record positions

**Hardlock**

The Hardlock parameter makes it possible to keep the drive active in "Manual" mode.

**Job**

Jobs are types of controllers that are in principle available in a D-MAX system.

**LS (Line Speed)**

Designation of the web speed signal which is supplied to X1.

**Manual**

Operating mode

There is no guiding of the web course.

**MAXNET**

MAXNET is a proprietary protocol used for communication between D-MAX Controllers and D-MAX operator interfaces. The MAXNET address of the D-MAX Controller must be different than the addresses of other controllers on the network (addresses 1 to 31).

**OI (Operator Interface)**

Designation of an operator interface.

**OSC**

Designation of an optionally available oscillator.

**RCAL**

Designation of an external input device for sensor calibration.

**RGPC (Remote Guide Point Control)**

Designation of an external activation system for offset of the guidepoint.

**SC (Servo Center)**

SC is the abbreviation for the "Servo Center" mode.

**Servo Center**

Operating mode

The actuator is moved to the mechanical center position depending on the servo-center transducer.

**Servo-center position**

Then the control rollers of the actuator are aligned parallel to the rollers of the customer system.

**Servo-center transducer**

Assigns the servo-center position for "Servo Center" mode

**SGC (Speed Gain Control)**

Guiding depends on web speed.

**Supplementary Operating Instructions**

Customer-specific software adjustments of the software are described in the "Supplementary Operating Instructions" for the D-MAX system and are included in the system documentation.

**Web / strip**

The web / strip is the customer's material, which is affected in its direction of movement as it is guided by the D-Max system.

For simplicity sake, these Operating Instructions will refer only to the web.

Preliminary

# 15 SERVICE

## Requests for Service

When requesting service, please have a copy of the order confirmation ready with the order number.

When ordering replacement parts, please indicate, (where possible) Part Number, Drawing Number and Model description (see [page 3-1](#)) an.

Please be careful to keep all documents accompanying the product in a safe place. This will allow us to help you more quickly in the event that service is required.

## Addresses

To request service, or if you need replacement parts, please contact one of the following addresses.

### Fife-Tidland GmbH

Max-Planck-Straße 8                      Siemensstraße 13-15  
65779 Kelkheim                            48683 Ahaus  
Deutschland                                Deutschland  
Telefon: +49 - 6195 - 7002 - 0  
Fax:        +49 - 6195 - 7002 - 933  
E-Mail:    service@maxcess.eu  
Web:        www.maxcess.eu

### Fife Corporation

Post Office Box 26508  
Oklahoma City, OK 73126, USA  
Telefon: +1 - 405 - 755 - 1600  
Fax:        +1 - 405 - 755 - 8425  
E-Mail:    service@maxcessintl.com  
Web:        www.maxcessintl.com



### EUROPE, MIDDLE EAST AND AFRICA

Tel +49.6195.7002.0  
Fax +49.6195.7002.933  
sales@maxcess.eu  
www.maxcess.eu

### INDIA

Tel +91.22.27602633  
Fax +91.22.27602634  
india@maxcessintl.com  
www.maxcess.in

### NORTH, CENTRAL AND SOUTH AMERICA

Tel +1.405.755.1600  
Fax +1.405.755.8425  
sales@maxcessintl.com  
www.maxcessintl.com

### JAPAN

Tel +81.43.421.1622  
Fax +81.43.421.2895  
japan@maxcessintl.com  
www.maxcess.jp

### CHINA

Tel +86.756.881.9398  
Fax +86.756.881.9393  
info@maxcessintl.com.cn  
www.maxcessintl.com.cn

### KOREA, TAIWAN, AND SE ASIA

Tel +65.9620.3883  
Fax +65.6235.4818  
asia@maxcessintl.com