User Manual

Sliding gate drives

HMD230

+

IGD

English

Version: 1.3 February 2013

Translation of the Original User Manual

Contents

1 GENERAL

1.1 MANUFACTURER / SUPPLIER

Manufacturer:

Heras B.V.
Hekdam 1, 5688 JE Oirschot
Netherlands
Tel.: +31(0)499-551225
www.heras.com

Technical Construction File

Heras B.V. manager, R&D Department

1.2 SERVICE / MAINTENANCE

In the event of problems, failures or questions you can contact:

Heras Service	Tel.	0900 202 0499*
	Fax	0900 202 4550

* local rate
Only available from the Netherlands. If you are located elsewhere, please contact your dealer for assistance.

1.3 TYPE

The HMD230 is intended for the following types of Heras sliding gate:

- uGate
- Delta
- SHB
- Orion

The HMD230 is available in 2 versions:

- HMD230S [Standard]
- HMD230A [Advanced]

The IGD is intended for the Heras iGate

The IGD is available in 2 versions:

- IGDP [Premium]
- IGDE [Excellent]

See the chapter on "TECHNICAL DATA" for the technical specifications.

1.4 HOW TO USE THIS MANUAL

Carefully read this User Manual before using the sliding gate and save it for future reference.
This description was made for the people who operate the gate. Fitters use a separate installation manual.

There is also a separate installation diagram for fitters to install the drive in question in compliance with the applicable norms and standards. If any faults occur, consult a Heras-certified engineer.

This manual is an addition to the manuals enclosed with the HMD230/IGD drive and control units.

1.5 DEFINITIONS: USER / OPERATOR / ENGINEER

User: Anyone using the gate.

Operator: A user who is familiar with all safety aspects dealt with in this manual. Operators are not allowed to carry out any installation work on the gate unless explicitly specified.

Engineer: The engineer is a Heras fitter (or an engineer employed by the customer who has been given explicit permission in writing from Heras) who is qualified to perform technical interventions on the gate.

1.6 EXPLANATION OF THE SYMBOLS

Caution!: To prevent personal injury, you must observe the safety instructions below.

Note! : To prevent material damage, you must observe the safety instructions below.

Information: This is followed by further information or by a reference to other documents.

Warning: Risk of limbs getting crushed

Warning: Risk of injury to hands by gear wheels

1.7 CONFORMITY WITH EUROPEAN DIRECTIVES

The installation complies with the following EU Directives:

2006/42/	EC	Machine Directive
2004/108	EC	EMC Directive (electromagnetic compatibility)

The EC Declaration of Conformity can be found in appendix B. The CE mark is located on the rear of the bottom rail of the gate

2 DESCRIPTION OF HMD230/IGD

The HMD230 is a drive unit intended for sliding gates of the types: Delta, uGate, SHB and Orion. The IGD is a drive unit intended for sliding gates of the type iGate. These drive units enable gates to be operated electrically (pulse or dead man's operation). Depending on the actual configuration, the gate sliding speed will be 0.25 m/s (HMD230S, IGDP, IGDE) or 0.5 m/s (HMD230A, optionally for IGD). Electrically driven Heras gates have anti-crushing safety protection devices. The type of anti-crushing safety protection devices and the sliding speed depend on the gate motor drive used.

See the chapter on "TECHNICAL DATA" for further information.

The motor of the HMD230/IGD has a pulse generator enabling the motor control to determine the gate position. Limit switches are not necessary anymore.

2.1 HMD230 PROFILES

The HMD230 is delivered with a pre-programmed profile (does not apply to the Netherlands). This profile cannot be changed by the user.

		PROFILE 1	PROFILE 2	PROFILE 3	PROFILE 4
		Dead man's mode	Pulse mode	Pulse mode + weekly calendar	Pulse mode + yearly calendar
Choice of language (3 languages)		■	■	■	■
Log function		■	■	■	■
Setting date/time		■	■	■	■
Inputs 1-2-3	Open-stop-closed		■	■	■
Input 4	Toggle Open-Closed		■	■	■
Input 5	Part open		■	■	■
Input 6	Emergency stop	■	■	■	■
Inputs 7-8	Dead man's Open-Closed	■			
Output 1	Light/Flash light control with pre-warn		■	■	■
Outputs 2-3	Gate Open-Closed messages	■	■	■	■
Output 4	"Service" message	■	■	■	■
Output 5	Switch external heating	■	■	■	■
Hand transmitter receiver	+ 1x hand transmitter		■	■	■
Weekly calendar				■	
Yearly calendar					■
HMD230 Standard		HMD230S1 (0.25 m/sec)	HMD230S2 (0.25 m/sec)	HMD230S3 (0.25 m/sec)	HMD230S4 (0.25 m/sec)
HMD230 Advanced		Not available	HMD230A2 (0.5 m/sec)	HMD230A3 (0.5 m/sec)	HMD230A4 (0.5 m/sec)
iGATE		Premium (0.25 m/sec)	Excellent (0.5 m/sec)	Excellent (0.5 m/sec)	Excellent (0.5 m/sec)

2.2 SCHEMATIC SLIDING GATE DESCRIPTIONS

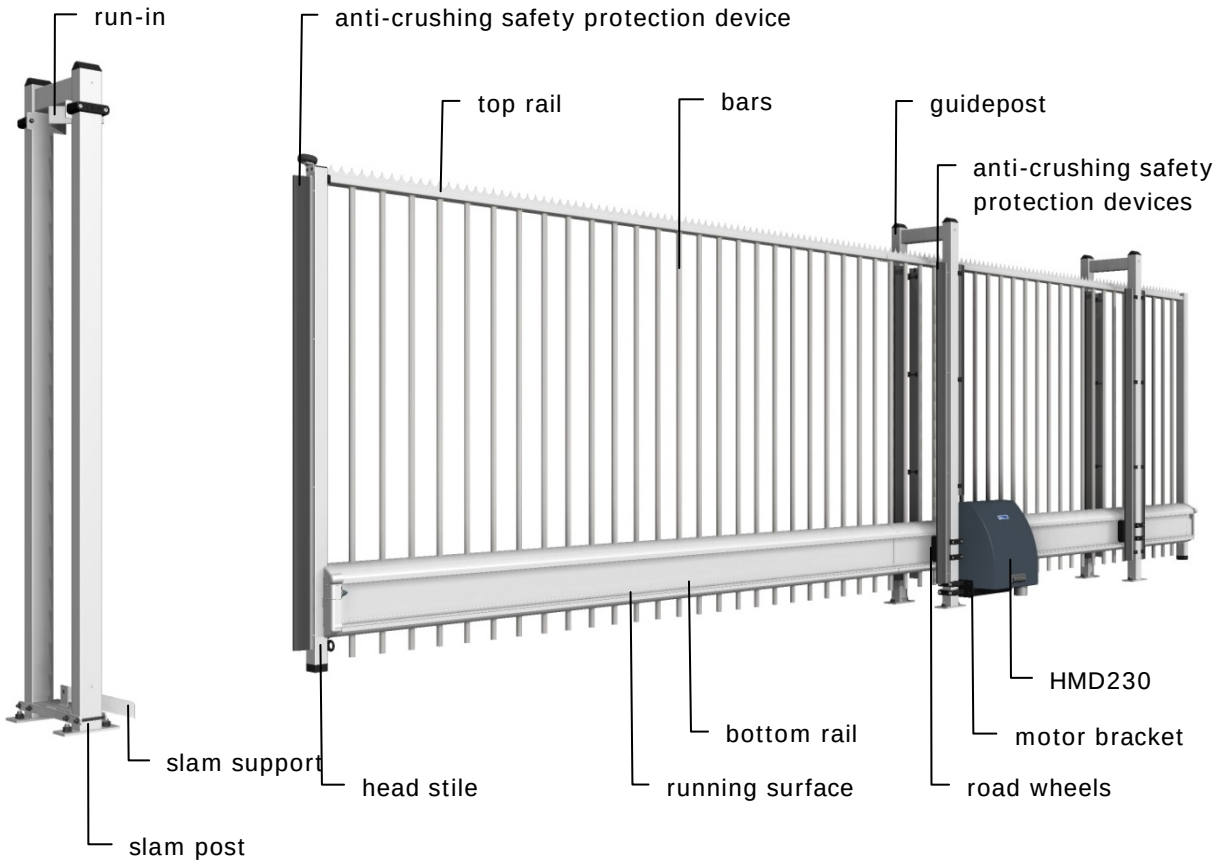


Illustration 1: Delta sliding gate terms

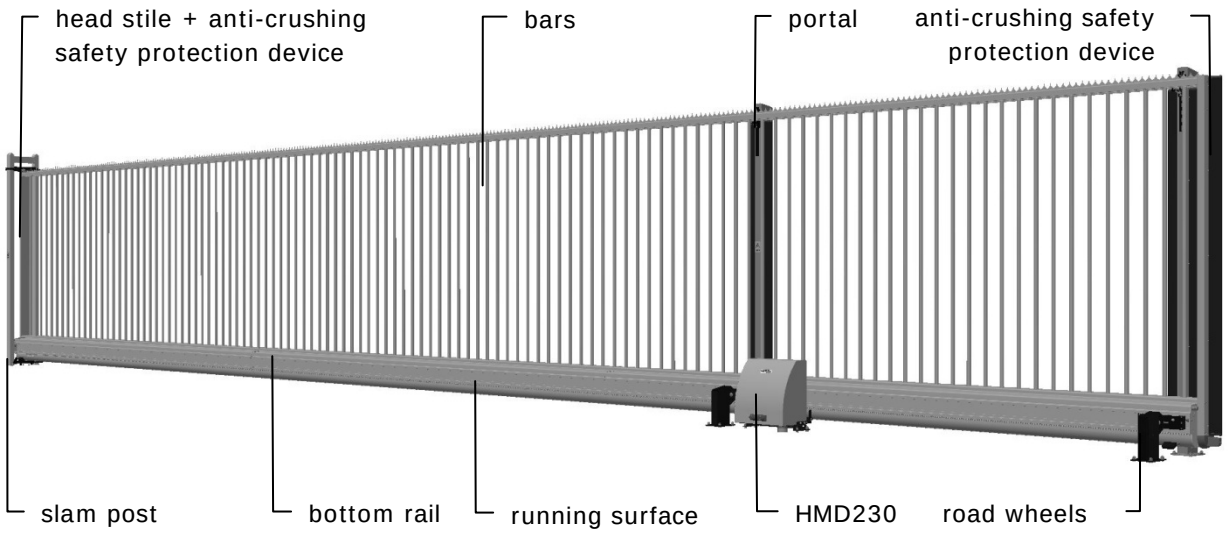


Illustration 2: uGate sliding gate terms

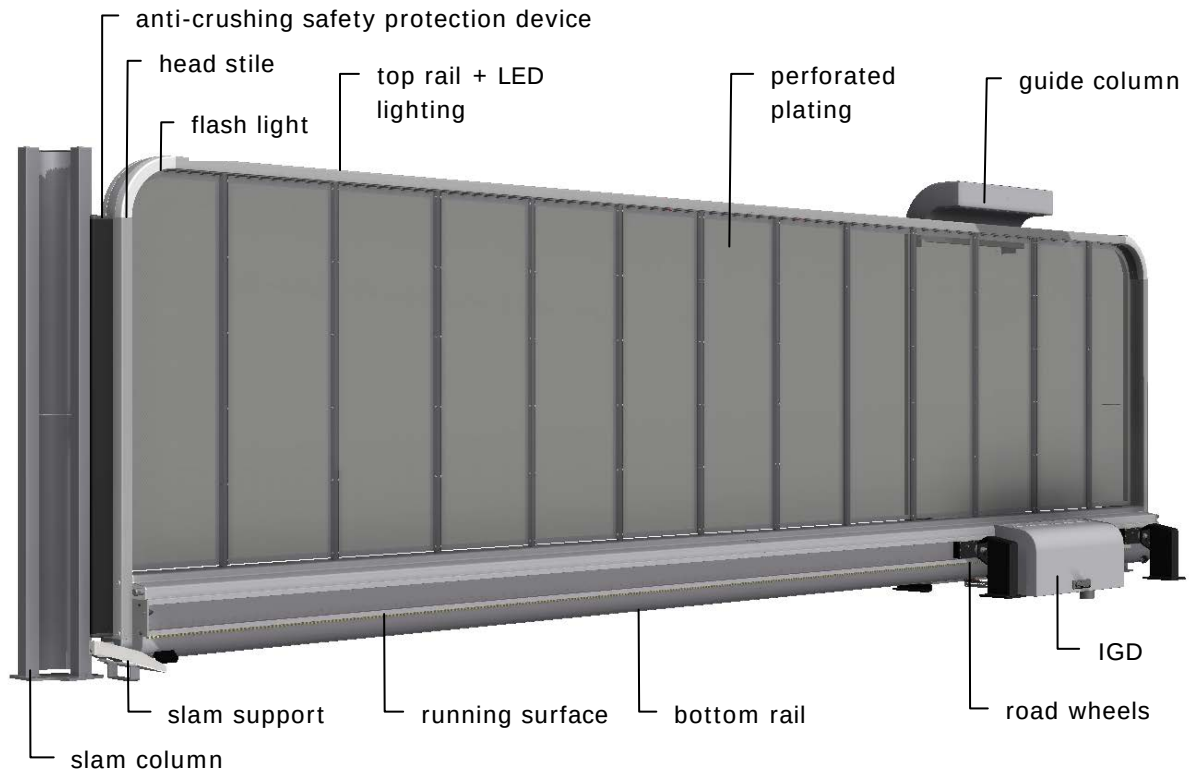


Illustration 3: iGate sliding gate terms

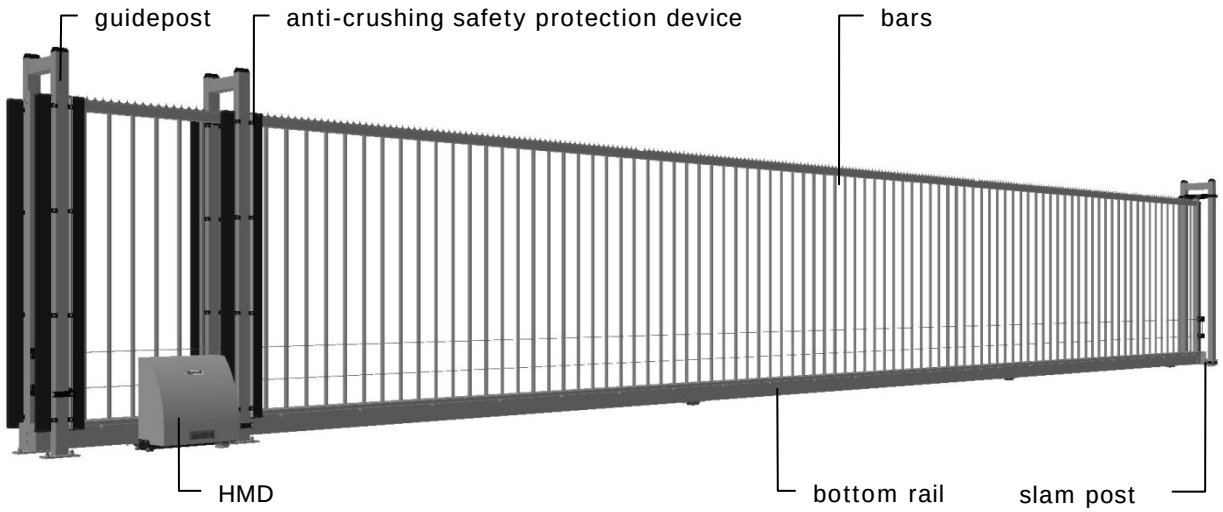


Illustration 4: SHB sliding gate terms

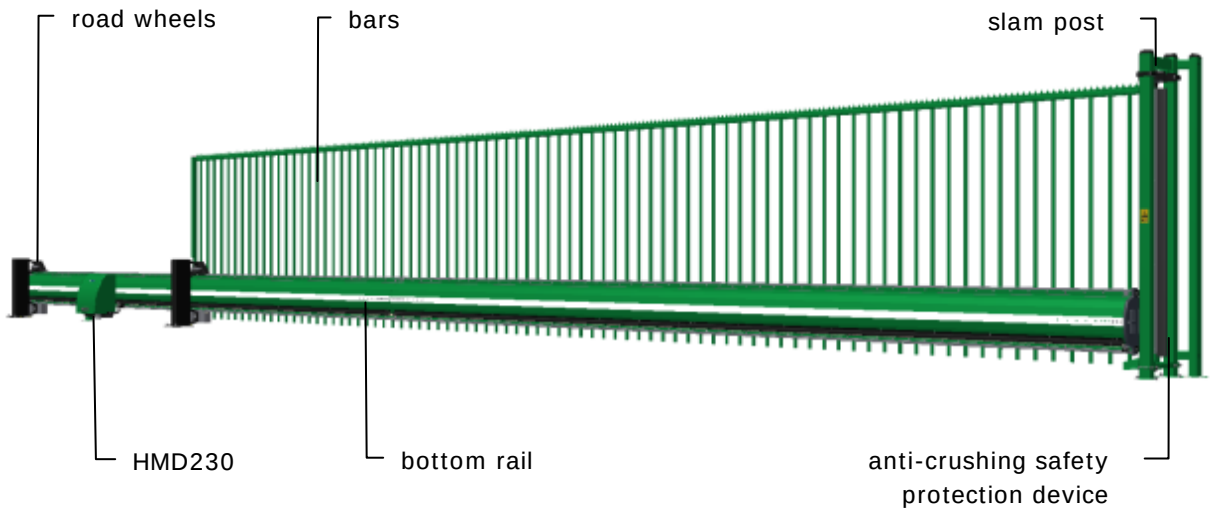


Illustration 5: Orion sliding gate terms

3 SAFETY

3.1 GENERAL SAFETY INSTRUCTIONS

- The operator must read the entire user manual before the gate is used for the first time. The instructions stated in the user manual must be observed and complied with. All other forms of use can cause unexpected hazards and are forbidden.
- It is forbidden to apply the drive unit to gates other than those stated in this manual, without Heras' permission.
- Applying a third-party drive unit and/or anti-crushing safety protection device may affect safety and will invalidate the CE mark.
- The gate must only be put into use if all safety facilities are in place and connected, and work properly.
- All faults which might present a source of danger to the user or to third persons must be eliminated immediately.
- All warnings and safety notices on the equipment must be in place and clearly legible at all times.
- The gate must be able to move freely without there being obstacles in the gate opening passage or anywhere else on the moving trajectory of the gate.
- Do not stick any objects through, over or under the gate which might block the gate. The gate running surface must always be free from snow, ice or dirt that might affect its sliding behavior. In the event of frost, check this before commissioning the gate. If the running surface is blocked, the gate will not move at all or will not complete its movement. An irregular running surface may cause damage to the drive and/or road wheels.
- Climbing the gate is strictly forbidden as people climbing the gate could be hurt if the gate is started unexpectedly.
- Closing the gate infill openings in any way, such as by means of banners, advertising signs etc, is not allowed as this may negatively affect the safe operation of the gate.
- All alterations or extensions to the gate must be carried out by qualified personnel using parts which the manufacturer has defined as suitable for such alterations or extensions. Any failure to comply with these instructions will be considered as non-compliant behavior and will invalidate the manufacturer's guarantee, as a result of which the risk entirely transfers to the user.
- Improper usage or servicing or ignoring the operating instructions can be a source of danger for persons, and/or result in material damage.
- If the meaning of any part of these installation and operating instructions is not clear, then please contact your supplier before you use the equipment.

3.2 SAFETY DURING INSTALLATION, DISASSEMBLY, USE AND MAINTENANCE

- When work is carried out on the gate, the power supply to the system must be switched off and it must be ensured that it cannot be switched on unexpectedly.
- Interrupt the power supply while cleaning the gate.
- Use the necessary personal safety equipment.
- Keep a safe distance from the moving gate. Warning icons to this effect have been installed in various locations.

- The gate has safety facilities such as anti-crushing safety protection devices.
- The anti-crushing safety protection devices serve as emergency facilities to immediately stop and reverse the gate movement. Using them as a regular gate stop feature is not allowed. Since the head stiles of the gate have anti-crushing safety protection devices that cannot cover their full height, there is still some risk of people getting trapped by the gate here.
- The gate is driven by means of a gear wheel. This is located under the beam and it is partly screened off by the drive unit cabinet. Beware of moving parts when carrying out maintenance under the gate at the drive unit cabinet.

- To move the gate manually, first switch the automatic fuse in the drive unit cabinet to “off” and make sure it cannot be switched on again (e.g. by locking the cabinet).
- Always lock the drive unit cabinet during use. The drive unit cabinet may only be opened by an electrical engineer.
- The EN 13241-1, EN 12453 and EN 12445 standards must be taken into consideration during installation. To achieve a good safety level, both the above standards and the national regulations must be taken into account in non-EC countries.

The Delta, uGate and iGate have highly tensioned cables fitted in the bottom rail. If these cables are damaged, they can snap with great force. This can lead to serious injury. Therefore, it is prohibited to drill into or grind these rails.

!! Only people trained by Heras are allowed to disassemble the bottom rail.

If the gate is damaged, always contact the supplier for an inspection.

4 INSTALLATION

The sliding gate and the gate drive and control unit must be installed, connected, set up and tuned by a fitter or an engineer who also connects and programs any accessories.
The gate control unit is adjusted to the options/accessories agreed with the user. The relevant options are laid down during hand-over.

Of course, you can add optional/accessories afterwards. Contact your supplier for this.

Gates are always delivered fully tested.

5 DELIVERY

5.1 HMD230

The HMD 230 is delivered as a complete drive and control unit, including gear wheel module 6.
By default, the half profile cylinder (according to DIN 18252) is not included for the Netherlands.

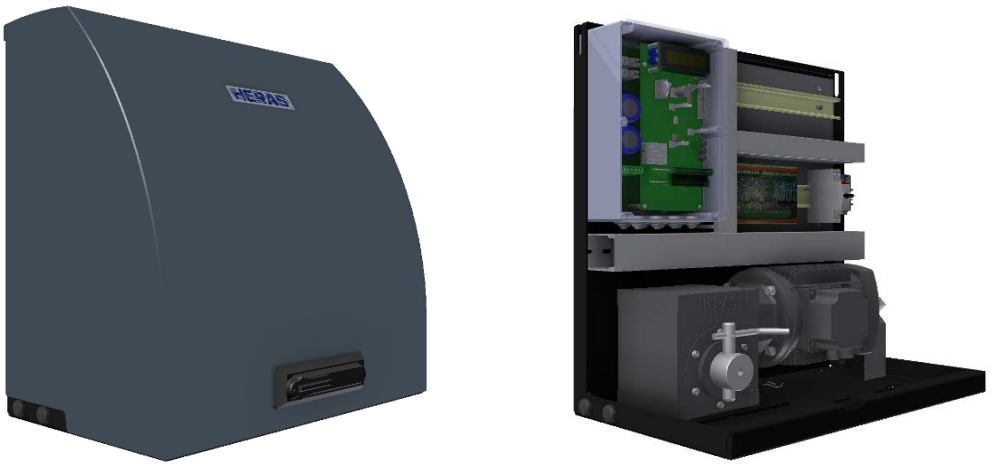


Illustration 6: HMD230 cover and cabinet

Illustration 7: Gear wheel

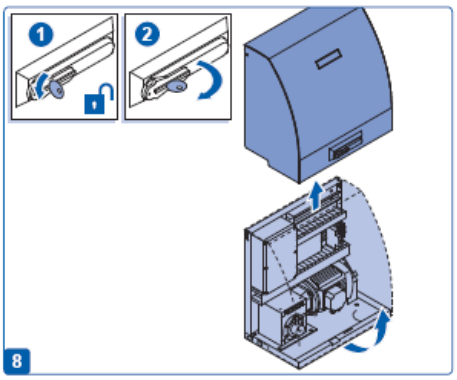
5.2 IGD

The IGD is delivered as a complete drive and control unit, including gear wheel module 6.
The drive is only delivered together with the iGate.
By default, the half profile cylinder (according to DIN 18252) is not included for the Netherlands.

Illustration 8: IGD cover and cabinet

6 OPENING/CLOSING THE HMD230/IGD

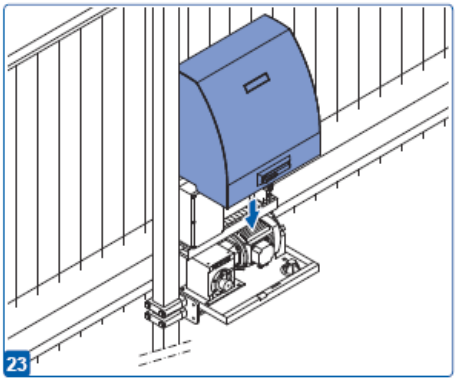
6.1 OPENING THE COVER



- open the lock
- turn the lever through a quarter rotation in a clockwise direction
- now rotate the cover through approx. 90º so that it can serve as a rain cover
- lift the cover away in a vertical movement

Illustration 9: opening the cover*

6.2 CLOSING THE COVER



- lower the tabs of the cover into the slot in the drive unit cabinet
- screw the cover into place to close it. Make sure that the sides of the cover properly fit over the drive unit cabinet
- close the lever and the lock

Illustration 10: closing the cover*

* The illustration shows the HMD230. The same principle applies to the IGD.

7 ACCESSORIES

The gate can be fitted with several electrical accessories.

7.1 ANTI-CRUSHING SAFETY PROTECTION DEVICES

Vertical switching strips have been fitted to the stationary and/or moving part or parts of the gate. They are not required for dead man's operation. These strips serve as safety components. The number of anti-crushing safety protection devices depends on the situation. See appendix A "LOCATIONS OF ANTI-CRUSHING SAFETY PROTECTION DEVICES"

Before the gate is moved, the control system checks the status of the anti-crushing safety protection devices. If one of the anti-crushing strips is faulty, the gate can only be opened and closed in dead man's operation.

In that case, consult a qualified engineer.

See the chapter “SERVICE /MAINTENANCE”

7.2 PHOTOCELLS (OPTIONAL)

They detect the gate passage opening. Photocells are located on the stationary part of the gate and usually take the form of a transmitter and a receiver. If there is an obstacle, e.g. a person between the transmitter and the receiver, the gate will not close. The photocell does not affect the opening of the gate.

7.3 LOOP DETECTION (OPTIONAL)

Safety loops in the pavement detect the gate passage opening. If there is an obstacle, e.g. a car on the loop, the gate will not close. Detection loops do not react to people.

7.4 TRAFFIC LIGHT (OPTIONAL)

Red/green signal lights that indicate the open/closed position statuses. People are only allowed to pass through the gate opening when the green light is on.

7.5 FLASHING LIGHT (OPTIONAL)

A flashing beacon to ensure extra attention before and while the gate is opening/closing.

7.6 RADIO-FREQUENCY RECEIVER (OPTIONAL)

Remote control to open, stop and close the gate.

See the chapter “RF REMOTE CONTROL”

7.7 LIGHTING (OPTIONAL)

Two kinds of lighting can be connected to the HMD230.

- Passage lighting to enhance the visibility of the passage opening. It can be lit before and/or while the gate is opening/closing.
- Outdoor lighting to illuminate the grounds. This is activated as soon as the gate is operated and it is switched off automatically after a certain pre-set time.

See the relevant chapter of the “HMD230 motor drive” user manual

7.8 LED LIGHTING IN TOP RAIL (OPTIONAL)

The iGate can optionally be fitted with LED lighting in the top rail.
This lighting serves as atmospheric lighting. It is only lit if the gate is closed.

See the chapter “LED LIGHTING OPERATION”

Accessories must be installed and programmed by an engineer.
This requires entering the right password.

8 COMMISSIONING

8.1 INTENDED USE

The gate is intended to control access to a specific plot, premises or site. The gate is intended for both industrial and private use.
The gate drive and control unit is adjusted to the options agreed with the user. The relevant options are laid down during hand-over.

Carefully read this user manual before operating the gate. You must always be familiar with the operating mode the gate is in.

8.2 OPERATING MODES

The control software is divided into separate function modules and is available to users in three possible operating modes:

- dead man's operation
- automatic mode
- emergency operation (only for the Netherlands)

8.2.1 DEAD MAN'S OPERATION

The gate motor drive can be operated in dead man's mode with limited comfort. In dead man's mode, the gate does not require anti-crushing safety protection devices. The gate will move as long as an OPEN or CLOSE key is pressed.

Dead man's operation is only permitted if the operator can see the entire gate system.
The drive and control unit must be fitted to the gate.

8.2.2 AUTOMATIC MODE

If the safety facilities have been installed completely, the motor drive will usually work in this automatic mode. The user can only use all motor drive functions in automatic mode. Total safety of the gate is guaranteed here by the activated safety facilities.
Opening or closing the gate can be initiated in automatic mode by means of the backplane and:

- two command keys (OPEN, CLOSE)
- one impulse input with toggle function (OPEN, STOP, CLOSE, STOP)
- 3x3 impulse inputs for OPEN, STOP and CLOSE commands
- 1 impulse input with PART OPEN function

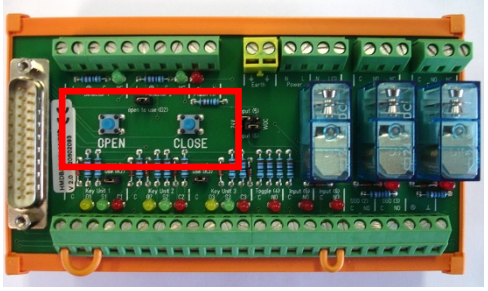


Illustration 11: Backplane

Every movement command causes the full action that has been selected to be performed (open gate, close gate etc.). Every action is stopped immediately by a stop command or a signal from the safety facilities.
Activating the anti-crushing safety protection devices causes the gate to immediately move in the opposite direction. If a photocell is interrupted while the gate is closing, this will cause the gate to be opened as far as the point where the closing movement started (OPEN or PARTLY OPEN).
A movement command for the opposite direction will gradually decelerate the gate and then cause it to move in opposite direction.

Automatic mode if the gate has not been installed fully yet:

If the gate has not been fully installed yet, or if motor drive programming has not been completed yet, the motor drive will work in a special safety mode (e.g.: the end positions of the gate have not been defined yet). The gate will then only run at dead man's mode speed. Only after the OPEN and CLOSED end positions have been set and after a measuring run at dead man's mode speed has been performed, will the system switch over to the automatic mode speed (depending on the type, HMD230/IGD, this will be 0.25 m/s or 0.5 m/s).

If the power supply to the drive has been interrupted, the gate will also only run at dead man's mode speed until the first time when an end position has been reached.

8.2.3 EMERGENCY OPERATION

The gate motor drive can switch over automatically from automatic mode to emergency operation. This automatic switch-over can only take place after a "Function emergency situation" input signal which is generated by a fire emergency room. Only the one movement (OPEN or CLOSED, depending on programming) that is requested will be performed at dead man's mode speed in this operating mode. The safety facilities are also activated during this movement. The movement can be interrupted by pressing and holding the STOP key or by a safety device being triggered. When this interruption no longer applies, the gate will immediately continue to move. At the end of the emergency movement and after the signal ("Function emergency situation") has been reset, the software of the motor drive will initiate a restart to enable safe switch-over to automatic mode.

Any static active OPEN or PARTLY OPEN signals are ignored by the motor drive in this operating mode. Just as the command triggered by an OPEN or CLOSE command key being pressed cannot be performed when a program is started, a static active "Emergency situation" input signal will also not be carried out when switching on the motor drive.

8.3 AUTOMATICALLY CHANGING OPERATING MODES

The gate motor drive can switch over from automatic mode to emergency operation if it has been programmed to allow this and the HMD230/IGD recognizes a corresponding "emergency situation" signal from a fire emergency room. This operating mode will then be performed until the motor drive is restarted.
If electronic safety facilities on the gate are out of operation (e.g. faulty photocell), the motor drive can automatically switch over from automatic mode to dead man's operation. This automatic switch-over will take place only for the individual motor movement that has been started and only if the key provided for dead man's operation is pressed. After this, the motor drive will switch over to automatic mode again, but if a new fault occurs or if the fault is not remedied, the system can switch over to dead man's operation again for the next movement.

Changing between operating modes is possible in the following directions:

- Automatic mode → Dead man's operation mode
- Dead man's mode → Automatic mode (if safety has been restored)
- Automatic mode → Emergency operation
- Emergency operation → Automatic mode (if no emergency situation signal is active anymore and after restarting the control software)

9 CONTROL UNIT AND DISPLAY READINGS

9.1 TOTAL VIEW OF HMD230 DRIVE UNIT

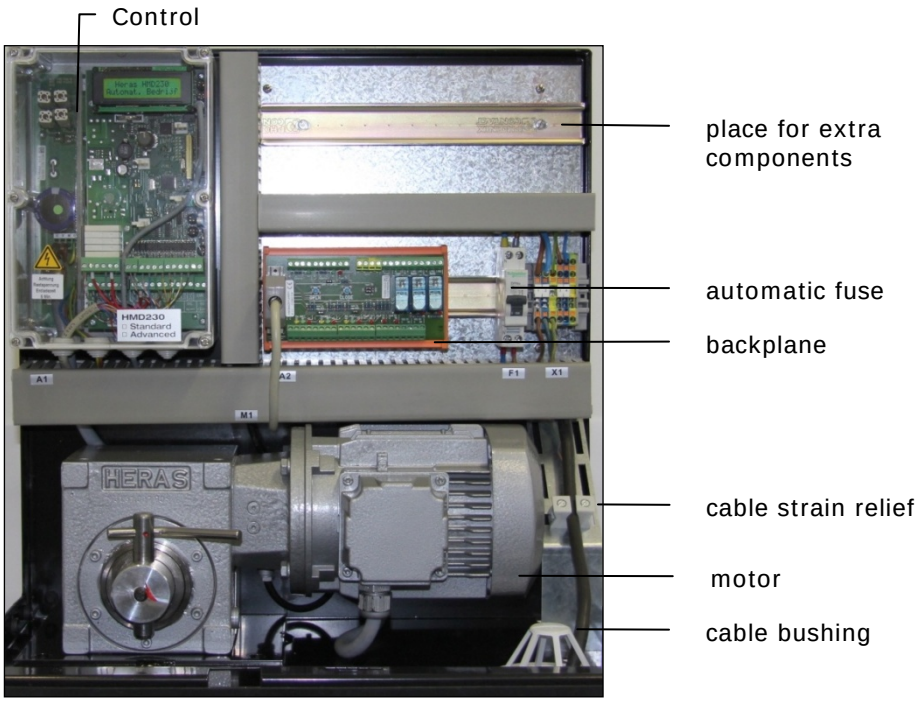


Illustration 12: view of HMD230 drive unit

9.2 TOTAL VIEW OF IGD DRIVE UNIT

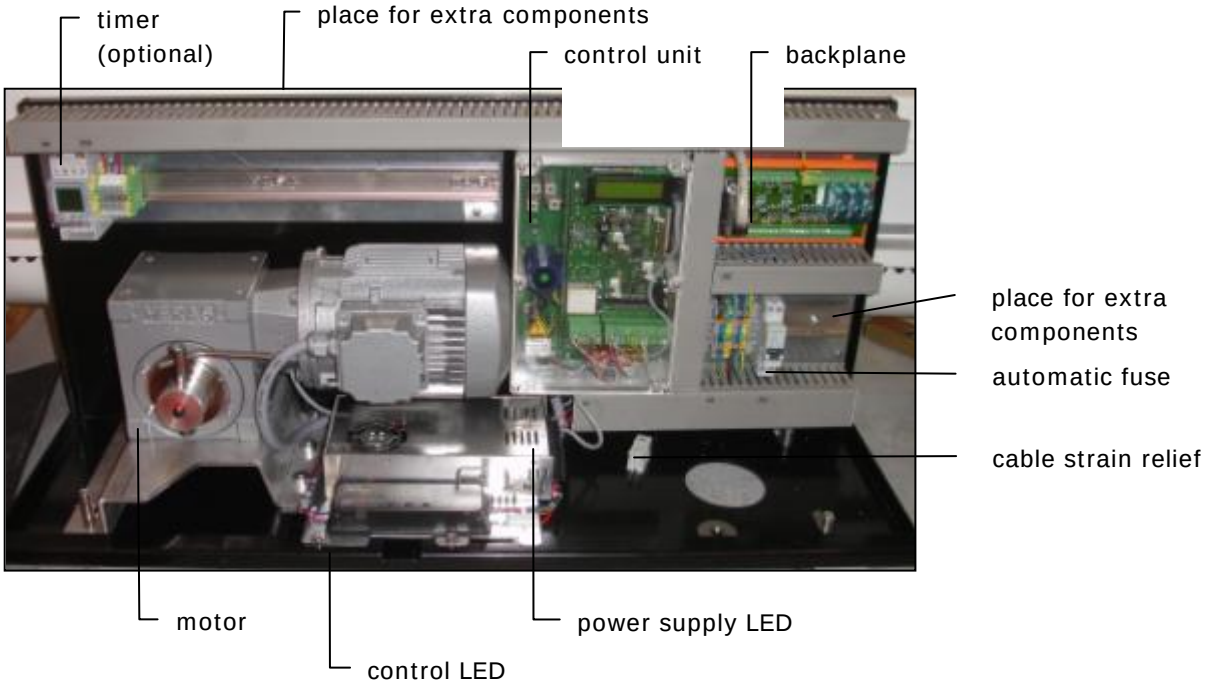


Illustration 13: view of IGD drive unit

9.3 VIEW OF CONTROL UNIT

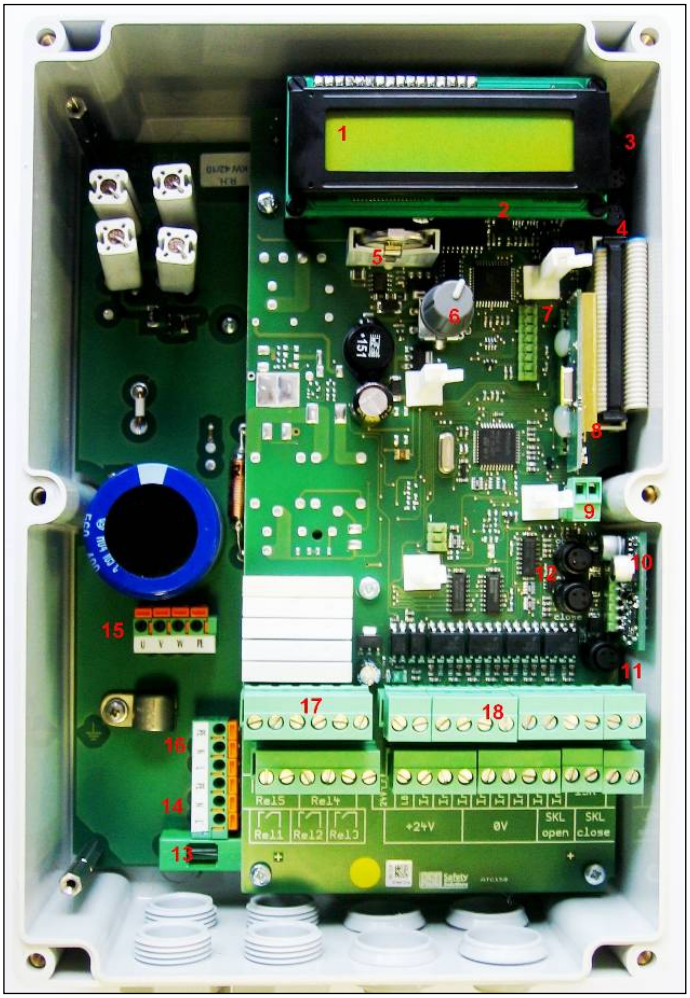


Illustration 14: view of control unit

Designations of the numbered parts:

1. LCD text display
2. 7-segment display (under the LCD display)
3. Serial interface
4. Input for incremental encoder
5. Battery for real-time clock
6. Twist and selector switch for making settings
7. Communication module slot (optional)
8. External radio-frequency receiver (optional)
9. Connection for external antenna
10. ISK7 ATC
11. ISK connection
12. SKL connections for both running directions
13. Main fuse (230V/6.3A slow-acting)
14. Power supply loop connection 230VAC/50Hz
15. Motor connection
16. Power supply input 230VAC/50Hz
17. Relay outputs
18. Safety and control inputs

9.4 TWIST AND SELECTOR SWITCH

Information is inputted in the integrated software of the HMD230 by means of a modern control unit that consists of one switch/button: the twist and selector switch. Visual feedback from the program to the operator is provided through the LCD screen.
The twist and selector switch, located under the battery for the clock, enables the information displayed by the HMD230 to be influenced.

Illustration 15: Twist and selector switch

The twist and selector switch is operated as follows:

Press briefly:
- confirm
- go back one step in the menu

Press and hold (>2s):
- access the main menu
- exit the menu

Turn*:
- scroll through menus
- change parameters

Fast turn*:
- scroll through menus fast
- change parameters fast

* Turn clockwise (CW)
Turn counter-clockwise (CCW)

9.5 LCD SCREEN

An LCD screen with two lines of 16 characters each has been provided to display more motor drive control information. This shows the active operating mode of the motor drive or the movement status of the motor in legible text.
The background of the display is lit for as long as the twist and selector switch is operated. 20 seconds after the last entry is made, the light is switched off. It can be switched on again at any moment by turning the selector switch. The display is also properly legible in direct sunlight.

Illustration 16: Information on the LCD screen

After resetting the software or after switching on the power, the display light will blink for a few seconds. This indicates that the processor is booting; it is not a fault condition.

If, prior to a reset, the gate is in the OPEN or PARTIALLY OPEN position and “Automatic closing” is programmed, the following is displayed on the display:

"Auto.Closing ON"
"-------"

This indicates that the automatic timer must be restarted by using keys. Without this command, the drive, after the control system has been switched on (reset), will not automatically operate.

9.6 DISPLAY OF OPERATING MODES

The following options are available as regards displaying operating modes on the LCD screen:

Display reading	Meaning
HMD230 Pe:x.xx	Start indication of the periphery controller (wait for information from the motor controller)
Init/ClearEEPROM WAIT: 120 sec.	Clear and initialize the parameter memory
Load Parameter	Request to load/save parameters
Heras HMD230 Automatic mode	Automatic operating mode, the gate is now in the idle position
Automatic mode Open	Automatic mode; gate opening active
Automatic mode Close	Automatic mode; gate closing active
Automatic mode Stop immediately	Automatic mode; STOP active
Automatic mode Close: xx	Automatic mode; the gate closes automatically after XX seconds
Heras HMD230 Dead man's operation	Idle position for dead man's operation
Dead man's operation Open	Open gate in dead man's operation mode active
Dead man's operation Close	Close gate in dead man's operation mode active
Dead man's operation Stop immediately	Dead man's operation STOP active
Heras HMD230 Emergency operation	Idle position for emergency operation
Emergency operation Open	Emergency operation; gate opening active
Emergency operation Close	Emergency operation; gate closing active
Emergency operation Stop immediately	Emergency operation; STOP active

9.7 DATE AND TIME DISPLAY

You can permanently display the current time on the screen from the operating mode display by briefly pressing the twist and selector switch once. The clock date is shown in the top line, using the "*year.month.day*" format. The lower line shows the time in the 24-hour "*hours:minutes:seconds*" format.
As standard, the control system has an automatic switch-over to summer or winter time. This can also be deactivated.

See the chapter on “Integrated real-time clock” in the HMD230 motor drive user manual.

The selected operating mode is displayed again if you briefly press the twist and selector switch or 20 seconds after operating this switch.

Illustration 17: Date and time display

9.8 SELECTING THE MENU SYSTEM

The HMD230 menu system is accessed by pressing the twist and selector switch for approx. 2 seconds while the operating mode is displayed. The display then shows the text "Main menu".

Illustration 18: Display of main menu on the LCD screen

Turn the selector switch to select the individual menu options and then press the switch to activate the selected option. The first menu option in a menu level always brings you back one level, "Back in menu". The "Exit main menu" option in the main menu closes the menu display and restarts the control software.

9.9 MENU DISPLAY INSTRUCTIONS

The menu system of the HMD230 can only be called up if the display has been fitted. You can use the twist and selector switch to select submenus. This offers the following possibilities:
Menu:

1. Identification; displays the drive unit version.
2. Service menu; access using a password for authorized users to activate extra functions.
3. Diagnostics; displays the states of the drive unit and the connected sensors.
4. Settings; settings parameters to control the drive unit and gate behavior.
5. Clock/Calendar; date/time and calendar functions.
6. RF remote control; remote control settings.

See the chapter on "PARAMETER SETTINGS"

9.10 MENU STRUCTURE AND TEXTS THAT ARE DISPLAYED

Selecting the menu brings you to the main menu level where you can choose from a number of submenus. The first menu option "Exit menu" lets you exit the main menu again after which a restart or reset brings you back in the active operating mode of the motor drive.

How many submenu levels are available depends on the password that is entered. First-level submenus can lead to second-level submenus.

The gate movement cannot be started automatically when the main menu is active.

9.11 BACKPLANE

Several accessories such as photocells, lighting etc. can be connected to the backplane.
The backplane has several control LEDs. The system is OK if all the green LEDs (detector 1, detector 2, Key units 1 to 3) light up while the gate is not active. If the gate gets an OPEN command, one of the orange LEDs (for the active input) will light up. If the gate gets a CLOSE command, one of the red LEDs (for the active input) will light up.
The "OPEN" and "CLOSE" keys are used to open or close the gate.

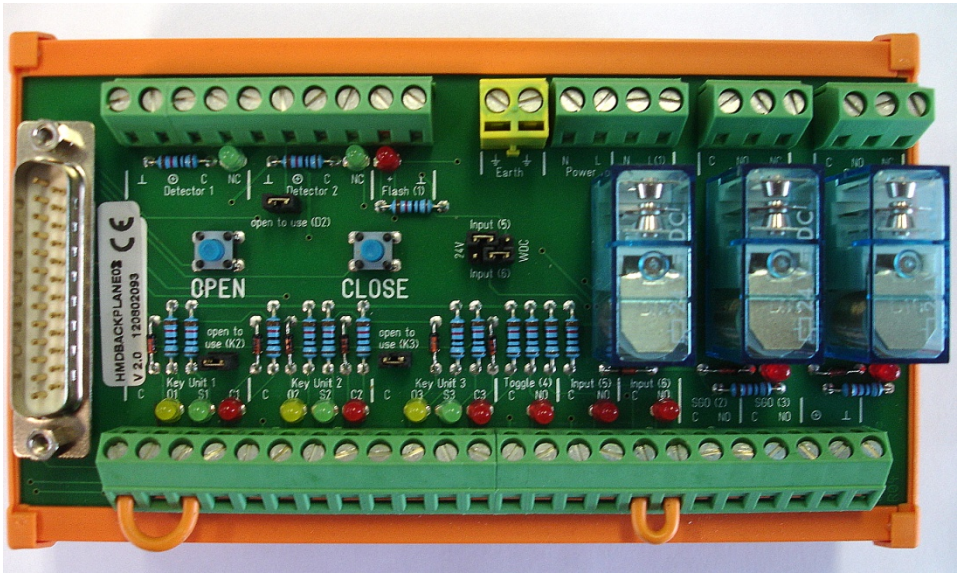


Illustration 19: backplane

10 PARAMETER SETTINGS

Different parameters can be set in the drive unit's control system. The user can view several parameters in the control system. Not all parameters are accessible to the user.

See the chapter on “Parameter settings” in the HMD230 motor drive installation manual.

10.1 MENU 1 - IDENTIFICATION

10.1.1 Menu 1.1: Master version

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
1	 press and hold	Main Menu 1 Identification	Activate the main menu.
1.1	 press briefly	Identification 1 Master Version	
	 press briefly	Master Version FU:1.02.01.1	The figures and the combination of numbers shown identify the software version used.
	 press and hold press briefly	Main Menu QUIT Menu	Exit the main menu. The control software is restarted.

10.1.2 Menu 1.2: Gate profile

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	

1	 press and hold	Main Menu 1 Identification	Activate the main menu.
1.2	 press briefly turn CW	Identification 2 Gate Type	
	 press briefly	Gate Type Heras Delta FR01	The text shown is the designation of the gate for which the drive, the software and the parameters stored have been defined.
	 press and hold press briefly	Main Menu QUIT Menu	Exit the main menu. The control software is restarted.

10.1.3 Menu 1.3: Serial number

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
1	 press and hold	Main Menu 1 Identification	Activate the main menu.
1.3	 press briefly	Identification 3 Serialnumber	
	 press briefly	Serialnumber 000001	
	 press and hold press briefly	Main Menu QUIT Menu	Exit the main menu. The control software is restarted.

10.2 MENU 2 - SERVICE MENU

The information in these menus is only relevant to authorized people.

10.2.1 Menu 2.1: Password entry

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
2	 press and hold turn CW	Main Menu 2 Service Menu	Activate the main menu.
2.1	 press briefly	Service Menu 1 Password Input	A password can be entered here. Depending on the password, the fitter or service engineer can access several parameters. **This does not apply to the user.**
	 press and hold press briefly	Main Menu QUIT Menu	Exit the main menu. The control software is restarted.

10.3 MENU 3 - DIAGNOSIS

Several gate parameters can be set and viewed in this menu.

10.3.1 Menu 3.1: Gate status

The Gate status menu summarizes all information that represents the current condition of the motor drive in combination with the gate. It can be reached as follows:

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
3	 press and hold turn CW	Main Menu 3 Diagnosis	Activate the main menu.

3.1	 press briefly	Diagnosis 1 Gate State	
3.1.1	 press briefly	Gate State 1 Gate Situation	
	 press briefly	Gate State STOPPED	The current status of the gate which has been recognized by the software is shown. It can be OPENED / CLOSED / KEEP PART OPEN / STOPPED.
3.1.2	 press briefly turn CW	Gate State 2 Input: 8765432	
	 press briefly	Input: 87654321 Value: 00000001	The logical values on the input terminals of the drive are displayed. The sequence matches inputs In8 to In1. An active input is indicated as "1". In the example only input In2 (stop function; break contact) is connected to 24V.
3.1.3	 press briefly turn CW	Gate State 3 Output 54321	
	 press briefly	Output 54321 Value: 00000	
3.1.4	 press briefly turn CW	Gate State 4 Completed Cycl	
	 press briefly	Completed Cycles 49 / 49	The status of the output relays is displayed together with the corresponding logical values. An energized relay is indicated as "1". The sequence matches outputs Rel5 to Rel1. The relay Rel2 is energized in the example (status display Gate open).

3.1.5	 press briefly turn CW	Gate State 5 Motor runtime	
	 press briefly	Motor runtime 0 / 0 h	The total motor running time and the run time since the last maintenance are displayed as hours.
3.1.6	 press briefly turn CW	Gate State 6 Last Service	
	 press briefly	Last Service 2012.01.31/00Mon	The date of the last maintenance is displayed, as well as the time that has elapsed which is indicated as months
	 press and hold press briefly	Main Menu QUIT Menu	Exit the main menu. The control software is restarted.

To make sure that the gate is maintained at regular intervals, a maintenance interval can be defined depending on the number of gate movements.
If the maintenance reminder is active (number of movement cycles or maintenance interval reached), the display shows the "< Maintenance > necessary" message.

10.3.2 Menu 3.2: Sensor Status

Menu: The statuses of the sensors can be displayed via "Diagnosis", "Sensor Status".
Turning the switch displays the individual sensors one by one. The sensor from the parameter list is always listed in the first line. The second line shows the current sensor state. Here a "1" stands for an active sensor and a "0" for an inactive sensor. This information is constantly updated to facilitate trouble-shooting. The operating mode is shown again 20 seconds after operating the twist switch.

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	

3	 press and hold turn CW	Main Menu 3 Diagnosis	Activate the main menu.
3.2	 press briefly turn CW	Diagnosis 2 Sensor State	
	 press briefly turn CCW	Start of Sensors	Turn the selector switch in a counter-clockwise direction to access the first entry in the sensor table
	 turn CW	LimitSwitchOPEN Value: 0 => 0	OPEN limit switch status (optional)
	 turn CW	LimitSwitchCLOSE Value: 0 => 0	CLOSED limit switch status (optional)
	 turn CW	PartOPEN Switch Value: 0 => 0	Part OPEN switch status (optional).
	 turn CW	Incr. Encoder Value: 2147481 81	Current value of the incremental encoder
	 turn CW	Stat.Edge OPEN Value: 0 => 0	Stationary anti-crushing safety protection device for the OPEN direction of the gate
	 turn CW	Stat.Edge CLOSE Value: 00 => 0000	Stationary anti-crushing safety protection device for the CLOSING direction of the gate
	 turn CW	Mov.Edge OPEN Value: 0 => 0	Moving anti-crushing safety protection device for the OPEN direction (ISK)
	 turn CW	Mov.Edge CLOSE Value: 0 => 0	Moving anti-crushing safety protection device for the CLOSING direction (ISK)

	 turn CW	Lightbarrier Value: 0 => 0	Photocell status
	 Turn CW	Loopdetect. A Value: 0 => 0	Status of traffic loop A
	 turn CW	Loopdetect. B Value: 0 => 0	Status of traffic loop B
	 turn CW	End of Sensors	Turn the selector switch in a clockwise direction to access the last entry in the sensor table
	 press and hold press briefly	Main Menu QUIT Menu	Exit the main menu. The control software is restarted.

10.4 MENU 4 - SETTINGS

Several settings can be programmed here.

10.4.1 Menu 4.1: Timer settings

10.4.1.1 Menu 4.1.1: Set lighting (coming home - leaving home)

The HMD230 can drive a lamp, e.g. to automatically light the zone around the gate when the gate is moving. The lamp must be installed by an engineer (password required).

 See the chapter on “Parameter settings” in the HMD230 motor drive installation manual.

The connected lighting (max. 230 VAC /3A) is activated by the drive unit as soon as a movement command is detected. After the motor is switched off, the lamp will continue to be lit for the time as set (1 to 1800 seconds). This parameter "Lighting (s)" can be set to the user's preference.

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
4	 press and hold turn CW	Main Menu 4 Settings	Activate the main menu.

4.1	 press briefly	Settings 1 Set Timer	
4.1.1	 press briefly	Set Timer 1 Lighting (s)	
	 press briefly turn CW	Lighting (s) Value: 1800	Set the required time in seconds. (1 to 1800 seconds)
	 press briefly	Set Timer 1 Lighting (s)	
	 press and hold press briefly	Main Menu QUIT Menu	Exit the main menu. The control software is restarted.

10.4.1.2 Menu 4.1.2: Keep open timer

Certain gate movements can be started automatically by pre-defined timer settings. These timer settings per menu must be displayed here.
The motor drive can close the gate automatically after a time as set (1 to 999 seconds) has elapsed after the OPEN end position was reached. This function is active only in automatic mode and after the OPEN end position has been reached. The timer is off if the value equals [0].

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
4	 press and hold turn CW	Main Menu 4 Settings	Activate the main menu.
4.1	 press briefly	Settings 1 Set Timer	
4.1.2	 press briefly turn CW	Set Timer 2 TMR Keep Open	Set the required time in seconds. (1 to 999 seconds)

	 press briefly turn CW	TMR Keep Open Value: 999	
	 press briefly	Set Timer 2 TMR Keep Open	
	 press and hold press briefly	Main Menu QUIT Menu	Exit the main menu. The control software is restarted.

Example: If the "Keep-open TMR" parameter is set at value 5, a 5-second timer is started when the gate reaches its OPEN end position in automatic mode. This timer causes the gate to be closed automatically again after 5 seconds. If another OPEN command is given or an installed photocell is activated during this time, the timer will start to count down again. This also applies to loop detection and anti-crushing safety protection devices.

10.4.1.3 Menu 4.1.3: Keep Part OPEN timer

The motor drive can close the gate automatically after a time as set (1 to 255 seconds) has elapsed after the Part OPEN position was reached. This function is active only in automatic mode and after the Part OPEN position has been reached.

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
4	 press and hold turn CW	Main Menu 4 Settings	Activate the main menu.
4.1	 press briefly	Settings 1 Set Timer	
4.1.3	 press briefly turn CW	Set Timer 3 TMR KeepPartOp	
	 press briefly	TMR KeepPartOpen Value: 255	Set the required time in seconds. (1- 255 seconds)

	 press briefly	Set Timer 3 TMR Keep Part Op	
	 press and hold press briefly	Main Menu QUIT Menu	Exit the main menu. The control software is restarted.

Example: If the "Keep Part OPEN TMR" parameter is set at value 5, a 5-second timer is started when the gate reaches its Part OPEN position in automatic mode. This timer causes the gate to be closed automatically again after 5 seconds. If another Part OPEN command is given or there is a static Part OPEN command during this time, the timer will start to count down again. This also applies to loop detection and anti-crushing safety protection devices.

10.4.2 Menu 4.2: End positions

10.4.2.1 Menu 4.2.1: Closed position for installing

The motor of the HMD drive has an incremental encoder module. No further limit switches are required on the gate. The OPEN and CLOSED end positions of the gate are laid down when installing and setting the gate and the drive. The user can only change the CLOSED end position.

Possible causes of a position no longer being correct are:

- The gate motor was disengaged and was not in exactly the same position when it was re-engaged.
- In rare exceptions, when activating an anti-crushing safety protection device the gear wheel may slip over a tooth of the toothed bar .

Attention: If the motor drive has been disengaged and the gate has been moved by hand, the gate position will no longer be defined in the software. This can be remedied in two ways:

1. *Move the gate so that the slot of the marker plate is aligned to the drive unit cabinet (see the chapter on the "Marker plate"). Then re-engage the motor. The gate is now in its original position.*
2. *Manually move the gate to its CLOSED position, re-engage the motor and set the position again.*

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
4	 press and hold turn CW	Main Menu 4 Settings	Activate the main menu.

4.2	press briefly turn CW	Settings 2 Gate Limits	
4.2.1	press briefly	Gate Limits 1 Set CLOSE Lim.	The end position has been set again. The control software is restarted.

Alternative method:

- *Simultaneously Press and hold the OPEN/CLOSE keys on the backplane for 8 seconds; applies to versions 1.02 and up.*

Attention: engaging the motor when the gate is in the wrong position may cause serious damage. If in doubt, contact the fitter!

See the chapter on "DISENGAGING THE MOTOR"

10.4.3 Marker plate

In CLOSED position (gate closed) the slot of the marker plate must be aligned to the side of the drive unit. If this is not the case, then manually move the gate to its CLOSED position.

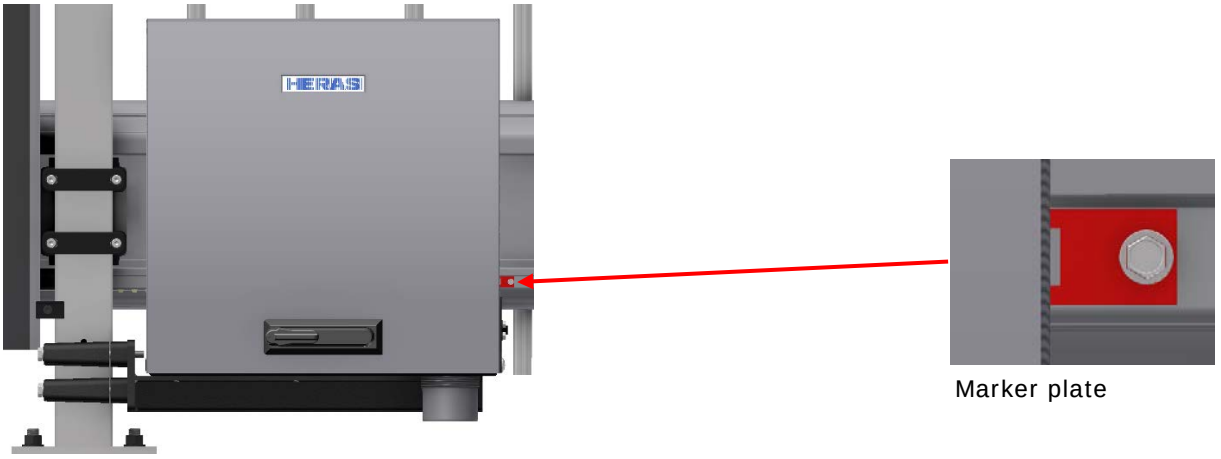


Illustration 20: Marker plate on a Delta

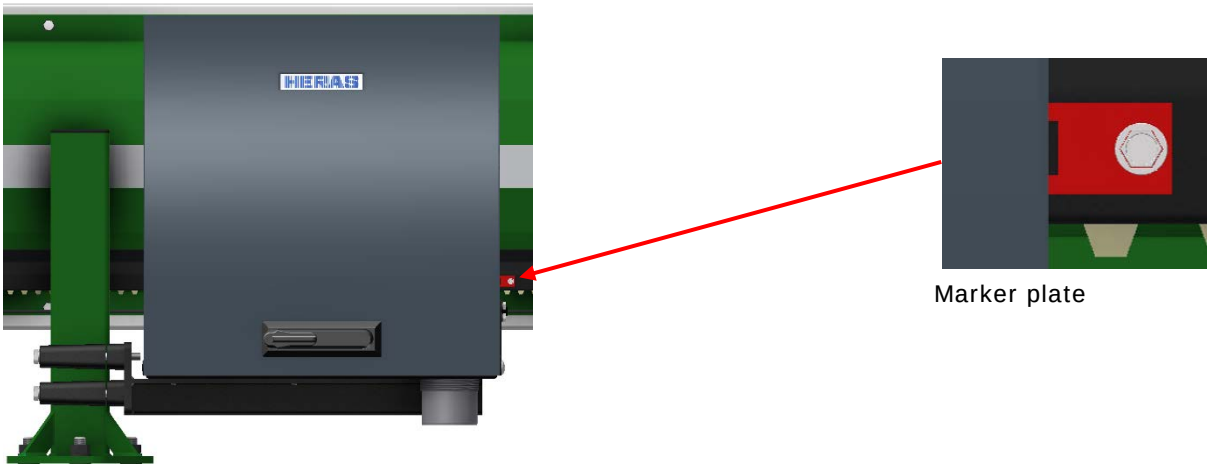


Illustration 21: Marker plate on a uGate and an Orion

Illustration 22: Marker plate on iGate

Attention: If there is a power failure while the gate is being moved, it may no longer be possible to save the gate position. This is indicated by the fact that the gate can no longer be moved in automatic mode. You must then also manually move the gate to its CLOSED position and set the position again.

10.5 MENU 5 - CLOCK / CALENDAR

The clock module integrated in the HMD230 can be used to move the gate automatically, on the basis of an exact time schedule.

If the power supply to the motor drive is switched off, the date and time are kept up to date for a couple of weeks. Automatic switch-over to summer or winter time take place, according to EU rules. As a result, the clock is put forward one hour at 2 a.m. CET on the last Sunday of March and it is put back one hour at 3 a.m. CET on the last Sunday of October.

10.5.1 Menu 5.1: Clock display

Press the selector switch once to display the current date and time for 20 seconds. You can access this menu option as follows:

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
5	 press and hold turn CW	Main Menu 5 Clock/Calendar	Activate the main menu.
5.1	 press briefly	Clock/Calendar 1 Display Clock	
	 press briefly	Date: 2012.04.01 Time: 16:34:45	The current date and time are displayed.
	 press and hold press briefly	Main Menu QUIT Menu	Exit the main menu. The control software is restarted.

10.5.2 Menu 5.2: Setting date / time

The internal clock of the HMD230 has been factory-set. If this time ever differs from the actual current time, the clock can be set as follows:

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
5	 press and hold turn CW	Main Menu 5 Clock/Calendar	Activate the main menu.
5.2	 press briefly turn CW	Clock/Calendar 2 Set Date/Time	

	press briefly	Set Date/Time Year	
	turning press briefly	Year Value: 2012	Set the last two digits of the current year.
	turn CW press briefly	Set Date/Time Month	
	turning press briefly	Month Value: 04	Set the current month.
	turn CW press briefly	Set Date/Time Day	
	turning press briefly	Day Value: 01	Set the current day.
	turn CW press briefly	Set Date/Time Hour	
	turning press briefly	Hour Value: 16	Set the current hour.
	turn CW press briefly	Set Date/Time Minute	
	turning press briefly	Minute Value: 34	Set the current minutes.
	turn CW press briefly	Set Date/Time Second	

	 turning press briefly	Second Value: 45	
	 turn CW press briefly	Set Date/Time Daylight Saving	
	 turning press briefly	Daylight Saving Value: 1	Set to "1" (default) for automatic summer time switch-over according to the EU rules.
	 turning press briefly	Set Date/Time Now DaylightSav?	
	 turning	Now DaylightSav? Value: 1	Set "0" in winter; and set to "1" if the summer time has started
	 press and hold press briefly	Main Menu QUIT Menu	Exit the main menu. The control software is restarted.

10.5.3 Calendar functions of the motor drive

In automatic mode, the calendar functions of the master drive can be used to influence the gate behavior in different ways at specific times. Only available for profiles 3+4.
Some commands are available for gate actions. They can be called up at carefully defined times. The times and commands can be repeated for the seven week days, with a weekly cycle.

However, other combinations of times and commands of a higher priority (e.g. for holidays) can be planned in a yearly calendar to suppress this weekly recurring time process. This enables the automatic gate behavior to be defined individually in advance by making the relevant calendar entries.

Information: The calendar function in the motor drive control system is a paid option which must be enabled by the engineer once and is then available to the customer. Otherwise, the calendars will not be visible.

Note: When programming, beware that "Automatic closing" is the default gate mode. The function to be programmed forms an exception to this behavior. Every function must have a start time and an end time.

Possible calendar functions (actions that the motor drive can perform via a calendar)

Functions	**Action**
No action	No gate action (hold position)
Keep open position	Keep the gate statically in OPEN position (The gate cannot be closed)
Leave open pos.	Leave the static OPEN position of the gate (The gate can close again)
Auto.close.OFF	Deactivate the automatic closing function (The keep-open time is ignored)
Auto.close.ON	Activate the automatic closing function (Activate the keep-open time again)
Keep Part Open ON	Activate the keep-open function for the Part OPEN position (The gate will move only between the Part OPEN and OPEN positions)
Keep Part Open OFF	Deactivate the Keep Part OPEN function (The gate can close again)
OPEN gate	The gate moves to the OPEN position.
CLOSE gate	The gate moves to the OPEN position (if possible)
Gate Part OPEN	The gate moves to the Part OPEN position (if possible)

10.5.4 Menu 5.3: Activating the calendar

The following setting can be used to activate or deactivate the total calendar functions without you having to change the specific individual entries.

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
5	 press and hold turn CW	Main Menu 5 Clock/Calendar	Activate the main menu.
5.3	 press briefly turn CW	Clock/Calendar 3 Cal.Activation	
	 press briefly turn	Cal.Activation Value: 1	0 = all calendar functions off. 1 = calendar on.
	 press and hold press briefly	Main Menu QUIT Menu	Exit the main menu. The control software is restarted

10.5.5 Menu 5.4: Displaying the weekly calendar

A maximum of 20 different switching times and the corresponding functions (gate actions) can be entered in the weekly calendar for every individual week day (Sunday through Saturday).
Only the times entered are shown in the display mode for the weekly calendar. The empty memory positions are skipped. The weekly calendar can be displayed as follows:

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
5	 press and hold turn CW	Main Menu 5 Clock/Calendar	Activate the main menu.
5.4	 press briefly turn CW	Clock/Calendar 4 Disp.Week Cal.	
	 press briefly turn	Monday 12:30 Hold Part.OPEN	Shows the switching time on the right. Turn the selector switch to browse through all entries in the calendar
	 turn CW	Disp.Week Cal. END	Shows the end of all actions entered. Or is displayed if no week clock has been set.
	 press and hold press briefly	Main Menu QUIT Menu	Exit the main menu. The control software is restarted.

10.5.6 Menu 5.5: Changing the weekly calendar

10.5.6.1 Menu 5.5.1: Week day setting

Proceed as follows to add new entries to the weekly calendar or change existing entries:

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	

5	 press and hold turn CW	Main Menu 5 Clock/Calendar	Activate the main menu.
5.5	 press briefly turn CW	Clock/Calendar 5 Edit Week Cal.	
5.5.1	 press briefly	Edit Week Cal. 1 Set Weekdays	
	 press briefly	Sunday	A free memory position for a week day is displayed.
	 turn CW	Monday	Select the week day.
	 press briefly	Monday 00:	Call up the entry mode for the hours.
	 turning	Monday 12:	Select the hour for the switching time.
	 press briefly	Monday 12:00	Call up the entry mode for the minutes.
	 turning	Monday 12:30	
	 press briefly	Monday 12:30 No Action	
	 turn CW	Monday 12:30 Hold Part.OPEN	Select the appropriate switching function.

	press briefly	Monday	Press the selector switch to insert the full entry into the week day on the calendar, sorted by time. The next free memory location of the calendar is shown.
	turn CW	Set Weekdays END	The end of the weekly calendar.
	press and hold press briefly	Main Menu QUIT Menu	Exit the main menu. The control software is restarted

Programming several actions at the same time is not possible.

10.5.6.2 Menu 5.5.1: Copying a day in the weekly calendar

All entries for a week day can be copied to another week day on the weekly calendar, provided that no entries have been made so far in the week day which the data is to be copied to.

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
5	press and hold turn CW	Main Menu 5 Clock/Calendar	Activate the main menu.
5.5	press briefly turn CW	Clock/Calendar 5 Edit Week Cal.	
5.5.1	press briefly	Edit Week Cal. 1 Set Weekdays	
	press briefly turn	Tuesday	Select the destination day to which the entry is to be copied.
	press briefly	Tuesday 00:	Call up the entry mode for hours.

	 turn CCW	Tuesday Copy of: Monday	Select the day from which the entry is to be copied.
	 press briefly	Tuesday Done	Copy entry (here from Monday to Tuesday).
	 press and hold	Set Weekdays END	The end of the weekly calendar.
	 press and hold press briefly	Main Menu QUIT Menu	Exit the main menu. The control software is restarted.

10.5.6.3 Menu 5.5.1: Deleting individual entries

You can delete individual entries for a week day on the weekly calendar as follows:

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
5	 press and hold turn CW	Main Menu 5 Clock/Calendar	Activate the main menu.
5.5	 press briefly turn CW	Clock/Calendar 5 Edit Week Cal.	
5.5.1	 press briefly	Edit Week Cal. 1 Set Weekdays	
	 press briefly turn CW	Monday 12:30 No Action	Select the day to be deleted.

	 press briefly turn CCW	Monday Delete Record?	
	 press briefly	Monday Done	Delete the entry from the week day on the calendar.
	 press and hold	Set Weekdays END	The end of the weekly calendar.
	 press and hold press briefly	Main Menu QUIT Menu	Exit the main menu. The control software is restarted.

10.5.6.4 Menu 5.5.1: Deleting a week day

You can also delete all entries for a week day from the weekly calendar after selecting the first entry for the week day in question:

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
5	 press and hold turn CW	Main Menu 5 Clock/Calendar	Activate the main menu.
5.5	 press briefly turn CW	Clock/Calendar 5 Edit Week Cal.	
5.5.1	 press briefly	Edit Week Cal. 1 Set Weekdays	
	 press briefly	Monday 12:30 Hold Part.OPEN	Select the first entry of the week day to be deleted.

	Turn CCW	Monday Delete Day?	
	press briefly	Monday Done	All entries for this week day are deleted from the calendar.
	press and hold	Edit Week Cal. 1 Set Weekdays	The end of the weekly calendar.
	turn CCW press and hold	Clock/Calendar 5 Edit Week Cal.	Go back one step in the menu.
	press and hold press briefly	Main Menu QUIT Menu	Exit the main menu. The control software is restarted.

10.5.6.5 Menu 5.5.2: Deleting the weekly calendar

You can also delete all entries for the entire weekly calendar as follows:

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
5	press and hold turn CW	Main Menu 5 Clock/Calendar	Activate the main menu.
5.5	press briefly turn CW	Clock/Calendar 5 Edit Week Cal.	
5.5.2	press briefly turn CW	Edit Week Cal. 2 Delete Week	
	press briefly	Delete Week Done	

	 press and hold press briefly	Main Menu QUIT Menu	Exit the main menu. The control software is restarted.

10.5.7 Menu 5.6: Displaying the yearly calendar

The yearly calendar is located over the weekly calendar on the control system. The yearly calendar can store 20 different switching times and corresponding gate actions per day for a total of 40 days. If switching times have been entered in the yearly calendar for a certain date, only the relevant entry will be applied with priority on the day in question and the weekly calendar will be ignored for this day. Only the times entered are shown in the display mode for the yearly calendar.
The empty memory positions are skipped. The yearly calendar can be displayed as follows:

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
5	 press and hold turn CW	Main Menu 5 Clock/Calendar	Activate the main menu.
5.6	 press briefly turn CW	Clock/Calendar 6 Disp.Year Cal.	
	 press briefly	2012.06.17 12:30 Hold Part.OPEN	Shows the switching time on the right. Turn the selector switch to browse through all entries in the calendar
	 press briefly	Disp.Year Cal. END	Shows the end of all actions entered. Or is displayed if no week clock has been set.
	 press and hold press briefly	Main Menu QUIT Menu	Exit the main menu. The control software is restarted.

Information: Other gate actions planned on the weekly calendar can be suppressed specifically for one day in the year (e.g. a national holiday) by using the "No action" function.

10.5.8 Menu 5.7: Changing the yearly calendar

You can add new entries to the yearly calendar or change existing entries.

10.5.8.1 Menu 5.7.1: Set day

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
5	 press and hold turn CW	Main Menu 5 Clock/Calendar	Activate the main menu.
5.7	 press briefly turn CW	Clock/Calendar 7 Edit Week Cal.	
5.7.1	 Press briefly	Edit Week Cal. 1 Set Day	
	 press briefly	20	An empty memory position for a date is displayed.
	 press briefly turn CW	2011.	Call up the entry mode for the year.
	 turn CW	2012.	Select the year for the switching time.
	 press briefly	2012.01.	Call up the entry mode for the month.
	 turn CW	2012.06.	Select the month for the switching time.

	 press briefly	2012.06.01	Call up the entry mode for the day.
	 turn CW	2012.06.17	Select the day for the switching time.
	 press briefly	2012.06.17 00:	Call up the entry mode for the hours.
	 turn CW	2012.06.17 12:	Select the hour for the switching time.
	 press briefly	2012.06.17 12:00	Call up the entry mode for the minutes.
	 turn CW	2012.06.17 12:30	Select the minutes for the switching time.
	 press briefly	2012.06.17 12:30 No Action	Call up the entry mode for the motor drive function for this switching time
	 turn CW	2012.06.17 12:30 Hold Part.OPEN	Turn the selector switch in a clockwise direction to select the function.
	 press briefly	2012.06.17	Press the selector switch to insert the full entry into the yearly calendar, sorted by time. The next memory location of the calendar will be displayed.
	 turn CW	Set Day END	Shows the end of the yearly calendar.
	 turn CCW press and hold	Clock/Calendar 7 Edit Week Cal.	Go back one step in the menu.

	 press and hold press briefly	Main Menu QUIT Menu	Exit the main menu. The control software is restarted.

Information: Changes to the date (and not only the switching time) can only be made in the first entry for this date and always apply to all entries for this day. The yearly calendar is sorted, i.e. an older date is put before a more recent date.

10.5.8.2 Menu 5.7.1: Copying a day in the yearly calendar

All entries for a certain day can be copied to another day with a different date on the yearly calendar. However, a new date has to be entered for this.

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
5	 press and hold turn CW	Main Menu 5 Clock/Calendar	Activate the main menu.
5.7	 press briefly turn CW	Clock/Calendar 7 Edit Week Cal.	
5.7.1	 press briefly	Edit Week Cal. 1 Set Day	
	 turn CW	2011.04.21	Enter a new date.
	 press briefly	2011.04.21 00:	Call up the entry mode for the hours.
	 turn CW	2011.04.21 Copy of: 2012.06.17	Select the day from which the entry is to be copied.
	 press briefly	Done	Copy the entry (here: from 17 June 2011 to 24 December 2011).

	 turn CW	Set Day END	Shows the end of the yearly calendar.
	 press and hold press briefly	Main Menu QUIT Menu	Exit the main menu. The control software is restarted.

10.5.8.3 Menu 5.7.1: Deleting individual entries

You can delete individual entries for a specific day on the yearly calendar as follows:

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
5	 press and hold turn CW	Main Menu 5 Clock/Calendar	Activate the main menu.
5.7	 press briefly turn CW	Clock/Calendar 7 Edit Week Cal.	
5.7.1	 press briefly	Edit Week Cal. 1 Set Day	
	 press briefly turn	2011.06.17 12:30 Hold Part.OPEN	
	 press briefly turn CCW	2011.06.17 Delete Record?	A question is displayed.
	 press briefly	Done	The entry in question is deleted from the calendar.
	 turn CW	Set Day END	Shows the end of the yearly calendar.

	 press and hold press briefly	Main Menu QUIT Menu	Exit the main menu. The control software is restarted.

10.5.8.4 Menu 5.7.1: Deleting a day

You can also delete all entries for an individual day from the yearly calendar after selecting the first entry for the day in question:

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
5	 press and hold turn CW	Main Menu 5 Clock/Calendar	Activate the main menu.
5.7	 press briefly turn CW	Clock/Calendar 7 Edit Week Cal.	
5.7.1	 press briefly	Edit Week Cal. 1 Set Day	
	 press briefly turning	2011.06.17012:30 Hold Part.OPEN	Select the entry to be deleted.
	 press briefly turn CCW	2011. Delete Day?	A question is displayed.
	 press briefly	Done	All entries for this day are deleted from the calendar.
	 turn CW	Set Day END	Shows the end of the yearly calendar.

	 press and hold press briefly	Main Menu QUIT Menu	Exit the main menu. The control software is restarted.

10.5.8.5 Menu 5.7.2: Deleting the entire yearly calendar

You can also delete all entries for the entire yearly calendar as follows:

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
5	 press and hold turn CW	Main Menu 5 Clock/Calendar	Activate the main menu.
5.7	 press briefly turn CW	Clock/Calendar 7 Edit Week Cal.	
5.7.2	 press briefly turn CW	Edit Week Cal. 2 Del. Year Cal.	
	 press briefly	Del. Year Cal. Done	
	 press and hold press briefly	Main Menu QUIT Menu	Exit the main menu. The control software is restarted.

10.6 MENU 6 - RF REMOTE CONTROL

The motor drive features a slot for a radio-frequency receiver module. An 868 MHz receiver module with FM modulation is used and the constant share of the "Rolling Code" of the HERAS transmitter used is analyzed. A corresponding hand transmitter enables the following functions of the motor drive to be remotely controlled:

- "OPEN function" left-hand top key

- "CLOSE function" right-hand top key
- "STOP function" large bottom key
- "PART OPEN function"* simultaneously press and hold the left and right keys

* Only in combination with an activated "Part open" position

Illustration 23: Heras transmitter

The keys can also be individually programmed, see “Teaching hand transmitters”.
Editing options (like teaching the hand transmitter and deleting) are available via the menu structure of the motor drive. A maximum of 150 hand transmitters can be taught.

Information: Gate movements can only be activated by means of the remote control if the motor drive is working in automatic mode.
An external antenna must be connected to the corresponding connector of the motor drive PCB (see illustration 13, pos. 9).

The internal core of the coax cable of the antenna is connected to the right-hand terminal (near the housing side). The antenna shield is connected to the most inward / left-hand terminal.

10.6.1 Menu 6.1: Displaying the number of hand transmitters

A separate storage location is reserved in the memory of the motor drive for each hand transmitter. The total number of transmitters stored can be displayed by means of the menu option "Active transmitters".

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
6	press and hold turn CW	Main Menu 6 RF Remote Ctrl	Activate the main menu.
6.1	press briefly	RF Remote Ctrl. 1 Active Transmi	
	press briefly	Active Transmit. 0	Display of the number of hand transmitters taught.
	press and hold press briefly	Main Menu QUIT Menu	Exit the main menu. The control software is restarted.

10.6.2 Menu 6.2: Teaching hand transmitters

Every hand transmitter which is used must be taught the commands to operate the motor drive once. This is done as follows:

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
6	 press and hold turn CW	Main Menu 6 RF Remote Ctrl	
6.2	 press briefly turn CW	RF Remote Ctrl. 2 Progr. Transmi	
	 press briefly	Progr. Transmit.	Twenty seconds are available for this function. After recognizing and saving the transmission code, a numeric value is displayed for 2 seconds. This is the value of the received signal together with the storage position. "RF# xxxx" "Pos.: p " If within twenty seconds after activating the menu the program does not recognize a valid code the menu is displayed again.
	 Press the hand transmitter button	RF#: 1 2 3 4 5 6 7 8 9 Pos.: 1 ..	When the transmission code has been recognized and saved, the menu is displayed again. Other hand transmitters can be programmed by activating the menu again. Check the number of transmitters stored by means of the menu option "Active transmitters".
		RF Remote Ctrl. 2 Progr. Transmi	Exit the main menu. The control software is restarted. Check the key functions that have been taught in "automatic mode".

	 press and hold press briefly	Main Menu QUIT Menu	Exit the main menu. The control software is restarted.

10.6.3 Menu 6.3-6.6: Programming hand transmitter buttons

If functions programmed as standard for the hand transmitter are inadequate, another four functions can be programmed. The individual buttons can be programmed using the menu below.

10.6.3.1 Menu 6.3: Programming hand transmitter button OPEN

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
6	 press and hold turn CW	Main Menu 6 RF Remote Ctrl	Activate the main menu.
6.3	 press briefly	RF Remote Ctrl. 3 Prog.Key OPEN	
	 press briefly	Prog.Key OPEN	Program OPEN function
	 Press the hand transmitter button	RF#: 12345678 9 Pos.: 2 Op	After recognizing and saving the transmission code, a numeric value is displayed for 2 seconds. This is the value of the received signal together with the storage position.
		RF Remote Ctrl. 3 Prog.Key OPEN	
	 press and hold press briefly	Main Menu QUIT Menu	Exit the main menu. The control software is restarted. Check the key functions that have been taught in "automatic mode".

10.6.3.2 Menu 6.4: Programming hand transmitter button CLOSE

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
6	 press and hold turn CW	Main Menu 6 RF Remote Ctrl	Activate the main menu.
6.4	 press briefly	RF Remote Ctrl. 4 Prog.Key CLOSE	
	 press briefly	Prog.Key CLOSE	Program CLOSE function
	 Press the hand transmitter button	RF#: 1 2 3 4 5 6 7 8 9 Pos.: 3 Cl	After recognizing and saving the transmission code, a numeric value is displayed for 2 seconds. This is the value of the received signal together with the storage position.
		RF Remote Ctrl. 4 Prog.Key CLOSE	
	 press and hold press	Main Menu QUIT Menu	Exit the main menu. The control software is restarted. Check the key functions that have been taught in "automatic mode".

10.6.3.3 Menu 6.5: Programming hand transmitter button PART OPEN

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
6	 press and hold turn CW	Main Menu 6 RF Remote Ctrl	Activate the main menu.

6.5	 press briefly	RF Remote Ctrl. 5 Prog.Part.OPEN	
	 press briefly	Prog.Part.OPEN	Program PART OPEN function
	 Press the hand transmitter button	RF#: 12345789 Pos.: 4 POp	After recognizing and saving the transmission code, a numeric value is displayed for 2 seconds. This is the value of the received signal together with the storage position.
		RF Remote Ctrl. 5 Prog.Part.OPEN	
	 press and hold press	Main Menu QUIT Menu	Exit the main menu. The control software is restarted. Check the key functions that have been taught in "automatic mode".

10.6.3.4 Menu 6.6: Programming hand transmitter button TOGGLE

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
6	 press and hold turn CW	Main Menu 6 RF Remote Ctrl	Activate the main menu.
6.6	 press briefly	RF Remote Ctrl. 6 Progr.Key TOGG	
	 press briefly	Progr.Key TOGGLE	Program Toggle function OPEN – STOP – CLOSE - STOP

	 Press the hand transmitter button	RF#: 12345678 Pos.: 2 Tog	After recognizing and saving the transmission code, a numeric value is displayed for 2 seconds. This is the value of the received signal together with the storage position.
		RF Remote Ctrl. 6 Progr.Key TOGG	
	 press and hold press	Main Menu QUIT Menu	Exit the main menu. The control software is restarted. Check the key functions that have been taught in "automatic mode".

The programmed function overwrites the pre-programmed function if the hand transmitter has been programmed in advanced. If the hand transmitter has not yet been programmed, then only the programmed function is available.

To restore the original functions, the transmitter must be deleted in the menu "Delete transmitter" or "Delete all" and then be reprogrammed.

10.6.4 Menu 6.7: Deleting transmitters from the memory

You can delete specific individual hand transmitters from the HMD230 memory. The menu option "Delete transmitter" puts the motor drive in a mode where the next correctly received hand transmitter is deleted from the memory again.

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
6	 press and hold turn CW	Main Menu 6 RF Remote Ctrl	Activate the main menu.
6.7	 press briefly turn CW	RF Remote Ctrl. 7 Delete Transmi	
	 press briefly	Delete Transmit.	

	 Press the hand transmitter button	RF Remote Ctrl. 7 Delete Transmi	When the transmission code has been recognized, the menu is displayed again. Check the number of transmitters stored by means of the menu option "Active transmitters".
	 press and hold press briefly	Main Menu QUIT Menu	Exit the main menu. The control software is restarted.

10.6.5 Menu 6.8: Deleting hand transmitter function

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
6	 press and hold turn CW	Main Menu 6 RF Remote Ctrl	Activate the main menu.
6.8	 press briefly turn CW	RF Remote Ctrl. 8 Delete PlaceNo	
	 press briefly	Delete PlaceNo. Pos.: 1 ..	Select the desired position e.g. Pos.: 1 Op Repeat if you want to delete multiple functions
	 press briefly	Delete PlaceNo. Delete Record?	Confirm the following display "Delete Entry?"
	 press briefly	Delete PlaceNo. Done	"Done" indicates that the function has been deleted.
	 turn CW	Delete PlaceNo. End	

		Main Menu QUIT Menu	

10.6.6 **Menu 6.9: Deleting all transmitters from the memory**

All transmitters stored in the memory of the HMD230 can be deleted using the menu option "Delete all".

Menu	Action	Display reading	Explanation
		Heras HMD230S1EN Automatic Mode	
6	 press and hold turn CW	Main Menu 6 RF Remote Ctrl	Activate the main menu.
6.9	 press briefly turn CW	0 7 TMR Autom. Ope	
	 press briefly	RF Remote Ctrl. 9 Delete All	All transmitters have been deleted. Check the number of transmitters stored by means of the menu option "Active transmitters".
	 press and hold press briefly	Main Menu QUIT Menu	Exit the main menu. The control software is restarted.

10.7 LED lighting operation

The iGate can optionally be provided with RGB LED strips. The light color can be set on the LED control unit. The LED lights will only switch on if the gate is closed. The lights can be activated at a specific time, using a separate week timer (optional). This enables you to set the gate lights such that they are only on at night. This can also be done automatically using a light/dark switch. When darkness falls, the lights on the gate will go on.

See the manuals for the LED control unit and the week timer for instructions on how to operate and program them.

Illustration 24: LED control unit

Illustration 25: Week timer

If the gate has not been used for some time, the lights on the gate may not work or may work poorly. Open and close the gate automatically 3x then. This will clean the contacts, causing the lights to work normally.

If this does not solve the problem, contact the Service Department.

See the chapter on "SERVICE / MAINTENANCE" for the technical specifications.

11 MANUAL OPERATION IN THE EVENT OF FAULTS

11.1 DISENGAGING THE MOTOR

The gate can be opened by hand in emergency situations. The gear wheel of the drive unit will have to be disengaged from the toothed bar for this.

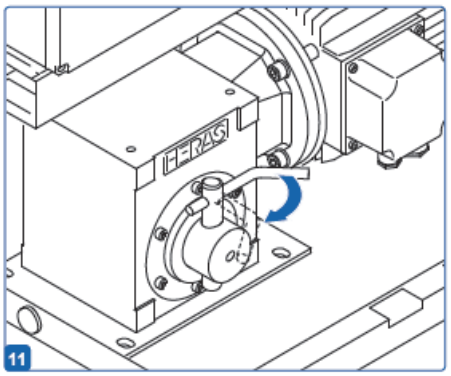


Illustration 25: release the motor

- Open the drive unit cabinet (key)
- Set the automatic fuse to “OFF”.
- Pull the disengagement lever forwards after which the gate can be opened and closed manually.

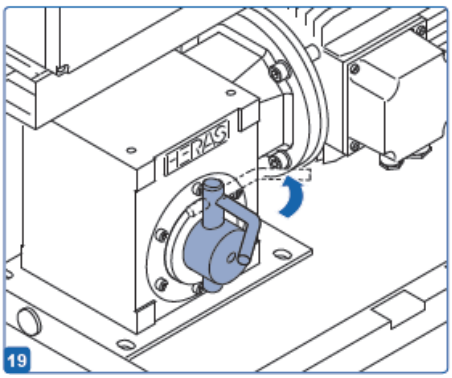


Illustration 26: lock the motor

- When locking the system again, close the gate as far as the mark on the bottom rail. Now move the gate to and fro or sideways a bit to engage the gear wheel with the toothed bar.
- Set the automatic fuse to “ON”. Lock the drive unit cabinet after use.

11.2 AUTOMATIC DISENGAGEMENT

Versions with automatic disengagement if there is a power failure can be recognized by a coil; this will automatically disengage the drive if a power failure occurs.

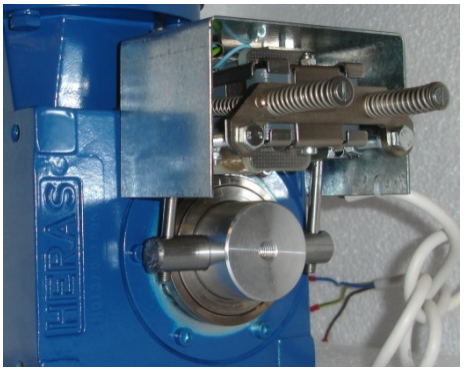


Illustration 27: Automatic disengagement

Attention! To be able to use the electrical system again to operate the gate after operating it manually, follow the procedure as described in chapter 10.4.2. "Menu 4.2.1 Closed position for installing".

12 EMERGENCY STOP

The HMD230 does not have an emergency stop system. According to the Machine Directive 2006/42/EC, annex 1, article 1.2.4.3., this is not necessary if the emergency stop system would not lower the risk. However, an emergency stop system can be connected to the HMD230.

13 MAINTENANCE INSTRUCTIONS

13.1 GATE MAINTENANCE

To ensure the optimum operation of the gate, Heras recommends having maintenance performed by a qualified engineer at least once a year or after every 7000 cycles.

See the chapter "SERVICE /MAINTENANCE"

13.2 HMD230 MAINTENANCE

The HMD230 motor drive does not require any maintenance. Only the battery [type CR 2032] for the integrated clock module must be replaced after 5 years. The battery can be found in a vertical holder over the twist and selector switch. Beware of causing a short circuit when using a metal implement to remove the battery.

The entire gate system must be checked regularly, in accordance with DIN EN 12453. To remind the operating company/user of this necessary maintenance, the

"< *MAINTENANCE* > *necessary*" message

is generated by the software of the motor drive.

13.3 CLEANING

The gate and the outside of the drive unit cabinet can be cleaned using a non-aggressive detergent and a soft cloth, brush or sponge. Avoid using a pressure cleaner as this might damage the gate and the drive unit cabinet.

Lubricating the running surface of the gate is not allowed.

14 DECOMMISSIONING AND REMOVAL

At the end of their service lives the products must be disposed of in accordance with all local, regional and national rules and instructions. The sliding part is mainly made of aluminum parts. The guideposts are made of steel.
Heras is also happy to take the products back and then dispose of them in an appropriate manner.

The Delta, uGate and iGate gates have highly tensioned cables fitted in the bottom rail. If these cables are cut, they can snap with great force. This can lead to serious injury. Therefore, it is prohibited to disassemble the bottom rail yourself.

!! Only people trained by Heras are allowed to disassemble the bottom rail.

There is no hidden danger associated with dismantling the bars, top rail and stiles.

The points that are fitted to some sliding gates are sharp. There is a danger of being cut when disassembling such a gate. Wear suitable gloves.

The master drive is fitted with a battery of the type CR 2032.

Disposing of batteries as domestic waste is not allowed. Spent batteries can be handed in for free at the public municipal collection facilities and at all points of sale where batteries are sold. You can also return any batteries bought from us to us after use. In this way you will be making an important contribution to conserving the environment!

15 SPARE PARTS

Use a CR 2032 button battery to replace the battery (see illustration 13 pos. 5) of the integrated clock.

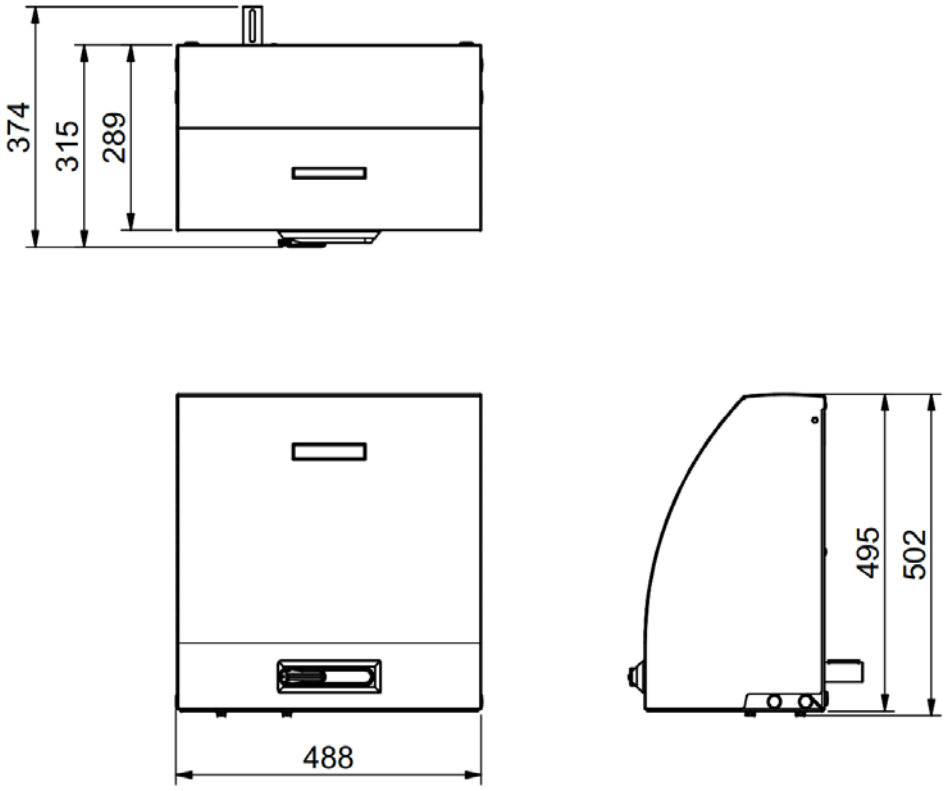
16 TECHNICAL DATA

16.1 SLIDING GATE DESCRIPTION

Gate leaf	**Delta**	**uGate**	**Orion**	**iGATE**	**SHB**
Length [m]	5.15 ... 12.5	9.74 ... 16.3	7.00 ... 16.6	4.7 ... 12.3	3.55...133.3
Height [m]	1.00 ... 2.5	1.5 ... 2.5	2.00 ... 2.5	1.5 ... 2.5	1.5 ... 2.5
Max. weight [kg]	340	450	575	260	610
Construction	cantilever	cantilever	cantilever	cantilever	On rail

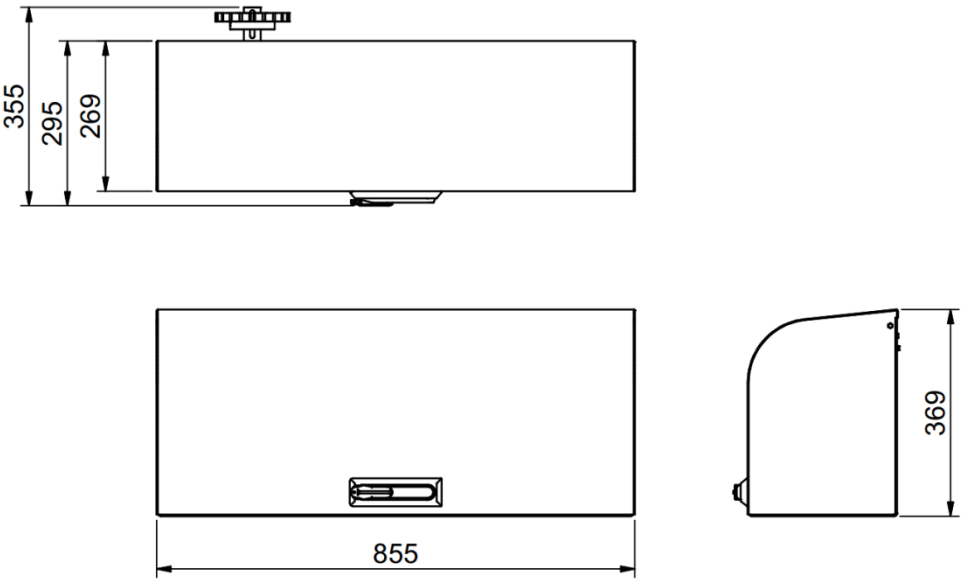
Type of drive	HMD230S	HMD230A
Motor	MOTHR80P (standard motor) MOTHR80PAO (with automatic disengagement)	
Supply voltage [VAC]	1 phase $230V_{AC}$/N/PE ±10% 50/60Hz	
External power supply 230V	230VAC ±10% 50/60Hz, fused with a 6.3A slow-acting fuse on the PCB	
Internal power supply 24V	$24V_{DC}$ stabilized (±5%) max. 500mA (fused with a semiconductor fuse that resets automatically) for optional accessories	
Motor power [kW]	0.37	
Control inputs	$24V_{DC}$ / typ. 4mA < 12 V: inactive -> logical 0 > 18 V: active> logical 1 (galvanically isolated internally)	
Local fuse	max. 10A	
Max. torque [Nm]	80	
Duty cycle [%]	100	
Anti-crushing safety	GE 365, GE 3555	GE 499, GE F85SK
Crawl speed [m/s]	0.13	0.25
Max. speed [m/s]	0.25	0.50
IP category of control cabinet	54	
Temperature range	-16 °C to +55 °C	
Relative humidity range	max. 99% non-condensing	
Weight [kg]	22	

16.2 HMD230 DIMENSIONS



Afbeelding 28: Dimensions of HMD230
Afbeelding 29:

16.3 IGD DIMENSIONS



Afbeelding 30: Dimensions of IGD

Appendix A: Locations of anti-crushing safety protection devices

Guidelines for installing the anti-crushing safety protection devices (referred to as 'safety edges' in the drawing below) on different configurations of Delta and Orion sliding gates. A sketch of the top view of the sliding gate is provided.

Explanation of symbols:

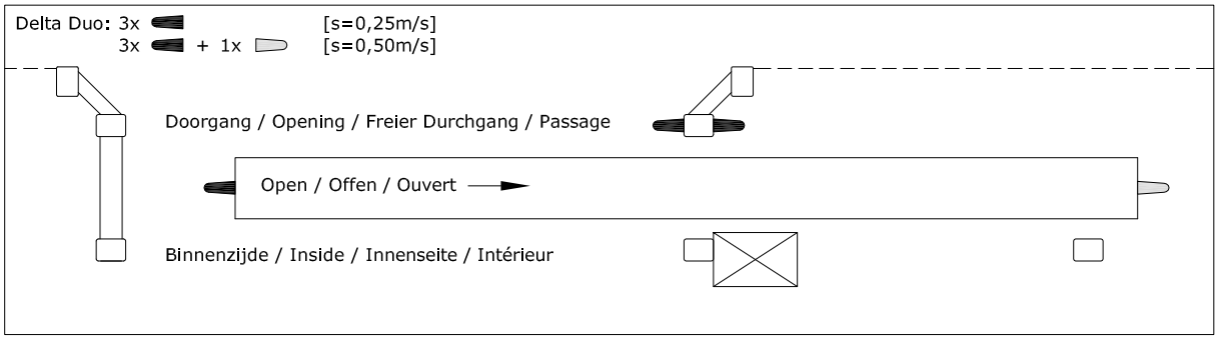
afknelbeveiliging / safety edge / Kontaktleiste / Sécurité des personnes

afknelbeveiliging / safety edge / Kontaktleiste / Sécurité des personnes

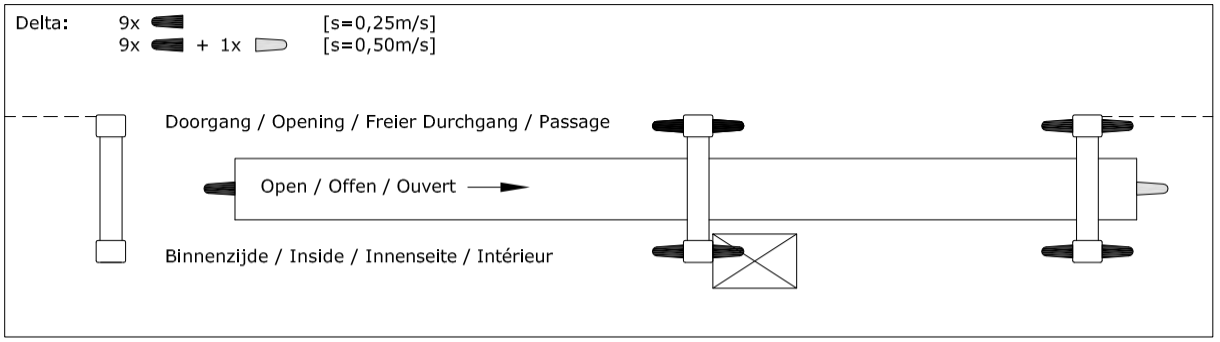
hekwerklijn / fenceline / Zaunlinien / ligne clôture

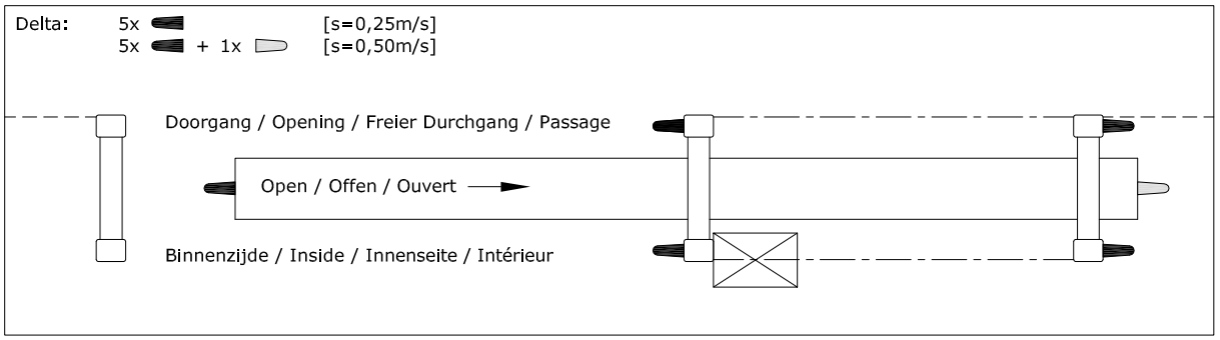
aandrijfunit / drive unit / Antriebseinheit / Moteur

Delta

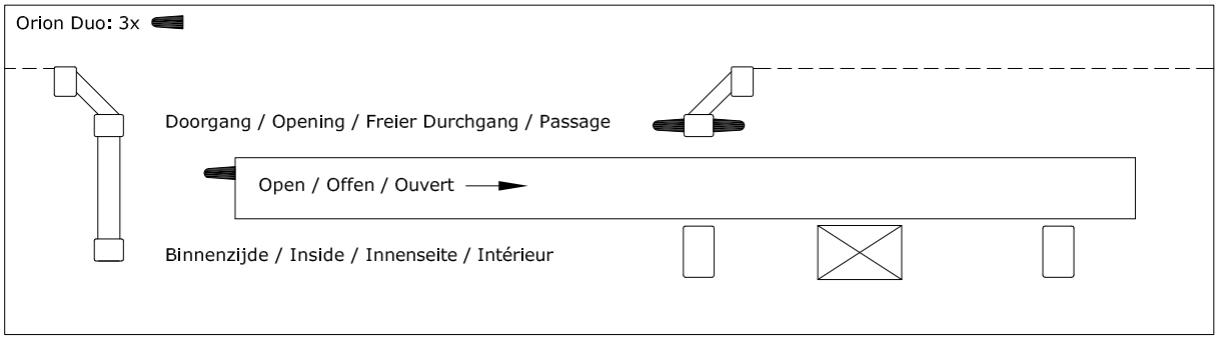


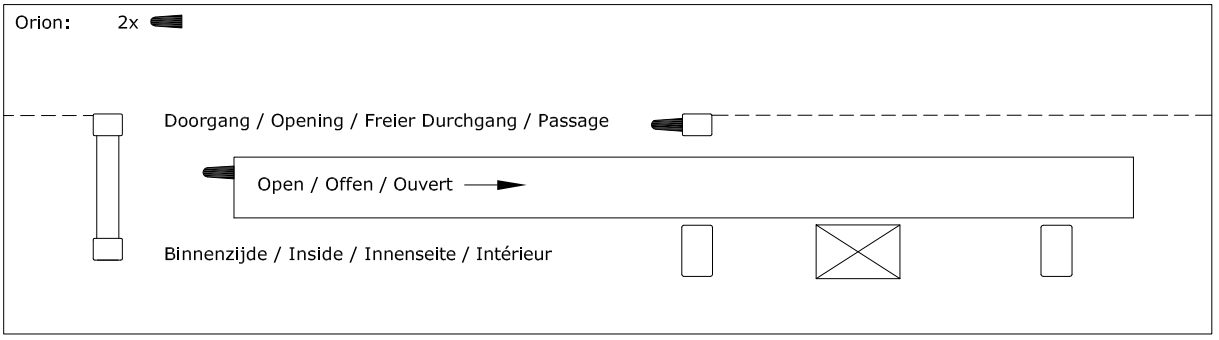
Delta + SHB



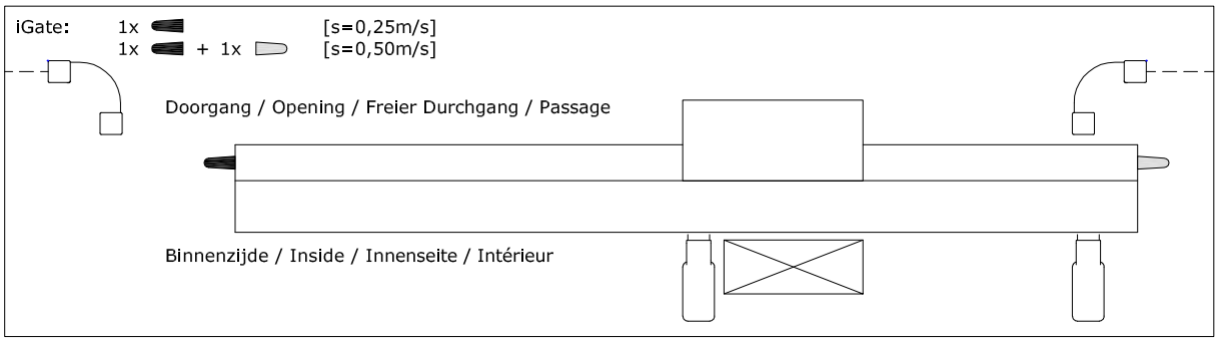

Delta:
5x
[s=0,25m/s]
5x
+ 1x
[s=0,50m/s]
Doorgang / Opening / Freier Durchgang / Passage
Open / Offen / Ouvert
Binnenzijde / Inside / Innenseite / Intérieur

Orion

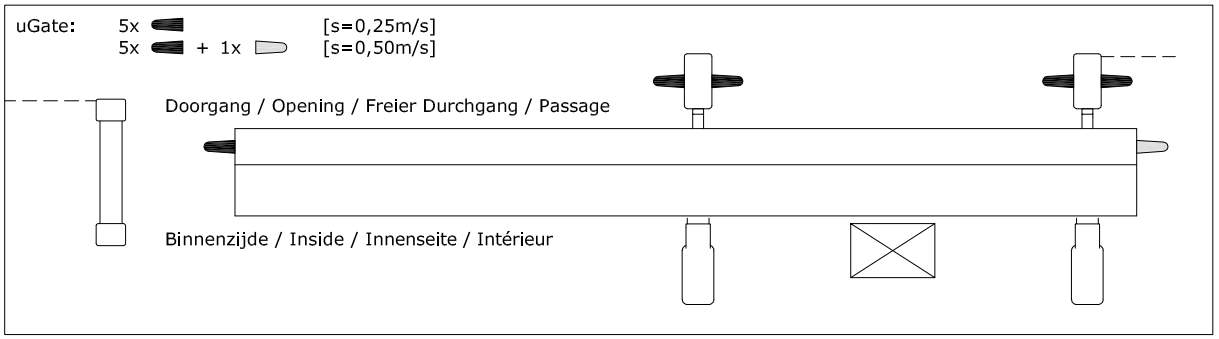

Orion Duo: 3x
Doorgang / Opening / Freier Durchgang / Passage
Open / Offen / Ouvert
Binnenzijde / Inside / Innenseite / Intérieur

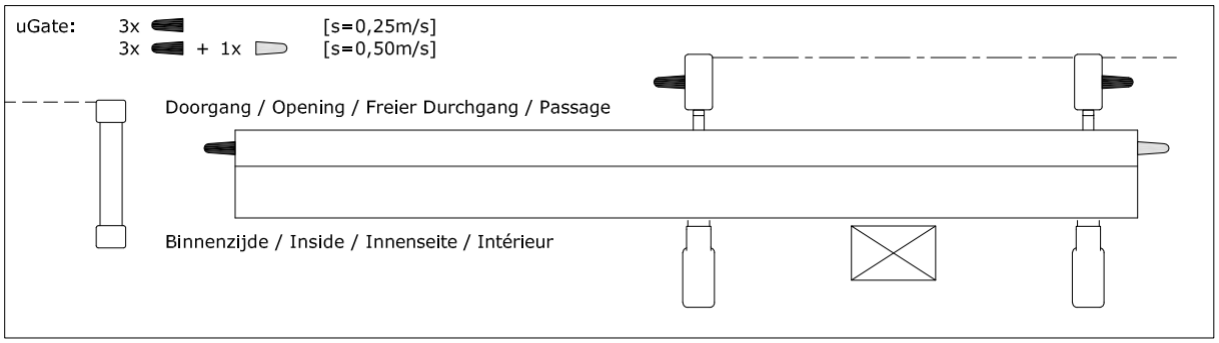

Orion:
2x
Doorgang / Opening / Freier Durchgang / Passage
Open / Offen / Ouvert
Binnenzijde / Inside / Innenseite / Intérieur

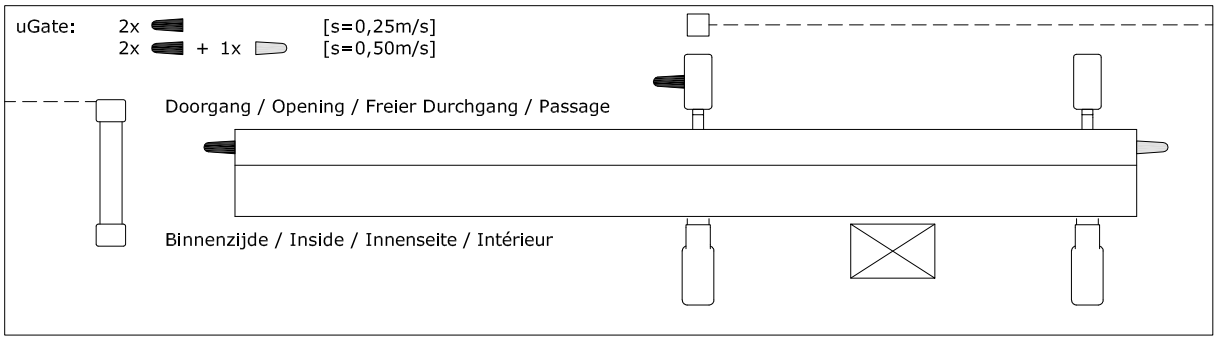
iGATE


iGate:
1x
[s=0,25m/s]
1x
+ 1x
[s=0,50m/s]
Doorgang / Opening / Freier Durchgang / Passage
Binnenzijde / Inside / Innenseite / Intérieur

uGate


uGate:
5x [s=0,25m/s]
5x + 1x [s=0,50m/s]
Doorgang / Opening / Freier Durchgang / Passage
Binnenzijde / Inside / Innenseite / Intérieur


uGate:
3x [s=0,25m/s]
3x + 1x [s=0,50m/s]
Doorgang / Opening / Freier Durchgang / Passage
Binnenzijde / Inside / Innenseite / Intérieur


uGate:
2x [s=0,25m/s]
2x + 1x [s=0,50m/s]
Doorgang / Opening / Freier Durchgang / Passage
Binnenzijde / Inside / Innenseite / Intérieur

Appendix B: Declaration of Conformity

EG Verklaring van overeenstemming
EC Declaration of Conformity
EG Konformitätserklärung
EC Déclaration de conformité

Fabrikant Manufacturer Hersteller Fabricant	:	Heras BV Hekdam 1 5688JE Oirschot Nederland, The Netherlands, Niederlande, Pays-Bas
Product Produkt Produit	:	Automatische Schuifpoorten, Automatic Sliding Gate, Automatische Schiebetor, Automatic Portail coulissant
Type Typ	:	**Delta, Delta Plus, Orion, uGate, iGate, Odysseus, Argos, SHB, P.I. Light**

Hiermee verklaren wij dat het bovenstaande product in overeenstemming is met de volgende richtlijnen en normen.

We herewith declare that the above mentioned product complies with the requirements of the directive(s) based on the following standards.

Hiermit erklären wir, dass die oben genannten Produkte der nachfolgenden Richtlinien und Normen entspricht.

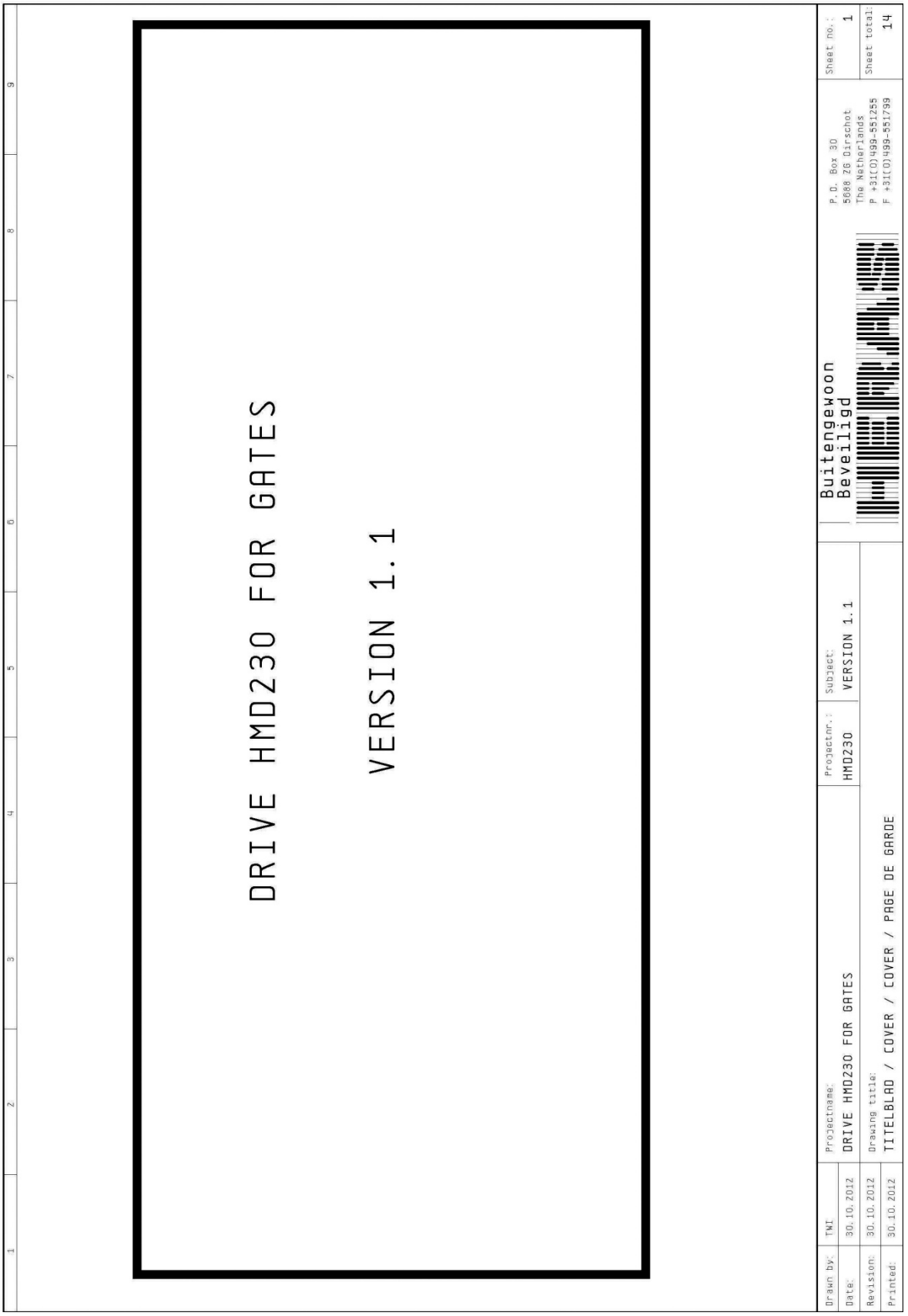
Par la présente nous déclarons que le produit ci-dessus est conforme aux directives et normes suivantes.

Richtlijnen Directives Richtlinien	:	2006/42/EC	Machinerichtlijn / Machine Directive / Maschinenrichtlinie / Directive machines
		89/106/EC	Richtlijn Bouwproducten / Construction Products Directive / Bauproduktenrichtlinie / Directive Produits de construction
		2004/108/EC	EMC Richtlijn / EMC Directive / EMV Richtlinie / Directive CEM
Normen Standards Normes	:	NEN-EN-ISO 12100:2010 NEN-EN 13241-1:2003+A1:2011 EN 12453: 2000 EN 12445: 2000	
Opmerking Remark Bemerkung Remarque	:	Voor elk type schuifpoort bestaat een aparte verklaring van overeenstemming For each type of sliding gate is a separate declaration of conformity Für jede Typ Schiebetor gibt es eine separate Konformitätserklärung Il existe une déclaration de conformité spécifique pour chaque type de portail	

Oirschot, March 1, 2012

D. Gouka
Managing Director

Appendix C: ELECTRIC DIAGRAM HMD230



BLAD	KOPNAAM	LAATSTE WIJZIGING
1	TITELBLAD / COVER / COVER / PAGE DE GARDE	30.10.2012
2	INHOUD / INHALT / CONTENTS / INDEX	30.10.2012
3	230V VOEDING / SPANNUNG / VOLTAGE / ALIMENTATION	30.10.2012
4	HMD230ISK7	30.10.2012
5	HMD230ISK7	30.10.2012
6	HMD230ISK7	30.10.2012
7	HMDBACKPLANE02	30.10.2012
8	HMDBACKPLANE02	30.10.2012
9	HMDBACKPLANE02	30.10.2012
10	HMDBACKPLANE02	30.10.2012
11	KLEMMENSTROOK / KLEMMENLEISTE / CONNECTIONRAIL / BORNE "X1"	30.10.2012
12	MONTAGEPLAAT / MONTAGEPLATTE / MOUNTING PLATE / PLAQUE DE MONTAGE	30.10.2012
13	HMDBACKPLANE02	30.10.2012
14	KLEUR / FARBE / COLOR / COULEUR	30.10.2012

Drawn by:	TWI	Projectname:	Projectnr.:	Subject:	
Date:	30.10.2012	DRIVE HMD230 FOR GATES	HMD230	VERSION 1.1	
Revision:	30.10.2012	Drawing title:			
Printed:	30.10.2012	INHOUD / INHALT / CONTENTS / INDEX			

Buitengewoon Beveiligd

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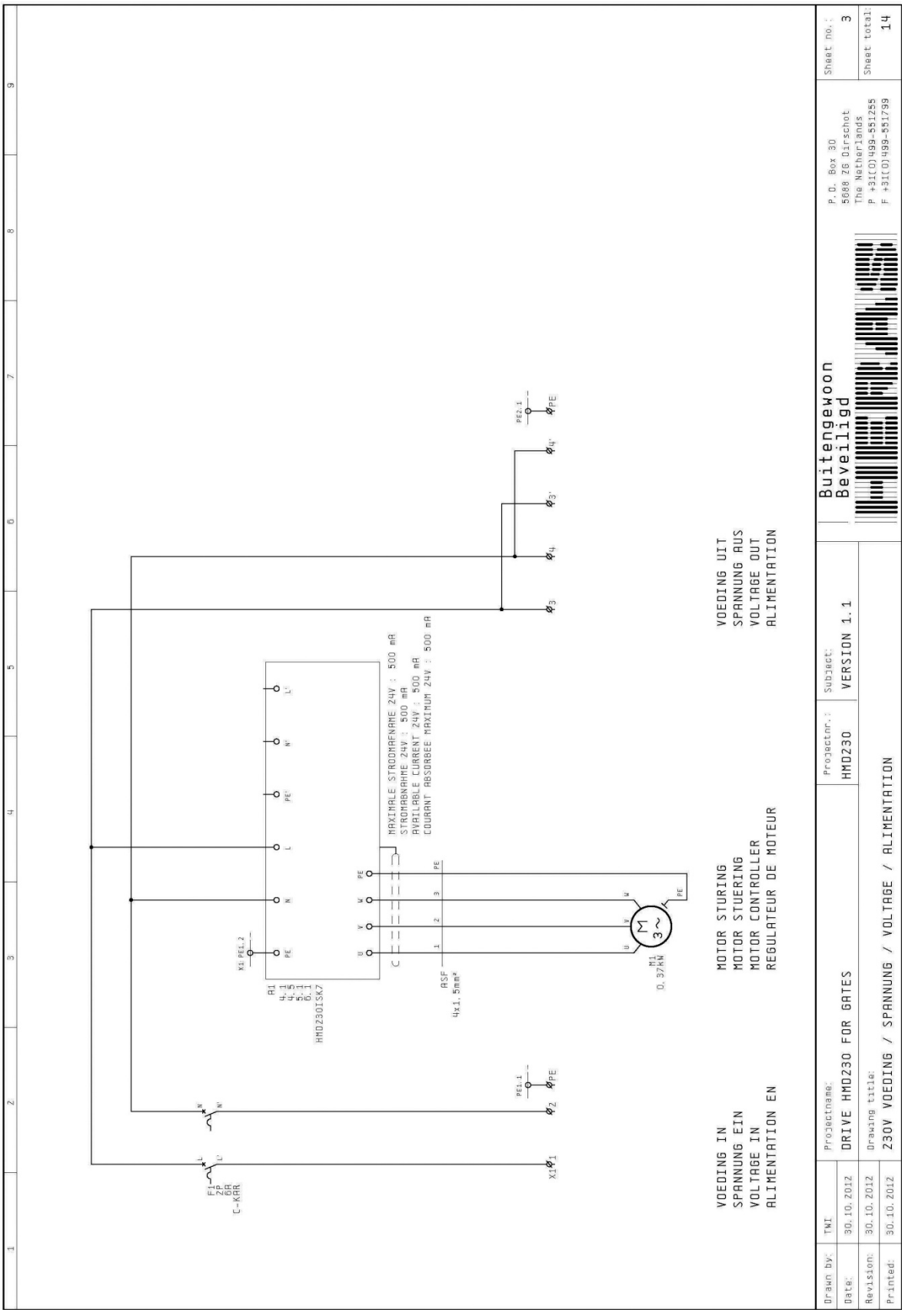
Sheet no.: 2
Sheet total: 14


VOEDING IN
SPANNUNG EIN
VOLTAGE IN
ALIMENTATION EN
MOTOR STURING
MOTOR STUERING
MOTOR CONTROLLER
REGULATEUR DE MOTEUR
VOEDING UIT
SPANNUNG AUS
VOLTAGE OUT
ALIMENTATION
MAXIMALE STROOMAFNAME 24V : 500 mA
STROMABNAHME 24V : 500 mA
AVAILABLE CURRENT 24V : 500 mA
COURANT ABSORBEE MAXIMUM 24V : 500 mA
HMD230ISK7
ASF
4x1.5mm²
M1
0.37kW
F1
2P
6A
C-KAR
Buitengewoon
Beveiligd
P.O. Box 30
5688 ZG Oirschot
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P +31(0)499-551255
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Drawn by: TWT
Date: 30.10.2012
Revision: 30.10.2012
Printed: 30.10.2012
Projectname:
DRIVE HMD230 FOR GATES
Drawing title:
230V VOEDING / SPANNUNG / VOLTAGE / ALIMENTATION
Projector.:
HMD230
Subject:
VERSION 1.1
Sheet no.: 3
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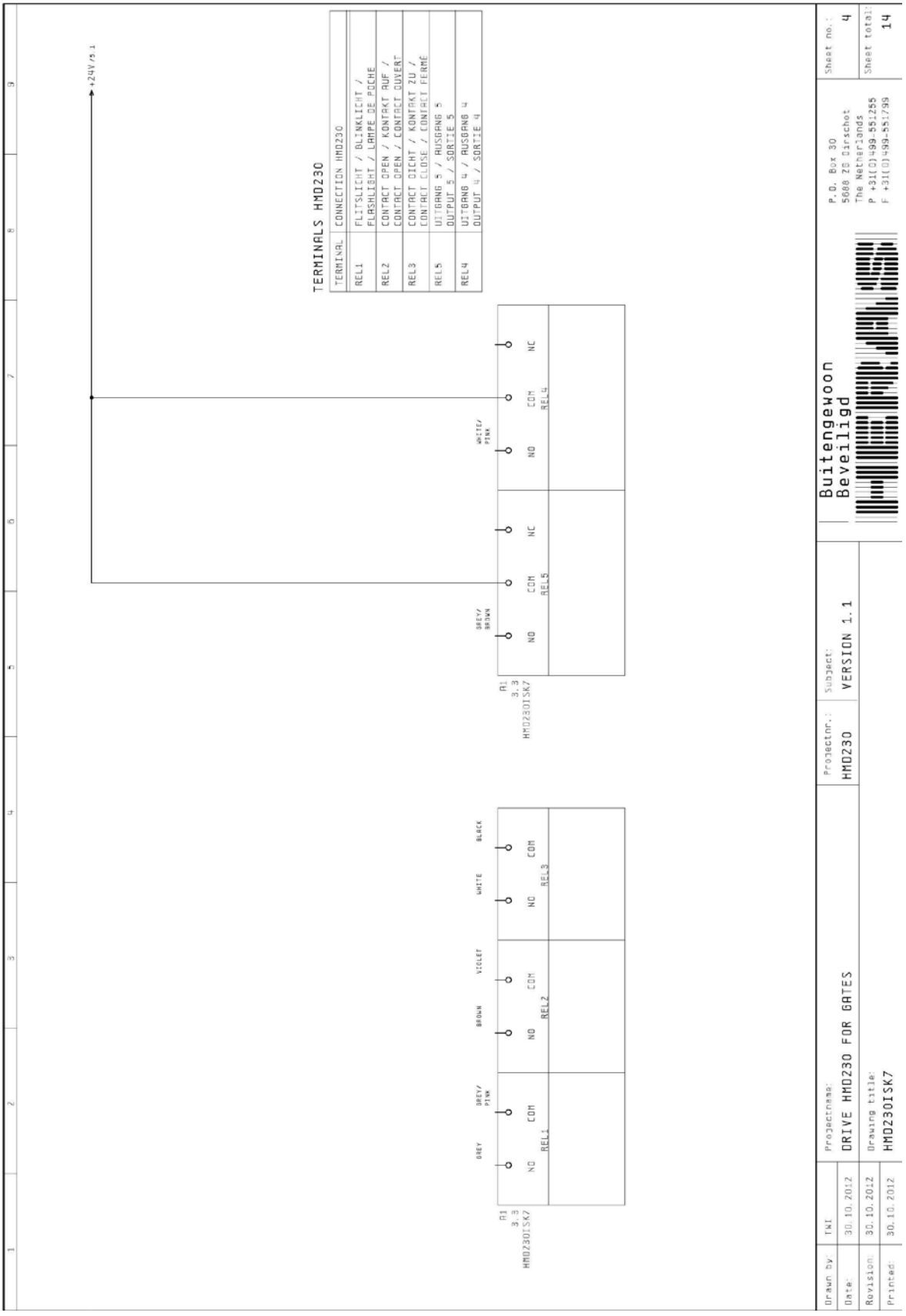
TERMINALS HMD230
TERMINAL
CONNECTION HMD230
REL1
FLITSLICHT / BLINKLICHT / FLASHLIGHT / LAMPE DE POCHE
REL2
CONTACT OPEN / KONTAKT AUF / CONTACT OPEN / CONTACT OUVERT
REL3
CONTACT DICHT / KONTAKT ZU / CONTACT CLOSE / CONTACT FERME
REL5
UITGANG 5 / AUSGANG 5 / OUTPUT 5 / SORTIE 5
REL4
UITGANG 4 / AUSGANG 4 / OUTPUT 4 / SORTIE 4
+24V/0.1
A1
3.3
HMD230ISK7
GREY
GREY/ PINK
BROWN
VIOLET
WHITE
BLACK
WHITE/ PINK
GREY/ BROWN
NO
COM
NC
REL1
REL2
REL3
REL4
REL5
Drawn by: TNT
Date: 30.10.2012
Revision: 30.10.2012
Printed: 30.10.2012
Projectname: DRIVE HMD230 FOR GATES
Drawing title: HMD230ISK7
Projectnr.: HMD230
Subject: VERSION 1.1
Buitengewoon Beveiligd
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5600 ZG Dirschot
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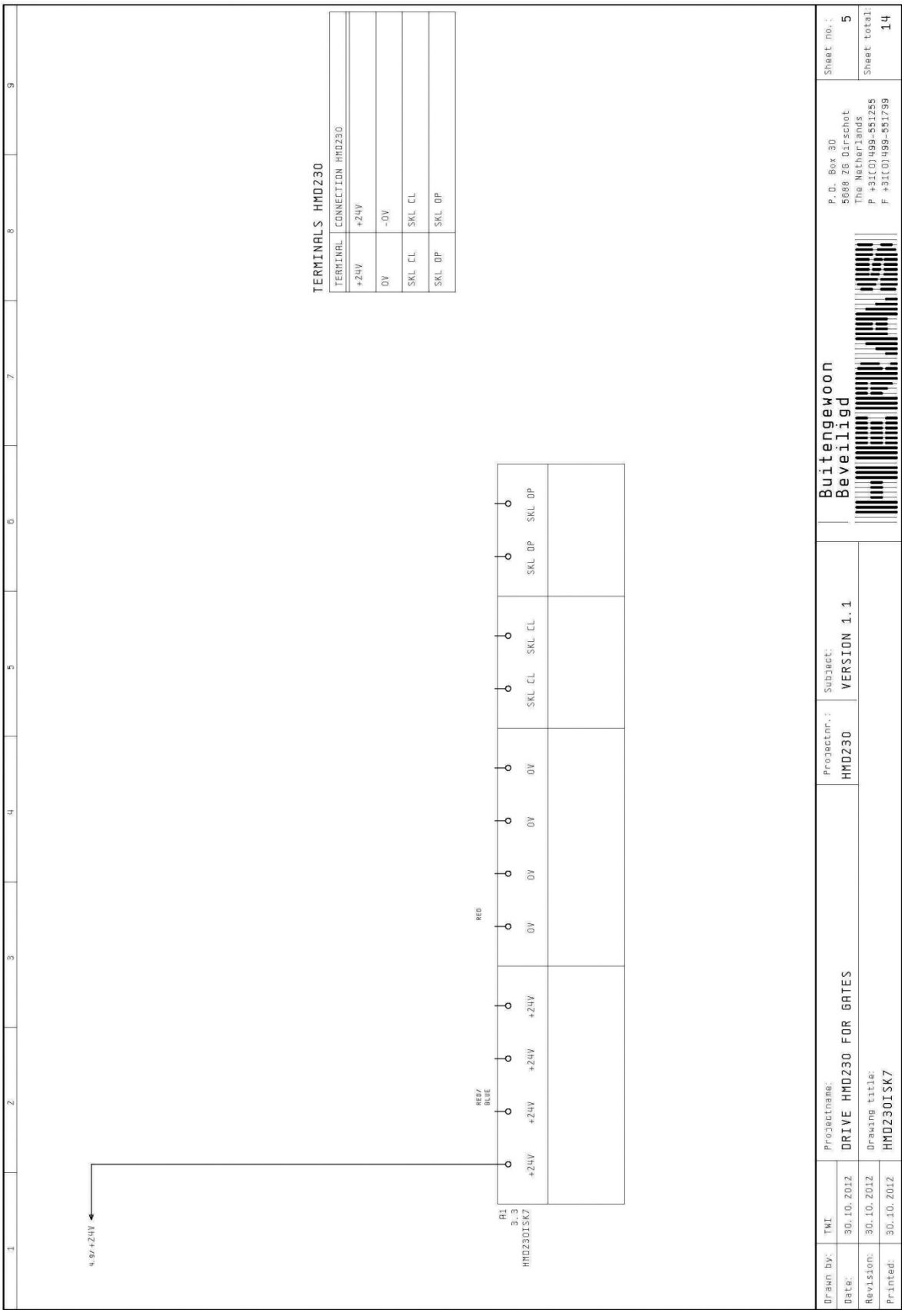
F +31(0)499-551799
Sheet no.: 4
Sheet total: 14


TERMINALS HMD230
TERMINAL | CONNECTION HMD230
+24V | +24V
0V | -0V
SKL CL | SKL CL
SKL OP | SKL OP
RED/BLUE
RED
+24V +24V +24V +24V 0V 0V 0V 0V SKL CL SKL CL SKL OP SKL OP
A1
3.3
HMD230ISK7
4.9/+24V
Drawn by: TWT
Date: 30.10.2012
Revision: 30.10.2012
Printed: 30.10.2012
Projectname: DRIVE HMD230 FOR GATES
Drawing title: HMD230ISK7
Projector.: HMD230
Subject: VERSION 1.1
Buitengewoon Beveiligd
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Sheet no.: 5
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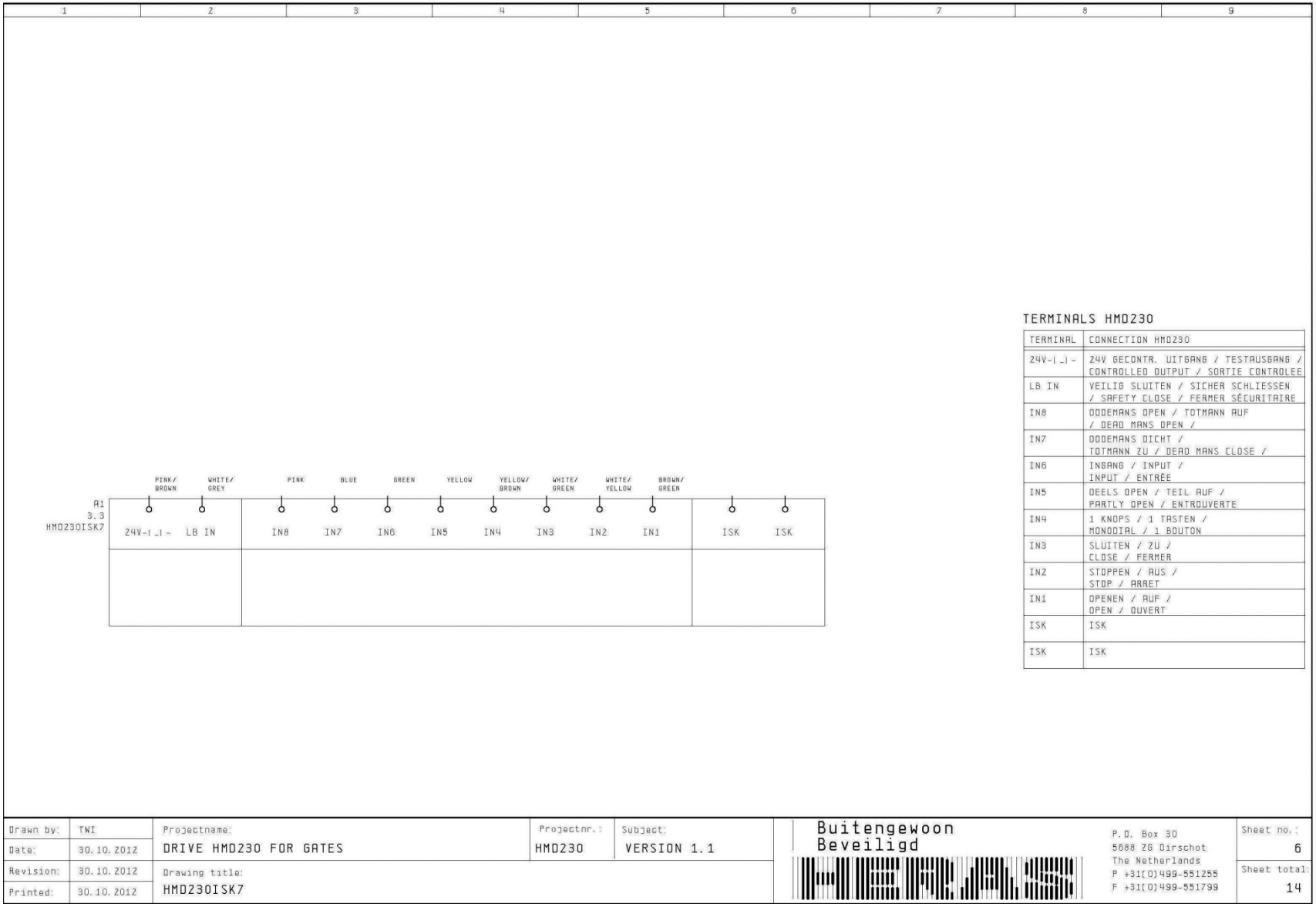

TERMINALS HMD230

TERMINAL	CONNECTION HMD230
24V-( )-	24V GECONTR. UITGANG / TESTAUSGANG / CONTROLLED OUTPUT / SORTIE CONTROLEE
LB IN	VEILIG SLUITEN / SICHER SCHLIESSEN / SAFETY CLOSE / FERMER SÉCURITAIRE
IN8	DODEMANS OPEN / TOTMANN AUF / DEAD MANS OPEN /
IN7	DODEMANS DICHT / TOTMANN ZU / DEAD MANS CLOSE /
IN6	INGANG / INPUT / INPUT / ENTRÉE
IN5	DEELS OPEN / TEIL AUF / PARTLY OPEN / ENTROUVERTE
IN4	1 KNOPS / 1 TASTEN / MONODIAL / 1 BOUTON
IN3	SLUITEN / ZU / CLOSE / FERMER
IN2	STOPPEN / AUS / STOP / ARRET
IN1	OPENEN / AUF / OPEN / OUVERT
ISK	ISK
ISK	ISK

Drawn by:	TWI	Projectname:		Projectnr.:	Subject:	
Date:	30.10.2012	DRIVE HMD230 FOR GATES		HMD230	VERSION 1.1	
Revision:	30.10.2012	Drawing title:				
Printed:	30.10.2012	HMD230ISK7				

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A2
8.1
9.1
10.1
HMDBACKPLANE02
1 2 3 4
C 01 S1 C1
KEY UNIT 1
OPENEN / STOPPEN / SLUITEN
AUF / AUS / ZU
OPEN / STOP / CLOSING
OUVERT / ARRETER / FERMER
5 6 7 8
C 02 S2 C2
KEY UNIT 2
OPENEN / STOPPEN / SLUITEN
AUF / AUS / ZU
OPEN / STOP / CLOSING
OUVERT / ARRETER / FERMER
9 10 11 12
C 03 S3 C3
KEY UNIT 3
OPENEN / STOPPEN / SLUITEN
AUF / AUS / ZU
OPEN / STOP / CLOSING
OUVERT / ARRETER / FERMER
13 14
C NO
TOGGLE (4)
1 KNOP BEDIENING
1 TASTEN BETRIEB
MONODIAL CONTROL
COMMANDE 1 BOUTON
15 16
C NO
INPUT (5)
INGANG (5)
EINGANG (5)
INPUT (5)
ENTREE (5)
17 18
C NO
INPUT (6)
INGANG (6)
EINGANG (6)
INPUT (6)
ENTREE (6)
Drawn by: TNT
Date: 30.10.2012
Revision: 30.10.2012
Printed: 30.10.2012
Projectname:
DRIVE HMD230 FOR GATES
Drawing title:
HMDBACKPLANE02
Projectnr.:
HMD230
Subject:
VERSION 1.1
Buitengewoon
Beveiligd
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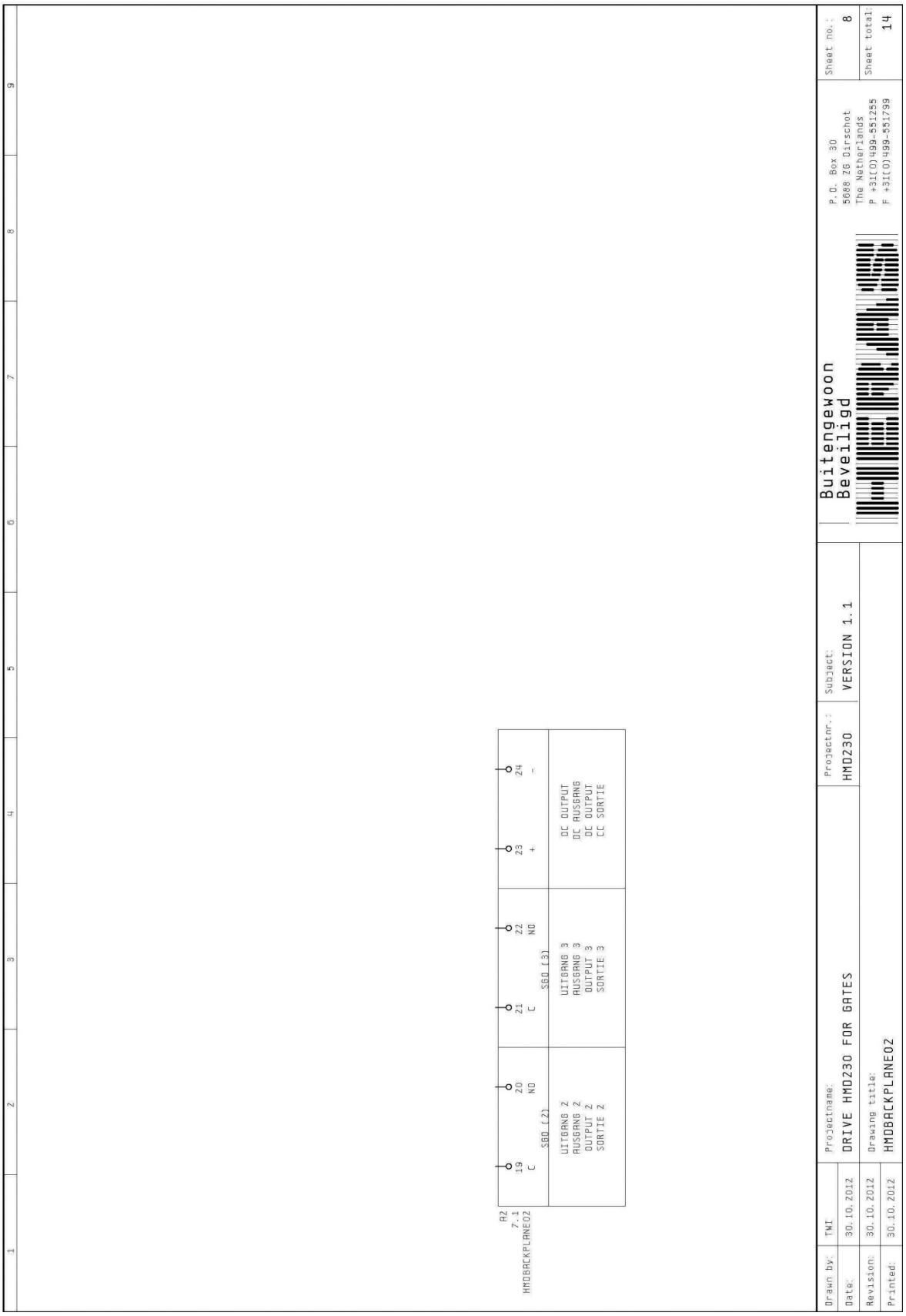
Sheet total: 14


A2
7.1
HMDBACKPLANE02
19
C
Z0
NO
Z1
C
Z2
NO
Z3
+
Z4
-
SGD (2)
SGD (3)
UITGANG 2
AUSGANG 2
OUTPUT 2
SORTIE 2
UITGANG 3
AUSGANG 3
OUTPUT 3
SORTIE 3
DC OUTPUT
DC AUSGANG
DC OUTPUT
CC SORTIE
Drawn by: TWT
Date: 30.10.2012
Revision: 30.10.2012
Printed: 30.10.2012
Projectname:
DRIVE HMD230 FOR GATES
Drawing title:
HMDBACKPLANE02
Projector.:
HMD230
Subject:
VERSION 1.1
Buitengewoon Beveiligd
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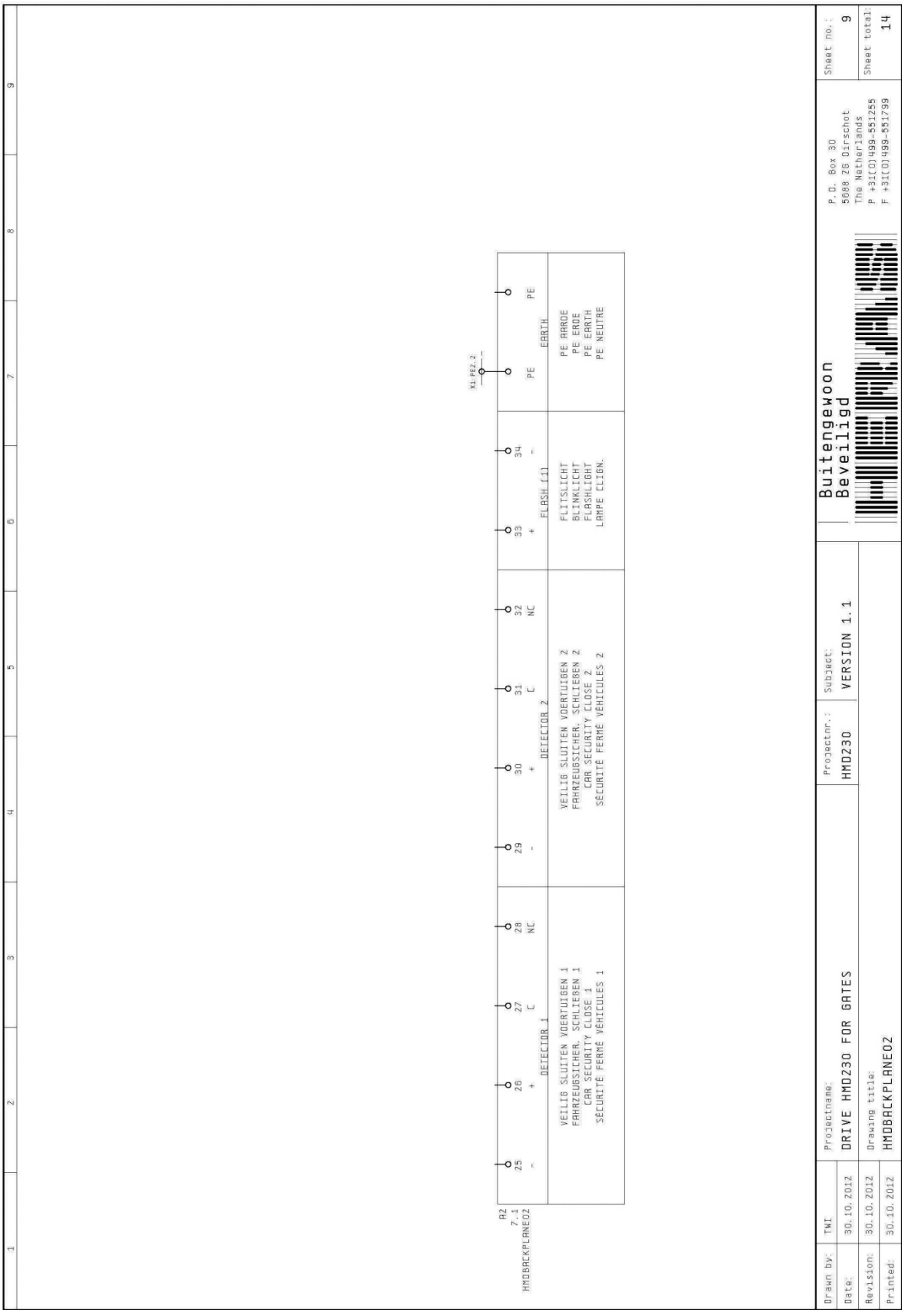
Sheet no.: 8
Sheet total: 14


A2
7.1
HMDBACKPLANE02
25 26 27 28 29 30 31 32 33 34
- + C NC - + C NC + -
DETECTOR 1
DETECTOR 2
FLASH (1)
VEILIG SLUITEN VOERTUIGEN 1
FAHRZEUGSICHER. SCHLIEßEN 1
CAR SECURITY CLOSE 1
SÉCURITÉ FERMÉ VÉHICULES 1
VEILIG SLUITEN VOERTUIGEN 2
FAHRZEUGSICHER. SCHLIEßEN 2
CAR SECURITY CLOSE 2
SÉCURITÉ FERMÉ VÉHICULES 2
FLITSLICHT
BLINKLICHT
FLASHLIGHT
LAMPE CLIGN.
PE
EARTH
PE AARDE
PE ERDE
PE EARTH
PE NEUTRE
X1.PE2.2
Drawn by: TWT
Date: 30.10.2012
Revision: 30.10.2012
Printed: 30.10.2012
Projectname:
DRIVE HMD230 FOR GATES
Drawing title:
HMDBACKPLANE02
Projector.:
HMD230
Subject:
VERSION 1.1
Buitengewoon Beveiligd
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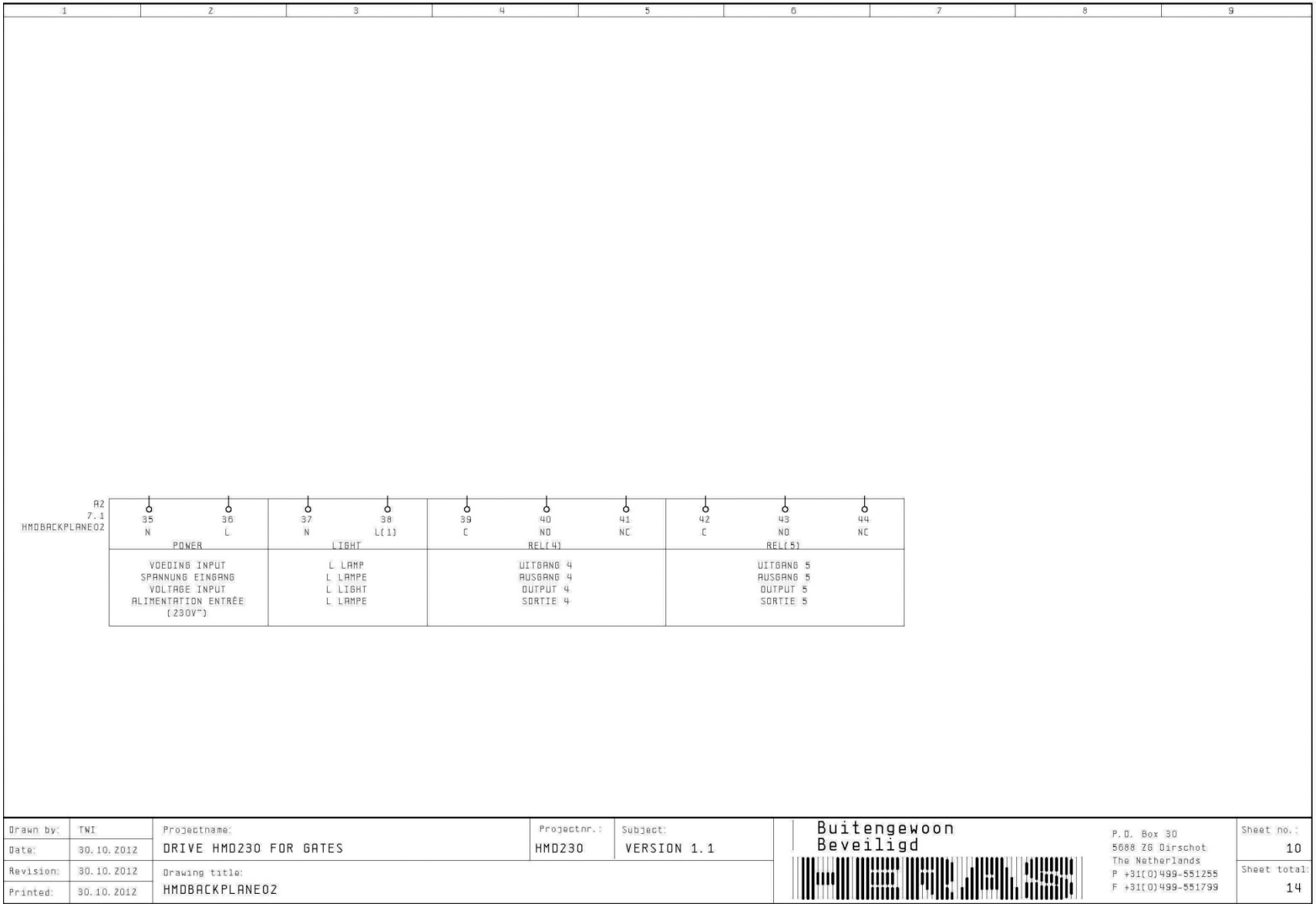
Sheet no.: 9
Sheet total: 14


1
2
3
4
5
6
7
8
9
A2
7.1
HMDBACKPLANE02
35
N
36
L
POWER
VOEDING INPUT
SPANNUNG EINGANG
VOLTAGE INPUT
ALIMENTATION ENTRÉE
(230V~)
37
N
38
L(1)
LIGHT
L LAMP
L LAMPE
L LIGHT
L LAMPE
39
C
40
NO
41
NC
REL(4)
UITGANG 4
AUSGANG 4
OUTPUT 4
SORTIE 4
42
C
43
NO
44
NC
REL(5)
UITGANG 5
AUSGANG 5
OUTPUT 5
SORTIE 5
Drawn by: TWI
Date: 30.10.2012
Revision: 30.10.2012
Printed: 30.10.2012
Projectname:
DRIVE HMD230 FOR GATES
Drawing title:
HMDBACKPLANE02
Projectnr.:
HMD230
Subject:
VERSION 1.1
Buitengewoon Beveiligd
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10
Sheet total:
14

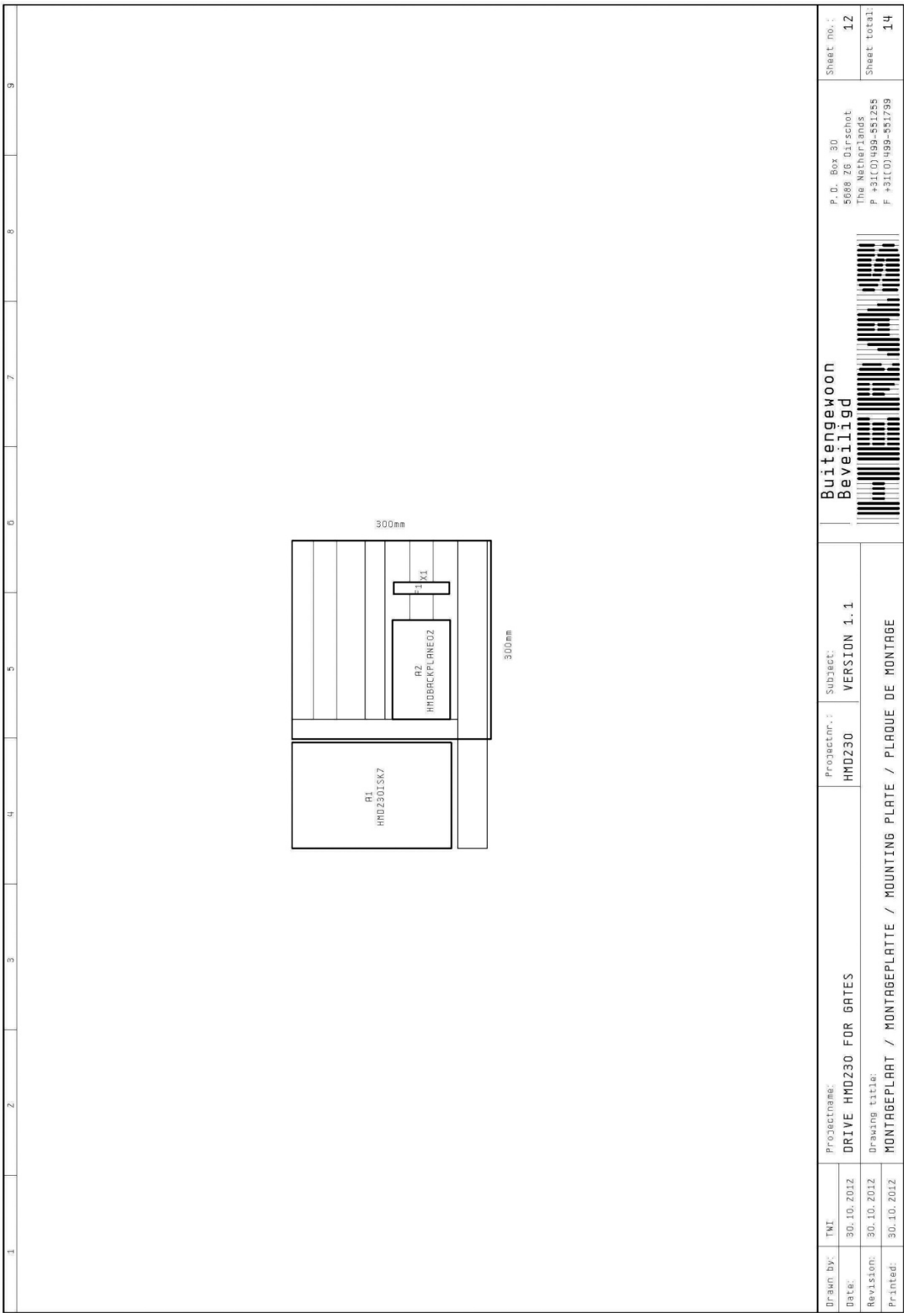
1	2	3	4	5	6	7	8	9

VOEDING IN/SPANNUNG EIN/
VOLTAGE IN/ALIMENTATION EN

230V UIT/AUS/OUT/COUPE

L	1	X1'
N	2	
⏚ PE1		
230V	3	
N	4	
⏚ PE2		

Drawn by:	TWI	Projectname:	Projectnr.:	Subject:	Buitengewoon Beveiligd	Sheet no.: 11
Date:	30.10.2012	DRIVE HMD230 FOR GATES	HMD230	VERSION 1.1	P.O. Box 30 5688 ZG Oirschot The Netherlands P +31(0)499-551255 F +31(0)499-551799	
Revision:	30.10.2012	Drawing title:				Sheet total: 14
Printed:	30.10.2012	KLEMMENSTROOK / KLEMMENLEISTE / CONNECTIONRAIL / BORNE "X1"				


300mm
300mm
A1
HMD230ISK7
A2
HMDBACKPLANE02
X1
Buitengewoon
Beveiligd
P.O. Box 30
5600 ZG Oirschot
The Netherlands
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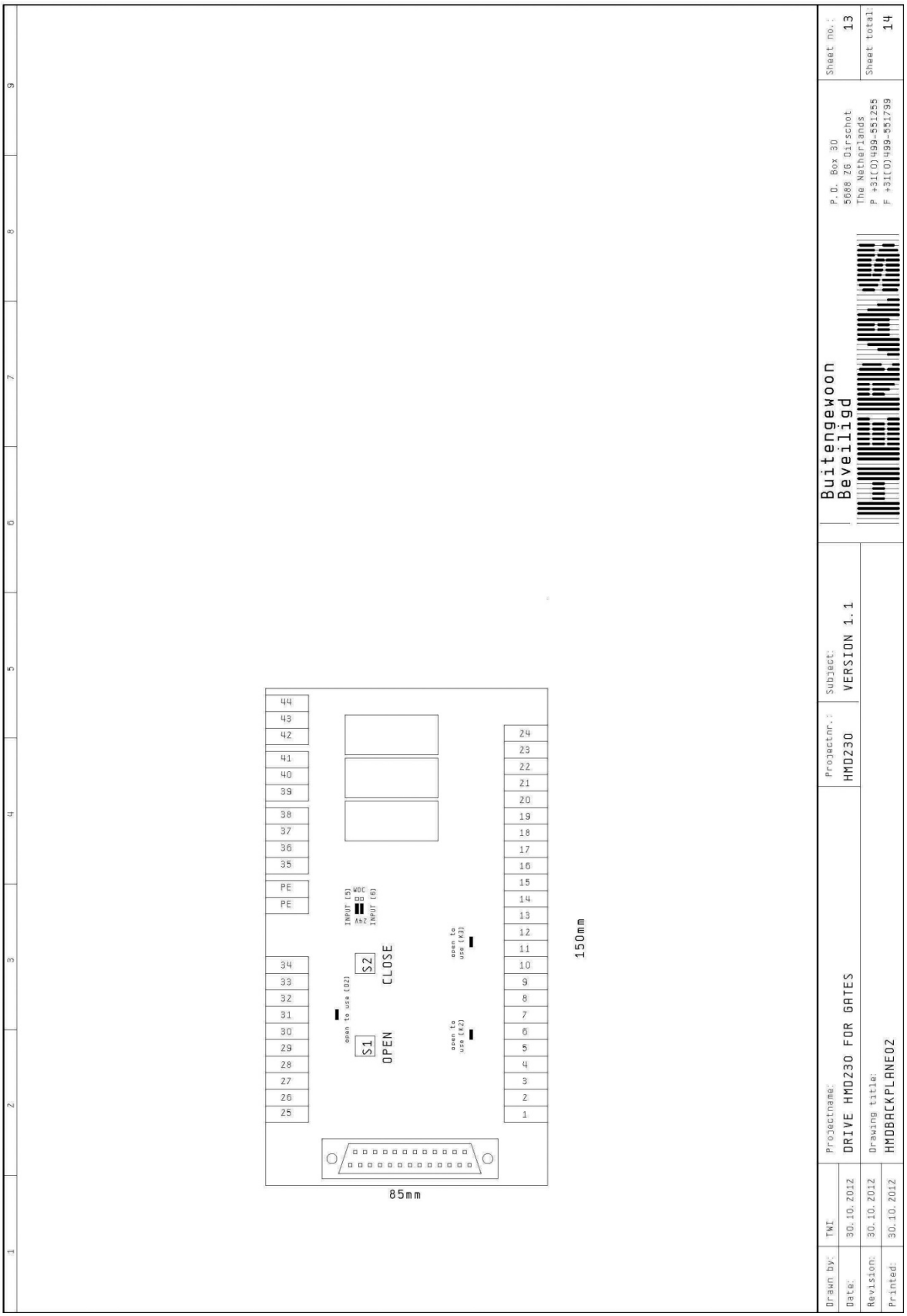
F +31(0)499-551799
Drawn by: TWT
Date: 30.10.2012
Revision: 30.10.2012
Printed: 30.10.2012
Projectname: DRIVE HMD230 FOR GATES
Drawing title: MONTAGEPLAAT / MONTAGEPLATTE / MOUNTING PLATE / PLAQUE DE MONTAGE
Projector.: HMD230
Subject: VERSION 1.1
Sheet no.: 12
Sheet total: 14


44
43
42
41
40
39
38
37
36
35
PE
PE
34
33
32
31
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
INPUT (5)
INPUT (6)
24V
VDC
S1
OPEN
S2
CLOSE
open to use (D2)
open to use (K2)
open to use (K3)
150mm
85mm
Drawn by: TWT
Date: 30.10.2012
Revision: 30.10.2012
Printed: 30.10.2012
Projectname: DRIVE HMD230 FOR GATES
Drawing title: HMDBACKPLANE02
Projector.: HMD230
Subject: VERSION 1.1
Buitengewoon Beveiligd
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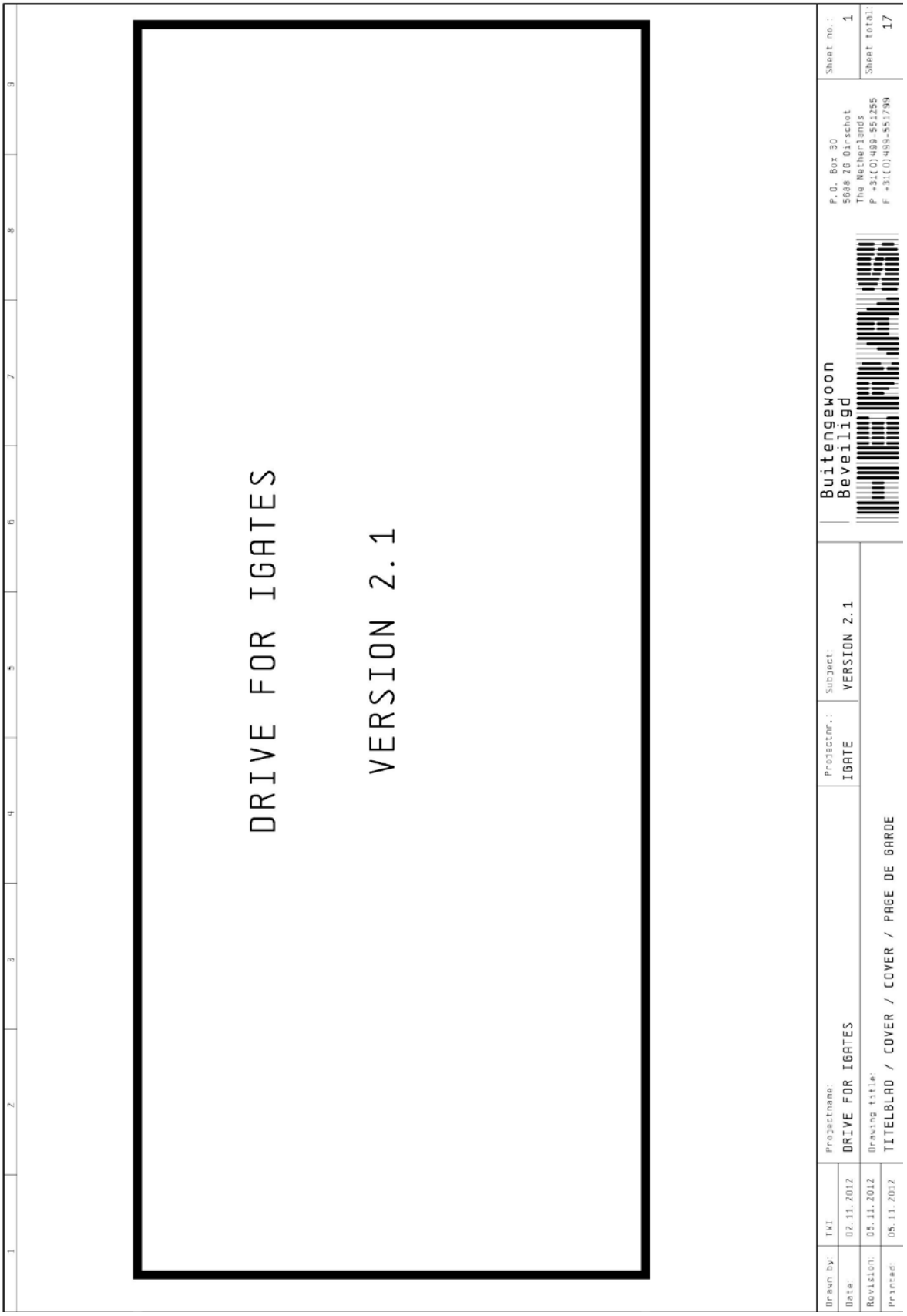
KLEUR/FARBE/COLOR/COULEUR	→	FUNCTIE/FUNKTION/FUNCTION/UTILISÉ
230V VOEDING / SPANNUNG / VOLTAGE / ALIMENTATION		
BRUIN/BRAUN/BROWN/MARRON 1.0 MM²	→	L 230V
BLAUW/BLAU/BLUE/BLEU 1.0 MM²	→	N 230V
GEEL-GROEN/GELB-GRÜN/YELLOW-GREEN/JAUNE-VERT 1.0 MM²	→	⏚
24V VOEDING / SPANNUNG / VOLTAGE / ALIMENTATION		
ROOD/ROT/RED/ROUGE 0.5 MM²	→	+24V
BLAUW/BLAU/BLUE/BLEU 0.5 MM²	→	-0V
GEEL-GROEN/GELB-GRÜN/YELLOW-GREEN/JAUNE-VERT 0.5 MM²	→	⏚

CONNECTION HMD230 / BACKPLANE

PIN	COLOR	CONNECTION HMD230
1	WHITE	REL3 LEFT
2	BROWN	REL2 LEFT
3	GREEN	IN6
4	YELLOW	IN5
9	GREY	REL1 LEFT
10	PINK	IN8
11	BLUE	IN7
12	RED	0V
14	BLACK	REL3 RIGHT
15	VIOLET	REL2 RIGHT
16	GREY/PINK	REL1 RIGHT
17	RED/BLUE	24V
18	WHITE/GREEN	IN3
19	BROWN/GREEN	IN1
20	WHITE/YELLOW	IN2
21	YELLOW/BROWN	IN4
22	WHITE/GREY	LB IN
23	GREY/BROWN	REL4 LEFT
24	WHITE/PINK	REL5 LEFT
25	PINK/BROWN	24V -|_|-
	CONNECT TO 24V	REL5 MIDDLE
	CONNECT TO 24V	REL4 MIDDLE

Drawn by:	TWI	Projectname: DRIVE HMD230 FOR GATES	Projectnr.: HMD230	Subject: VERSION 1.1	Buitengewoon Beveiligd	Sheet no.: 14
Date:	30.10.2012				P.O. Box 30 5688 ZG Oirschot The Netherlands P +31(0)499-551255 F +31(0)499-551799	
Revision:	30.10.2012	Drawing title: KLEUR / FARBE / COLOR / COULEUR				Sheet total: 14
Printed:	30.10.2012					

Appendix D: ELECTRIC DIAGRAM IGD



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1	TITELBLAD / COVER / COVER / PAGE DE GARDE	05.11.2012
2	INHOUD / INHALT / CONTENTS / INDEX	05.11.2012
3	230V VOEDING / SPANNUNG / VOLTAGE / ALIMENTATION	05.11.2012
4	230V VOEDING / SPANNUNG / VOLTAGE / ALIMENTATION	05.11.2012
5	VOEDING / SPANNUNG / VOLTAGE / ALIMENTATION 24V	05.11.2012
6	HMD230ISK7	05.11.2012
7	HMD230ISK7	05.11.2012
8	HMD230ISK7	05.11.2012
9	HMDBACKPLANE02	05.11.2012
10	HMDBACKPLANE02	05.11.2012
11	HMDBACKPLANE02	05.11.2012
12	HMDBACKPLANE02	05.11.2012
13	KLEMMENSTROOK / KLEMMENLEISTE / CONNECTIONRAIL / BORNE "X1"	05.11.2012
14	KLEMMENSTROOK / KLEMMENLEISTE / CONNECTIONRAIL / BORNE "X1A"	05.11.2012
15	MONTAGEPLAAT / MONTAGEPLATTE / MOUNTING PLATE / PLAQUE DE MONTAGE	05.11.2012
16	HMDBACKPLANE02	05.11.2012
17	KLEUR / FARBE / COLOR / COULEUR	05.11.2012

Drawn by:	TWI	Projectname:	Projectnr.:	Subject:	
Date:	02.11.2012	DRIVE FOR IGATES	IGATE	VERSION 2.1	
Revision:	05.11.2012	Drawing title:			
Printed:	05.11.2012	INHOUD / INHALT / CONTENTS / INDEX			

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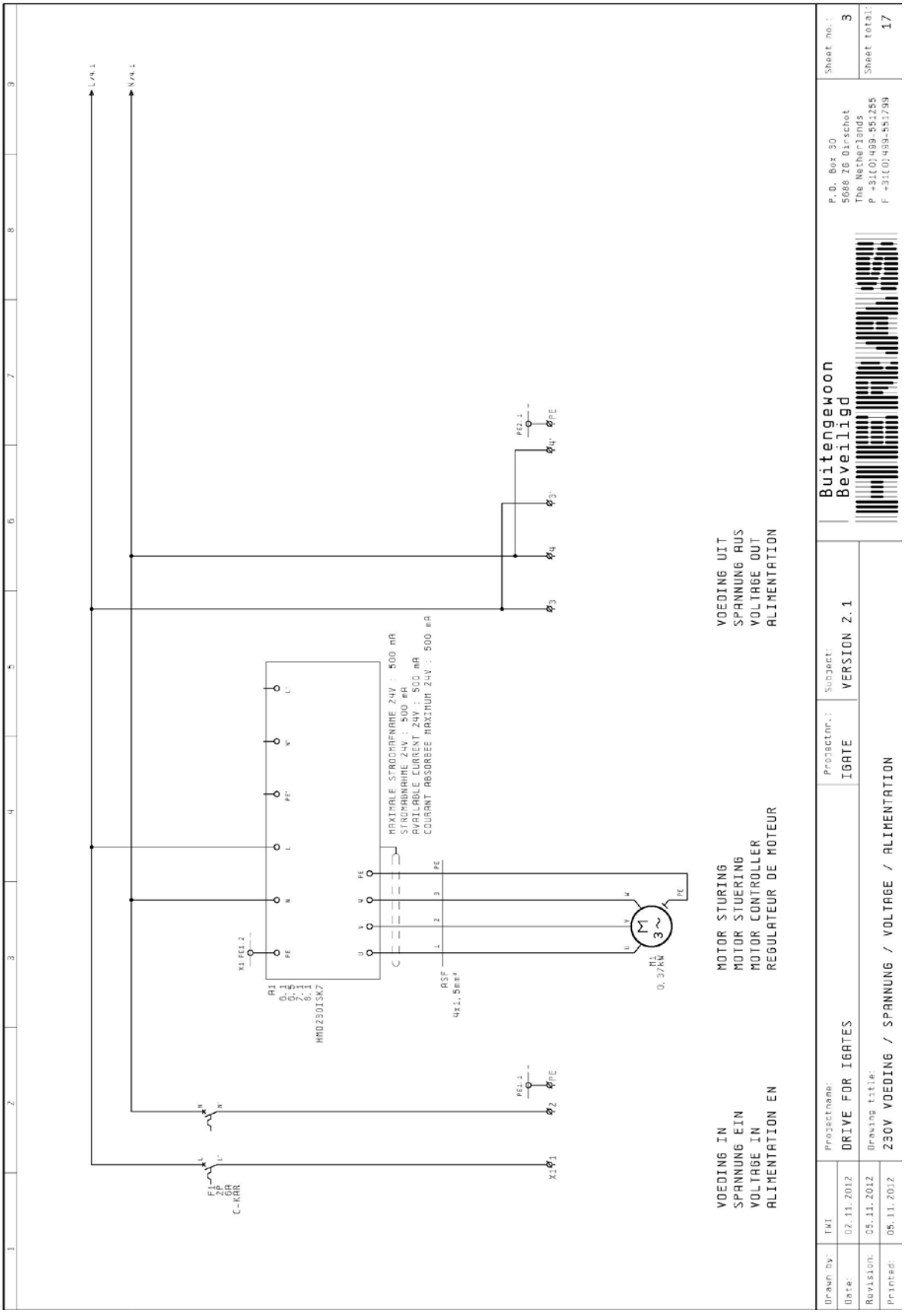
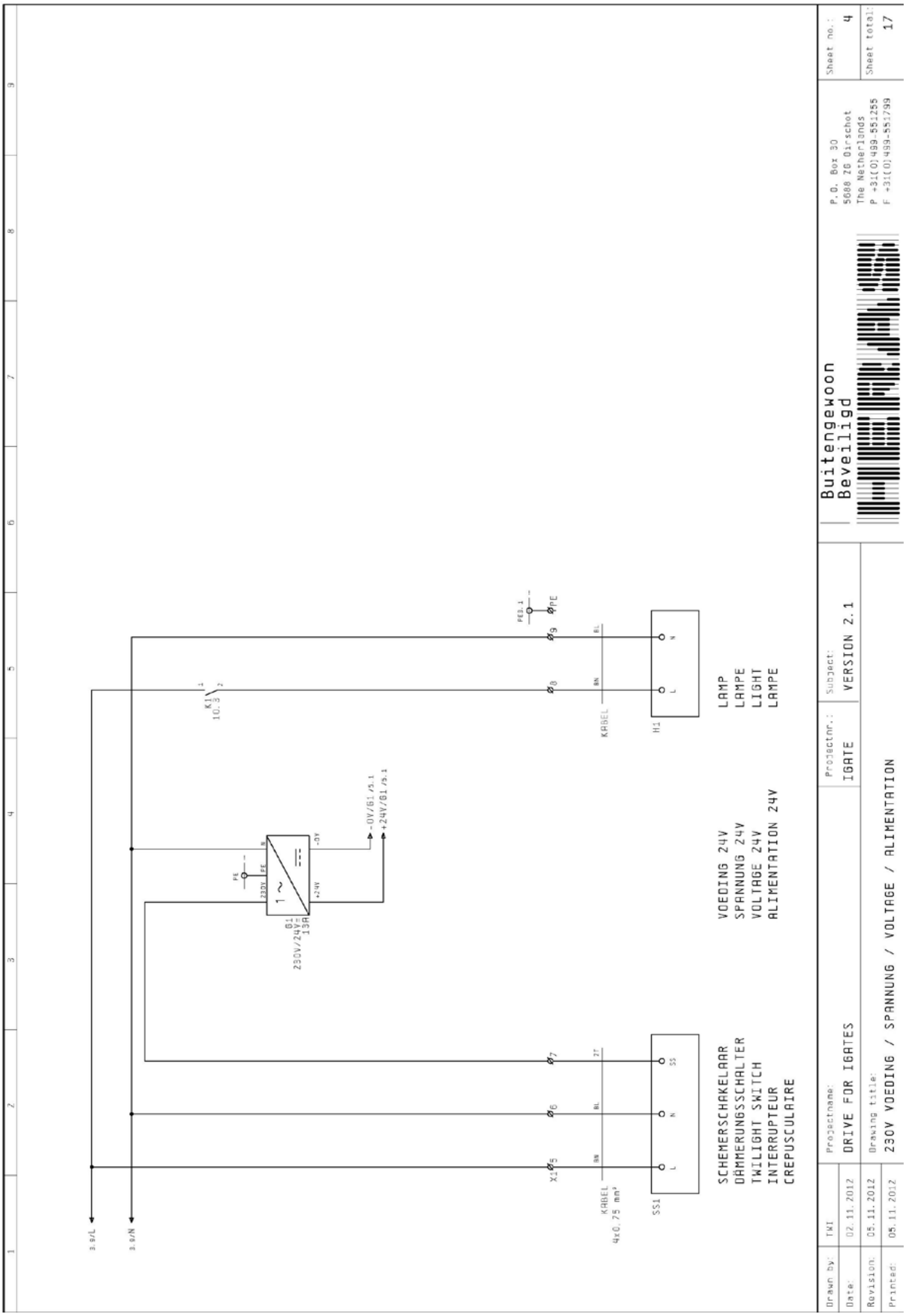
Sheet total: 17


VOEDING IN
SPANNUNG EIN
VOLTAGE IN
ALIMENTATION EN
MOTOR STURING
MOTOR STUERING
MOTOR CONTROLLER
REGULATEUR DE MOTEUR
VOEDING UIT
SPANNUNG AUS
VOLTAGE OUT
ALIMENTATION
MAXIMALE STROOMAFNAME 24V : 500 mA
STROMABNAHME 24V : 500 mA
AVAILABLE CURRENT 24V : 500 mA
COURANT ABSORBEE MAXIMUM 24V : 500 mA
HMD2301SK7
ASF
4x1.5mm²
M1
0,37kW
F1
2P
C-KAR
Buitengewoon
Beveiligd
P.O. Box 30
5600 ZG Dirschot
The Netherlands
P +31(0)499-551255
F +31(0)499-551799
Drawn by: TWT
Date: 02.11.2012
Revision: 05.11.2012
Printed: 05.11.2012
Projectname: DRIVE FOR IGATES
Drawing title: 230V VOEDING / SPANNUNG / VOLTAGE / ALIMENTATION
Projectnr.: IGATE
Subject: VERSION 2.1
Sheet no.: 3
Sheet total: 17


SCHEMERSCHAKELAAR
DÄMMERUNGSSCHALTER
TWILIGHT SWITCH
INTERRUPTEUR
CREPUSCULAIRE
VOEDING 24V
SPANNUNG 24V
VOLTAGE 24V
ALIMENTATION 24V
LAMP
LAMPE
LIGHT
LAMPE
G1
230V/24V=
13A
K1
10.3
KABEL
4x0.75 mm²
SS1
H1
Buitengewoon
Beveiligd
Drawn by: TWI
Date: 02.11.2012
Revision: 05.11.2012
Printed: 05.11.2012
Projectname: DRIVE FOR IGATES
Drawing title: 230V VOEDING / SPANNUNG / VOLTAGE / ALIMENTATION
Projectnr.: IGATE
Subject: VERSION 2.1
P.O. Box 30
5688 ZG Oirschot
The Netherlands
P +31(0)499-551255
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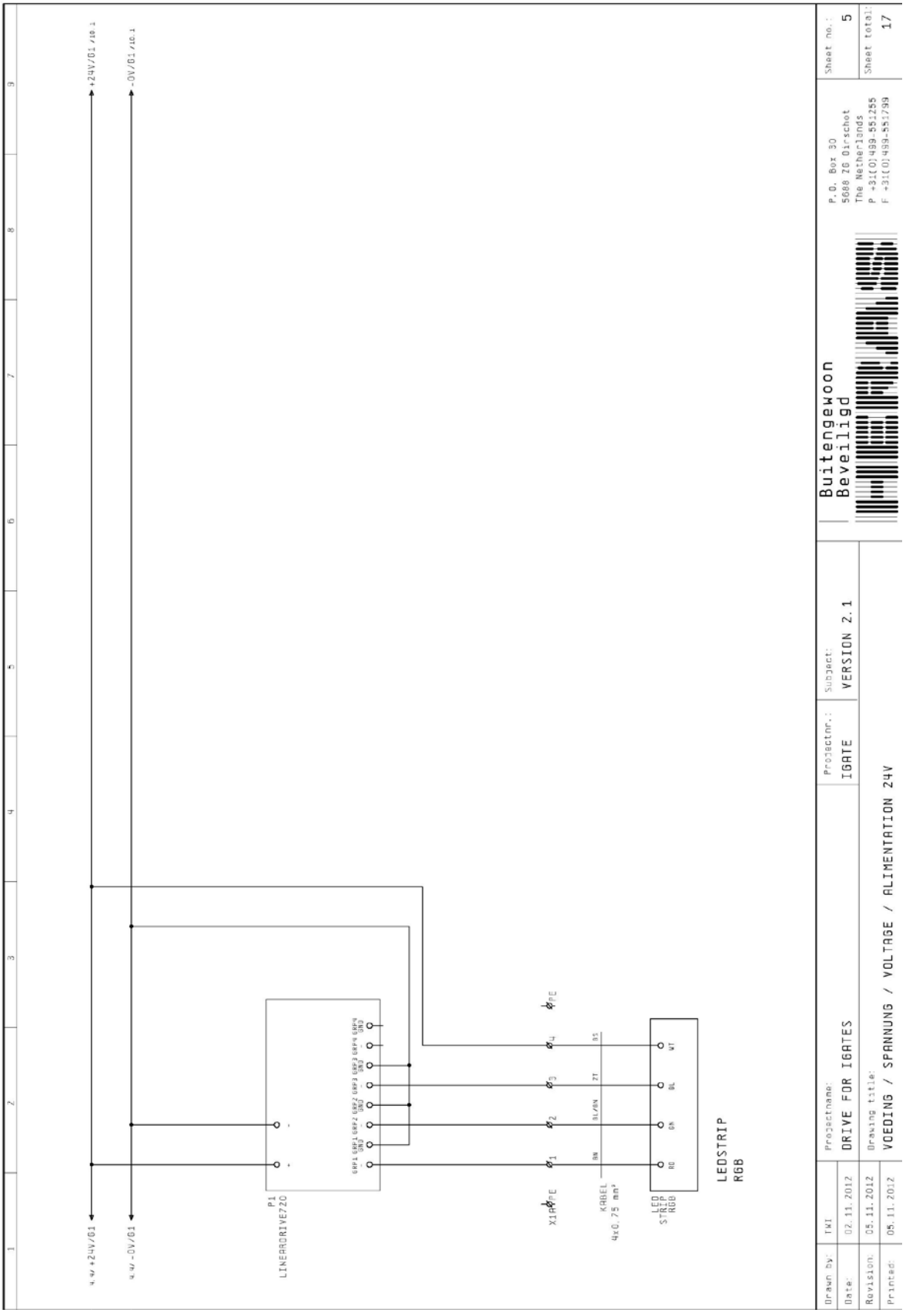
+24V/G1
0V/G1
P1
LINEARDRIVE720
X1
LEDSTRIP
RGB
KABEL
4x0.75 mm²
LED
STRIP
RGB
Buitengewoon
Beveiligd
P.O. Box 30
5600 ZG Dirschot
The Netherlands
P +31(0)499-551255
F +31(0)499-551799
Drawn by: TWT
Date: 02.11.2012
Revision: 05.11.2012
Printed: 05.11.2012
Projectname:
DRIVE FOR IGATES
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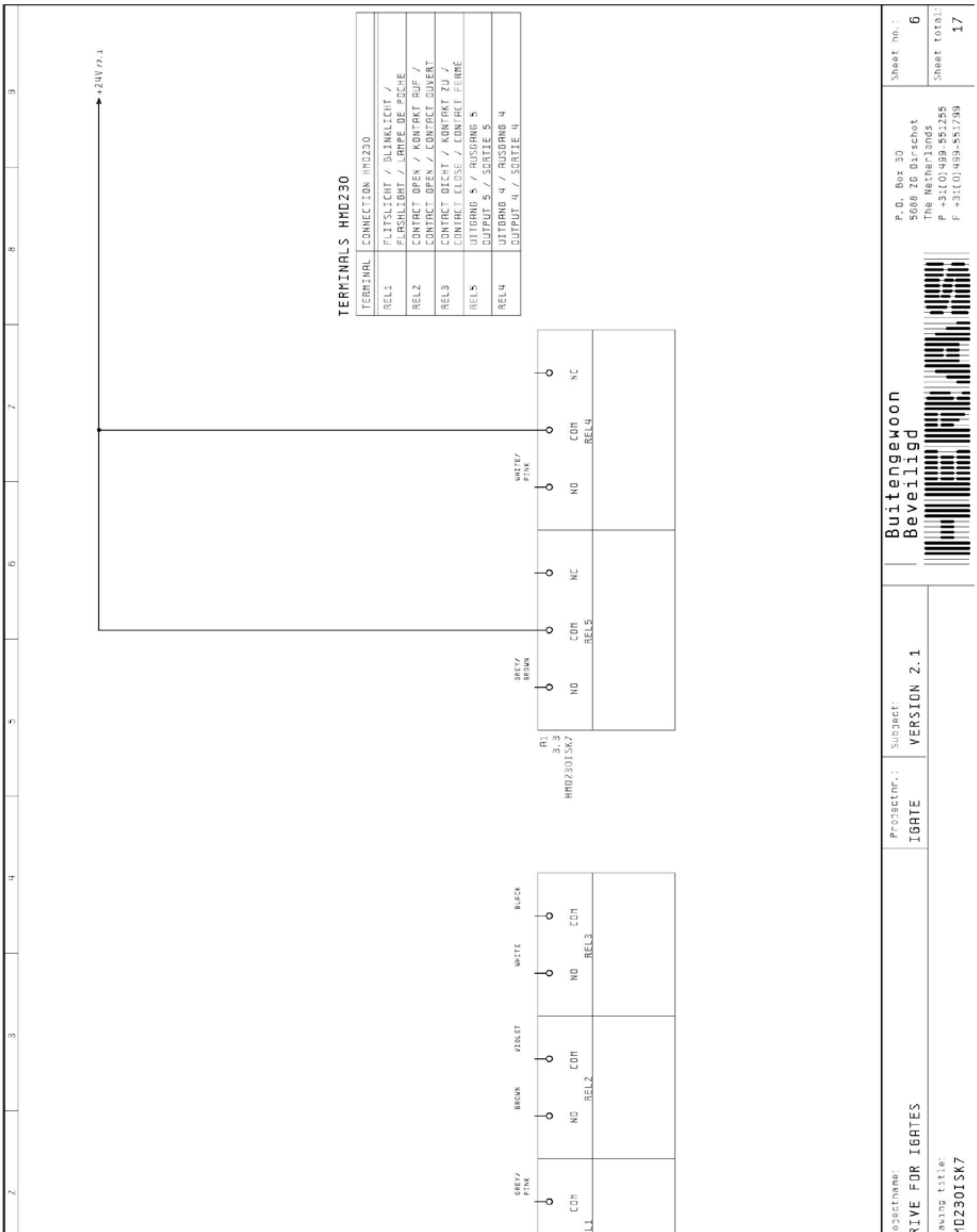
VOEDING / SPANNUNG / VOLTAGE / ALIMENTATION 24V
Projectnr.:
IGATE
Subject:
VERSION 2.1
Sheet no.: 5
Sheet total: 17


+24V/7.1
TERMINALS HMD230
TERMINAL | CONNECTION HMD230
REL1 | FLITSLICHT / BLINKLICHT / FLASHLIGHT / LAMPE DE POCHE
REL2 | CONTACT OPEN / KONTAKT AUF / CONTACT OPEN / CONTACT OUVERT
REL3 | CONTACT DICHT / KONTAKT ZU / CONTACT CLOSE / CONTACT FERMÉ
REL5 | UITGANG 5 / AUSGANG 5 OUTPUT 5 / SORTIE 5
REL4 | UITGANG 4 / AUSGANG 4 OUTPUT 4 / SORTIE 4
GREY/BROWN
NO COM NC
REL5
WHITE/PINK
NO COM NC
REL4
A1 3.3 HMD230ISK7
GREY GREY/PINK
NO COM
REL1
BROWN VIOLET
NO COM
REL2
WHITE BLACK
NO COM
REL3
A1 3.3 HMD230ISK7
Drawn by: TKI
Date: 02.11.2012
Revision: 05.11.2012
Printed: 05.11.2012
Projectname: DRIVE FOR IGATES
Drawing title: HMD230ISK7
Projectnr.: IGATE
Subject: VERSION 2.1
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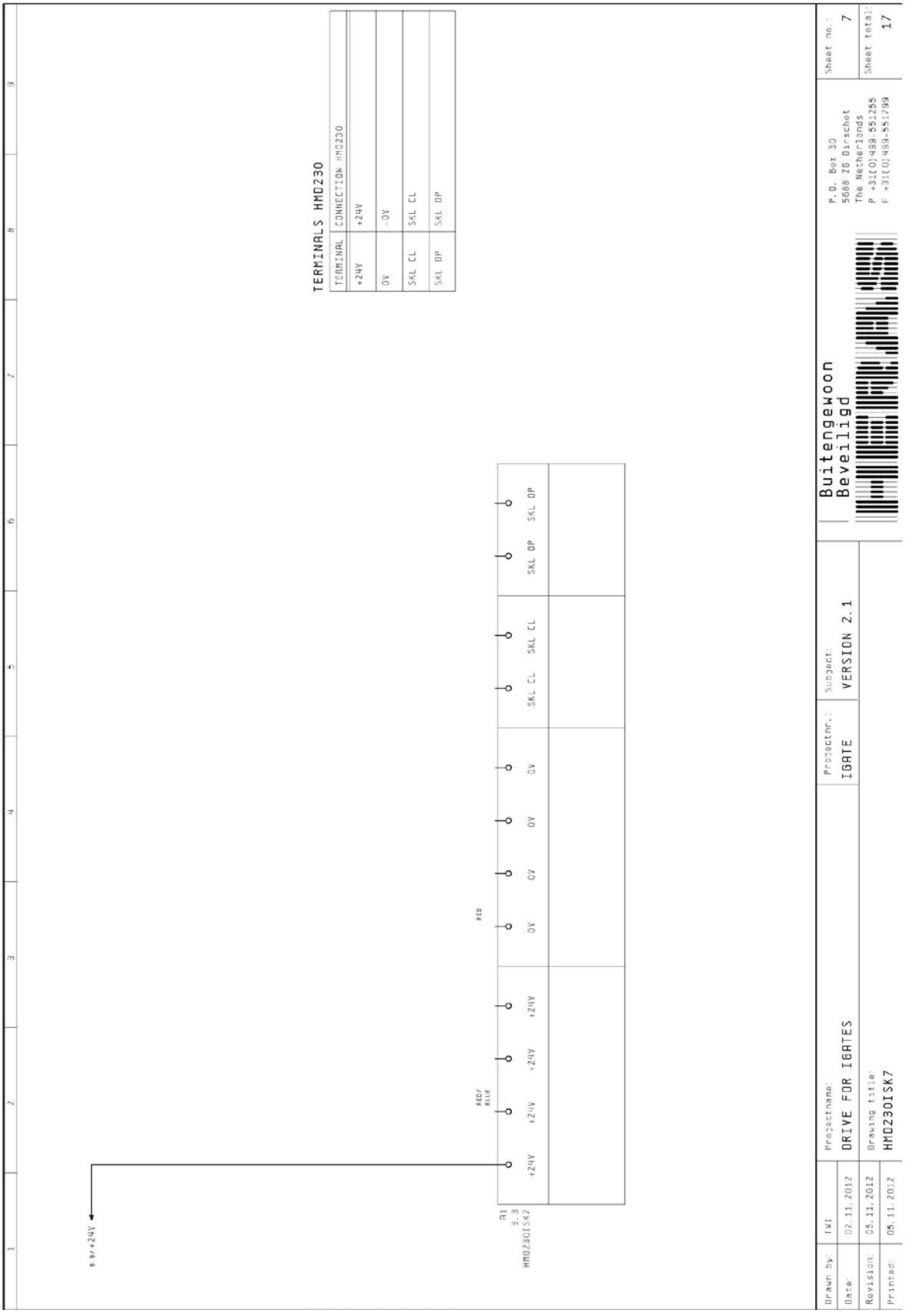
Sheet total: 17


TERMINALS HMD230
TERMINAL | CONNECTION HMD230
+24V | +24V
0V | 0V
SKL CL | SKL CL
SKL DP | SKL DP
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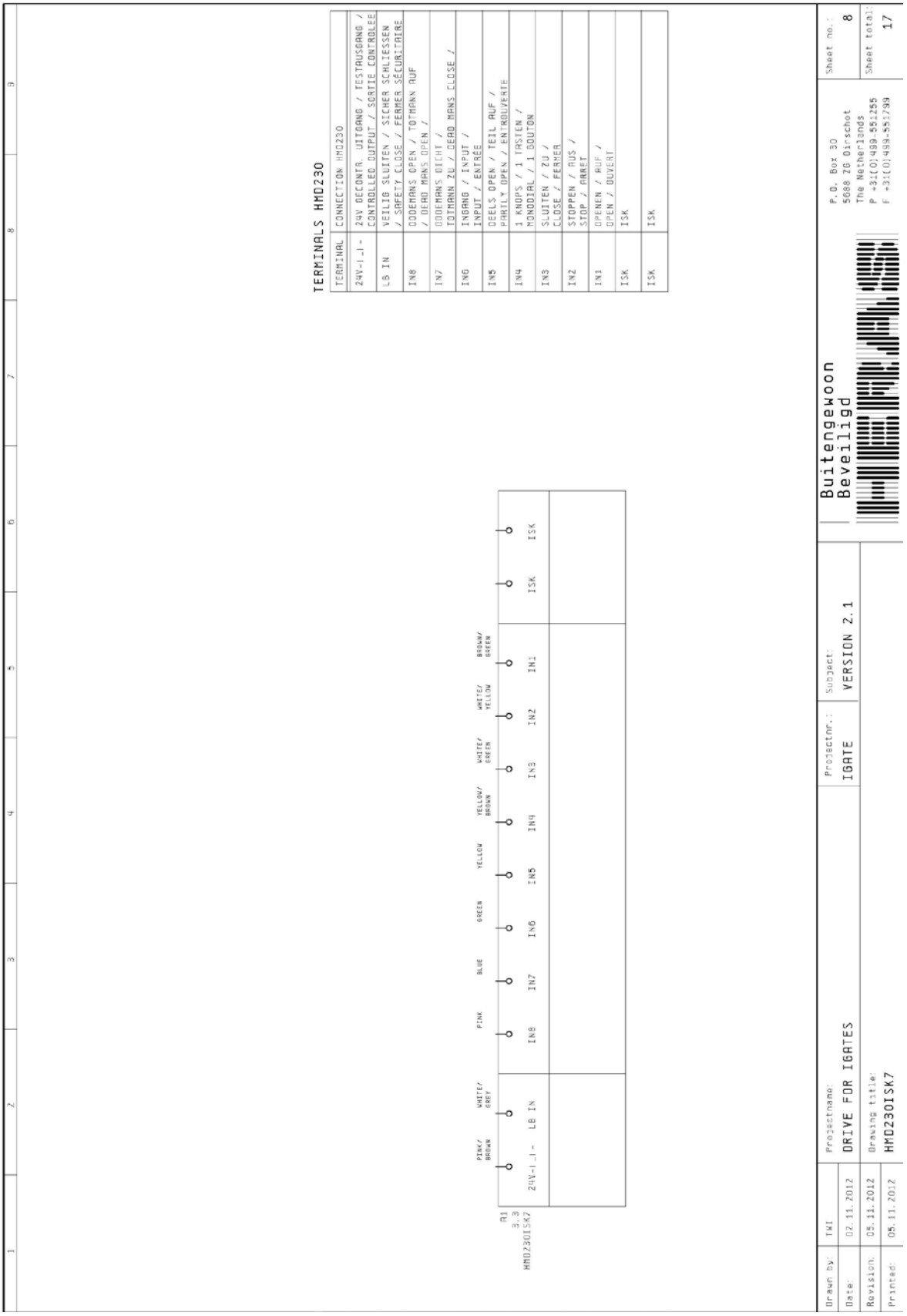
Sheet no.: 7
Sheet total: 17
Drawn by: TWT
Date: 02.11.2012
Revision: 05.11.2012
Printed: 05.11.2012
Projectname: DRIVE FOR IGATES
Projectnr.: IGATE
Subject: VERSION 2.1
Drawing title: HMD230ISK7
A1
3.3
HMD230ISK7
RED/BLUE
RED
+24V +24V +24V +24V 0V 0V 0V 0V SKL CL SKL CL SKL DP SKL DP
6.9/+24V


TERMINALS HMD230
TERMINAL
CONNECTION HMD230
24V-I-
24V GECONTR. UITGANG / TESTAUSGANG / CONTROLLED OUTPUT / SORTIE CONTROLEE
LB IN
VEILIG SLUITEN / SICHER SCHLIESSEN / SAFETY CLOSE / FERMER SÉCURITAIRE
IN8
DODEMANS OPEN / TOTMANN AUF / DEAD MANS OPEN /
IN7
DODEMANS DICHT / TOTMANN ZU / DEAD MANS CLOSE /
IN6
INGANG / INPUT / ENTRÉE
IN5
DEELS OPEN / TEIL AUF / PARTLY OPEN / ENTROUVERTE
IN4
1 KNOPS / 1 TASTEN / MONODIAL / 1 BOUTON
IN3
SLUITEN / ZU / CLOSE / FERMER
IN2
STOPPEN / AUS / STOP / ARRET
IN1
OPENEN / AUF / OPEN / OUVERT
ISK
ISK
ISK
ISK
PINK/ BROWN
WHITE/ GREY
PINK
BLUE
GREEN
YELLOW
YELLOW/ BROWN
WHITE/ GREEN
WHITE/ YELLOW
BROWN/ GREEN
24V-I-
LB IN
IN8
IN7
IN6
IN5
IN4
IN3
IN2
IN1
ISK
ISK
A1
3.3
HMD230ISK7
Drawn by:
TWI
Projectname:
DRIVE FOR IGATES
Projector.:
IGATE
Subject:
VERSION 2.1
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Date:
02.11.2012
Revision:
05.11.2012
Drawing title:
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Printed:
05.11.2012
Sheet total:
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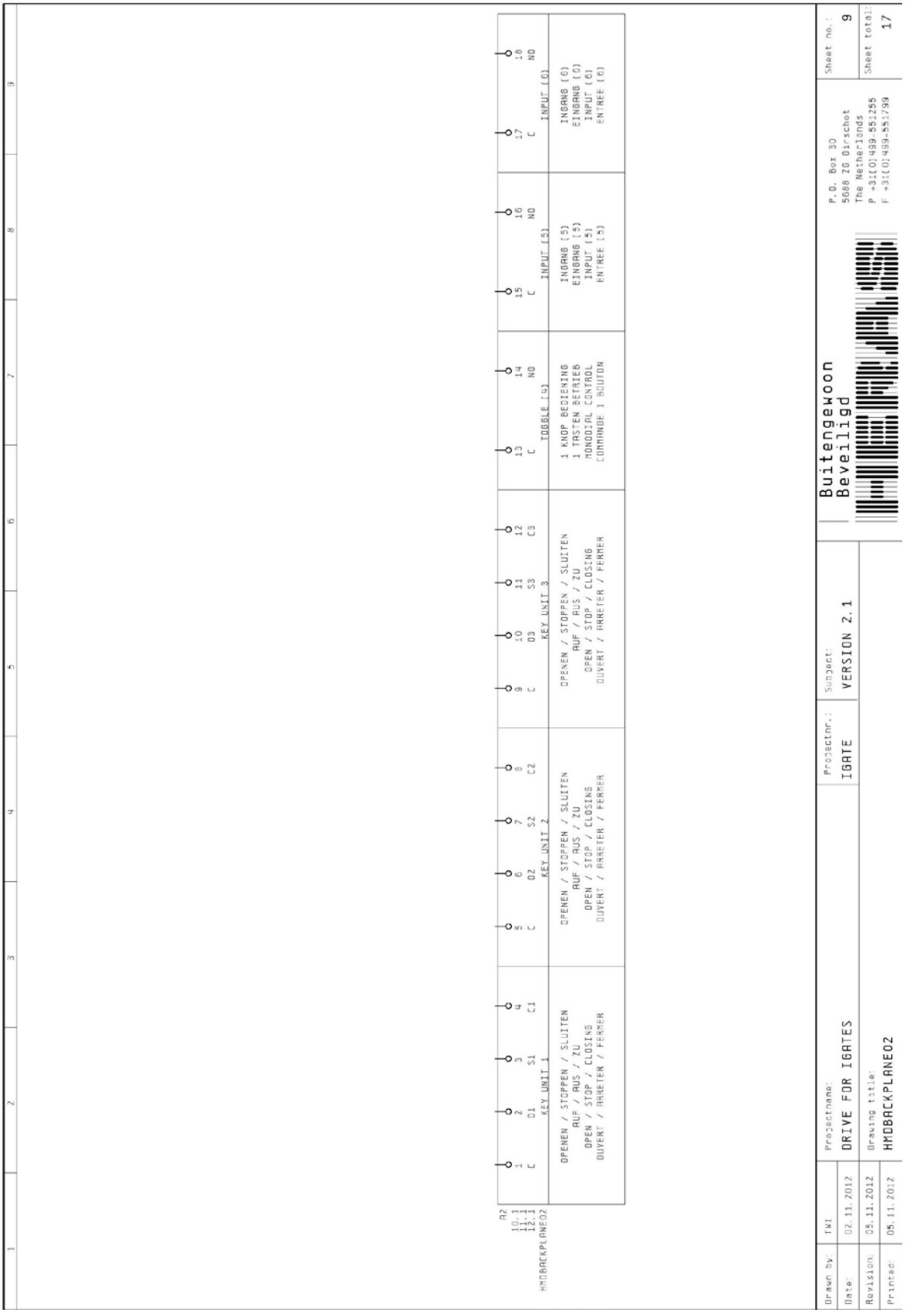
A2
10.1
11.1
12.1
HMDBACKPLANE02
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
C D1 S1 C1 C D2 S2 C2 C D3 S3 C3 C NO C NO C NO
KEY UNIT 1
KEY UNIT 2
KEY UNIT 3
TOGGLE (5)
INPUT (5)
INPUT (6)
OPENEN / STOPPEN / SLUITEN
AUF / AUS / ZU
OPEN / STOP / CLOSING
OUVERT / ARRETER / FERMER
1 KNOP BEDIENING
1 TASTEN BETRIEB
MONODIAL CONTROL
COMMANDE 1 BOUTON
INGANG (5)
EINGANG (5)
INPUT (5)
ENTREE (5)
INGANG (6)
EINGANG (6)
INPUT (6)
ENTREE (6)
Drawn by: TWT
Date: 02.11.2012
Revision: 05.11.2012
Printed: 05.11.2012
Projectname:
DRIVE FOR IGATES
Drawing title:
HMDBACKPLANE02
Projectnr.:
IGATE
Subject:
VERSION 2.1
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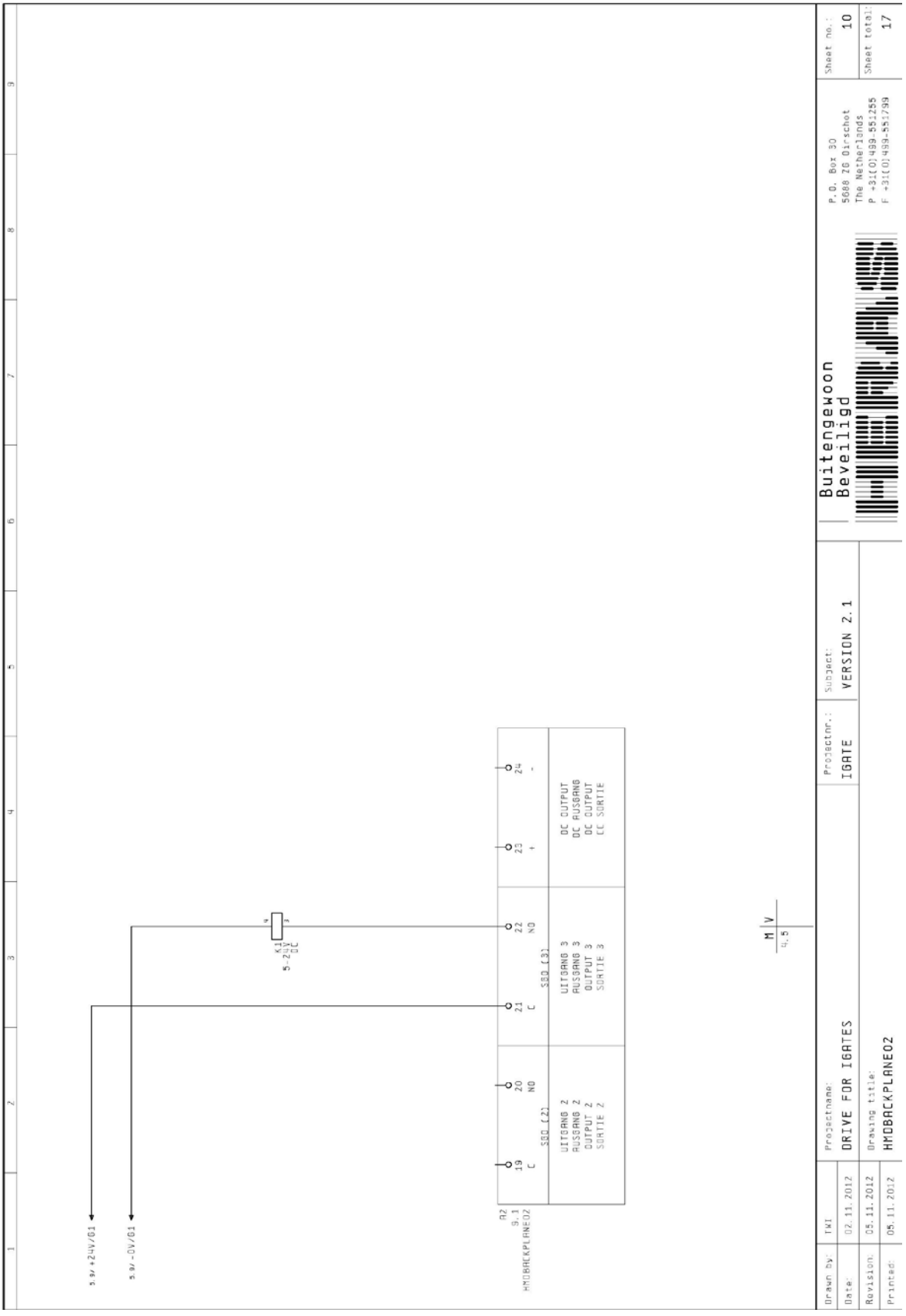
5.9/+24V/G1
5.9/-0V/G1
K1
5-24V
DC
A2
9.1
HMDBRKPLANE02
19
C
20
NO
SSO (2)
UITGANG 2
AUSGANG 2
OUTPUT 2
SORTIE 2
Z1
C
Z2
NO
SSO (3)
UITGANG 3
AUSGANG 3
OUTPUT 3
SORTIE 3
23
+
24
-
DC OUTPUT
DC AUSGANG
DC OUTPUT
CC SORTIE
M | V
4,5
Drawn by: TWT
Date: 02.11.2012
Revision: 05.11.2012
Printed: 05.11.2012
Projectname:
DRIVE FOR IGATES
Drawing title:
HMDBRCKPLANE02
Projectnr.:
IGATE
Subject:
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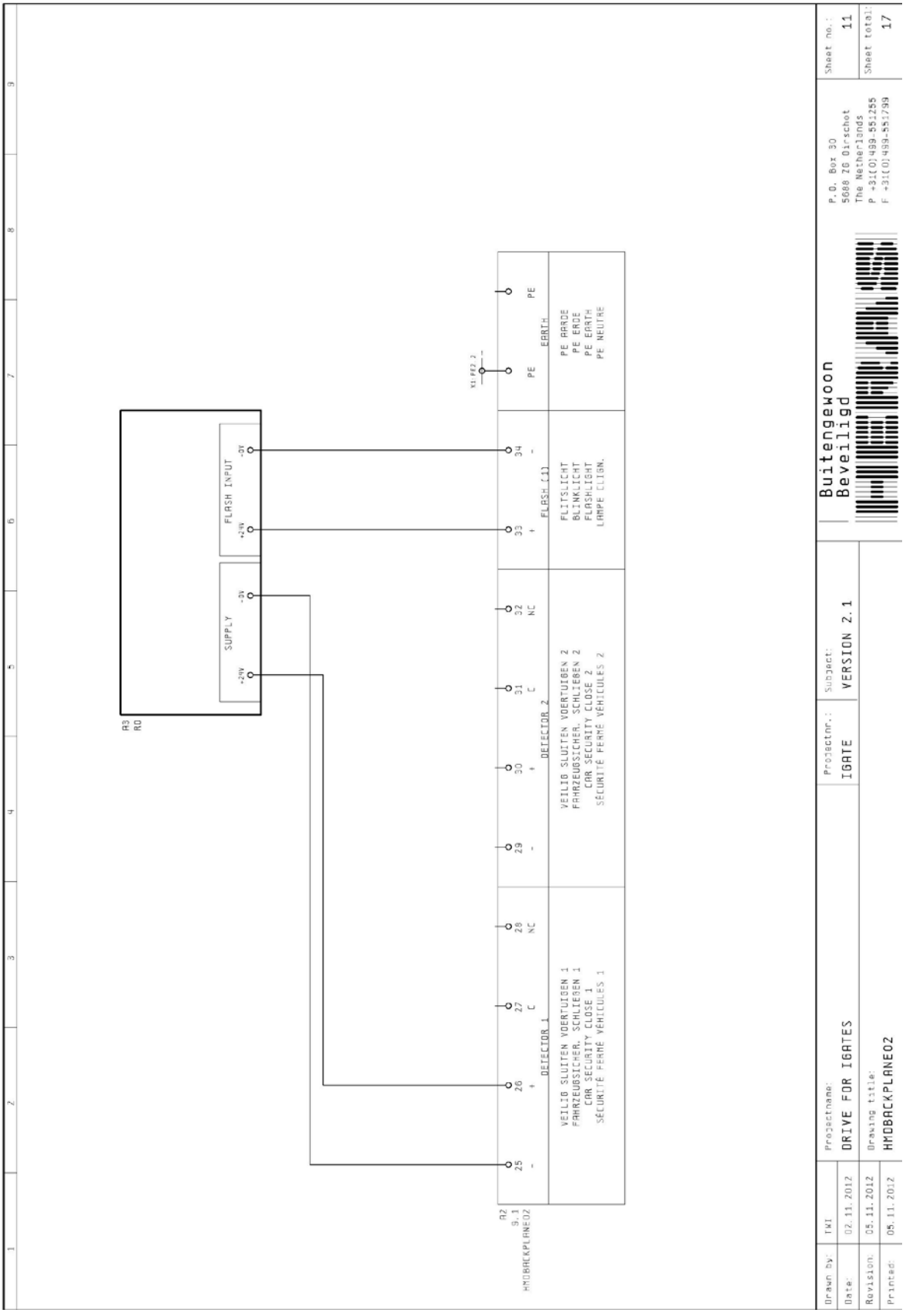
A3
R0
SUPPLY
FLASH INPUT
+24V
0V
A2
9.1
HMDBACKPLANE02
VEILIG SLUITEN VOERTUIGEN 1
FAHRZEUGSICHER. SCHLIEßEN 1
CAR SECURITY CLOSE 1
SÉCURITÉ FERMÉ VÉHICULES 1
DEFECTOR 1
VEILIG SLUITEN VOERTUIGEN 2
FAHRZEUGSICHER. SCHLIEßEN 2
CAR SECURITY CLOSE 2
SÉCURITÉ FERMÉ VÉHICULES 2
DEFECTOR 2
FLASH (1)
FLITSLICHT
BLINKLICHT
FLASHLIGHT
LAMPE CLIGN.
EARTH
PE
PE AARDE
PE ERDE
PE EARTH
PE NEUTRE
Buitengewoon Beveiligd
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Projectnaam:
DRIVE FOR IGATES
Projector.:
IGATE
Subject:
VERSION 2.1
Drawing title:
HMDBACKPLANE02
Drawn by:
TWT
Date:
02.11.2012
Revision:
05.11.2012
Printed:
05.11.2012
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Sheet total:
17

A2
9.1
HMDBACKPLANE02
35 N
36 L
POWER
VOEDING INPUT
SPANNUNG EINGANG
VOLTAGE INPUT
ALIMENTATION ENTRÉE
(230V~)
37 N
38 L(1)
LIGHT
L LAMP
L LAMPE
L LIGHT
L LAMPE
39 C
40 NO
REL(4)
UITGANG 4
AUSGANG 4
OUTPUT 4
SORTIE 4
41 NC
42 C
43 NO
REL(5)
UITGANG 5
AUSGANG 5
OUTPUT 5
SORTIE 5
44 NC
Drawn by: TWT
Date: 02.11.2012
Revision: 05.11.2012
Printed: 05.11.2012
Projectname:
DRIVE FOR IGATES
Drawing title:
HMDBACKPLANE02
Projectnr.:
IGATE
Subject:
VERSION 2.1
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17

1	2	3	4	5	6	7	8	9

VOEDING IN/SPANNUNG EIN/
VOLTAGE IN/ALIMENTATION EN

230V UIT/AUS/OUT/COUPE

SCHEMERSCHAKELAAR/DÄMMERUNGSSCHALTER
TWILIGHT SWITCH/INTERRUPTEUR CREPUSCULAIRE

LAMP/LAMPE/LIGHT/LAMPE

X1'

L	1
N	2
⏚ PE1	
230V	3
N	4
⏚ PE2	
230V	5
N	6
SS	7
230V	8
N	9
⏚ PE3	

Drawn by:	TWI	Projectname:	Projectnr.:	Subject:	
Date:	02.11.2012	DRIVE FOR IGATES	IGATE	VERSION 2.1	
Revision:	05.11.2012	Drawing title:			
Printed:	05.11.2012	KLEMMENSTROOK / KLEMMENLEISTE / CONNECTIONRAIL / BORNE "X1"			

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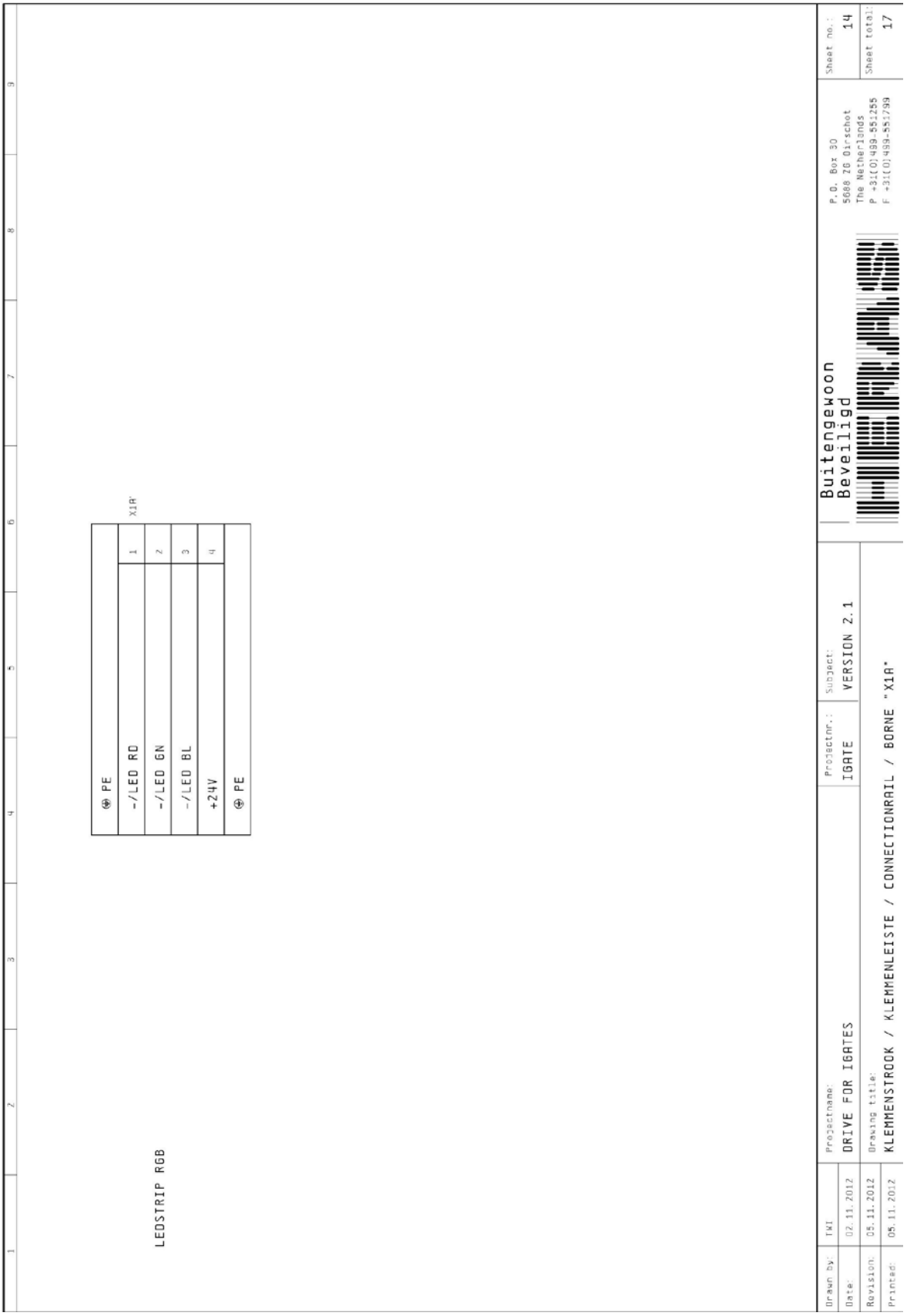
PE
-/LED RD
-/LED GN
-/LED BL
+24V
PE
1
2
3
4
X1A'
LEDSTRIP RGB
Drawn by: TWT
Date: 02.11.2012
Revision: 05.11.2012
Printed: 05.11.2012
Projectname:
DRIVE FOR IGATES
Drawing title:
KLEMMENSTROOK / KLEMMENLEISTE / CONNECTIONRAIL / BORNE "X1A"
Projectnr.:
IGATE
Subject:
VERSION 2.1
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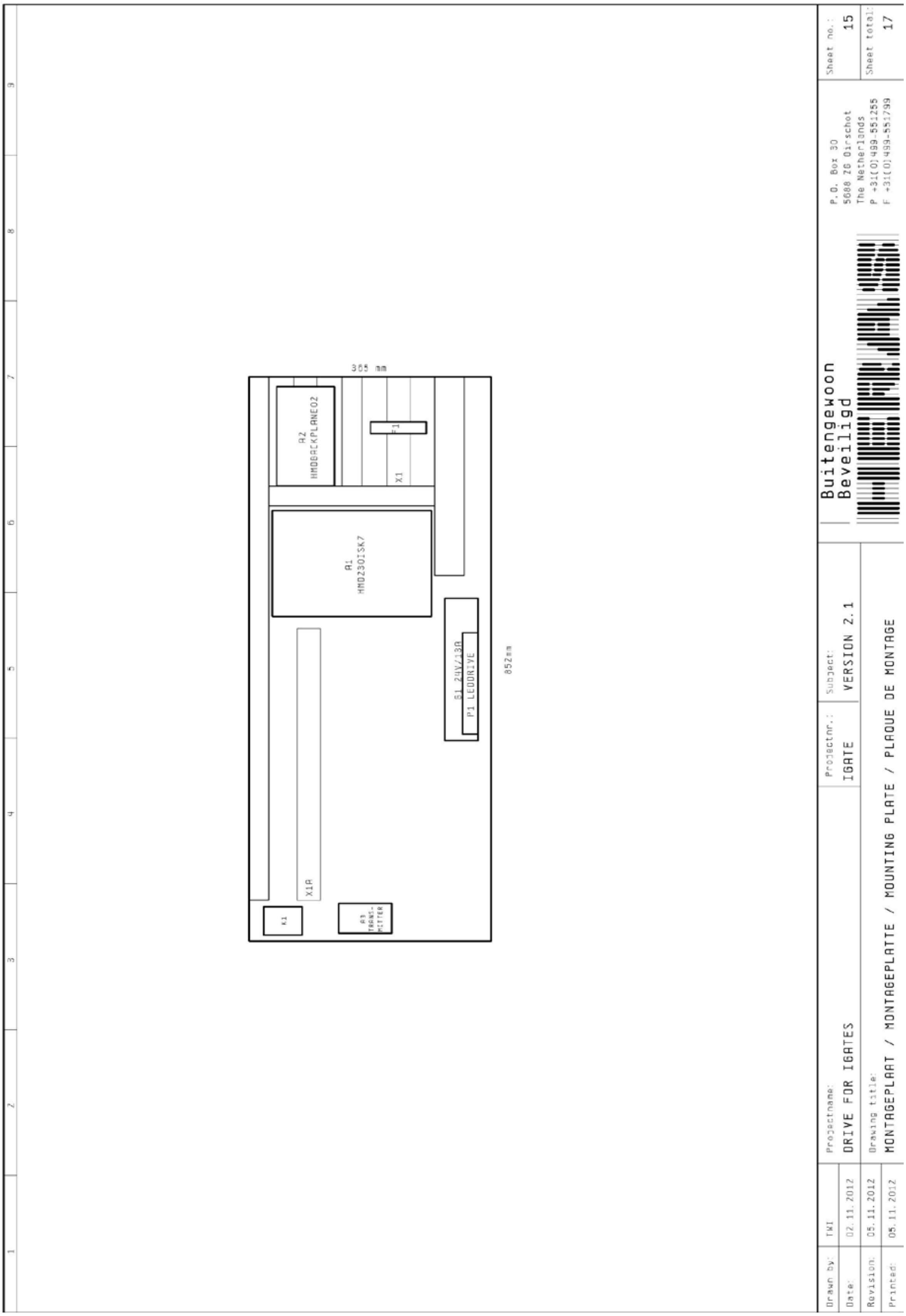
365 mm
852mm
A2
HMDBACKPLANE02
F1
X1
A1
HMD230ISK7
G1 24V/13A
P1 LEDDRIVE
X1A
K1
Drawn by: TKI
Date: 02.11.2012
Revision: 05.11.2012
Printed: 05.11.2012
Projectname: DRIVE FOR IGATES
Drawing title: MONTAGEPLAAT / MONTAGEPLATTE / MOUNTING PLATE / PLAQUE DE MONTAGE
Projectnr.: IGATE
Subject: VERSION 2.1
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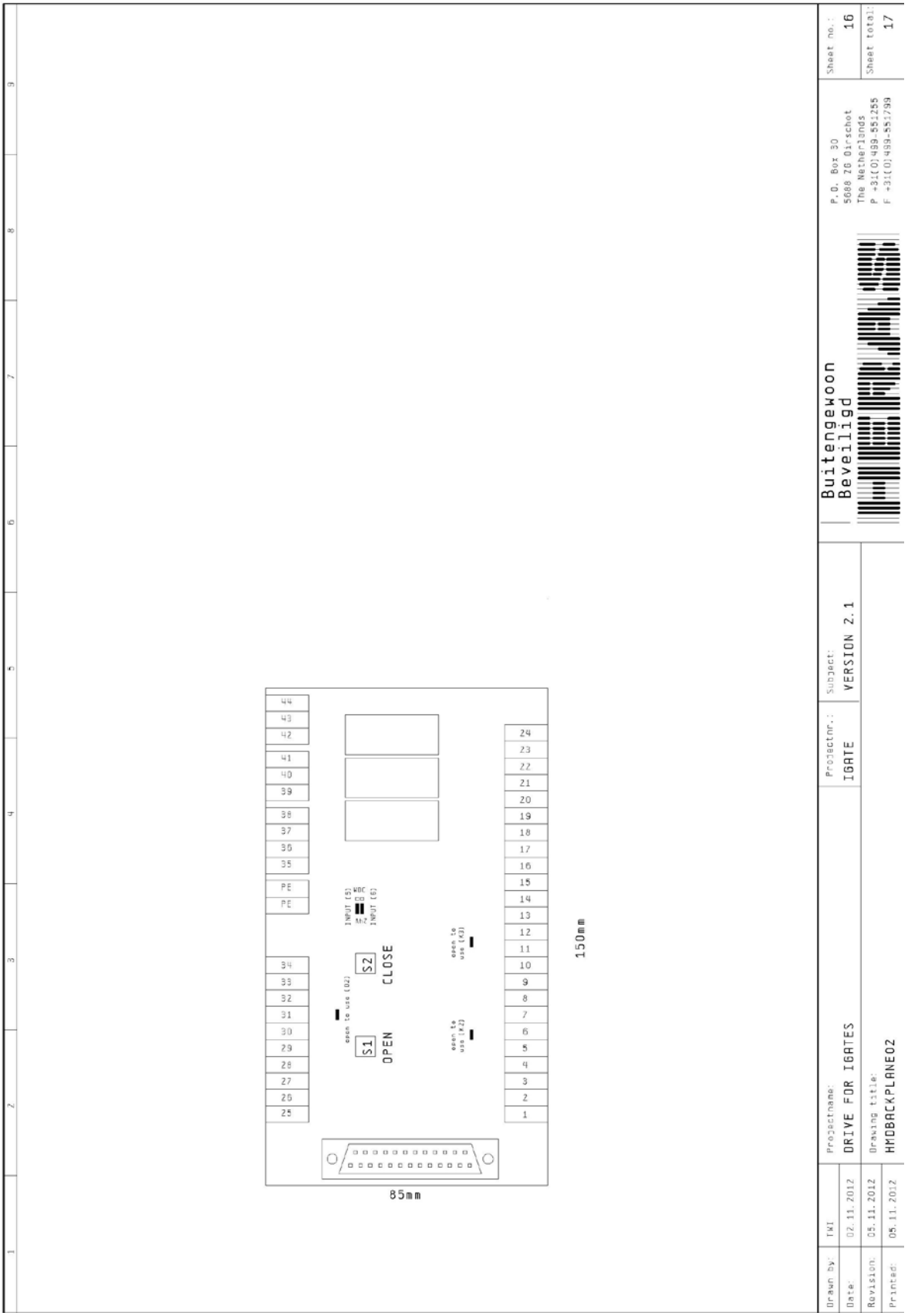
44
43
42
41
40
39
38
37
36
35
PE
PE
34
33
32
31
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
S1
OPEN
S2
CLOSE
150mm
85mm
Buitengewoon Beveiligd
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The Netherlands
Projectnr.:
IGATE
Subject:
VERSION 2.1
Projectname:
DRIVE FOR IGATES
Drawing title:
HMDBACKPLANE02
Sheet no.:
16
Sheet total:
17

KLEUR/FARBE/COLOR/COULEUR	→	FUNCTIE/FUNKTION/FUNCTION/UTILISÉ
230V VOEDING / SPANNUNG / VOLTAGE / ALIMENTATION		
BRUIN/BRAUN/BROWN/MARRON 1.0 MM²	→	L 230V
BLAUW/BLAU/BLUE/BLEU 1.0 MM²	→	N 230V
GEEL-GROEN/GELB-GRÜN/YELLOW-GREEN/JAUNE-VERT 1.0 MM²	→	⏚
24V VOEDING / SPANNUNG / VOLTAGE / ALIMENTATION		
ROOD/ROT/RED/ROUGE 0.5 MM²	→	+24V
BLAUW/BLAU/BLUE/BLEU 0.5 MM²	→	-0V
GEEL-GROEN/GELB-GRÜN/YELLOW-GREEN/JAUNE-VERT 0.5 MM²	→	⏚

CONNECTION HMD230 / BACKPLANE

PIN	COLOR	CONNECTION HMD230
1	WHITE	REL3 LEFT
2	BROWN	REL2 LEFT
3	GREEN	IN6
4	YELLOW	IN5
9	GREY	REL1 LEFT
10	PINK	IN8
11	BLUE	IN7
12	RED	0V
14	BLACK	REL3 RIGHT
15	VIOLET	REL2 RIGHT
16	GREY/PINK	REL1 RIGHT
17	RED/BLUE	24V
18	WHITE/GREEN	IN3
19	BROWN/GREEN	IN1
20	WHITE/YELLOW	IN2
21	YELLOW/BROWN	IN4
22	WHITE/GREY	LB IN
23	GREY/BROWN	REL4 LEFT
24	WHITE/PINK	REL5 LEFT
25	PINK/BROWN	24V -|_|-
	CONNECT TO 24V	REL5 MIDDLE
	CONNECT TO 24V	REL4 MIDDLE

Drawn by:	TWI	Projectname:	Projectnr.:	Subject:	
Date:	02.11.2012	DRIVE FOR IGATES	IGATE	VERSION 2.1	
Revision:	05.11.2012	Drawing title:			
Printed:	05.11.2012	KLEUR / FARBE / COLOR / COULEUR			

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