MINI STD. V7E OPERATOR
ELECTRONIC AND MECHANICAL LIMITS
PCB VERSION 7-0104 R1021
VERSION - **SOFTWARE 29.31**

It is important to follow this installation guide during the installation to insure correct installation.

1 SAFETY INSTRUCTIONS

During the installation it is necessary to observe and follow the safety and accident-prevention regulations valid for the specific application.

CAUTION – Do not connect CEE plug before the installation is complete with all plug in terminals connected and all screw terminals are secured.

In particular the following standards should be noticed (The list may not be sufficiently)

- EN 12453 (Safety in use of power operated doors - Requirements
- EN 12445 (Safety in use of power operated doors – Test methods
- EN 12978 (Industrial commercial and garage doors and gates- safety devices for power operated doors – Requirements and test methods)

CAUTION – It is important to adjust the electronic force control according to the national regulations to secure the usage of the door and to prevent damage and accidents – Furthermore do not adjust the force control harder than necessary as it can lead to damage or accidents

It is important to follow this installation guide during the installation to insure correct installation. A mains switch or CEE-plug must be located close to the door control unit and must be easy to reach.

The door must always be correct balanced.

Only trained personal should install electrical equipment according to national security regulations.

The product must not be disposed with regular housekeeping waste and must be treated as WEEE (Disposal of electronic equipment).

The order number written on the white cell on the PCB shows the year of production (.--)

The original languages of the manuals are Danish and English and every other translation are made from these.

1.1 ELECTRICAL INSTALLATION

During the electrical installation the installer shall note the following:

- The main power supply must be in the area of max. +/- 10% of the control unit's mains supply.
- Be sure not to overload the gear motor in accordance with the electrical data on the sign of the gear motor.
- Temperature control is necessary when using the control outside the temperature range -10 - + 50 ºC.
- The control unit must not be used in environments with risk of condensation. Furthermore it is important to mount the control board on a flat wall without vibrations away from children and other not allowed users.

Be aware of right phase rotation when using a three phase motor.

SAFETY RELAYS:

In case of contactor welding the three relays RE 1,2,3 will disconnect the power to contactors one seconds after a stop command, if the motor is still running.
The control unit observes the electronic position movement when using electronic limits.
When using mechanical limits be sure that the motor have a pulse output connected to the control unit to observe that the motor is still running (normally 4 pulses/rotation).
"SER" is shown in the display in case unintended movement (contactor welding). See in the manual section 2, troubleshooting to handle this situation.

2 TECHNICAL DETAILS

Installation:	Vertical on a vibration free and flat wall
Temperature range (operating)	-10…+50°C
Humidity:	Up to 93% RH non-condensing.
Vibration:	Low-vibration installation, wall mounted.
Enclosure data (Dalmatic enclosure):	IP65 (with normal cable glands reduced to IP54) 293 x 190 x 100 mm, ABS
PCB dimension:	163 x 225 x 80 mm
Supply voltage:	400VAC ± 10% L1,L2,L3,N,PE or 230VAC ± 10% L1,L2,L3,PE. (L,N,PE) 50/60Hz, Mains fuse max: 3 x 10A Rated insulation voltage Ui = 400V
Transformer:	Max 18 VA , VDE 0570/EN61558 Primary 230VAC winding is thermal protected by built-in thermal transformer fuse and external fuse 0,125A-T when 400V winding is in use. Both secondary windings are overload protected by multifuses.
Motor output:	Max motor load by 3 x 400VAC: 4 kW Max motor load by 3 x 230VAC: 2.3 kW Max motor current: 8.5A
Emergency stop, Stop, Thermo spec. door stop and Safety chain	Function as normal stop command and disconnect power to contactor coils.
24VDC Output (terminals X3-18,X3-19):	24VDC ± 20% (non-regulated), Max load: 250mA (Tamb = 25 °C) Max load: 200mA (Tamb = 40 °C) (if no plug-in module is used, else these currents must be subtracted))
Safety edge input:	PNE/air switch Electric type - 8k2 termination ± 10% Optical type (Fraba OSE or Dalmatic TSS/RSS) Performance level C, Category 2
Optical safety edge:	Input voltage high (green): 2.5 - 5.0 Volt. Input voltage low (green): < 0.5 Volt. Input frequency range (green): 250 – 2000 Hz. (50% duty-cycle) Pulse interval maximum (green): 7.0 mS (when not 50% dutycycle)
Photo input	X12-1,2,3,4 External photo, 24 VDC (e.g. self contain photo cell)

	X3-19,20,21,22 External photo, 24VDC (e.g. self contain photo cell) Performance level C, Category 2
Electronic limits	RS485, Data+ Data-, terminated with 120 Ohm
Relay output (K3 + X17)	Change over contact: 230VAC/5A
Directives – EMC Directive 2014/30/EU	EN 61000-6-3 (2007) + A1:2011 Emission – Residential EN 61000-6-1 (2007) Immunity – Residential EN 61000-6-4 (2007) Emission – Industry EN 61000-6-2 (2005) Immunity – Industry EN 61000-4-3 (2006) +A1(2008) +A2(2010) RF-field immunity EN 60335-1 (2012)/AC:2014 Safety – Part 1: General requirements
Directive – Low Voltage Directive LVD 2014/35/EU	EN 60335-1 (2012)/AC:2014 Safety of Household and similar electrical appliance/ Part 1. EN335-2-103:2015
TÜV type tested according to:	EN 12453 (2017) Industrial, Commercial and garage doors and gates. Safety in use. EN ISO 13849-1:2015 Safety of machinery

3 SPECIFIKATIONS STANDARD GEARMOTORS

Note: Always be aware of the dimensioning of the drum and speed of the gearmotor according to the allowed door speed.

Dall gearmotors with built in Dalmatic multi turn absolute encoder and hand chain for manual operation

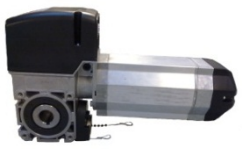
TYPE	TORQUE (NM)	POWER (kW)	RPM	GEAR SIZE	HOLLOW SHAFT (MM)	MAX DOOR WEIGHT (KG) *)	MAX DRUM SIZE (MM) **)
DA 90 NM 24 HE	90	0,37	24	50	25,4	400	<250 MM
DA 140 NM 17 HE	140	0,37	17	50	25,4	500	<250 MM
DA 140 NM 17 HE	140	0,37	17	63	31,75	650	<250 MM
DA 200 NM 17 HE***	200	0,55	17	90	35	700	<250 MM

*) Recommended limitations, door weight. Only for use on balanced doors.
**) Recommended limitations, drum size.
***) Not on stock.

TAE gearmotors with built in Kostal single turn encoder and declutch for manual operation

TYPE	TORQUE (NM)	POWER (kW)	RPM	GEAR SIZE	HOLLOW SHAFT (MM)	MAX DOOR WEIGHT (KG) *)	MAX DRUM SIZE (MM) **)
TAE 90 NM 24 HE	90	0,37	24	50	25,4	400	<250 MM
TAE 140 NM 17 HE	140	0,55	17	50	31,75	650	<250 MM

*) Recommended limitations, door weight. Only for use on balanced doors.
**) Recommended limitations, drum size.

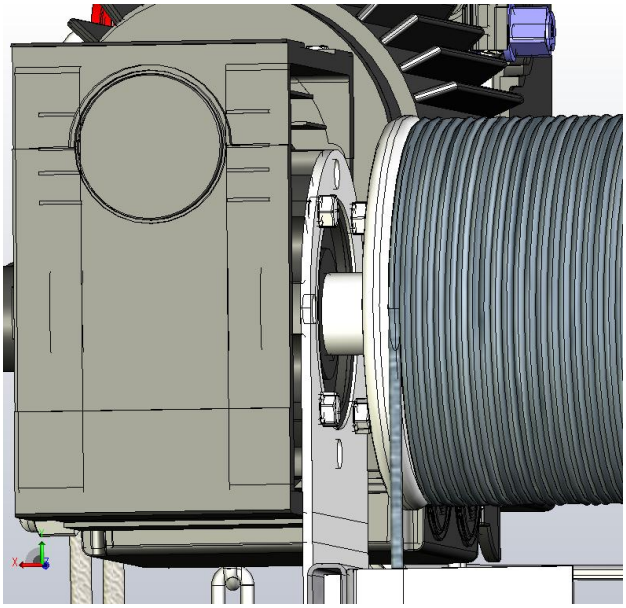


STA gearmotors with mechanical limits (or Kostal encoder) and declutch for manual operation

TYPE	TORQUE (NM)	POWER (kW)	RPM	GEAR SIZE	HOLLOW SHAFT (MM)	MAX DOOR WEIGHT (KG) *)	MAX DRUM SIZE (MM) **)
STA1 90 NM 24 HE	90	0,37	24	50	25,4	400	<250 MM

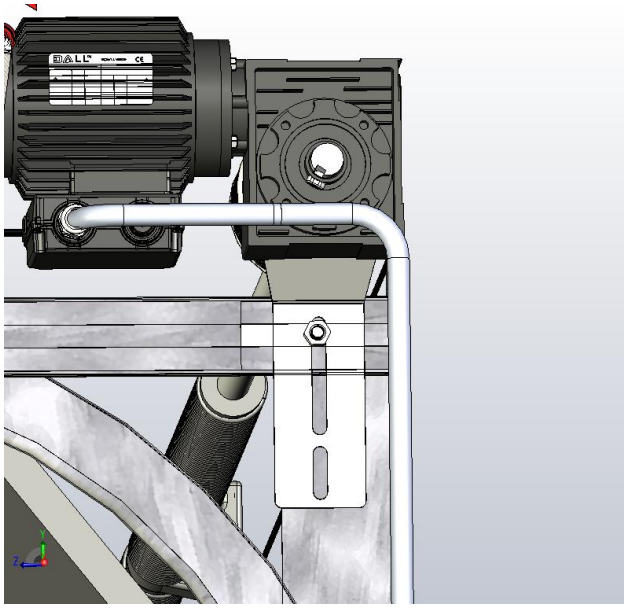
*) Recommended limitations, door weight. Only for use on balanced doors.
**) Recommended limitations, drum size.

4 EXAMPLE INSTALLATION DALL GEARMOTOR ELECTRONIC LIMITS



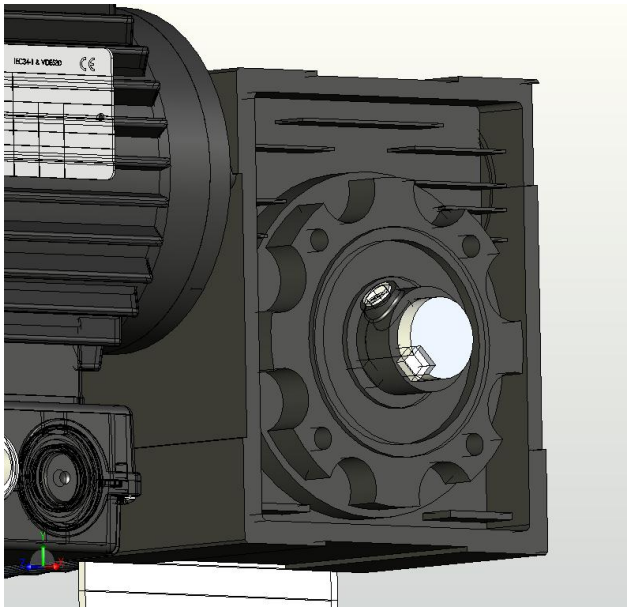
Picture 1

Mount the gearmotor on the hollow shaft and fix the mounting bracket with screws to the gearmotor according to the picture.
The gearmotor can be mounted either vertical and horizontal



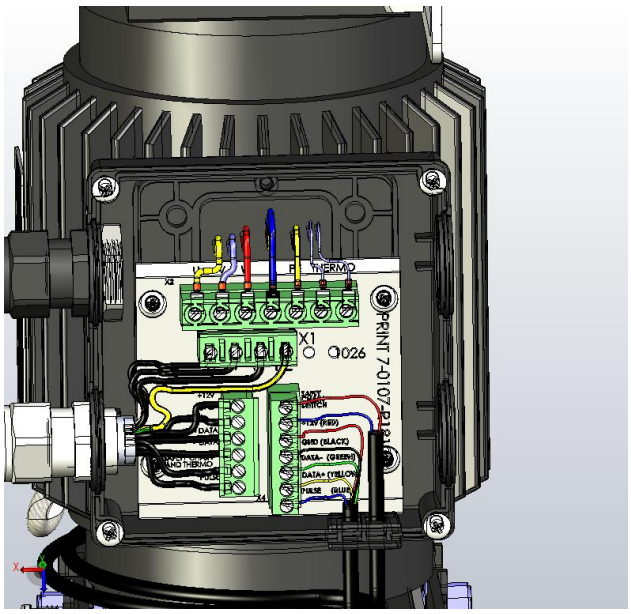
Picture 2

The gearmotor can be mounted on the ”C” rail of the door or on the door frame vertically



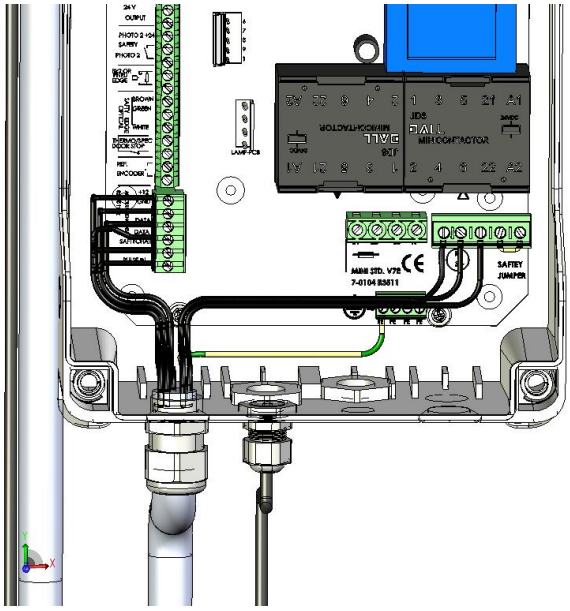
Picture 3

Hold the square key steady by using the set collar and tighten the hex key



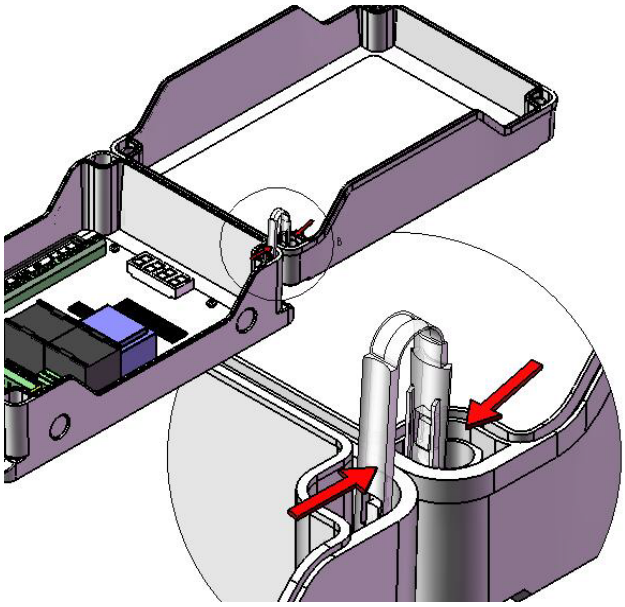
Picture 4

Open the junction box on the gearmotor and remove one of the black blind plugs and fix the plug in terminals as shown.



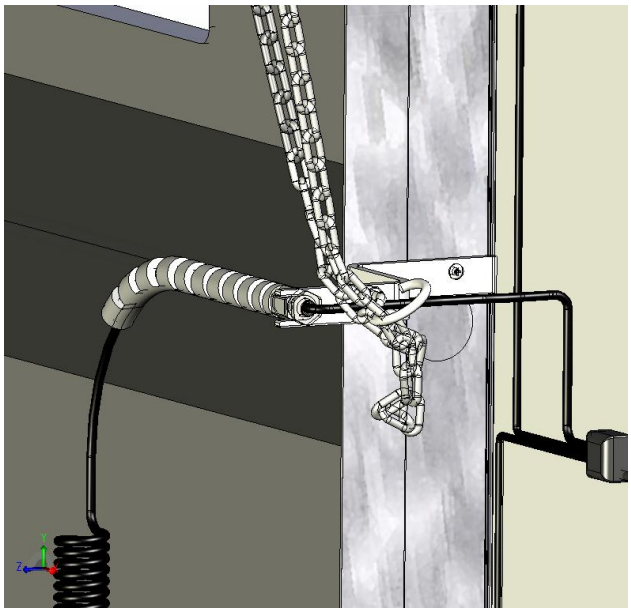
Picture 5

Fix the other end of the cable in the control unit as shown.



Picture 6

Included hinges can be mounted on top of the box as shown. Important to fix the right ends in the lid and in the base part

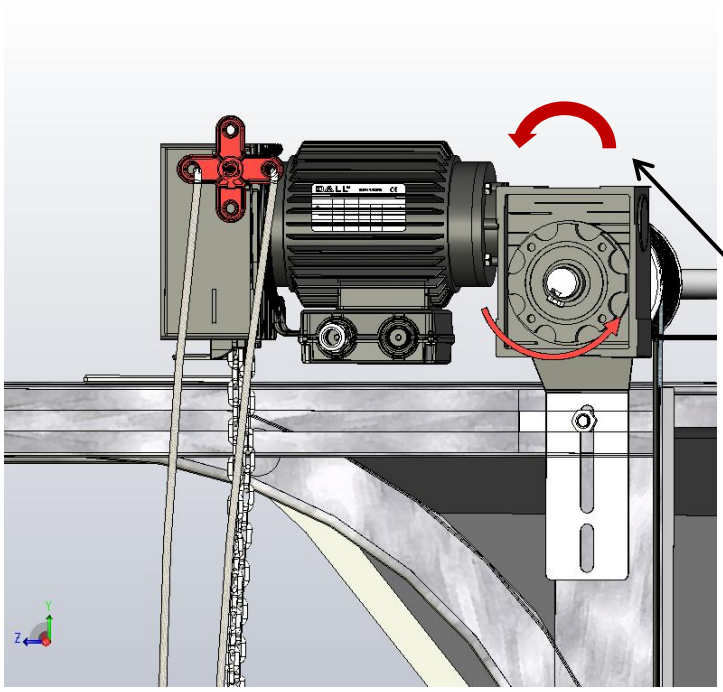


Picture 7

Fix the hatch to the holding angle for the spirale cable.
Put the hand chain in the hatch when the hand chain is not in use.

5 OBSERVE DIRECTION OF THE SHAFT WHEN OPENING

It is necessary to observe the rotation of the shaft in opening direction to make the right selection in parameter 11. The selection of right and left turning encoder in parameter 11 depends on how the gearmotor is mounted on the door. The illustration shows two possibilities.

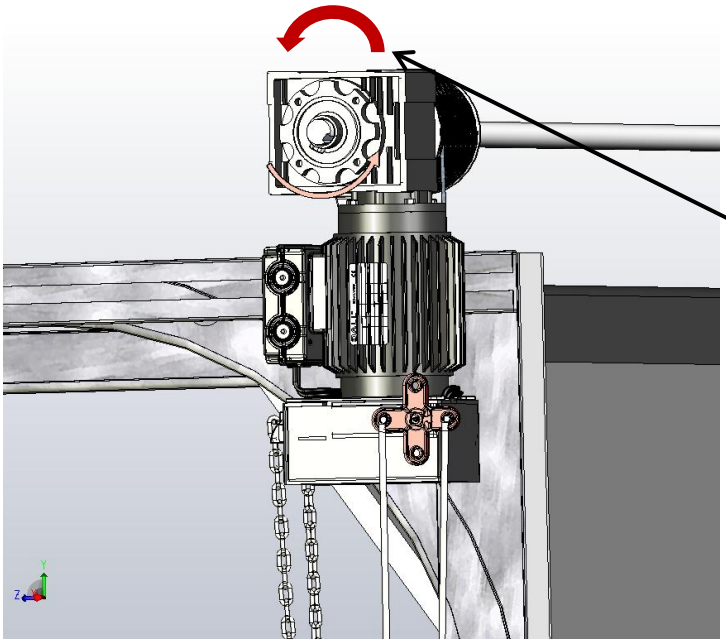


EXAMPLE 1

RECOMMENDED MOUNTING

RIGHT TURNING
ENCODER SELECTION IN PARAMETER 11

Picture 8



EXAMPLE 2

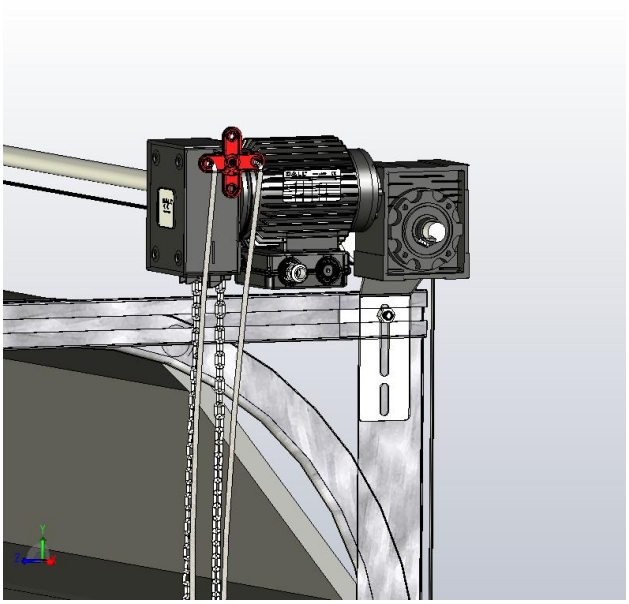
Not recommended in regard to the Hand chain mechanism

LEFT TURNING
ENCODER SELECTION IN PARAMETER 11

NOTE:
Gearmotor mounted reversed
Compared to picture 8.

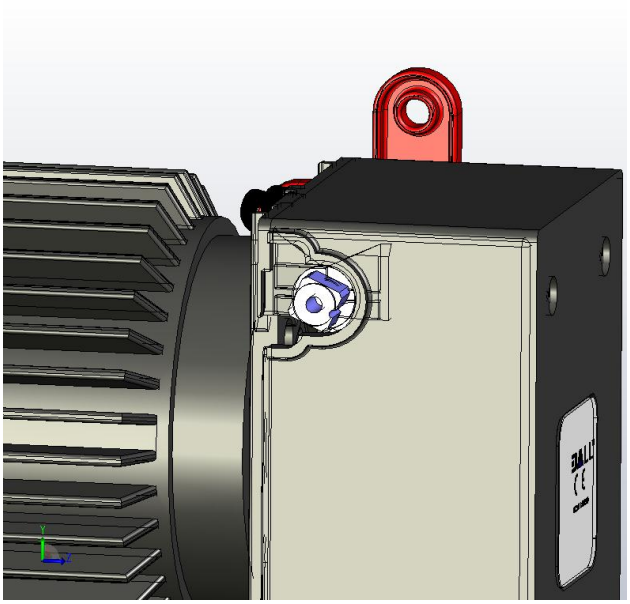
Picture 9

6 MANUAL OPERATION



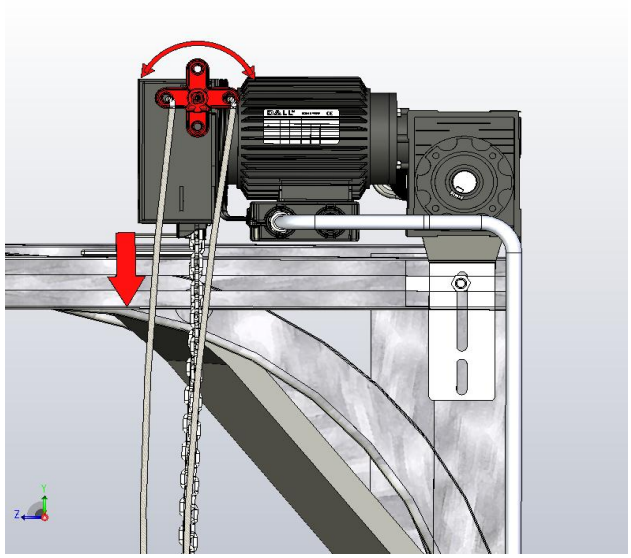
Picture 10

Use the red handle to switch between automatic and manual operation. Connect two robes to be able to make the switch from the floor



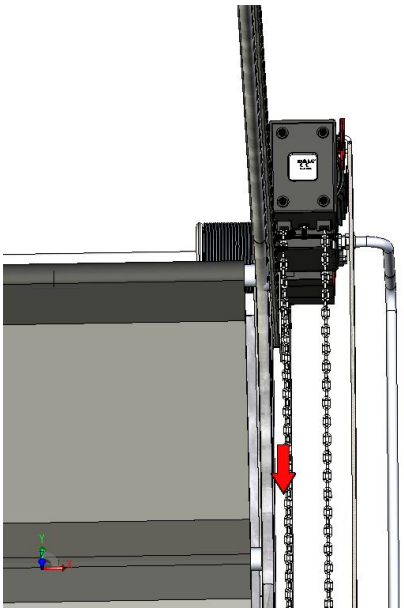
Picture 11

It is possible to mount the red handle on the opposite side (Left) by untightening the screw in the middle of the handle and move it to the other side.



Picture 13

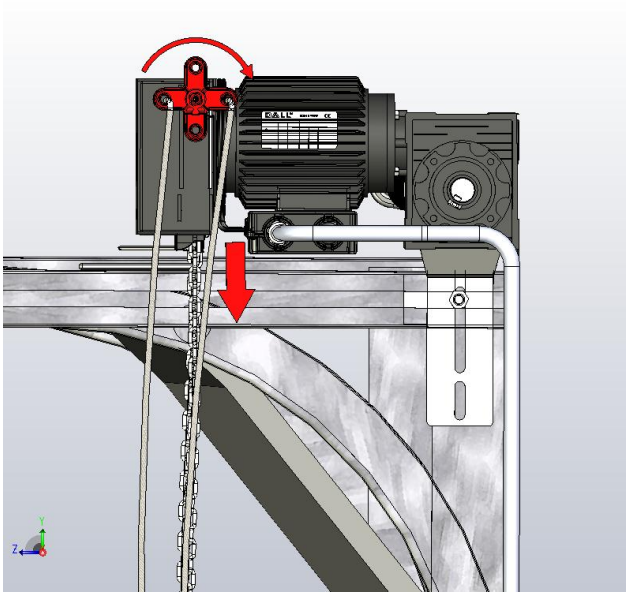
Switch to manual operation by turning the red handle counter clock wise.



Picture 12

Pull the hand chin to open/close the door manually.

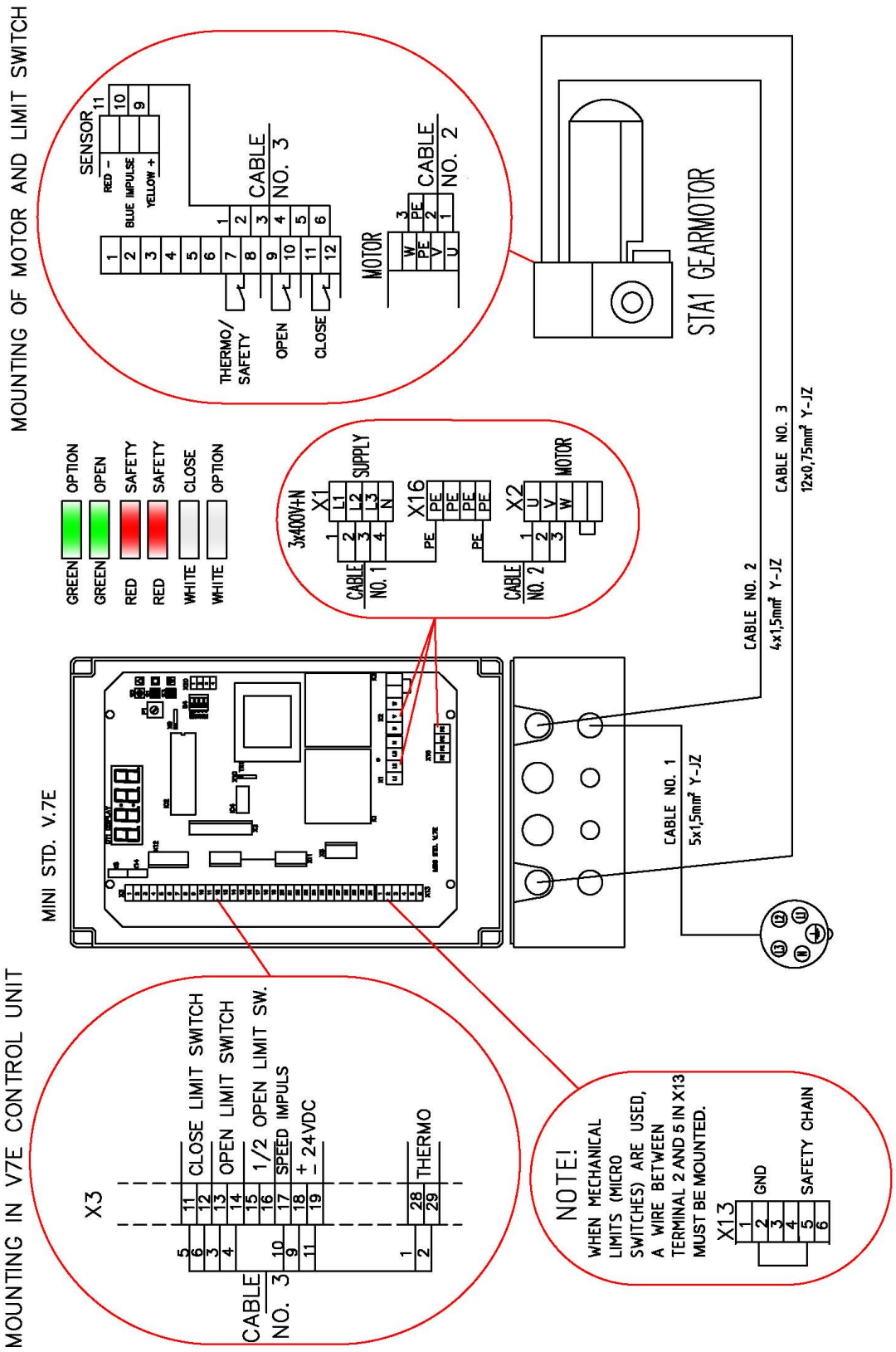
NOTE! Hand chain is only for emergency operation



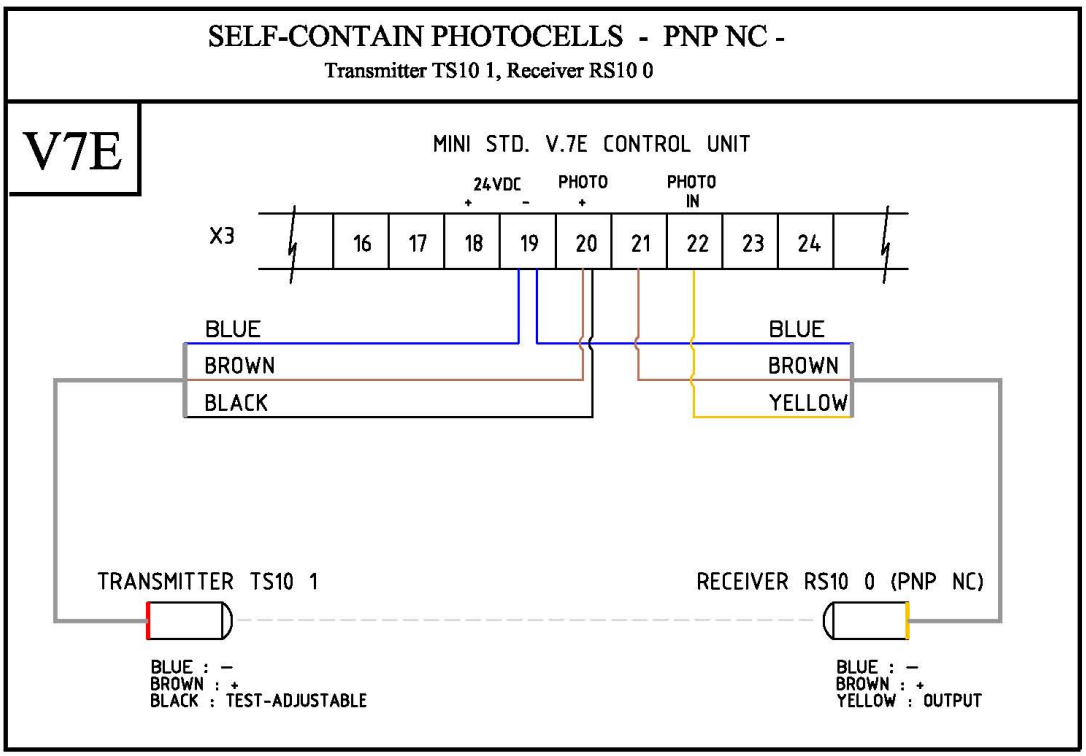
Picture 14

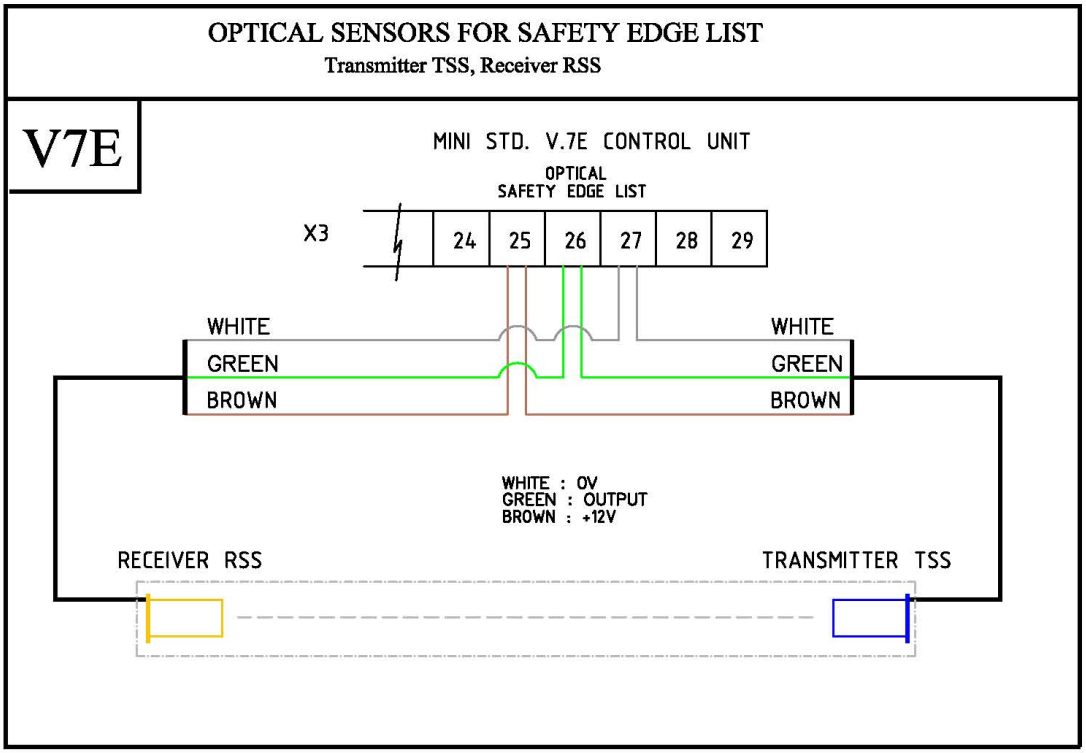
Switch back to automatic operation by turning the red handle clock wise.

7 EXAMPLE INSTALLATION GEARMOTOR WITH MECHANICAL LIMITS

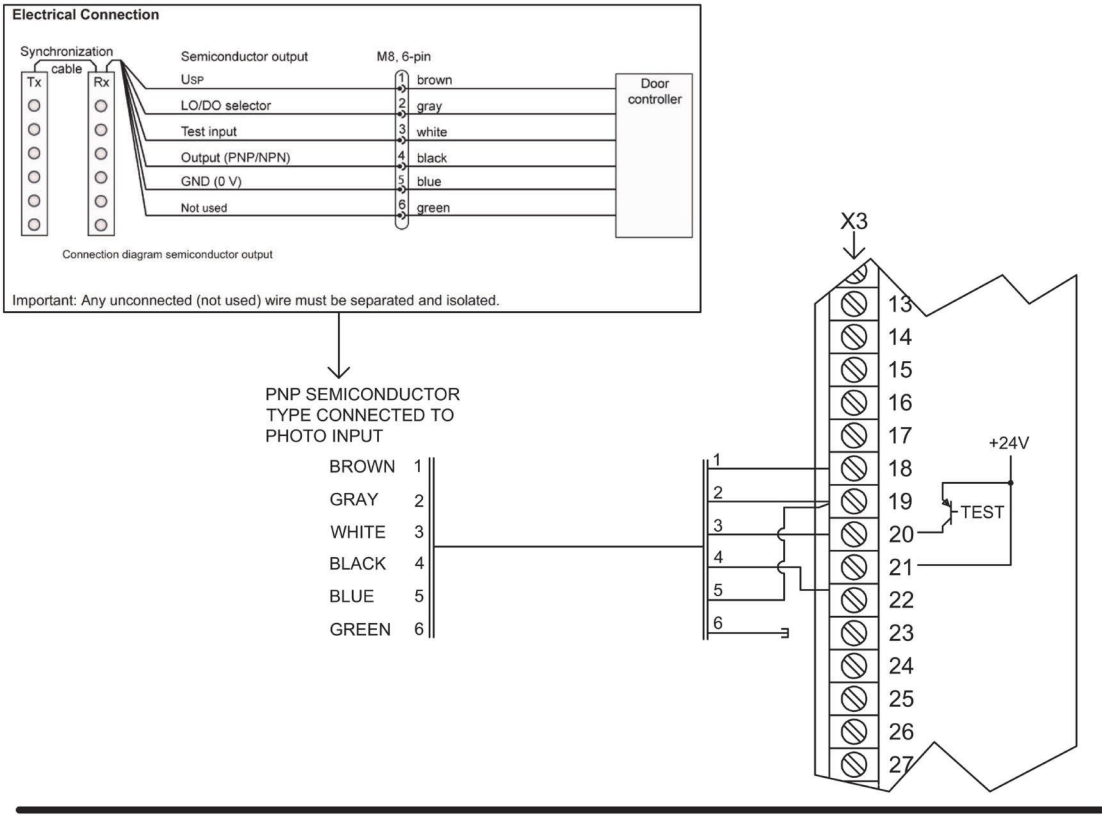


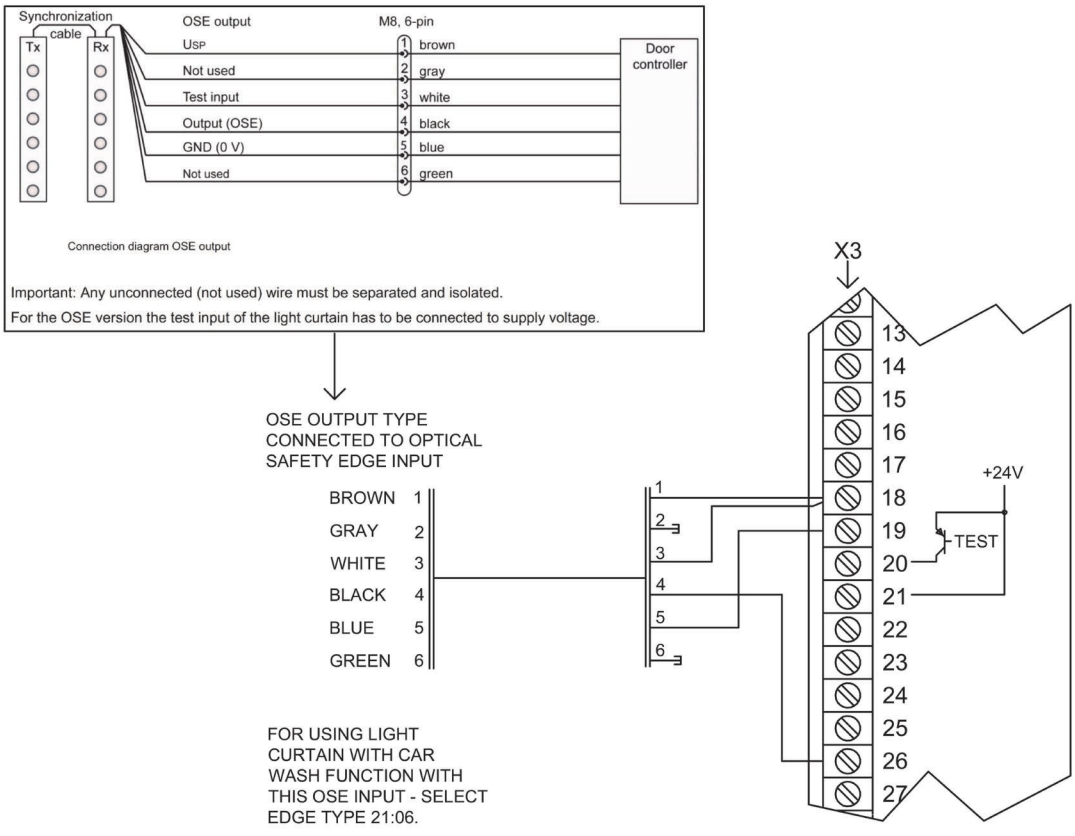
8 PHOTO / LIGHT CURTAIN CONNECTIONS





V7E - LOW VOLTAGE CONNECTIONS FOR ALTERNATIVE SAFETY LIGHT CURTAIN

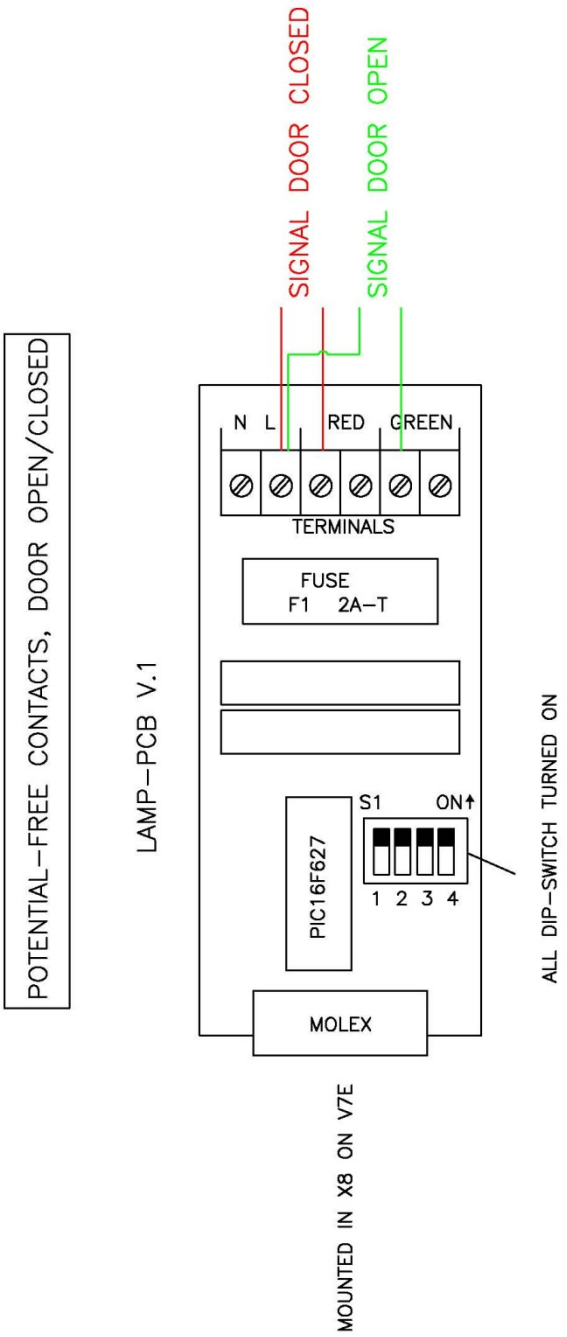




9 CONNECTION OF TRAFFIC LIGHT LAMP PCB V.1 MODULE (BUY SEPARATE)

Plug in module can be used to control traffic lights and give potential free signals (door opened, door closed or door in movement).

Find more information about traffic light settings in the data sheet which is included with the module.



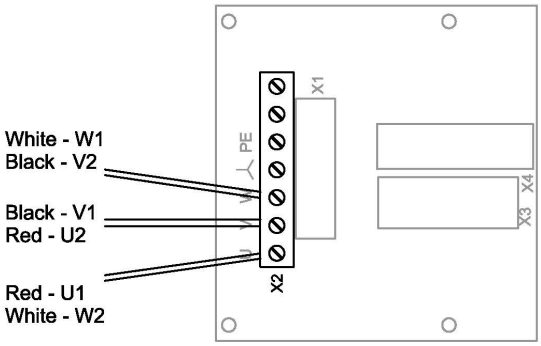
10 SWITCHING BETWEEN 3X230V – 3X400V (GEARMOTOR)

CONNECTION ON MOTOR 3x230V - 3x400V

Terminals on DALL operator

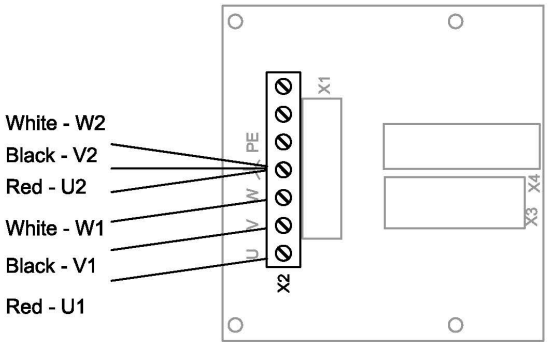
3 x 230V

Motor in delta connection

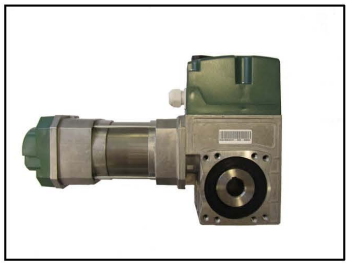


3 x 400V

Motor in star connection

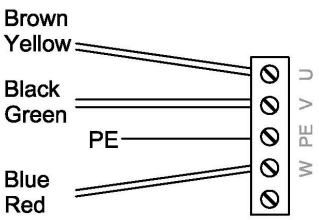


Terminals on TAE operator



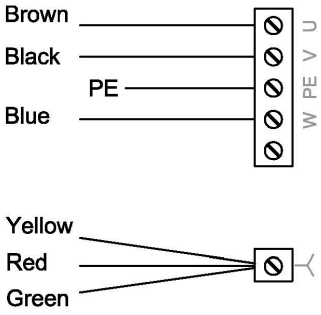
3 x 230V

Motor in delta connection



3 x 400V

Motor in star connection



11 PCB LAYOUT AND PLUG IN OPTIONS

X5 X14 PUSH BUTTON MEMBRANE

S4 DIL SWITCH FOR PROGRAMMING

X7 RCM434A03 RADIO RECEIVER

X24 SUPPLY VOLTAGE SELECT 230/400V

X8 TRAFFIC LIGHT LAMP PCB OR RELAY MODULE

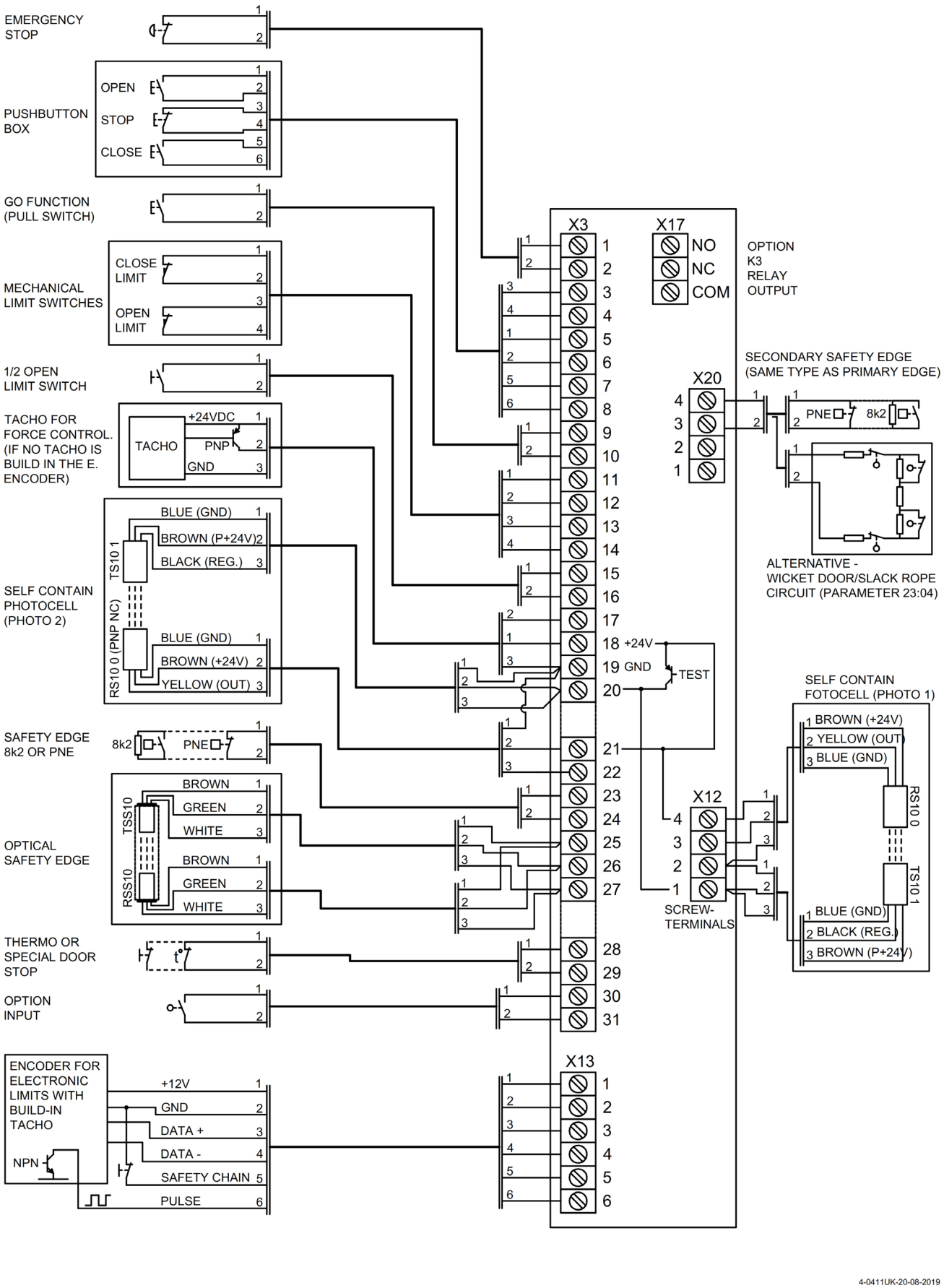
X13 ABSOLUTE ENCODER

LABEL WITH SOFTWARE VERSION

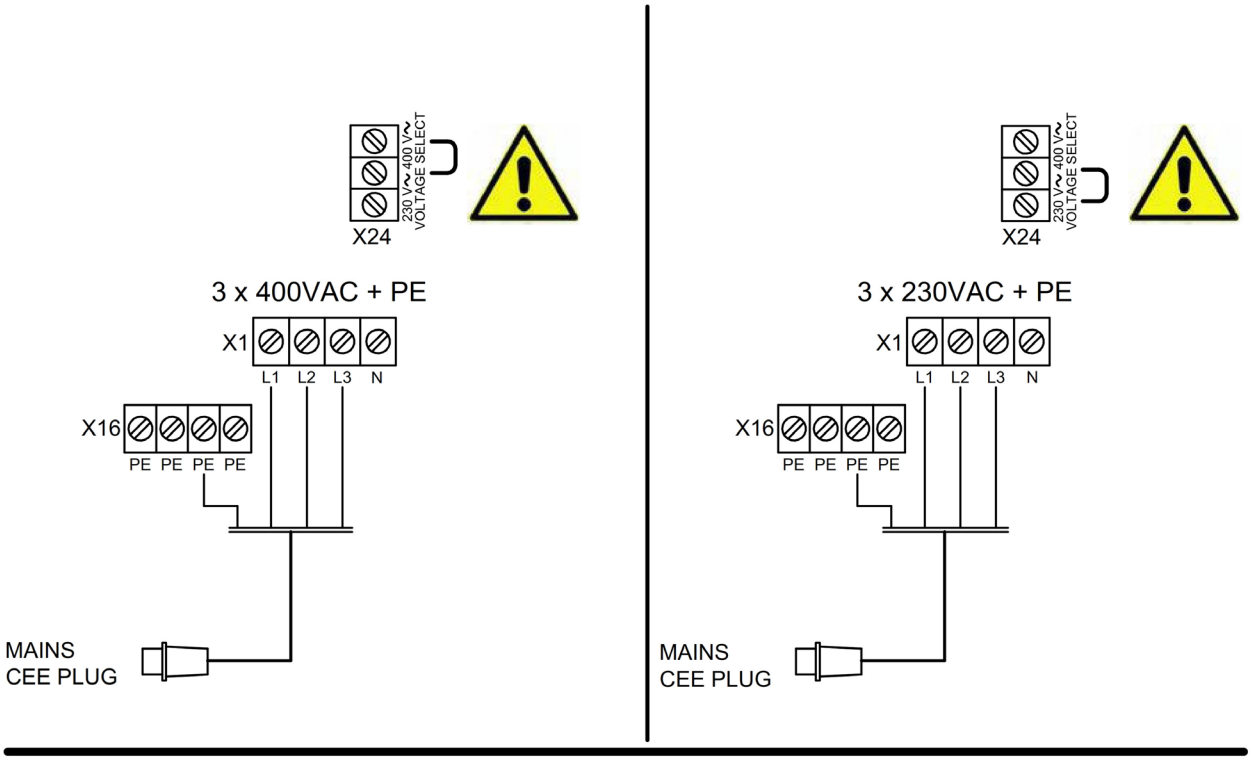
X2 PLUG IN CONNECTOR FOR GEARMOTOR

12 CONNECTIONS

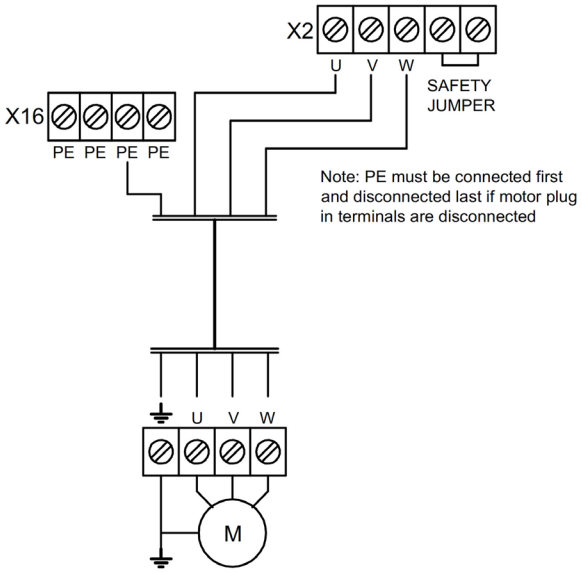
V7E - LOW VOLTAGE CONNECTIONS



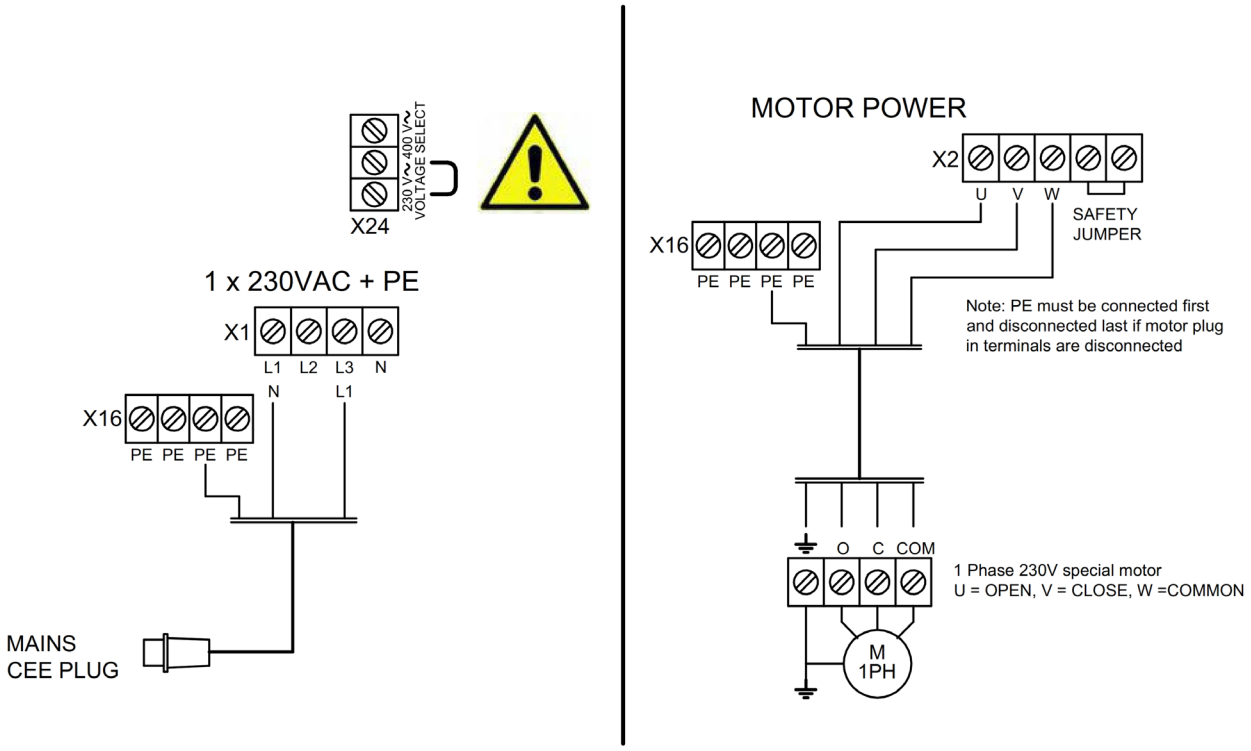
MAINS POWER



MOTOR POWER

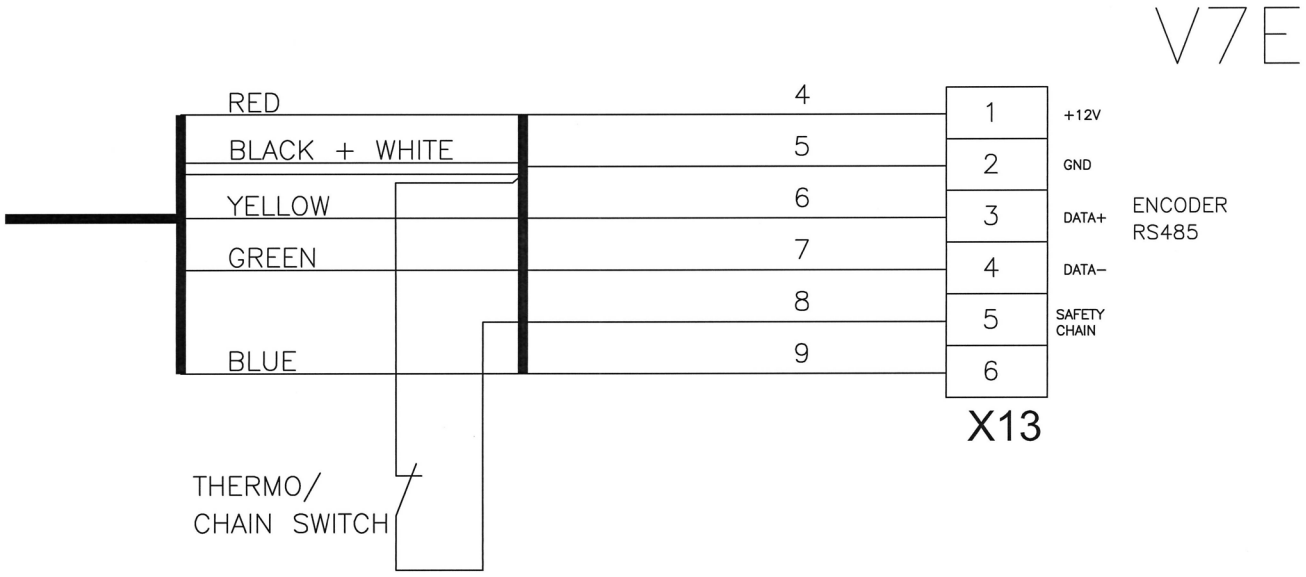


MAINS POWER FOR 1 PH 230V MOTOR

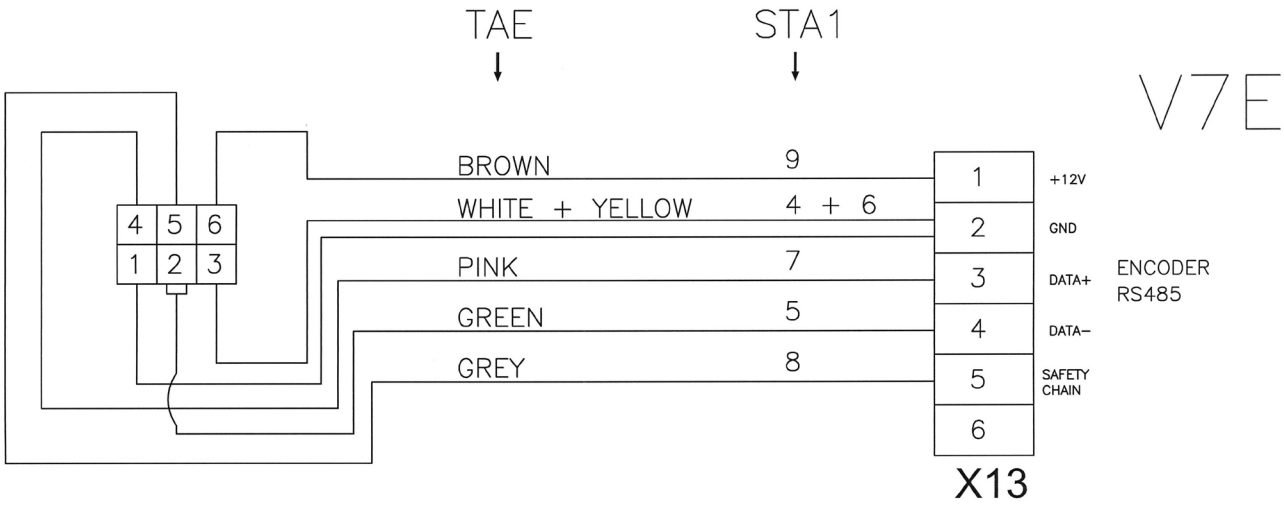


Encoder connections:

DALL/MTM Encoder



KOSTAL Encoder



13 DECLARATION OF CONFORMITY

13.1 CE DECLARATION – CONTROL UNIT

CE

EU DECLARATION OF CONFORMITY

Declaration under sole responsibility that the door control units:

Mini Std. V.7E SR

manufactured at and technical documentation:

DALMATIC A/S
LÆGÅRDSVEJ 9
DK-8520 LYSTRUP

is in accordance with the following Directives:

EMC Directive (Directive 2014/30/EU) relating to electromagnetic compatibility.
Machinery Directive 2006/42/EC
Low Voltage Directive 2014/35/EU) to electrical equipment intended for use within certain voltage limits.

Furthermore, it declared - that the following standards have been used:

EN 60335-1:2012/ AC:2014	Household and similar electrical appliance – Safety
EN 60335-2-103:2015	Household and similar electrical appliance – Safety – Particular requirement for drives for gates, doors and windows
EN 61000-6-2:2005	EMC – Immunity for industrial environment)
EN 61000-6-3:2007 +A1:2011	EMC – emission for residential, commercial and light industrial environment)
EN12453:2017	Industrial, commercial and garage doors and gates Safety in use of power operated doors.
EN ISO 13849-1:2015	Safety of machinery.
EN 12978:2003 A1: 2009	Industrial, commercial and garage doors and gates Safety devices of power operated doors and gates.

Responsible for technical documentation

© - Lystrup | 10.10.2018

Hans Hilmar Dall, Owner and director

EC type examination
No: 44 205 18194901
TüV Nord Cert GmbH
Langemarkstrasse 20
45141 Essen

13.2 CE DECLARATION – gearmotor

Machinery Directive, 2006/42/EC, Annex II, para. B (Component Declaration) prohibition of deployment

Declaration under sole responsibility that the gearmotors:

DALL 90 NM 24 HE,
DALL 140 NM 17 HE

manufactured at:

DALMATIC A/S
LÆGÅRDSVEJ 9
DK-8520 LYSTRUP

- are meant to be incorporated into machinery or assembled with other parts of the machinery for deployment to machines covered by the Machinery Directive 2006/42/EC as amended, and with national legislation transposing this Directive (Labor Inspectorate order 561/94).
- therefore not fulfill this Directive fully.
- Are in accordance with the instructions of the following directives: LVD 2006/95/EG, EMV 2004/108/EG, RoHS 2002/95/EG & 2002/96/EG.

Furthermore, it declared - that the following harmonized standards have been observed:

EN 60034-1
EN 60034 -5
EN 60034-7
EN 60034-9
EN 60034-14
EN 60034-8
EN 60072-1

Furthermore declared prohibition of deployment until the machine in which it will be assembled as a whole, incl. the machine / component that are referenced in this Statement has been declared in accordance with all relevant provisions of the Machinery Directive 2006/95/EC

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Hans Hilmar Dall, Owner and director

EG-Baumusterprüfbescheinigung
EC type-examination certificate

Hiermit wird bescheinigt, dass das unten beschriebene Produkt der Firma
This certifies that the product mentioned below from company

Dalmatic A/S
Lægårdsvej 9
8520 Lystrup
Denmark

die Anforderung des Anhangs 1 der Maschinenrichtlinie 2006/42/EG als eine Grundlage für die EG-Konformitätserklärung erfüllt.
meets the requirements of Annex 1 of the Directive 2006/42/EC as a basis for the EC declaration of conformity.

Geprüft nach *Tested in accordance with*	**EN ISO 13849-1:2015** **EN 60335-2-103:2015**
Beschreibung des Produktes (Details s. Anlage 1) *Description of product* *(Details see Annex 1)*	**Torsteuerung** *Door control unit*
Typenbezeichnung *Type Designation*	**Mini Std. V7E SR / Mini Std. V7E SR LSis M100**
Bemerkung *Remark*	**Siehe Anlage 1** *See annex 1*

Registrier-Nr. / *Registered No.* 44 205 18194901
Prüfbericht Nr. / *Test Report No.* 35230787 / 3524 9267
Aktenzeichen / *File reference* 8000489193 / 8003006722

Gültigkeit / Validity
von / *from* 2019-07-11
bis / *until* 2023-10-10

TÜV NORD CERT GmbH Essen
Zertifizierungsstelle Maschinen
Certification Body Machinery
Benannte Stelle 0044 / *Notified Body 0044*

Essen, 2019-07-11

TÜV NORD CERT GmbH Langemarckstraße 20 45141 Essen www.tuev-nord-cert.de machinery@tuev-nord.de

Bitte beachten Sie auch die umseitigen Hinweise
Please also pay attention to the information stated overleaf

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Jedes Produkt muss deutlich einen Hinweis auf den Hersteller oder Importeur und eine Typenbezeichnung tragen, damit die Identität des geprüften Baumusters mit den serienmäßig in den Verkehr gebrachten Produkten festgestellt werden kann.

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This TÜV NORD CERT - certificate only applies to the firm stated overleaf, the specified product and the manufacturing plants stated. It may only be transferred to third parties by the certification body.

Each product must be accompanied by the instructions which are necessary for its operation and installation.

Each product must bear a distinct indication of the manufacturer or importer and a type designation so that the identity of the tested sample maybe determined with the product launched on the market as a standard.

The bearer of the TÜV NORD CERT - Certificate undertakes to regularly supervise the manufacturing of products for compliance with the test specifications and in particular properly carry out the checks which are stated in the specifications or required by the test laboratory.

In case of modifications of the tested product the certification body must be informed immediately.

In case of modifications and expiration of validity the original certificate must be returned to the certification body immediately. The certification body decides if the certificate can be supplemented or whether a new certification is required.

In addition to the conditions stated above, all other provisions of the General Agreement are applicable to the TÜV NORD CERT - Certificate. It will be valid as long as the rules of technology on which the test was based are valid, unless revoked previously pursuant to the provisions of the General Agreement.

The TÜV NORD CERT - Certificate will become invalid and shall be returned to the certification body immediately in the event that it shall expire without delay when it has expired or revoked.

ANLAGE
ANNEX

zur EG-Baumusterprüfbescheinigung / *to EC type-examination certificate*
Registrier-Nr. / *Registered No.* 44 205 18194901

Produktbeschreibung: *Product description:*	**Torsteuerung** *Door control unit*		
Typbezeichnung: *Type designation:*	**Mini Std. V7E SR / Mini Std. V7E SR LSis M100**		
Teilprüfungen: *Partial tests*	**EN 12453:2017 clause 5.1.2**		
		Mini Std. V7E SR	Mini Std. V7E SR LSis M100
Technische Daten: *Technical data:*	**Nennspannung:** *Nominal voltage:*	400 V AC ± 10% 230 V AC ± 10%	230 V AC ± 10%
	Nennfrequenz: *Nominal frequency:*	50/60 Hz	50/60 Hz
	Max. Antriebsleistung: *Max. drive load:*	4 kW – 400 V AC 2,3 kW – 230 V AC	0,8 kW – 230 V AC
	Schutzart: *Degree of Protection:*	IP54	IP54
	Abmessungen: *Dimension:*	293 x 190 x 100 mm	400 x 190 x 185 mm

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Essen, 2019-07-11

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ANLAGE
ANNEX

zur EG-Baumusterprüfbescheinigung / *to EC type-examination certificate*
Registrier-Nr. / *Registered No.* 44 205 18194901

Sicherheitskennwerte:
Safety related data

Sicherheitsfunktion / *Safety function*	**Kategorie** / *Category*	**Performance Level**
Monitoring 8K2 safety edge	**2**	**c**
Monitoring pneumatic safety edge	**2**	**c**
Monitoring photo cell	**2**	**c**
Monitoring frequency input (FRABA)	**2**	**c**
Monitoring end position with external encoder	**2**	**c**
Monitoring safety chain input	**2**	**c**
Emergency stop	**1**	**c**

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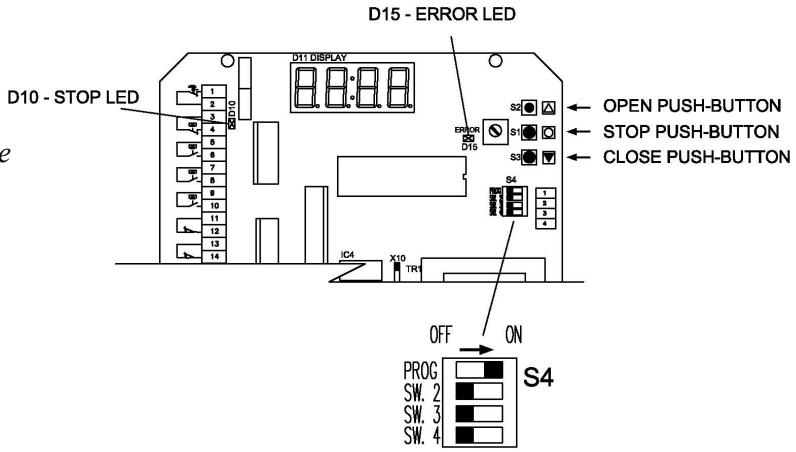
Essen, 2019-07-11

PARAMETER LIST:

01:01	**Operation settings** – Section 2 - 2
02:00	**Special setting regarding failure on safety list or photo** – Section 2 - 2
11:00	**Selection of limits (Mechanical/encoder)** – Section 2 – 3
12: ⌜ ⌝	**Electronic limit settings, OPEN** – Section 2 – 4
13: ‾ 5	**Electronic limit settings, OPEN fine tuning** – Section 2 - 5
14: ⌞ ⌟	**Electronic limit settings, CLOSE** – Section 2 – 4
15: _ 5	**Electronic limit, CLOSE fine tuning** – Section 2 - 5
16:00	**1/2 Open settings** – Section 2 - 6
17:00	**Auto close 1/2 open** – Section 2 - 6
21:01	**Selection of safety list** – Section 2 - 7
22:00	**Electronic after run** – Section 2 - 8
23:00	**Extra safety list/Wicket Door** – Section 2 - 8
29:00	**Wire tightening function** – Section 2 - 8
31:00	**Photo cells** – Section 2 - 9
32:00	**Auto close** – Section 2 - 10
33:00	**Car wash function** – Section 2 - 10
34:00	**"Forced" closing** – Section 2 - 10
35:00	**GO function (Step)** – Section 2 - 11
36:01	**Interlock function ON/OFF** – Section 2 - 11
41:00	**Force control – Section** 2 - 12
42:60	**Force control MANUEL OPEN settings** – Section 2 - 13
43:50	**Force control MANUEL CLOSE settings** – Section 2 - 13
44:00	**Force control automatic settings (41:03)** – Section 2 - 14
51:00	**Run time** – Section 2 - 15
52:01	**Reverse time – safety list** – Section 2 - 15
53:01	**Reverse time – photo cells** – Section 2 - 15
58:00	**Service counter** – Section 2 - 16
59:00	**Service counter reaction** – Section 2 - 16
75:00	**Settings for AUX4 (Relay module)** – Section 2 - 187
76:00	**Settings for AUX5 (Relay module)** – Section 2 - 187
77:00	**Start delay open (Relay module)** – Section 2 - 187
78:05	**Start delay close warning (Relay module)** – Section 2 - 187
81:03	**Encoder position failure** – Section 2 - 18
82:01	**Encoder test function** – Section 2 - 18
84:01	**Special open or close function** – Section 2 - 189
88:01	**Relay K3 settings** – Section 2 - 189
91:03	**Set point open (Relay module)** – Section 2 - 189
92:03	**Set point close (Relay module)** – Section 2 – 20
	Reset to factory settings – Section 2 – 20

1. HOW TO PROGRAM

(The door will always run in hold-to-run mode in programming mode)



Program the control by opening the enclosure.
Find OPEN - CLOSE - STOP push-buttons and a 4 pole DIL switch on the PCB (S4).

CAUTION! Be sure that stop circuits are mounted and no emergency stop or other stop is activated before entering programming mode. LED D10 must not light up. See description of stop circuits in section 1, connections.

1. **Select programming mode:**

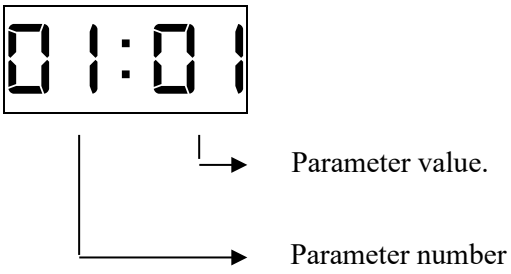
   To enter programming mode change DIL switch 1 (S4) to ON position. The door will always run in hold-to-run mode when programming.
   (Back to normal mode: Change DIL switch 1 to OFF position)

2. Navigating the table:

   STOP push-button is used to navigate between **parameter number** and **parameter value.**
   OPEN and CLOSE push-buttons is used to select parameter number or change parameter value

   Active digits will be flashing.
   Some of the parameters have an extra step when pressing the stop push-button. For example when the door needs to run in programming stage. Display will show "RUN".

3. **Parameter explanation**

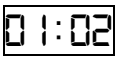


00:00 shaded values shows factory settings.

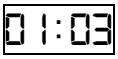
1.1 OPERATION

1.1.1 *Operation mode*

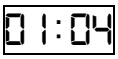
Hold-to-run OPEN
Hold-to-run CLOSE (Put a bridge in X3 terminal 23-24 when there is no safety list)



Impulse OPEN
Hold-to-run CLOSE (Put a bridge in X3 terminal 23-24 when there is no safety list)



Impulse OPEN
Impulse CLOSE

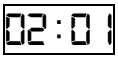


Impulse OPEN
Impulse CLOSE
0,5 sec reverse by stop on force control in opening direction.

1.1.2 *Reaction – Failure on photo or Safety edge list*

Hold to run operation not possible when failure on photo or safety edge list.

The door cannot close when there is an error on photo or safety edge. By a special code the door can close one time in hold to run mode. Press and hold STOP when pressing 222111 (2 = DOWN push button and 1 = OP push button).



Hold to run possible when failure on photo or safety edge list.

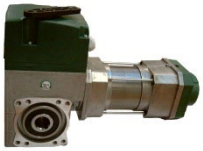
Do not use 01 when a device with constant close signal is mounted. Usage of 01 is on customers own risk.

1.2 SELECTION OF LIMITS

Dall gearmotor

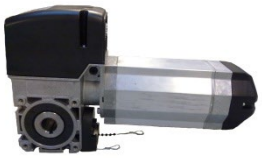
Dalmatic encoder

TAE gearmotor



Kostal encoder

STA1 gearmotor



Mechanical cams

Selection in parameter 11

11:01
Dalmatic right turning

11:02
Dalmatic left turning

11:03
Not in use

11:04
Not in use

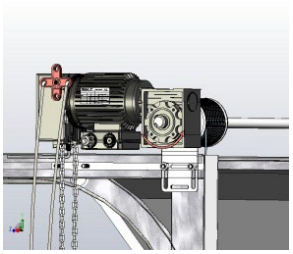
11:05
Kostal right turning

11:06
Kostal left turning

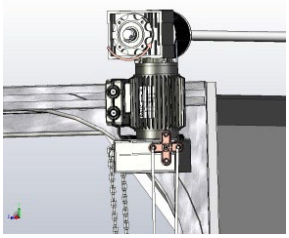
NOTE!
After changing to Kostal encoder a new power up is needed to start communication.
(Data+ = Kostal RS485A)

11:00
Mechanical limits

Right turning, open direction



Left turning, open direction

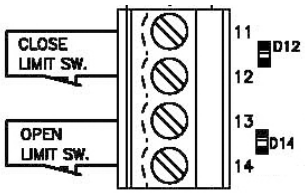


Go to next page to learn limits

1.3 LEARNING OPEN AND CLOSE LIMITS

LEARNING – MECHANICAL LIMITS:

Connect mechanical limits to the terminals (X3):



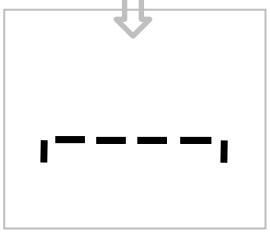
LEARNING – ELECTRONIC OPEN LIMIT:

NOTE: *½ OPEN limit cannot be active during programming (parameter 16).*
Photo in the door frame (parameter 31) cannot be active during learning of limits.
When relearning limits parameter 41(force control) and 51(run time) will be reset to factory setting.

(Note that ERROR LED D15 is flashing 2 times until both limits are learned.)

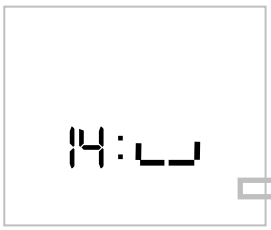
Press STOP 2 times

Run the door to open position.
(By pressing OPEN or DOWN).
Press the STOP push-button
to confirm open limit.



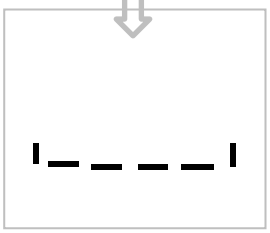
(The display will show open limit symbol about 2 sec.
and the display will automatic switch back
to active parameter number)

LEARNING – ELECTRONIC CLOSE LIMIT:



Press STOP 2 times

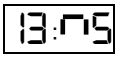
Run the door to close position.
(By pressing OPEN or CLOSE).
Normally 3-5 cm. from the floor.
Press the STOP push-button
to confirm close limit.



(The display will show close limit symbol about 2 sec. and
the display will automatic switch back
to active parameter number)

ERROR LED D15 will now stop flashing.
If it flashes 4 times, the wrong encoder rotation in parameter 11 has been made. Change settings in parameter 11 and start learning limits from the beginning!!!

1.3.1 *Fine tuning of electronic Limit OPEN*



Press STOP push-button
until the display parameter value is active.

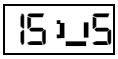
Fine tune OPEN limit 6-9 more open, 1-4 less open. Press OPEN or CLOSE push-button to change value.

If the value is changed: Press STOP push-button (Display shows ”RUN”.)
Test the fine tuning by running the door up and down.

Press the STOP push-button to save and return to parameter value.
(adjustment range is maximum +/- 0.8% of the door run range)

Pressing STOP without a value change = return to parameter number.

1.3.2 *Fine tuning of electronic Limit CLOSE*



Press STOP push-button
until the display parameter value is active.

Fine tune CLOSE limit 6-9 more open, 1-4 less open. Press OPEN or CLOSE push-button to change value.

If the value is changed: Press STOP push-button (Display shows” RUN”.)
Test if the fine tuning by running the door up and down.

Press the STOP push-button to save and return to parameter value.
(adjustment range is maximum +/- 0.8% of the door run range)

Pressing STOP without a value change = return to parameter number.

1.4 ½ OPEN SETTINGS

½ Open select

16:00	No ½ open active.
16:01	**Mechanical limit switches:** (Value 00 in parameter 11) ½ open stop active. Controlled ON/OFF by mechanical switch in terminal 15+16.

Electronic limits (encoder): (Value > 00 selected in parameter 11)

ON/OFF controlled by switch in terminal X3,15+16

16:02	½ open stop active. Electronic limit on 50 % open position.
16:03	½ open stop active. Electronic limit on 55 % open position.
16:04	½ open stop active. Electronic limit on 60 % open position.
16:05	½ open stop active. Electronic limit on 65 % open position.
16:06	½ open stop active. Electronic limit on 70 % open position.
16:07	½ open stop active. Electronic limit on 75 % open position

½ OPEN command by a push button NO in terminal X3,15 + 16

16:08	½ open stop active. Electronic limit on 50 % open position.
16:09	½ open stop active. Electronic limit on 55 % open position.
16: 10	½ open stop active. Electronic limit on 60 % open position.
16: 11	½ open stop active. Electronic limit on 65 % open position.
16: 12	½ open stop active. Electronic limit on 70 % open position.
16: 13	½ open stop active. Electronic limit on 75 % open position.

1.4.1 *Auto close from ½ open*

17:00	No auto close from ½ open limit.
17:01	Auto close from ½ open limit.

Note that auto close must be activated in parameter 32.

1.5 SAFETY EDGE SETTINGS

Safety edge selection

21:01	PNE / DW air switch
21:02	8k2 ohm electrical
21:03	Optical - OSE
21:04	Special LP DW air switch
21:05	Wireless edge with test function on X20 s.out
21:06	Light curtain with OSE output (for connections, see installation manual section 1-13)

Note, *that actual edge must be connected but not activated before this setup.*
If the controller has observed a wrong edge select, the display will show ERR.

Note, *that nothing must be connected to X3 terminal 23-24 when parameter value 03 or 06 has been chosen.*

1.6 ADVANCED SETTINGS

1.6.1 *After run*

(Used to prevent that the door reverses when it reaches the floor before the close limit gets activated – for instance if there is dirt in the door opening or if the wires are getting longer)

22:00	No after run (Note! Value 00 = NO monitoring of PNE/DW)*
22>00	After run active – after run time 0.01 – 0.50 sec.

NOTE! Monitoring of the PNE/DW air switch safety edge is only active when after run is selected parameter 22:01-50

**Monitoring of PNE/DW air switch safety edge is automatically selected when after run is active When the door reach close limit switch when closing, the door will continue closing until PNE/DW air switch activate or until the after run time exceeds.*

PROGRAMMING:

Set close limit switch about 1-3 cm over the floor. Adjust the door to the floor by setting the after run time on the right level until the door stops on PNE/DW signal from the safety list.

1.6.2 *Extra safety edge or Wicket Door/slack rope circuit (X20 – terminal 3-4)*

23:00	No extra safety edge list
23:01	Extra safety edge list works parallel with primary safety edge list(*)
23:02	Extra safety list stops door in opening direction (*)
23:03	Extra safety list stops door and reverse a little in opening direction (*)
23:04	Wicket Door/Slack rope circuit. (special resistances and switches circuit)
23:05	Wicket Door/Slack rope circuit. (NC)

(*) Extra safety list shall be PNE/air switch or 8k2 type and the same type as primary safety edge list
Note: If parameter 88:03 (lock function), it is not possible to mount extra safety edge.

1.6.3 *Wire tighten*

(Used to prevent the wire is getting loose when the door is closed. Works as a small pull back
time when the door stops on close limit)

29:00	No wire tighten function
29:01	Wire tighten 5 mS
29:02	Wire tighten 10 mS.
29:03	Wire tighten 20 mS.
29:04	Wire tighten 30 mS.

1.7 PHOTO SETTINGS

Photo 1: External photo mounted in screw terminals X12
Photo 2: External photo mounted in screw terminals X3

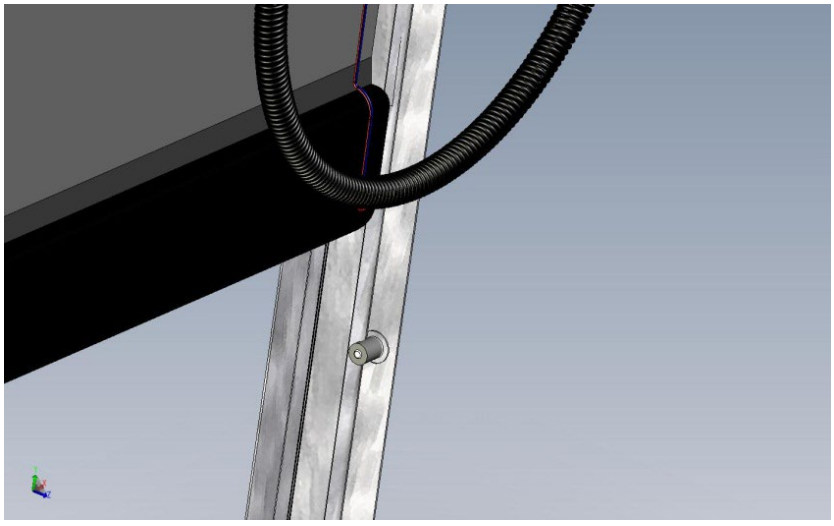
31:00	No Photo safety connected
31:01	Photo 1 connected
31:02	Photo 2 connected
31:03	Photo 1 and 2 connected

Additional photo mounted in the door frame (Only possible with electronic limits).

After selecting the right parameter value run mode is available by pressing stop. Location of photo will now be learned by running from close to open position. The door will stop when the photo is no longer blocked and the control unit will change back to parameter number automatically

31:04	Photo 1 connected and mounted in the door frame.
31:05	Photo 2 connected and mounted in the door frame.
31:06	Photo 1 and 2 connected and photo 1 mounted in the door frame.
31:07	Photo 1 and 2 connected and photo 2 mounted in the door frame.

Install additional safety photo cells in the door track to protect the photo cells from the sun and knocks. After the installation the photo cells will automatically be disabled when the door passes the photo beam.



Avoid mounting the photo receiver on the door side where the sun is shining directly on the sensor when the sun is low!

1.8 COMFORT SETTINGS

1.8.1 *Auto close select*

Set the door to auto close after a selected time. Auto close can be switched ON/OFF with jumper in X19.

No auto closing

Seconds 1 – 990 (after 99 the changing will be in x10 of seconds and the value is flashing quickly - e.g. 18 is 180 seconds)

Count down of auto close time will show in the display.

Note that impulse close must be selected in parameter 1.

Interlock:

If stop or emergency stop is activated more than 5 sec. with door in open position. The auto close is interlocked to prevent closing. Reset of interlock by CLOSE push-button or "GO FUNCTION" close. If the interlock function is not wanted, deselect this in parameter 36.

WARNING
Automatic closing is normally only allowed if additional photo safety is used selected in parameter 31.

1.8.2 *Car wash function*

Count down of auto closing time starts, only if photo has been activated more than "photo active time". Door shall be complete closed before start of a new cycle.

No car wash function

Photo active time in 0,1 sec. Units (e. g. 15 = 1,5 sec.)
(Adjustable 1 – 30 units – 0,1 sec. to 3,0 sec.)

1.8.3 *"Forced" closing (Only when car wash function is selected in parameter 33)*

No forced closing

Forced closing after 2 min. (even though photo has not been activated).

Forced closing after 5 min. (even though photo has not been activated).

Forced closing after 10 min. (even though photo has not been activated).

Forced closing after 20 min. (even though photo has not been activated).

1.8.4 *Go function (Step)*

Impulse function used for step-by-step operation

It is only possible to close the door by the Go function, when photo safety is used, selected in parameter 31.
Auto close without additional photo safety, connect a bridge in X3: 20-22 and select parameter 31:02 (at customers own risk).

35:00	Normal go function (Closing is only possible from open limit)
35:01	Special go function: open – stop – close – open – stop – close etc.
35:02	Go function with open function only.
35:03	Special go function: open – stop – close – stop – open – stop etc.

(Parameter only visible if photo is selected in parameter 31)

1.8.5 *Interlock function (see 1.8.1)*

36:00	Interlock function OFF)
36:01	Interlock function ON.

(Parameter only visible if auto close is selected in parameter 32)

1.9 FORCE CONTROL

All mechanical spring and door limits must be adjusted before selecting force control.

Force control is an added safety to prevent an obstacle to get lifted by the door in opening direction and in closing direction the force control works as extra force limitation on closing edge. Balance of springs is monitored with the force control with a tolerance selected in parameter 44 (Automatic learning, and set with potentiometer in manual learning)

Force control settings

41:00 No force control.

Manual learning with potentiometer

41:01 Force control manual adjustment (motor 1300 -1750 rpm) (Standard Dall door operator)

41:02 Force control manual adjustment (motor 2600 -3500 rpm)

41:05 Force control manual adjustment (motor 850 -1050 rpm)

If manual learning is selected - go to next page!!

Automatic learning (RECOMMENDED LEARNING)

41:03 Force control by automatic learning – multi turn = Motor 850-3600 rpm. (Standard Dall encoder).

41:04 Force control by automatic learning with singleturn encoder (*) (Kostal encoder on TAE gearmotors).

Press STOP → RUN → Run the door 2 complete door cycles (1 time with Kostal encoder) from closed position without any stop. When learning is finished the ”RUN” will stop flashing 2 sec. and the display will automatic switch back to active parameter number.

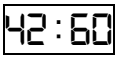
(*)Encoder is single turn when it is mounted on top of the gear and is turning only 5 turns/ cycle.

If new automatic learning is wanted. Press stop 2 times until ”RUN” is flashing again.
(setup of torque – look in parameter 44)
Note: Minimum door opening time is 7.0 sec.

Please note when using single turn encoder:
The use of encoder turning area is important. More than 180 angle degrees is recommended.
Door opening time is also important and ought to be between 7 and 14 sec.
If the door opening time is between 14 and 25 sec. the encoder turning area usage must be between 270-310 angle degrees.
Longer door opening times needs more than 360 degrees. Kostal encoder cannot be used more than 310 degrees.
Dalmatic encoder can manage 6 revolutions and Feig encoder can manage 3 revolutions single turn.
Faster door opening times less than 7 sec is not recommended because of non-accurate door limits.

1.9.1 *Force control manual learning OPEN*

(not shown if automatic or no force control is selected)



Procedure for changing value:

Press STOP push-button until the parameter value is active (flashing)

1. If this is the first adjustment - Turn potentiometer P1 clock-wise to maximum.

2. Push CLOSE to reset for new value and run the door to closed position.

3. Press OPEN continuously and turn slowly P1 until the door is stopped, and turn a little back. The display shows approximately P1 percent value.

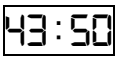
Check the torque and change the value if necessary.

By pressing STOP the value is stored and display switch to parameter number. The value must be stored before leaving programming mode.

(if no OPEN or CLOSE have been pressed, no new value is changed)

1.9.2 *Force control manual learning CLOSE*

(not shown if automatic or no force control is selected)



Procedure for changing value: Press STOP push-button until the parameter value is active (flashing)

1. If this is the first adjustment - Turn potentiometer P1 clock-wise to maximum.

2. Push OPEN to reset for new value and run the door to open position.

4. Press CLOSE continuously and turn slowly P1 until the door is stopped, and turn a little back. The display shows approximately P1 percent value.

Check the torque and change the value if necessary.

By pressing STOP the value is stored and display switch to parameter number. The value must be stored before leaving programming mode.

(if no OPEN or CLOSE have been pressed, no new value is changed)

1.9.3 *Sensitivity force control automatically learning (Parameter 41:03)*

(not shown if manual or no force control is selected)

44:00	Force control delay	0.8 sec.
	Stopped by low speed	-0.5 %
	Wear limit (from initial values)	-5 %
44:01	Force control delay	0.8 sec.
	Stopped by low speed	-1.0 %
	Wear limit (from initial values)	-5 %
44:02	Force control delay	0.8 sec.
	Stopped by low speed	-1.5 %
	Wear limit (from initial values)	-5 %
44:03	Force control delay	0.8 sec.
	Stopped by low speed	-2.0 %
	Wear limit (from initial values)	-5 %
44:04	Force control delay	0.8 sec.
	Stopped by low speed	-2.5 %
	Wear limit (from initial values)	-6 %
44:05	Force control delay	0.8 sec.
	Stopped by low speed	-3.0 %
	Wear limit (from initial values)	-7 %

Automatic force adjustment regarding door balance 0.3 %/10 door cycles

1.9.4 *Sensitivity force control automatically learning Single turn (Parameter 41:04)*

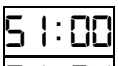
44:02	Force control delay	0.4 sec.
	Stopped by low speed	-3.5 %
	Wear limit (from initial values)	-7 %
44:05	Force control delay	0.4 sec.
	Stopped by low speed	-7.0 %
	Wear limit (from initial values)	-14 %

Automatic force adjustment regarding door balance	*0.9 %/10 door cycles*
Reaction time for force change	*about 2.4 sec.*

1.10 RUN TIME CONTROL

The door will stop if the pre-set run time exceeds and the display shows E:03.

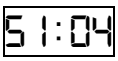
Run time control



No run time control

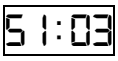
Run time 20 sec.

Run time 40 sec.



Run time 60 sec.

Run time control - automatic learning



Automatic run time. ”RUN” position is now available by pressing STOP.
Run the door from closed to open position without any stop. (keep press OPEN)

When run time is learned (by open limit) the ”RUN” will stop flashing and the display will automatic switch back to active parameter number)
Run time is learned time + 12.5%. Below 10 seconds learned time, fixed 1 second is added.

Both limits must be set before selecting automatic run time.

1.11 REVERSE TIME

1.11.1 *Safety edge*

Reverse time of safety edge in 1/100 seconds. 0.00 – 0.99 sec.
Example: 01 = 0.01 sec.
(If 00 is selected the reverse time is set to minimum 0.004 sec.)

1.11.2 *Photo*

Reverse time of Photo in 1/100 seconds. 0.05 – 0.99 sec.
Example: 30 = 0.30 sec.
This reverse time is also used as force reversing time.

1.12 SERVICE COUNTER

Use service counter to make service interval on doors.

Service counter setup

58:00	No Service countdown
58:01	15 open cycles before service **(for test only)**
58:02	5000 open cycles before service
58:03	10000 open cycles before service
58:04	20000 open cycles before service

Reset for new countdown or selecting value:
Press STOP to select parameter value. Press OPEN or CLOSE to select value.

Press STOP again **minimum 2 sec**. CLR is shown 2 sec. in display to confirm new countdown.

1.12.1 *Service count reaction*

59:00	Display shows E:04
59:01	Switch to hold-to-run control and display shows E:04

If LED pad is mounted: Service LED will light when service countdown reach 0.

1.13 RELAY MODULE SETTINGS

REALY MODULE (plug-in module in X8, buy separate)

Function setup for the Relay module is made in parameter 75 and 76.
Parameter 75 is for AUX4 and parameter 76 is for AUX5.

The function modes are similar for parameter 75 and 76, (75 is shown below):

75:00	No functions.
75:01	Flashing function by warning and ON when door is running.
75:02	Flashing function by warning and running.
75:03	ON by warning and running.
75:04	1 sec. impulse ON by OPEN command.
75:05	ON by Error (LED D15).
75:06	ON by OPEN limit position.
75:07	ON by CLOSE limit position.
75:08	OFF by OPEN limit position, all other situations ON
75:09	OFF by CLOSE limit position, all other situations ON
75: 12	ON just before and by closed limit position. Setpoint by parameter 92 (electronic limits only)
75: 13	ON by running + 0.4 sec. delay added before and after running
75: 14	ON when motor is running (e.g. brake relay)
75: 15	ON when motor is *not* running.
75: 16	ON when motor is running and on open limit.
75: 17	ON when safety edge is activated or safety test error on the safety edge.
75: 18	Flashing by warning and OFF by door running.
75: 19	ON just before and by open limit position. Setpoint by parameter 91 (electronic limits only)
75:23	ON by OPEN limit position
75:24	ON for 1 sec. impulse by every motor start.
75:25	ON by opening and 2 minutes after stopped on OPEN limit.
75:26	Alternative output signal for wireless safety edge. (parameter 21:05)
75:27	ON impulse for 2 sec. when OPEN limit is reached.
75:28	Relay OFF.
75:29	ON when door opening.
75:30	ON when door closing.
75:31	ON when service interval is reached (parameter 58)
75:35	ON by Photocell signal OK. Off by interrupted photo beam.
75:43	ON when door is running up or down.
77:00	Time setup start delay (adjustable 1-10 sec.), both directions, relay warning in close direction*
78:05	Time setup warning close direction (adjustable 0-120 sec. – above 100 in 10sec. steps)*

* Only in use when warning are selected in parameter 75 or 76

1.14 SPECIAL SETTINGS

Delay time indication of missing encoder position

81:00	1 sec.
81:01	2 sec.
81:02	4 sec.

(Display shows E:09 after pre-set operation time without change of encoder position).
Failure can be reset by hold-to-run steps to find both end limits or relearning of limits)

Encoder positioning failure – automatic resetting

81:03 4 sec. After operation without change of encoder position the door will stop and error code E:09 will be automatically reset.

No limit monitoring by selecting value 03

1.14.1 *Encoder test function*

(Parameter only visible if Dall Encoder is selected in parameter 11. (11:01 or 11:02))

Run the door to middle position between limits before activating the test function. The control unit is able to run this encoder test before limits is learned and it's possible to pass the limits by this running.

82:00 Ready for encoder test.
"RUN" position is now available by pressing STOP.
Press OPEN or CLOSE until the door stop again (about 1 sec.).
Display will show the result:

a) If encoder is answering, position is moving and encoder battery is above low level the display shows measured battery voltage e.g. "3.65" Volt. (Low battery is below 3.2 Volt.) (ENCODER IS OK).

b) If encoder is answering but the battery is low the display shows "E BA"

c) If encoder doesn't answer the display shows "ERRA"

d) If encoder position is not moving the display shows "ERRP"

1.14.2 *Special open or close function*

84:00	Normal open function	
84:01	Special open function:	Open signal with high priority. The door will always open on a continuously open signal, even after a stop impulse. (E.g. a fire open signal)
84:02	Special close function:	Close signal with high priority. The door will always close on a continuously close signal, even after a stop impulse. (E.g. a fire close signal)

1.14.3 *Option relay K3*

Mechanical relay and terminals X17 needs to be mounted on the PCB on position K3 – and it can work like follows.

88:00	K3 active when door is running
88:01	K3 active when the door is closed
88:02	K3 active when the door is open
88:03	K3 used for electric lock

1.14.4 *Set point Open (Relay module)*

Set point for Relay module parameter 75/76:19 (Section 2-17)

91:00	5 % before open limit
91:01	10 % before open limit
91:02	15 % before open limit
91:03	20 % before open limit
91:04	25 % before open limit
91:05	30 % before open limit
91:06	35 % before open limit
91:07	40 % before open limit

1.14.5 *Set point Close (Relay module)*

Set point for Relay module parameter 75/76:12 (Section 2-17)

92:00	5 % before closed limit
92:01	10 % before closed limit
92:02	15 % before closed limit
92:03	20 % before closed limit
92:04	25 % before closed limit
92:05	30 % before closed limit
92:06	35 % before closed limit
92:07	40 % before closed limit

1.15 RESET TO FACTORY SETTINGS

Reset to factory settings by changing DIL switch 4 (S4) to ON position and activate STOP and UP push-buttons in 2 seconds.

The display will flash with "FAC" and program version number will be shown "29:31".

Remember to switch DIL switch 4 back to OFF position.

2 TROUBLESHOOTTING

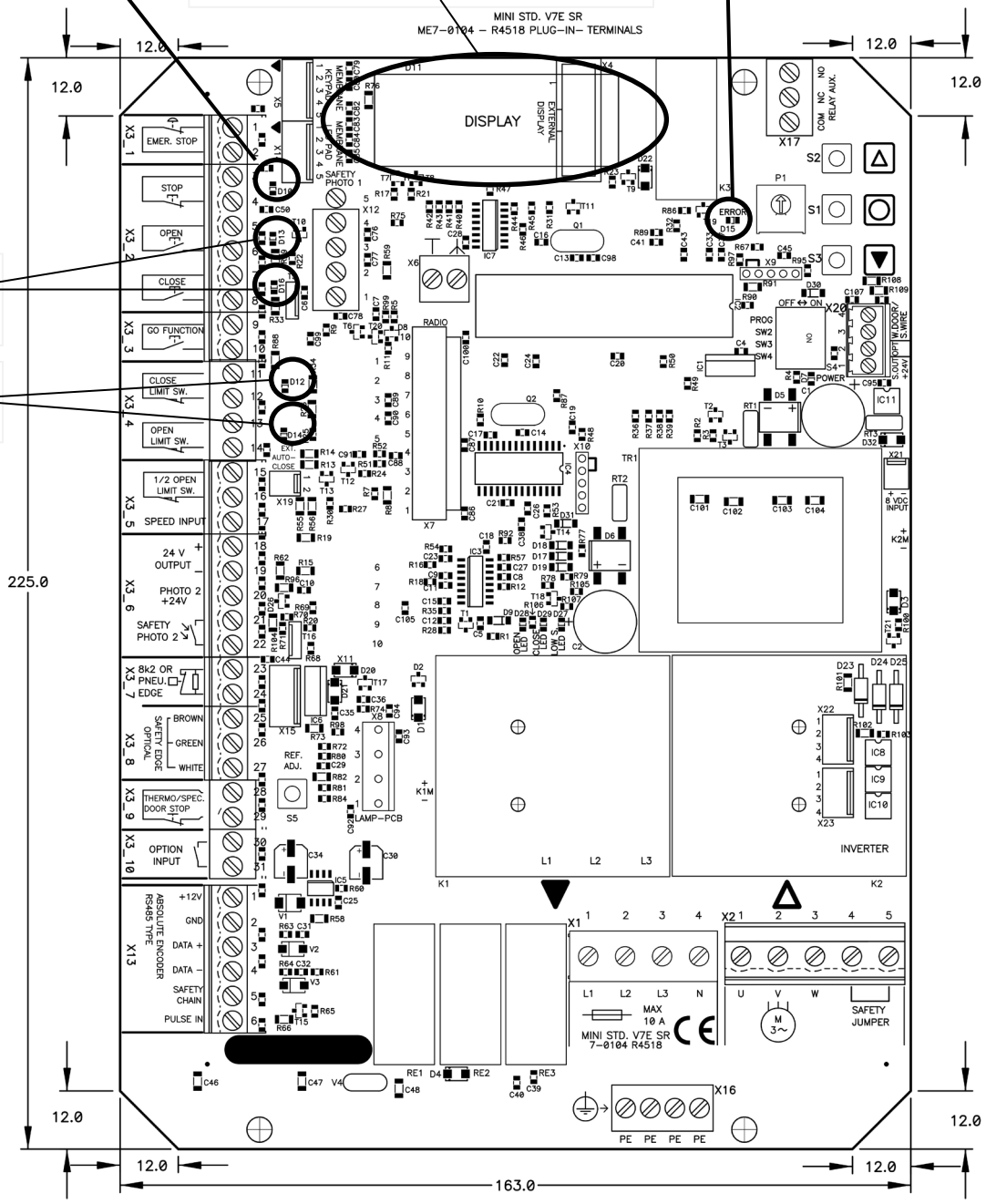
Diode D10 = stop circuit active.
Check emergency stop **(X3:1-2)**
or stop **(X3:3-4)**, stop **(X3:28-29)**, safety jumper **(X2:4-5)**
or switch/thermo in gearmotor **(X13:2-5)**
Or an internal stop, check flash code on **Error LED-D15**

Error diode D15. Flashing 1-9 times. See description in chapter 2.1

4 digit LED display: See run mode and error symbols. Description in chapter 2.3

Open signal D13
Close signal D16

Close limit D12
Open limit D14



OBS:
Active stop circuit (LED D10 lights up) is common when the control unit is in fail mode . To remove fail, check stop circuits, error LED D15 (chapter 2.2.1) or as the last thing try to reset to factory settings. (chapter 1.15).

2.1 LED CODES

LED	Explanation
D15	Error LED – shows error codes (see manual)
D10	Stop active (X3:1-2, X3:3-4, X3:28-29, X13:2-5, X2:4-5) LED is also active in fail mode. Observe display and D15 ERROR LED
D13	Open active
D16	Close active
D12	Close Limit active
D14	Open Limit active
D27	LOW speed active - output for inverter
D28	Power ON to Open contactor
D29	Power ON to Close contactor

2.2 LED CODES – LED ON PUSH BUTTON MEMBRANE IN LID – (NOTE! - NOT LED ON THE V7E PCB)

(FLASH)	LED PUSH BUTTON MEMBRANE shows:
Constant light	Stop activated
Quick flash	Photo or safety list active, when CLOSE push button is active
1 flash	E:01 Error safety list
2 flash	E:02 Force control
3 flash	E:03 Run time
4 flash	E:04 Service counter reached 0
5 flash	
6 flash (on CLS)	E BA – Battery low – Change encoder
7 flash	
8 flash	E:08 Force control – Wear observed
9 flash	E:09 No change of encoder position

2.2.1 ERROR CODES - D15 ERROR LED (NOTE! NOT LED on push button membrane)

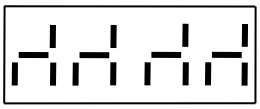
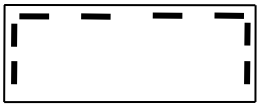
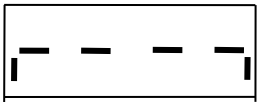
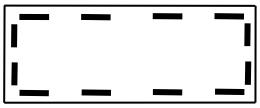
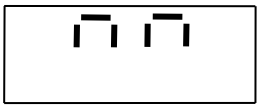
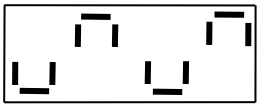
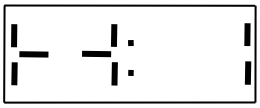
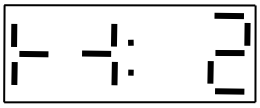
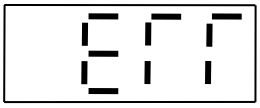
(used when electronic limits is selected)

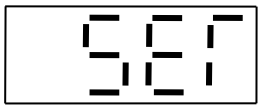
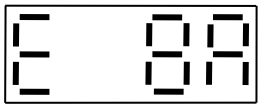
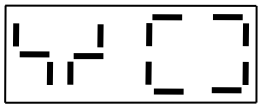
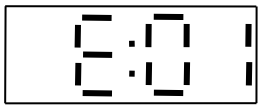
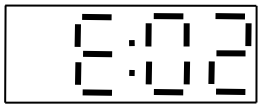
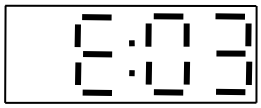
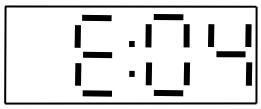
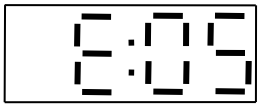
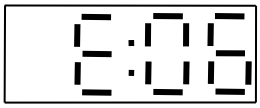
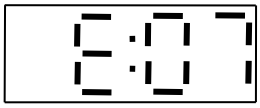
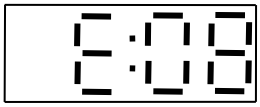
Flashes on error LED	Error explanation	Solving error
1	No answer from encoder (No 24Vdc control voltage)	- Check connections - Check the 24VDC voltage in terminal X3 18-19
2	Limits not learned	Learn limits
3	Motor running unintended	Service needed. Fatal error. Move the door manual to middle position without power. Change from normal mode to programming mode on DIL switch no. 1. This will clear the SER error. If the door is running again in 1 sec. without command when power is on then the PCB is defect.
4	Calculation error	Check that parameter 11 value is correct selected. (Left/right turning select). Possible user error – both limits are the same. Encoder error.
5	Not in use	
6	Not in use	
7	Dalmatic/Feig encoder = position out of learned range.	Re-learn limits
	Kostal encoder – wrong selection of left/right turning	Check that parameter 11 value is correct selected. (Left/right turning select) or re-learn limits
8	Kostal encoder – Failure operating voltage	Check connection and supply voltage. Change encoder
9	EEPROM failure on IC4 by power up	- Re-learn limits and make a new power-up. (In that order!) Or - Make a factory resetting and a new power-up. (In that order!)

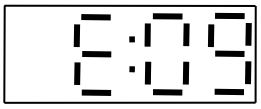
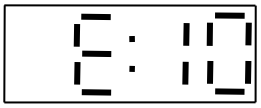
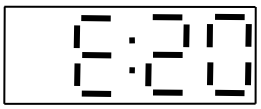
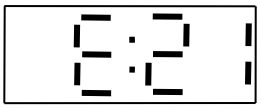
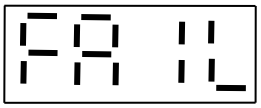
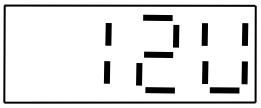
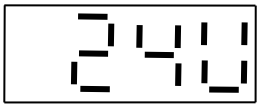
2.3 DISPLAY IN RUN MODE

The display will in run mode show status of limits, some inputs or error codes if they occurs.

When power up the software version is showed shortly.

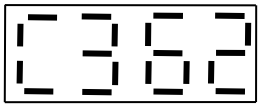
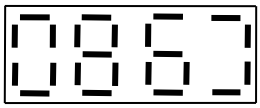
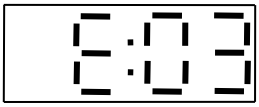
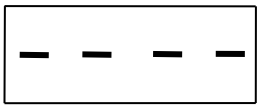
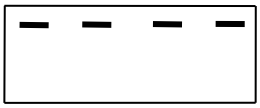
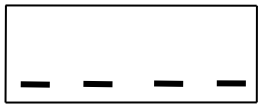
Parameter	Description
	**Nothing active** Nothing active. (4 chairs symbol) Door is stopped between limits and no errors are found.
	**Open limit active**
	**Close limit active**
	1/**2 open limit active**
	**STOP active**
	**OPEN push-button active** Activation of loop detector will also show this symbol
	**CLOSE push-button active**
	**GO function active** **(Note that the door only can be closed by GO function, when photo is installed)**
	**Photo 1 active** Photo 2 is external photo cells mounted in the screw terminals X12.
	**Photo 2 active** Photo 2 is external photo cells mounted in the screw terminals X3.
	**Safety Edge active**
	**Safety list not mounted correct / wrong selection in parameter 21.**
	**Door running up**

	**Door running down**
	**Error code. Door is running without command** Service needed. Fatal error. Move the door manual away from door travel limits and make a new power up. Alternative change from normal mode to programming mode on DIL switch no. 1. This will also clear the SER error. If the door is running again in 1 sec. without command when power is on, then the PCB is defect.
	**Error code. Encoder battery** Warning symbol indicating that the encoder battery is nearly discharged. Encoder shall be replaced as soon as possible (0,5-2 years) This indication is only possible with Dalmatic encoder. Symbol switches between indication and normal operation symbol
	**Wicket Door / Slack rope stop active** Wicket Door / Slack rope switch is mounted in terminal X20:3-4
	**Error code. Edge monitoring** Error code Monitoring failure of safety edge if this function is activated. Check or adjust safety edge list. See chapter 1.5.
	**Error code. Force control** Error code Door is stopped by force control when this function is active. Symbol also shown if the automatic force control is not learned, when returning to run mode. Re-learn force control or change sensitivity in parameter 44
	**Error code. Run time** Error code Door is stopped on run time control. See chapter 1.10.
	**Error code. Service** Service counter decremented to 0 Reset for new countdown
	**Error code. Photo** Failure in photo circuit. (Test cycle after last stop failed, Press stop to start new test)
	**Error code. Safety Edge** Failure in edge circuit. (Test cycle after last stop failed, Press stop to start new test)
	**Error code. Tacho failure** Tacho failure when force control is active. Contact the supplier.
	**Error code. Speed wear** Speed wear failure. Check if the door is mechanical in good condition and relearn force control.

	**Error code. no change of encoder position, when running.** Door started, but the position is not changing. Door is stopped after delay time and E:09 failure is shown about 1 sec. Possible errors: The door is blocked, disengaged, cable connection error or the encoder magnet is not fixed on the shaft. Reset of E09: both limits shall be founded again by hold-to-run steps. (If it is not possible to find both limits, the limits must be relearned) If necessary, adjust in parameter 81 (delay time) (Parameter 81:03 = autoreset)
	**Error code. Second Safety Edge or Wicket Door** (X20-3,4) Failure in edge circuit. (Test cycle after last stop failed, Press stop to start new test)
	**Error code. EEPROM Fail** Possible error: Limits has been changed, ***after*** the force control has been learned. Reset of E20: Try deactivating force control in parameter 41 (41:00) and after this make a new power-up.
	**Error code. EEPROM Fail** EEPROM failure of power-up. Try factory clear or change processor.
 and  and 	**Error on 24V and/or 12V voltage circuit.** 24/12V is shorted or overloaded.

2.4 ELECTRONIC COUNTER AND LAST 10 ERRORS

To select counter or error history – Close the door and switch DIL switch 2 to ON.
(The door cannot be moved when display status is active)

Parameter	Description
Electronic counter status  and 	The display is flashing between and the most significant digits (1000 to 999000) and the least significant digits (000 – 999). Example shown is (362 and 086) = 362086 door openings Press STOP to see last 10 errors or exit by switching DIL switch 2 to off.
Last 10 errors 	Press OPEN (up) to select newer error Press CLOSE (down) to select older error If there is no errors the display will show:  By the end of the registered 10 errors the display will show:   Upper end lower end Switch DIL switch 2 to OFF to get out of ”display status”. Reset of last 10 errors by pressing OPEN at least 10 sec. when “upper end” symbol is shown Exit by switching DIL switch 2 to off.