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A

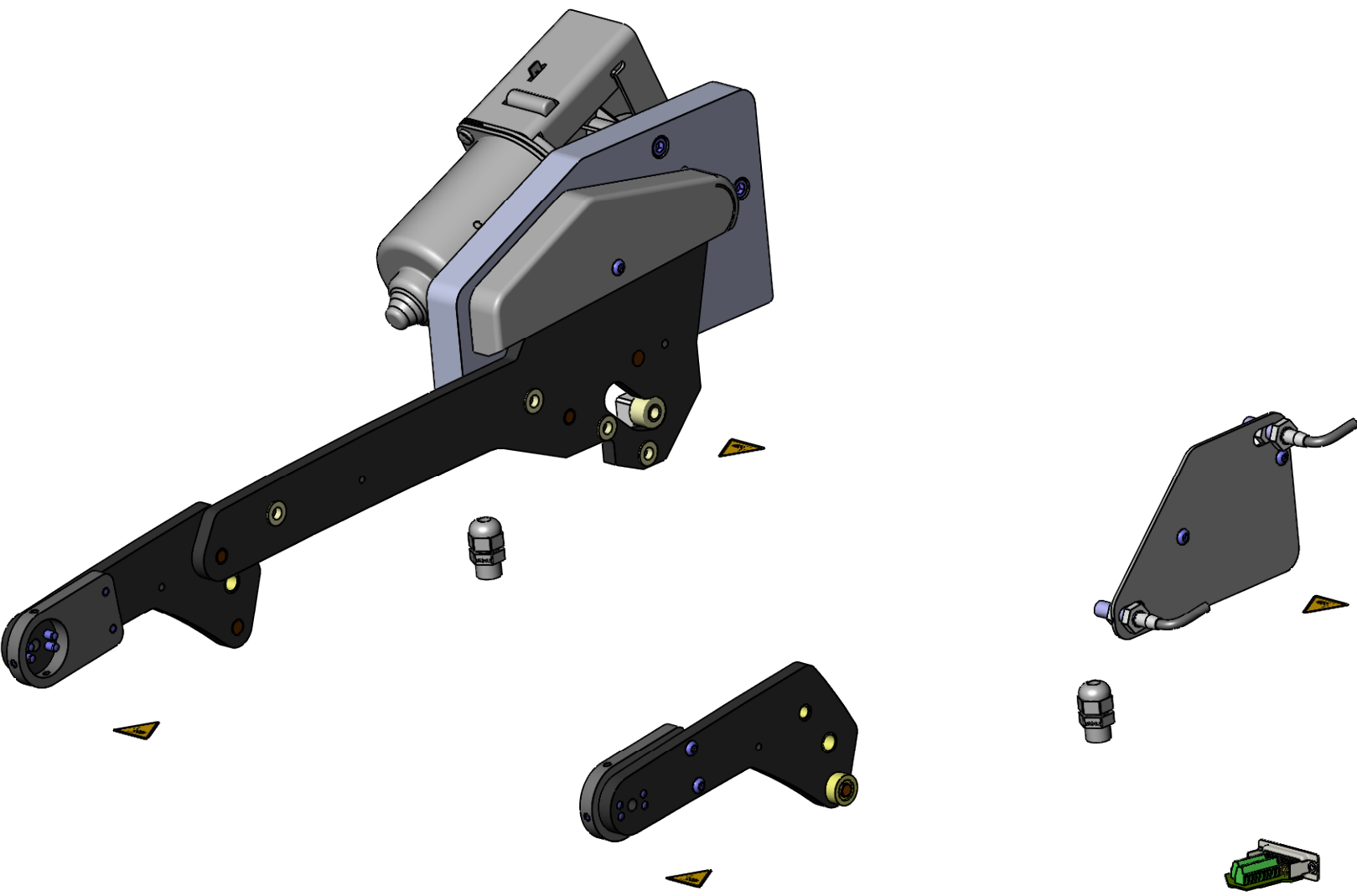
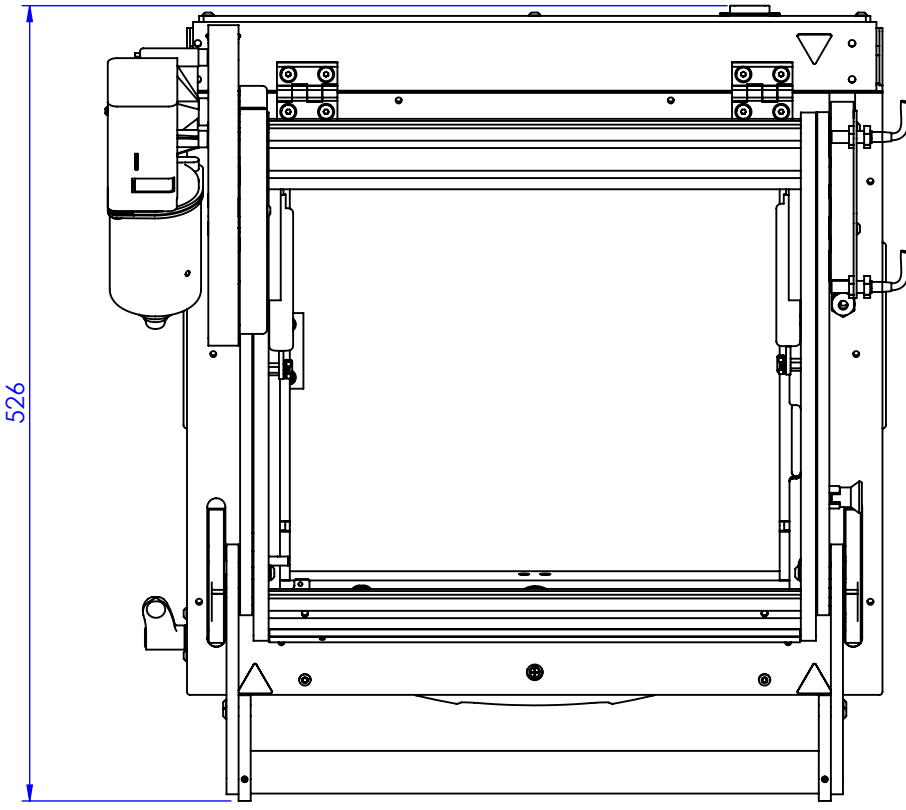
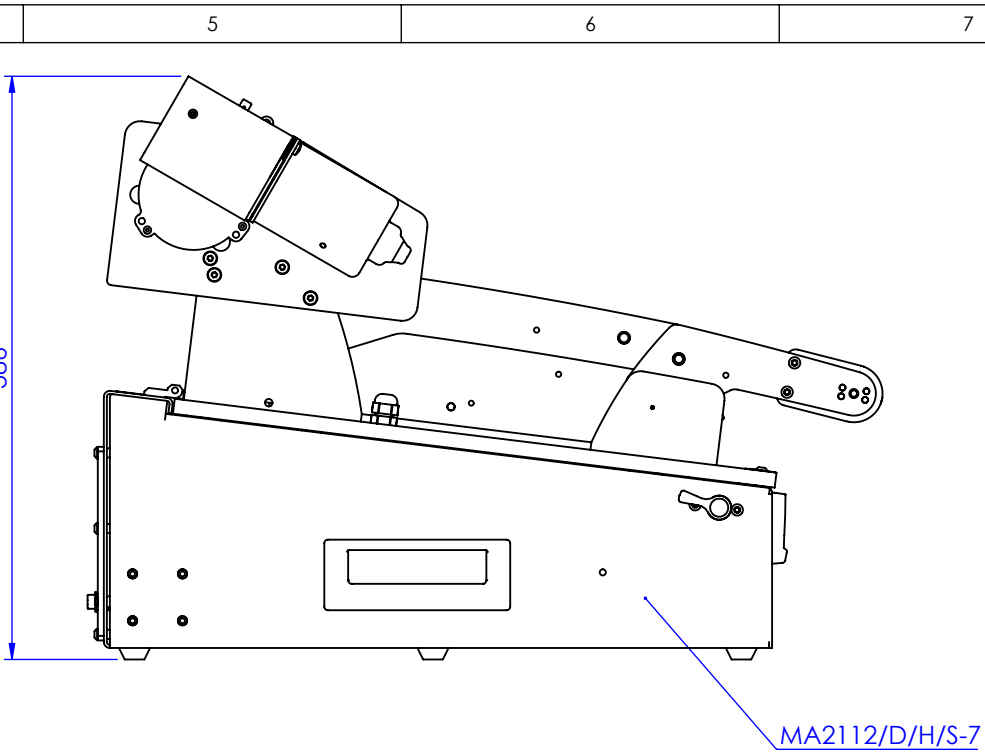
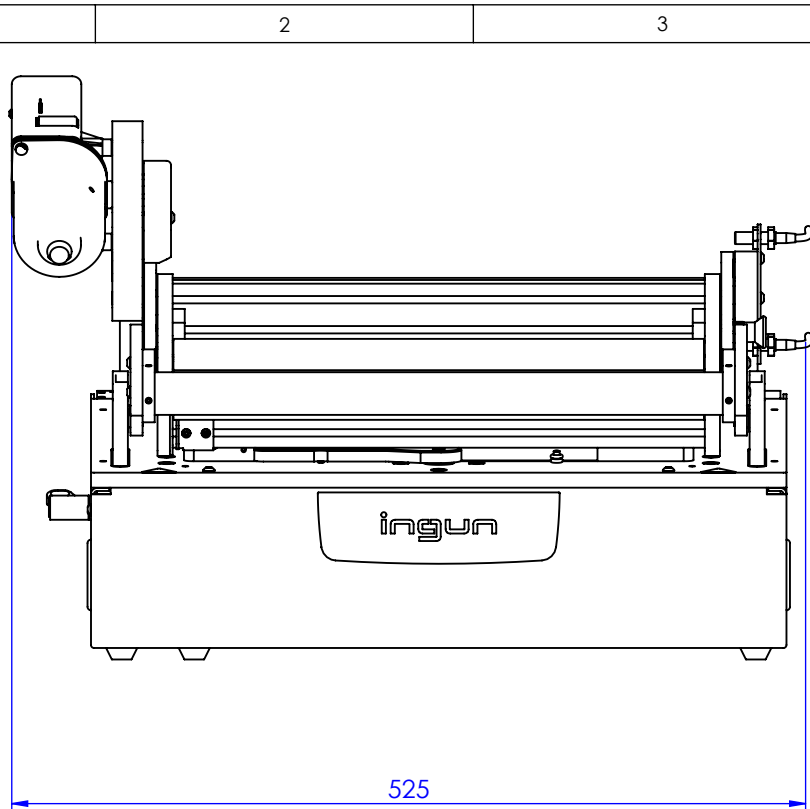
B

C

D

E

F



Für manuellen Betrieb User manuel Kapitel 6.5 beachten.  
To operate manually, please refer to section 6.5 of the user manual.

Das Referenzdesign als Vorschlag für die Steuerung diese Funktionsbaugruppe finden Sie unter: [www.ingun.com/manuals/INGUN\\_INFO-4594.pdf](http://www.ingun.com/manuals/INGUN_INFO-4594.pdf)

Suggestions for the control of this functional unit can be found in the reference design document INFO 4594: [www.ingun.com/manuals/INGUN\\_INFO-4594.pdf](http://www.ingun.com/manuals/INGUN_INFO-4594.pdf).



Montageanleitung INFO 4595 und Referenzdesign INFO 4594 beachten  
Refer to installation instructions INFO 4595 and reference design INFO 4594

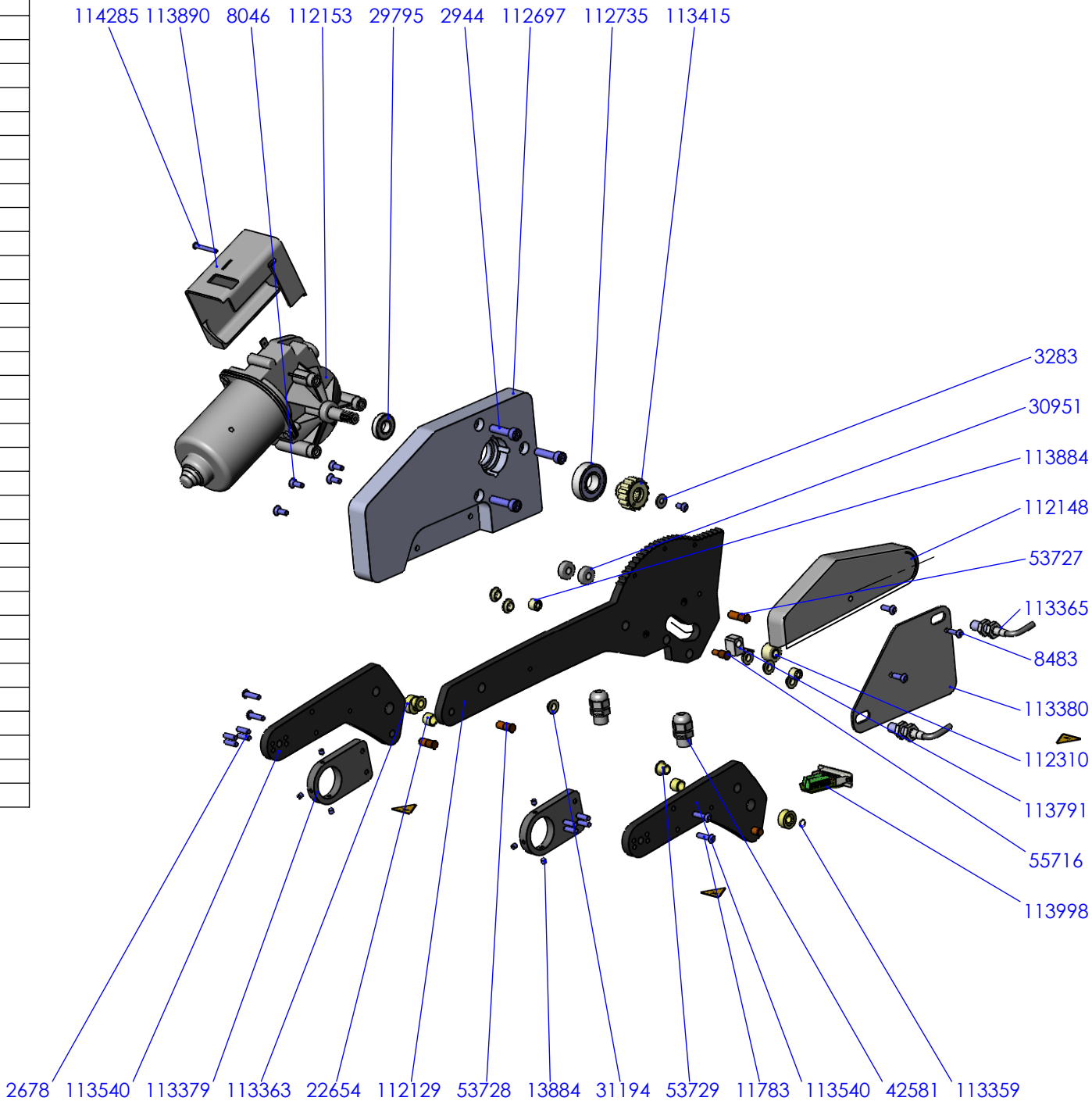
RoHS-3;6c

|                                        |                                                                                                                    |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Maßstab/Scale: 1:5                     | Benennung/Designation: FB-OSA-E-MA2x12 Öffner-Schließer-Automatik el.<br>FB-OSA-E-MA2x12 / Opener-closer automatic |
| gespeichert/saved: 25.08.2022 12:52:39 | Artikel-Nr./PartNo.: 113401                                                                                        |
| Montageanleitung/instruction sheet     | Index: 0                                                                                                           |
| ingun                                  | Blatt/Sheet 1 von 2<br>DIN A3                                                                                      |

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| 1                      |  | 2                 |  | 3                                |  | 4                                              |  | 5 |  | 6 |  | 7 |  | 8 |  |
|------------------------|--|-------------------|--|----------------------------------|--|------------------------------------------------|--|---|--|---|--|---|--|---|--|
| Art.-Nr.:<br>Part-no.: |  | Menge:<br>Amount: |  | Benennung DE:<br>Description DE: |  | Benennung EN:<br>Description EN:               |  |   |  |   |  |   |  |   |  |
| 112697                 |  | 1                 |  | Motorplatte                      |  | Engine plate                                   |  |   |  |   |  |   |  |   |  |
| 112153                 |  | 1                 |  | Getriebemotor 405 060            |  | Worm Gear Motor                                |  |   |  |   |  |   |  |   |  |
| 113890                 |  | 1                 |  | Abdeckung Motor                  |  | Cover motor                                    |  |   |  |   |  |   |  |   |  |
| 113415                 |  | 1                 |  | Ritzel Z15                       |  | Pulley                                         |  |   |  |   |  |   |  |   |  |
| 112735                 |  | 1                 |  | Rillenkugellager 32/15/9         |  | bearing                                        |  |   |  |   |  |   |  |   |  |
| 29795                  |  | 1                 |  | Rillenkugellager D22 d10 b6      |  | bearing                                        |  |   |  |   |  |   |  |   |  |
| 3283                   |  | 1                 |  | Scheibe mit Fase D 4,3 groß      |  | Washer D 4,3 large   DIN 9021 - A2             |  |   |  |   |  |   |  |   |  |
| 2944                   |  | 3                 |  | Zyl.-Schraube M 6x 25 ISK        |  | head cap screw M 6x 25 ISK   DIN 912 - A2      |  |   |  |   |  |   |  |   |  |
| 8483                   |  | 3                 |  | Linsenschraube M 4x 12 T20       |  | Button head screw M 4x 12 T20   ISO 7380 - A2  |  |   |  |   |  |   |  |   |  |
| 114285                 |  | 1                 |  | Selbstschn Schraube M 3x 25      |  | button head screw M 3x 25                      |  |   |  |   |  |   |  |   |  |
| 8046                   |  | 4                 |  | Senkschraube M 4x 12 T20         |  | Flat headed screw M 4x 12 T20   ISO 14581 - A2 |  |   |  |   |  |   |  |   |  |
| 112129                 |  | 1                 |  | Koppel MA 2111/2112 ZS           |  | side coupler MA2111/2112   drive unit          |  |   |  |   |  |   |  |   |  |
| 53727                  |  | 1                 |  | Zylinderstift ASF 6x20           |  | cylindrical pin with chamfer   6x20            |  |   |  |   |  |   |  |   |  |
| 30951                  |  | 2                 |  | Miniaturlager d6 15-b5           |  | bearing Misumi B696ZZ                          |  |   |  |   |  |   |  |   |  |
| 31194                  |  | 6                 |  | Gleitlager                       |  | slide bearing   igus JFM 0608-04               |  |   |  |   |  |   |  |   |  |
| 53728                  |  | 1                 |  | Zylinderstift ASF 6x16           |  | cylindrical pin with chamfer   6x16            |  |   |  |   |  |   |  |   |  |
| 55716                  |  | 1                 |  | Zylinderstift ASF 6/4x16         |  | cylindrical pin with chamfer 6/4 x 16mm        |  |   |  |   |  |   |  |   |  |
| 112148                 |  | 1                 |  | Abdeckung Ritzel b18             |  | Cover                                          |  |   |  |   |  |   |  |   |  |
| 113884                 |  | 2                 |  | Koppelrolle d9/4                 |  | role                                           |  |   |  |   |  |   |  |   |  |
| 113540                 |  | 2                 |  | Klinke FB-OSA...                 |  | latch                                          |  |   |  |   |  |   |  |   |  |
| 113356                 |  | 2                 |  | Zylinderstift ASF 6x16,6         |  | cylindrical pin with chamfer                   |  |   |  |   |  |   |  |   |  |
| 113363                 |  | 2                 |  | Rolle 15 vorne                   |  | role                                           |  |   |  |   |  |   |  |   |  |
| 113359                 |  | 2                 |  | Draht Sprengring RW6             |  | circular Wire Circlips                         |  |   |  |   |  |   |  |   |  |
| 53729                  |  | 2                 |  | Gleitlager                       |  | slide bearing   igus JFM 0608-08               |  |   |  |   |  |   |  |   |  |
| 22654                  |  | 2                 |  | Gleitlager                       |  | bush bearing   igus WSM 0810-08                |  |   |  |   |  |   |  |   |  |
| 113379                 |  | 2                 |  | Drehmoment Platte                |  | plate                                          |  |   |  |   |  |   |  |   |  |
| 13884                  |  | 6                 |  | Gewindestift M 4x 5 ISK          |  | Set Screw M 4x 5   DIN 914 - A2                |  |   |  |   |  |   |  |   |  |
| 11783                  |  | 4                 |  | Linsenschraube M 4x 16 T20       |  | Button head screw M 4x 16 T20   ISO 7380 - A2  |  |   |  |   |  |   |  |   |  |
| 2678                   |  | 8                 |  | Zyl.-Stift D 4m6x 14             |  | parallel pin D 4m6x 14   ISO 8734 C1 - A2      |  |   |  |   |  |   |  |   |  |
| 112310                 |  | 1                 |  | Laufrolle NDH                    |  | role                                           |  |   |  |   |  |   |  |   |  |
| 113791                 |  | 1                 |  | Kulissenstein MA21 OSA           |  | sliding block                                  |  |   |  |   |  |   |  |   |  |
| 113380                 |  | 1                 |  | Sensor Patte                     |  | plate                                          |  |   |  |   |  |   |  |   |  |
| 113365                 |  | 2                 |  | Sensor induktiv M8x1 Öff         |  | Sn 2 PNP Kabel                                 |  |   |  |   |  |   |  |   |  |
| 113998                 |  | 1                 |  | D-SUB-15 pol                     |  | D-SUB connection                               |  |   |  |   |  |   |  |   |  |
| 42581                  |  | 2                 |  | Kabelverschraubung M12x1,5       |  | cable fitting                                  |  |   |  |   |  |   |  |   |  |
| 8484                   |  | 1                 |  | Linsenschraube M 4x 8 T20        |  | button head screw M 4x 8 T20   ISO 7380 - A2   |  |   |  |   |  |   |  |   |  |
| 3012                   |  | 1                 |  | Scheibe mit Fase D 6,4           |  | washer D 6,4   DIN 125A - A2                   |  |   |  |   |  |   |  |   |  |
| 35334                  |  | 4                 |  | Warnschild D-W027 25mm           |  | warning sign                                   |  |   |  |   |  |   |  |   |  |



RoHS-3;6c

|                                                                                       |  |                                                                                                                       |                                  |
|---------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------|----------------------------------|
| Maßstab/Scale: 1:10                                                                   |  | Benennung/Designation:<br>FB-OSA-E-MA2x12 Öffner-Schließer-Automatik el.<br>FB-OSA-E-MA2x12   Opener-closer automatic |                                  |
| gespeichert/saved: 25.08.2022 12:52:39                                                |  |                                                                                                                       |                                  |
| Montageanleitung/instruction sheet                                                    |  |                                                                                                                       |                                  |
|  |  | Artikel-Nr./PartNo.:<br><b>113401</b>                                                                                 |                                  |
|                                                                                       |  | Index:<br><b>0</b>                                                                                                    | Blatt/Sheet<br>2 von 2<br>DIN A3 |