EN 16035 :2023 Hardware performance sheet
EL596FU
No : HPS240001-00

Table 1 Building hardware

Line	Feature	Required indication / Properties
1.1	HPS No./version	HPS240001-00
1.2	Date	13.8.2024
1.3	Prepared by	Abloy Oy, Testing, Maarit Jumppanen.
1.4	Manufacturer	Abloy Oy
1.5	Type of building hardware	Electric lock
1.6	Product line	EL596
1.7	Relevant EN standard	EN 14846: 2008
1.8	Classification / performance	1 2 3 4 5 6 7 8 9 3 S 5 F - L 3 1 1 Category of use/Durability and load on latchbolt/Door mass and closing force/ Suitability for use on fire /Smoke doors/Safety/Corrosion resistance, temperature and humidity/Security/Security - electrical function/Security - electrical manipulation
1.9	Test evidence used	VTT-S-00636-14, VTT-S-00746-18

Table 2 Test evidence used

Line	Feature	Required indication / Properties
2.1	HPS No./version	HPS240001-00
2.2	No. of test evidence	EXAP - EUFI29-19005329-T2
2.3	Product version	EL596FU
2.4	Main dimensions of the specific building hardware	Dimensions (height x width x depth): lock body 159 mm x 20.5 mm x 79 mm forend 225.5 mm x 22 mm x 3 mm (Technical drawings with dimensions attached). EL596FU represents the whole product family as it has biggest fire load, with largest main dimensions and largest cutout on fire door. EL596FL and EL596 are equal size, fire load is equal (EL596FL) / smaller (EL596) EL581, EL583, BL581, BL583 are smaller sizes. Dimensions: lock body 158 mm x 20 mm x 79 mm forend 225.5 mm x 21.8 mm x 3 mm LC102, LC190, LC193, LC194, LC197, LC290, LC291 are smaller sizes. Dimensions: lock body 152 mm x 19 mm x 77 mm forend 225 mm x 22 mm x 4 mm OP193, LE180, LE184 are smaller sizes. Dimensions:

		lock body 152 mm x 19 mm x 78mm forend 225 mm x 22 mm x 4 mm
2.5	Fixing, building hardware to element	-
2.6	Settings	-
2.7	Material of doorset and/or openable window	☒ Steel doorset ☐ Aluminum doorset ☐ Metal framed glazed doorset ☐ Timber ☐ Additional information
2.8	Type and material of the element frame	Type - Material ☒ Steel ☐ Aluminum ☐ Timber
2.9	Element frame thickness	118 mm
2.10	Mode of operation	☒ Hinged ☐ Pivoted ☐ Sliding ☒ Single leaf ☐ Double leaf
2.11	Mounting position building hardware	☐ Surface mounted ☒ Mortise mounted
2.12	Building hardware is mounted on	☒ Primary (single /active) leaf ☐ Secondary (inactive) leaf
2.13	Leaf mass	141 kg (including frames)
2.14	Leaf width	904 mm
2.15	Leaf height	2001 mm
2.16	Leaf thickness	114 mm
2.17	Thermal separation	-
2.18	Insulation layer	Stone wool slabs, Glasrock plaster boards
2.19	Intumescent layer	-
2.20	Seals or gaskets	☒ Yes. Around the door leaf (except bottom side of the door leaves) and around the inner side of the door frame there were parallel 30 mm x 2 mm intumescent seals. In both vertical frame parts there were 20 mm x 2 mm intumescent seals. ☐N/A

Table 3 Performance level(s) fire resistance

Line	Feature	Required indication / Properties
3.1	HPS No. and test evidence used	HPS240001-00 EUFI29-19002003-T1
3.2	Fire resistance test	☒ EN 1634-1 :2014 + A1:2018 ☐ EN 1634-2:2008
3.3	No. Test report	EUFI29-19002003-T1
3.4	Notified test body	0809 Eurofins Expert Services Oy
3.5	Direction of test exposure	☒ Towards the furnace ☒ Away the furnace
3.6	Precondition test	☒ 25 cycles ☐ 5000 cycles ☐ N/A
3.7	Classification	☒ EN 13501-2 classification including overrun time

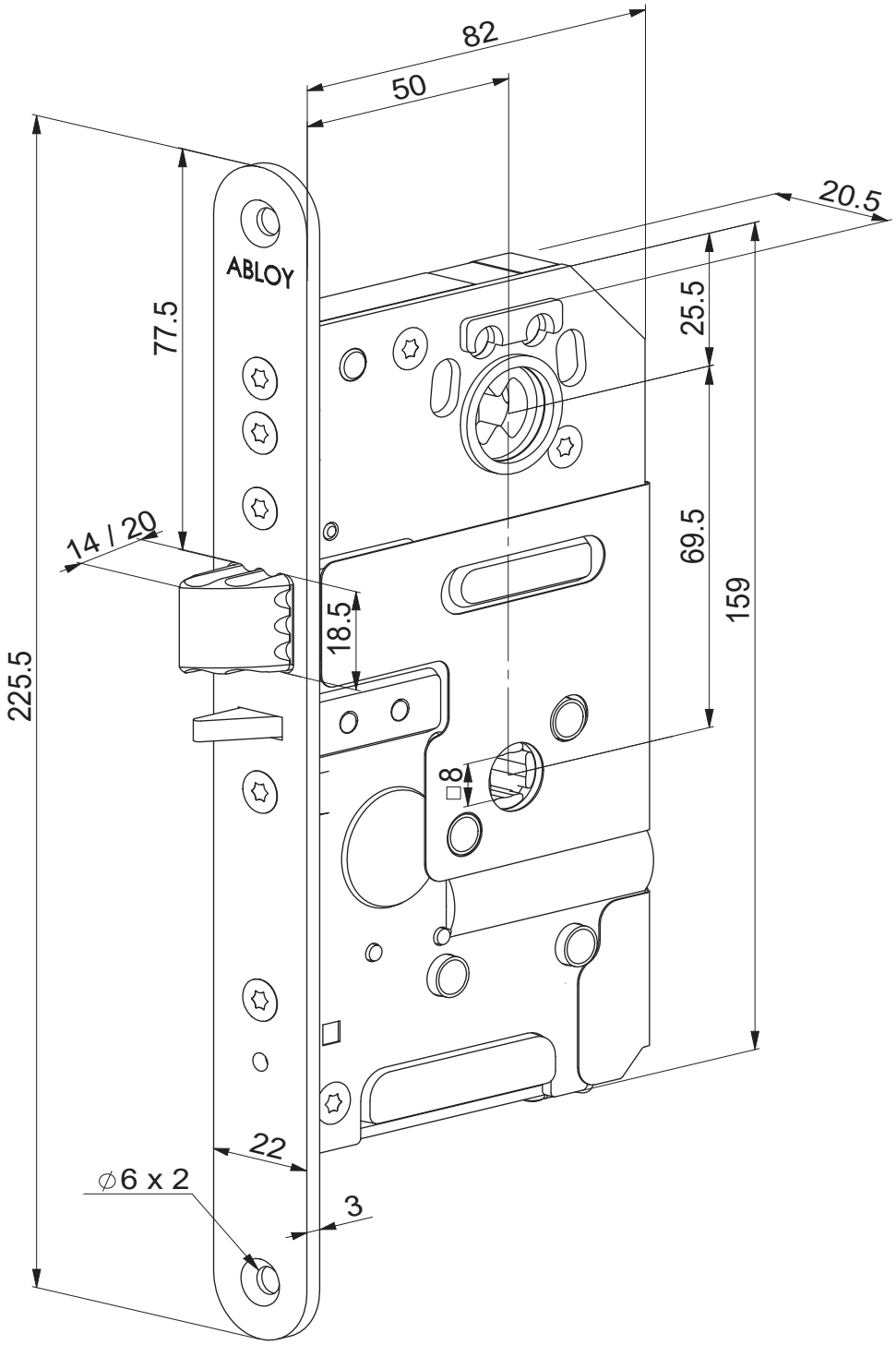
<table>
<tr><td></td><td></td><td colspan="3">E: 149 min
W: 149 min
I_1: 90 min
I_2: 149 min
☐ N/A</td></tr>
<tr><td rowspan="10">3.8</td><td rowspan="10">Observations during the test related to hardware</td><td>Time (min:s)</td><td>E/U</td><td>Observation E = exposed side, U = unexposed</td></tr>
<tr><td>0:00</td><td></td><td>Test was started.</td></tr>
<tr><td>1:00</td><td>U</td><td>Heavy smoking started from both door</td></tr>
<tr><td>32:50</td><td>U</td><td>Door B: the surface of the door was buckling</td></tr>
<tr><td>51:00</td><td>U</td><td>Door B: tc36 had detached from the frame.</td></tr>
<tr><td>112:30…113:00</td><td>U</td><td>Door B: Cotton wool pad test was performed on the gap between door leaf and frame next to the lock. Neither burning nor glowing.</td></tr>
<tr><td>116:00</td><td>U</td><td>Door A: rowing thermocouple was used at the place of detached tc36. Measured temperature was 182° C.</td></tr>
<tr><td>145:15…145:45</td><td></td><td>Door A: Cotton wool pad test was performed on the gap between door leaf and frame next to tc9 and tc14. Neither burning nor glowing</td></tr>
<tr><td>149:10</td><td>U</td><td>Test was terminated.</td></tr>
<tr><td colspan="3">Door A opened towards fire, Door B opened away fire</td></tr>
<tr><td>3.9</td><td>Applicable EXAP Standard</td><td colspan="3">☒ EN 15269-2 Part 2 Fire resistance of hinged and pivoted steel doorsets
☐ EN 15269_3 Part 3 Fire resistance of hinged and pivoted timber doorsets
☐ EN15269-5 2014 A1:2016 Part 5 Hinged and pivoted metal framed glazed doorsets and openable windows
☐ N/A</td></tr>
<tr><td>3.10</td><td>Data confirmed by</td><td colspan="3">Not confirmed by Notified body</td></tr>
</table>

Joensuu 2024-08-15
Signed for and on behalf of Abloy Oy

Minna Sallinen
VP Digital Access Solutions BU

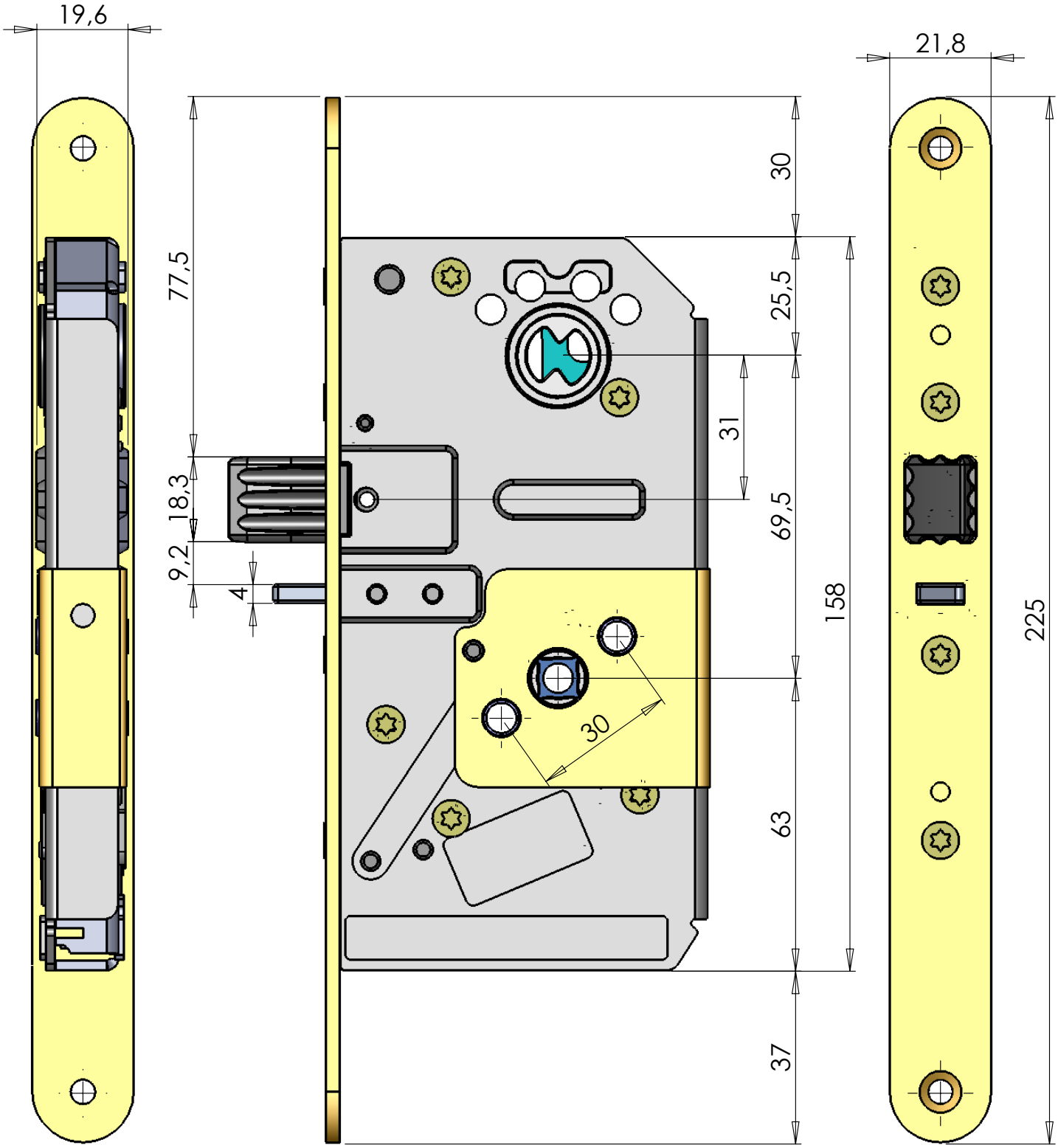
Joensuu 2024-08-15
Signed for and on behalf of Abloy Oy

Jari Kervinen
Director and Head of Innovation, Mechanical Core PU Nordic



EL596, EL596FU, EL596FL

ABLOY® EL581,-3



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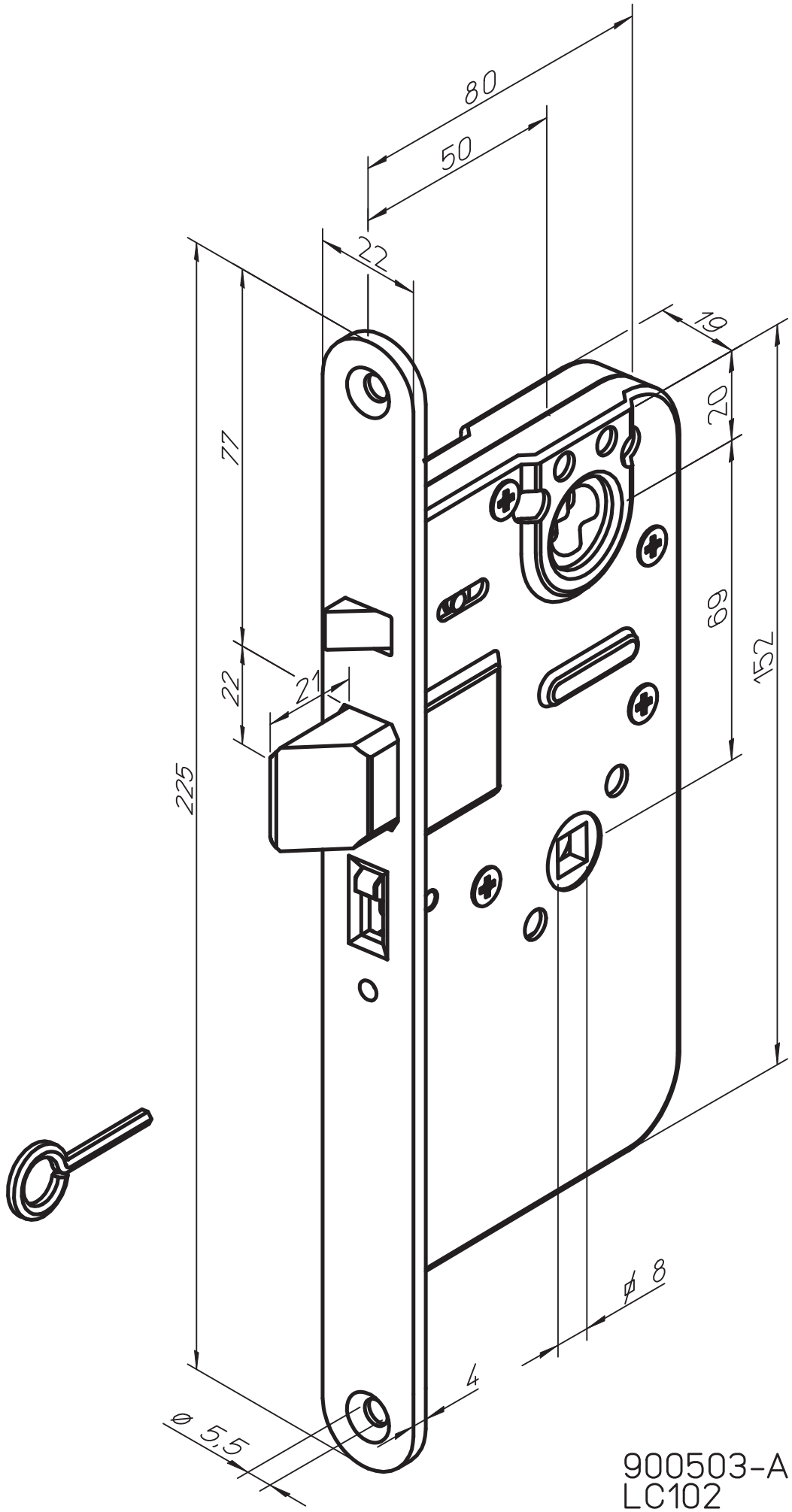
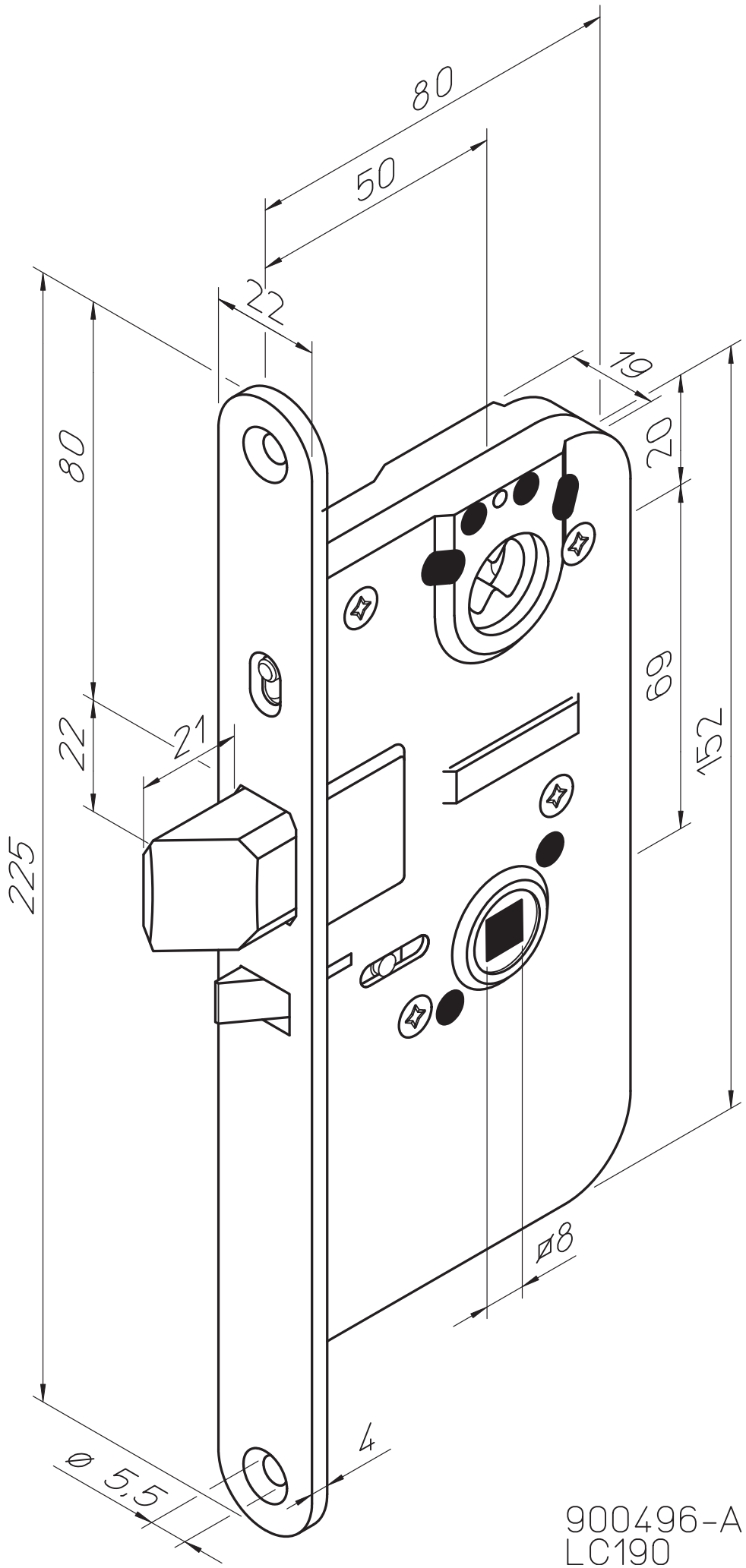


900503-A
LC102



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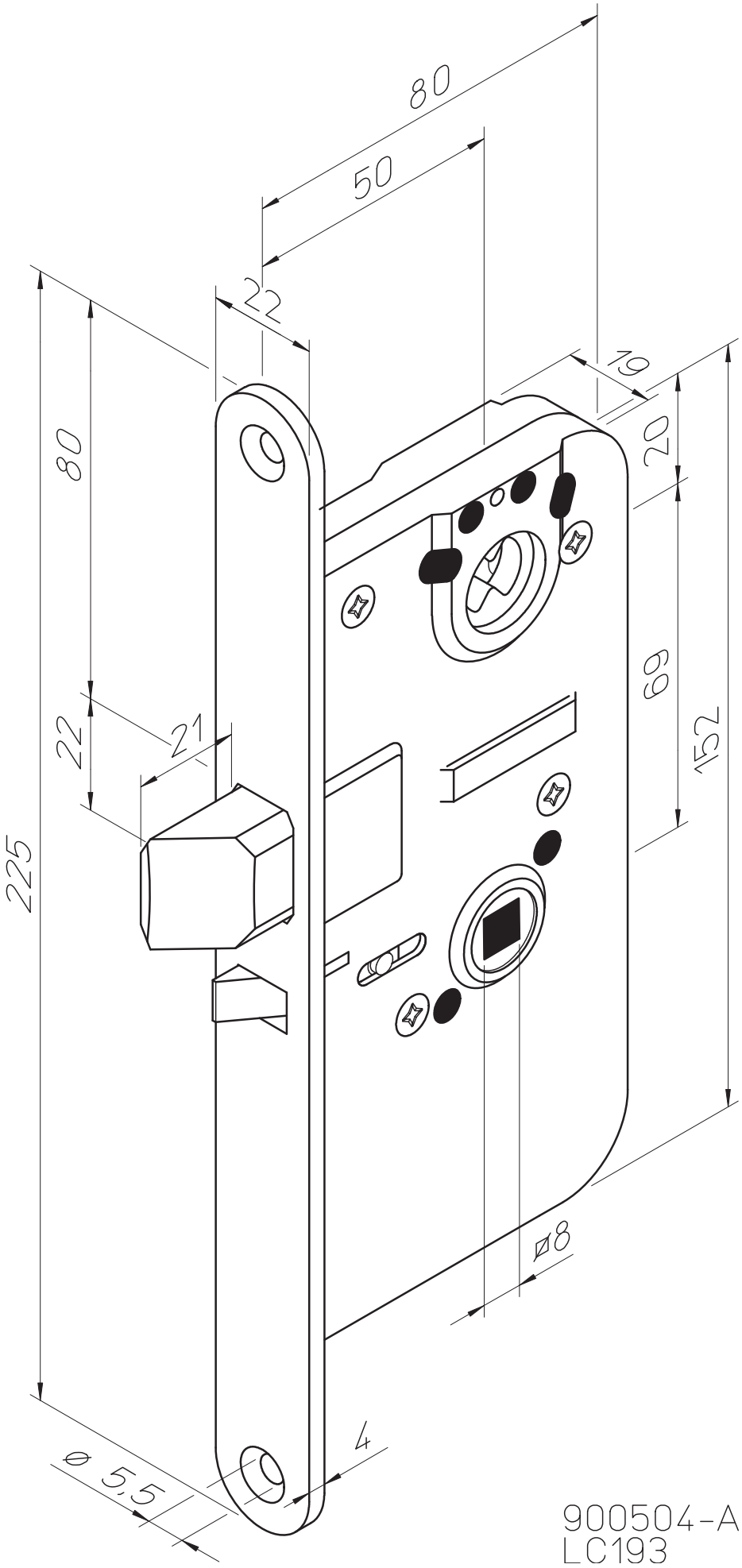
LC190



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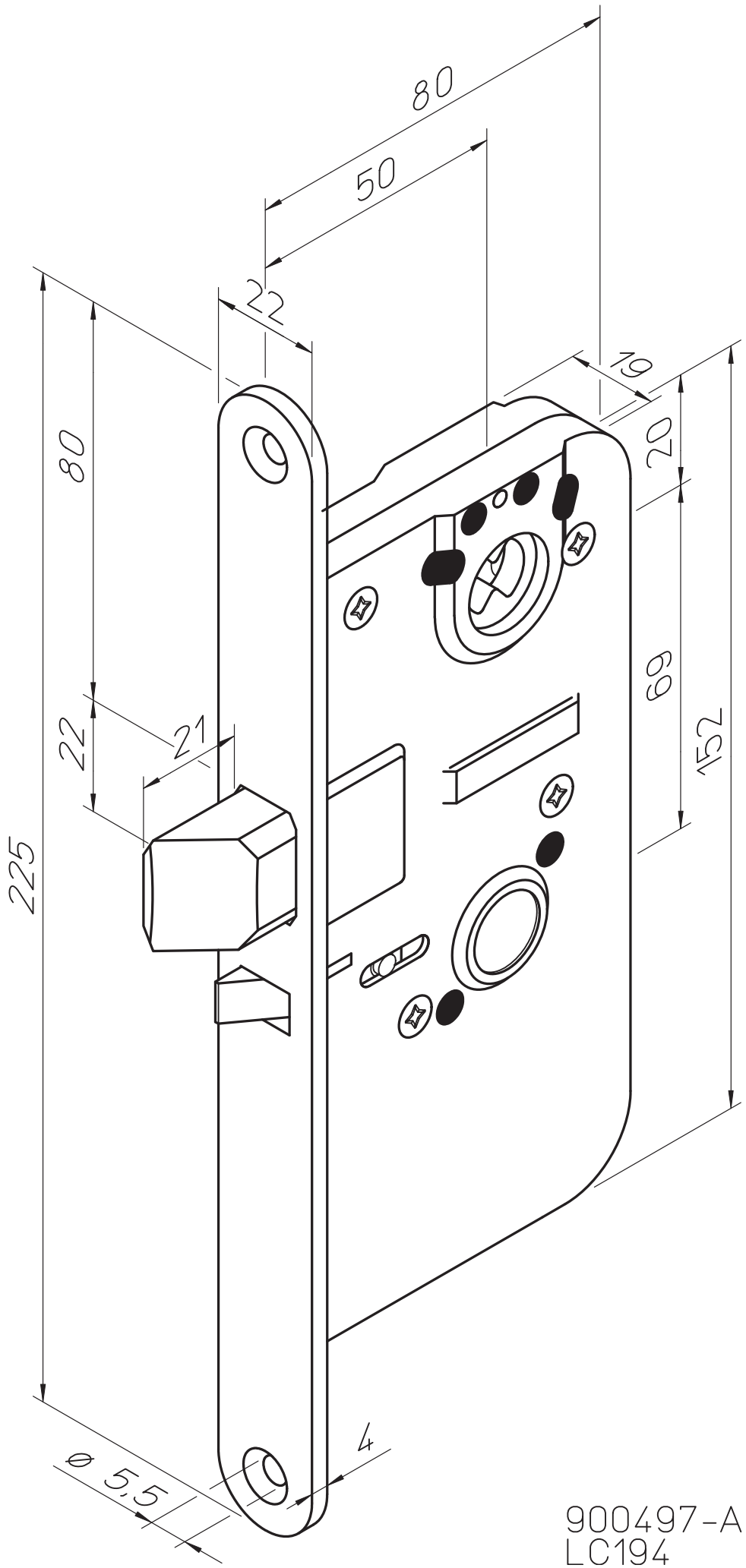
LC193



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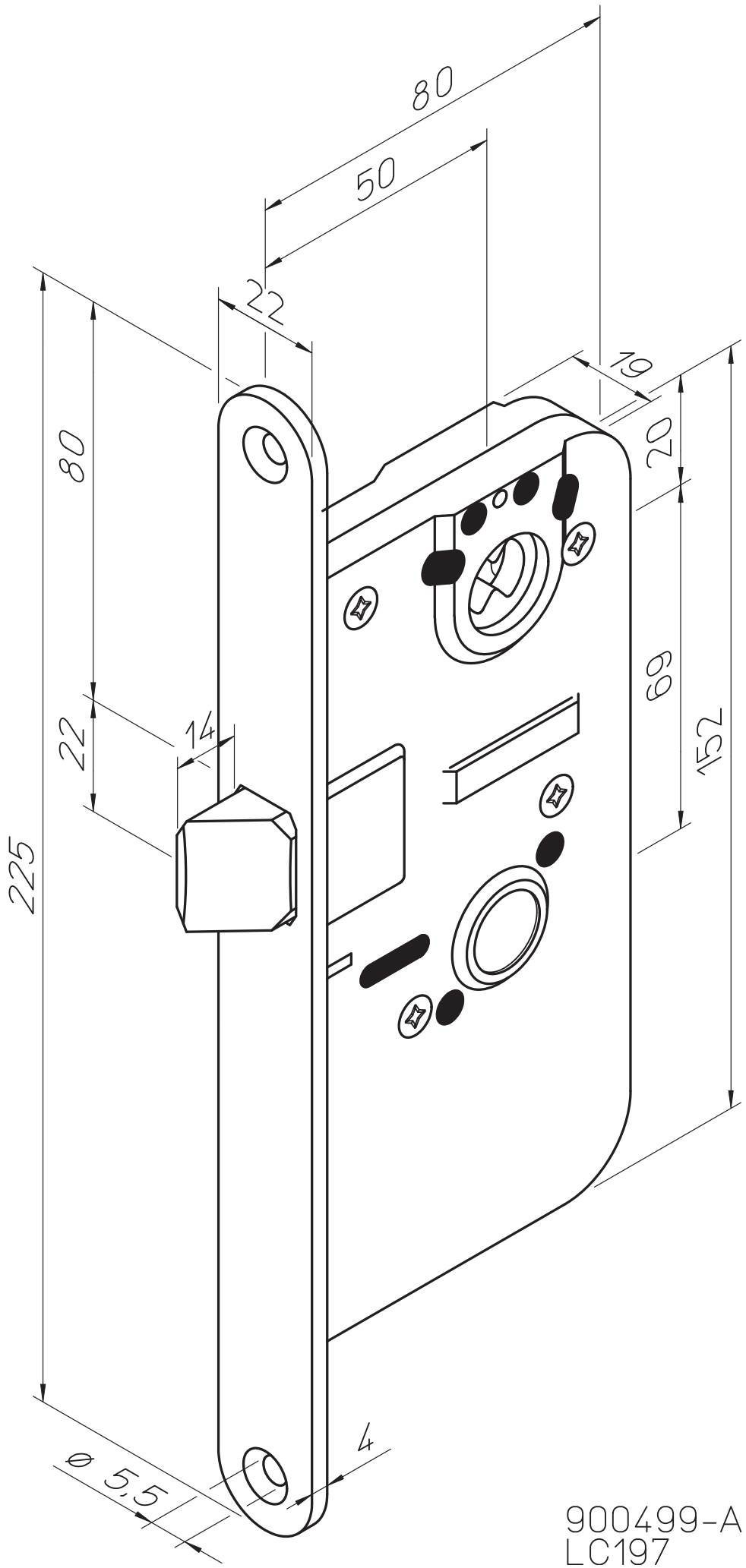
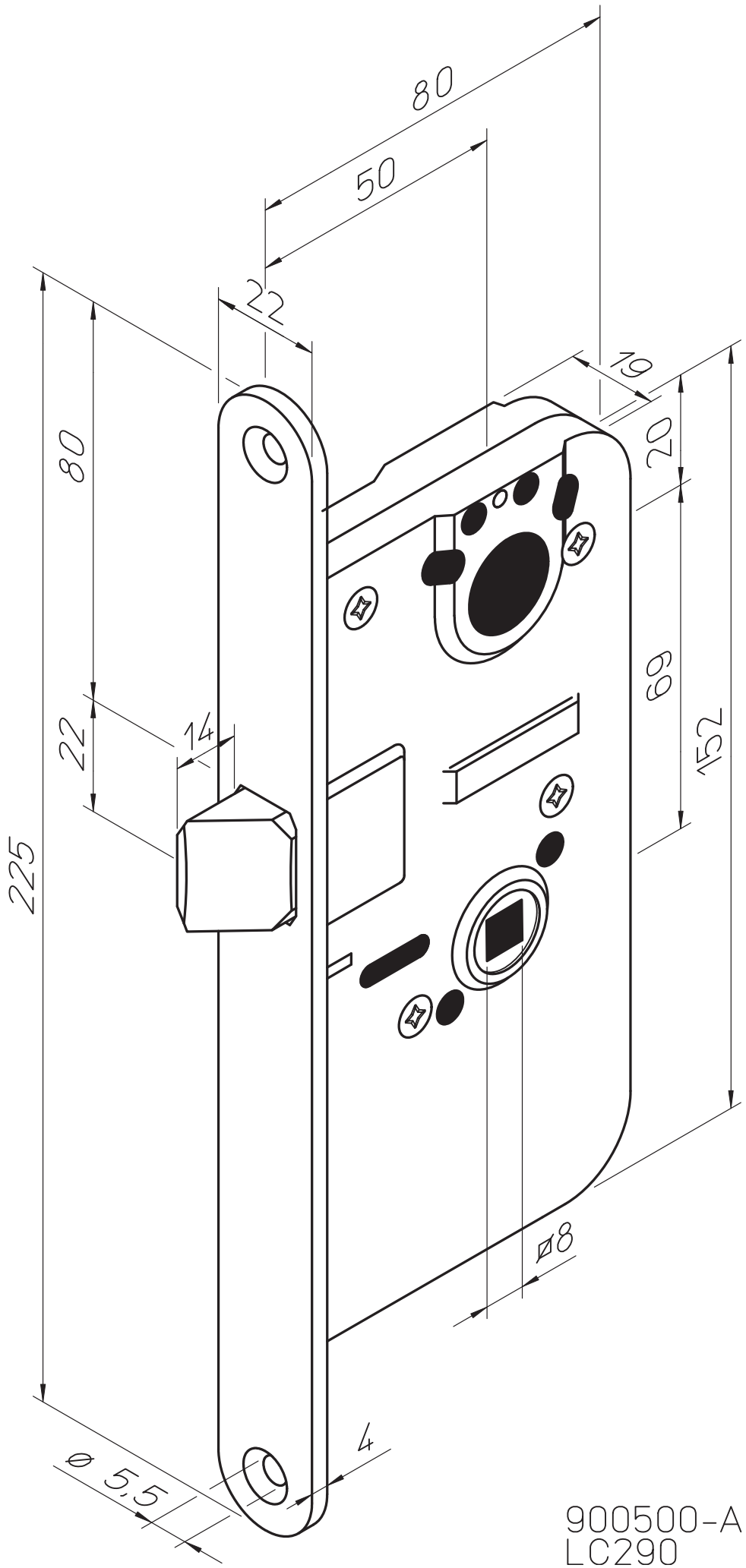
LC194



900499-A
LC197



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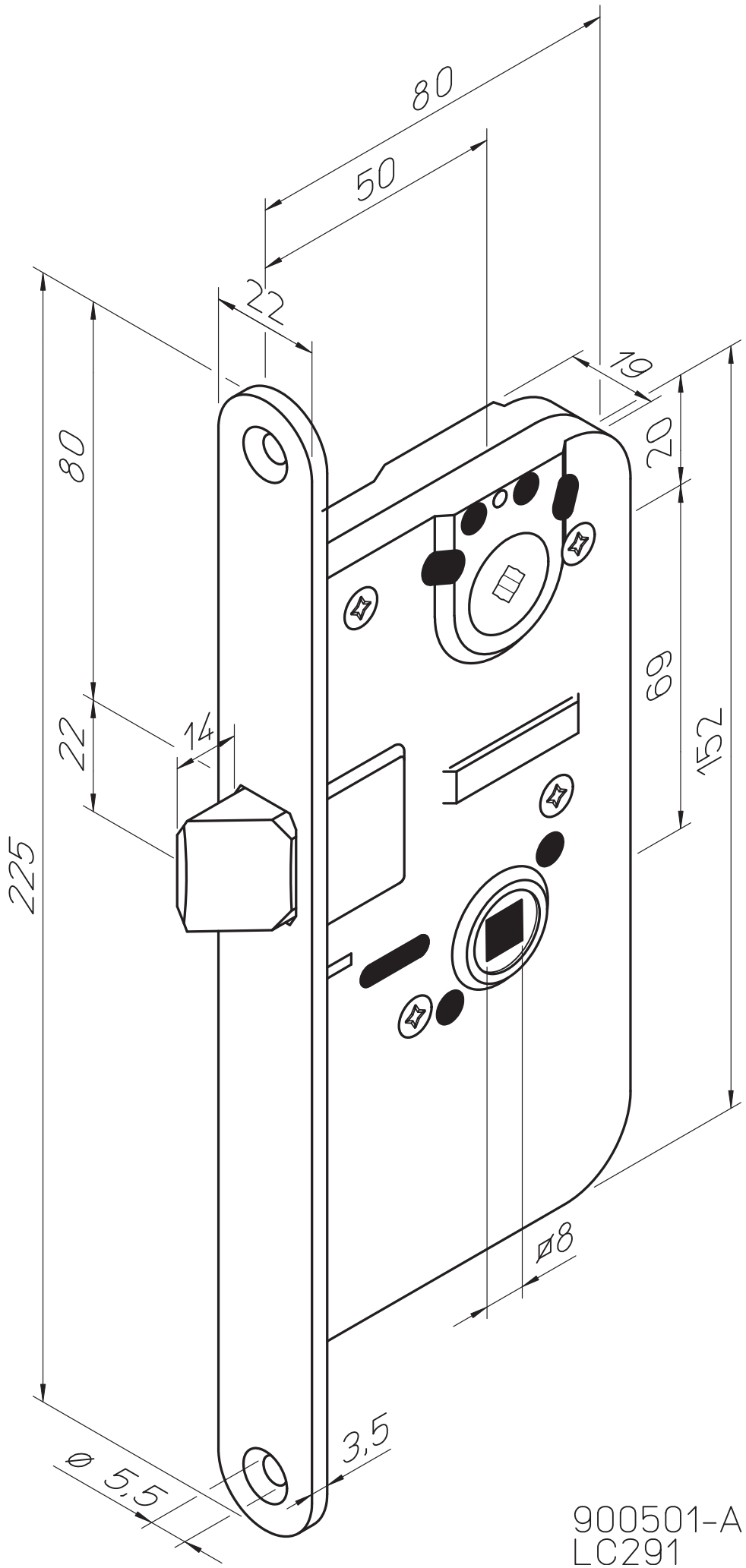
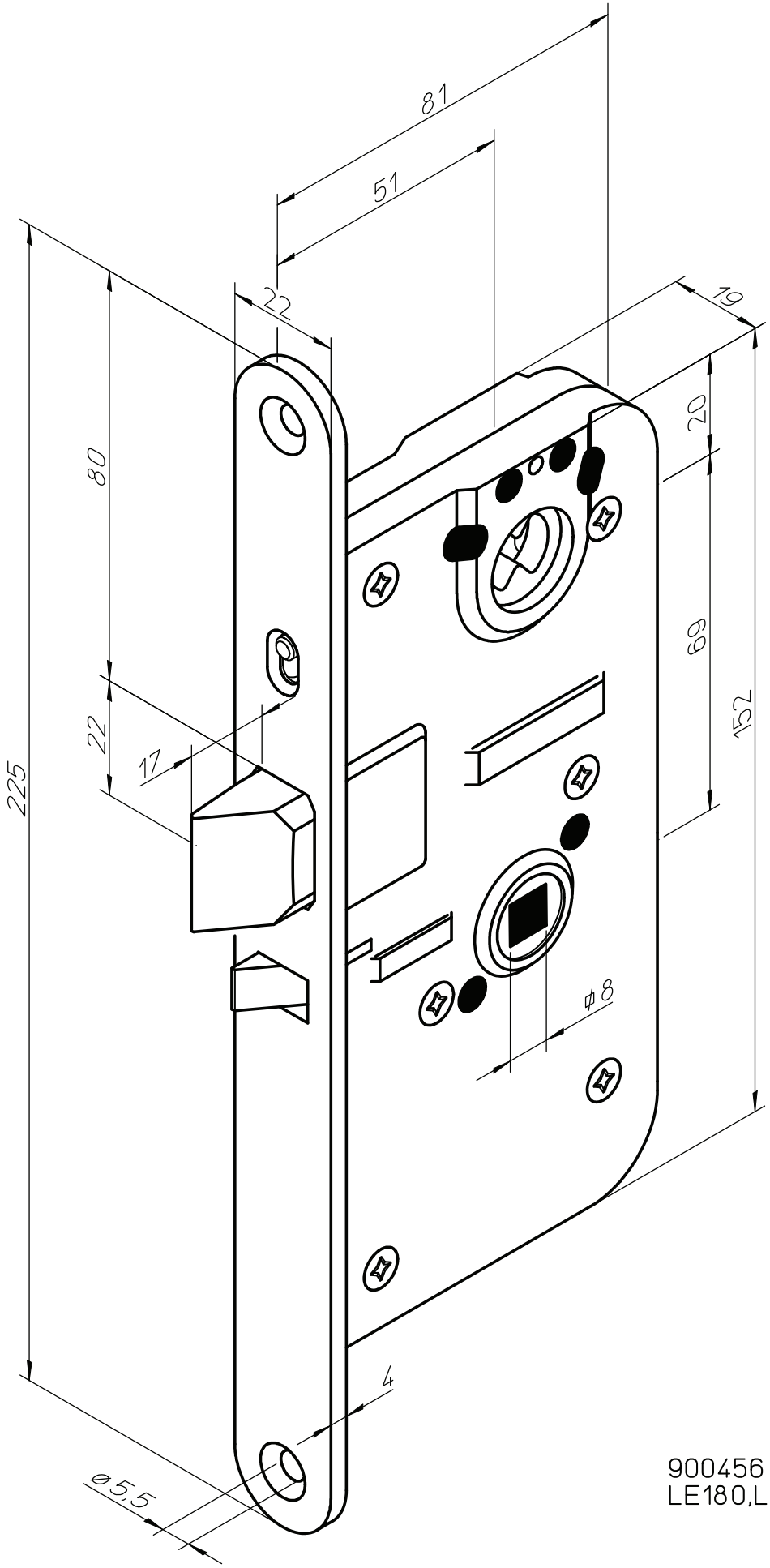
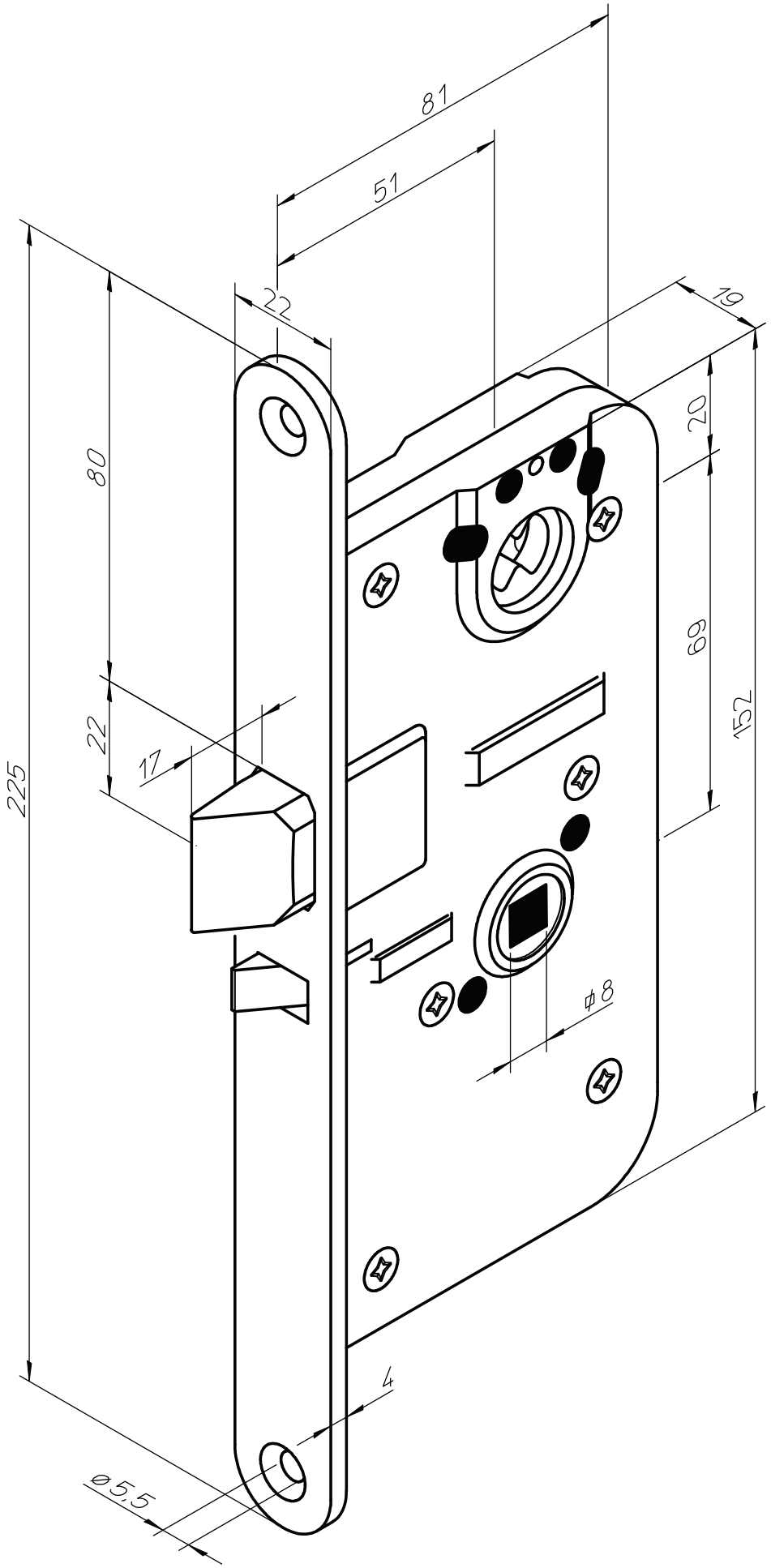
LC290



900501-A
LC291



900456
LE180,LE185



900457
LE184