Manual

Assa Abloy: Sargent Manufacturing and Corbin Russwin Factory Installation Instructions

Factory Installation Instructions for Reader assemblies with Bluetooth. Model: BLE9117K

1 Warning

Changes or modifications to this device not expressly approved by ASSA ABLOY could void the user's authority to operate the equipment.

FCC:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Industry Canada:

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.
Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

General Regulatory Compliance:

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Cet appareil contient des émetteurs/réceptuers exemptés de licence conformes aux RSS d'Innovation, Sciences et Développment économique Canada. Cet appareil est conforme à la section 15 de la réglementation de la FCC.
L'opération est sujette aux deux conditions suivantes: (1) ce dispositif peut ne pas causer l'interférence nocive, et (2) ce dispositif doit accepter n'importe quelle interférence reçue, y compris l'interférence qui peut causer l'opération peu désirée.

This equipment complies with FCC and IC radiation exposure limits set forth for general population (uncontrolled environment). This device must not be co-located or operating in conjunction with any other antenna or transmitter.
Cet équipement est conforme aux limites d'exposition aux radiations de la FCC et IC définies pour la population générale (environnement non contrôlé). Cet appareil ne doit pas être co-localisé ou fonctionner en conjonction avec une autre antenne ou un autre émetteur.

This product can expose you to lead which is known to the state of California to cause cancer and birth defects or other reproductive harm.
For more information go to: **www.P65warnings.ca.gov**.
Ce produit peut vous exposer au plomb qui, dans l'état de la Californie, est reconnu pour causer le cancer, des anomalies congénitales ou d'autres problèmes de reproduction.
Pour plus d'informations, visitez: **www.P65warnings.ca.gov**.

Any retrofit or other field modification to a fire rated opening can potentially impact the fire rating of the opening, and SARGENT Manufacturing makes no representations or warranties concerning what such impact may be in any specific situation. When retrofitting any portion of an existing fire rated opening, or specifying and installing a new fire-rated opening, please consult with a code specialist or local code official (Authority Having Jurisdiction) to ensure compliance with all applicable codes and ratings.

To avoid possible damage from electrostatic discharge (ESD), some basic precautions should be used when handling electronic components:

- Minimize build-up of static by touching and/or maintaining contact with unpainted metal surfaces such as door hinges, latches, and mounting plates especially when mounting electronic components such as readers and controllers onto the door.
- Leave components (reader and controller) protected in their respective anti-static bags until ready for installation
- Do not touch pins, leads or solder connections on the circuit boards

Assembly Drawings and Instructions:
52-4964TAB
Model BLE9117K is Sargent assembly P/N 52-4964 and Corbin Russwin assembly P/N 851P969

Factory Configuration Instructions:
Model BLE9117K shall be programmed at the manufacturing facility with firmware.

Field Configuration Instructions:

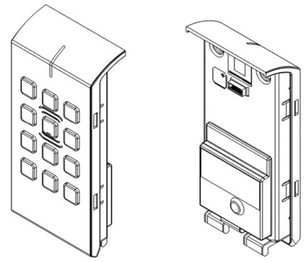
BLE9117K LF (125kHz) and HF (13.56MHz).
LF and HF may only be field configured by a certified technician with the Assa Abloy LCT (Lock Configuration Tool) for card credential type, and either ultra-low power mode or normal power mode.

BLE9117K Bluetooth.
At the customer site, encryption keys are loaded by a "Mobile Keys" certified technician using an HID configuration card. This installation can be performed on mobile enabled readers only. Once the "Mobile Keys" have been loaded interface with mobile devices can be achieved. The HID BLE Configuration application is currently available on Android OS and provides additional configuration that can be used to configure tap sensitivity and transmission power. Transmission power is restricted to a maximum of +4dBm. The HID BLE Configuration application can be used to upgrade the BLE devices firmware using the OTA technology. Field firmware upgrades can only be performed through and HID certified technician that are authorized to use a controlled administration card.

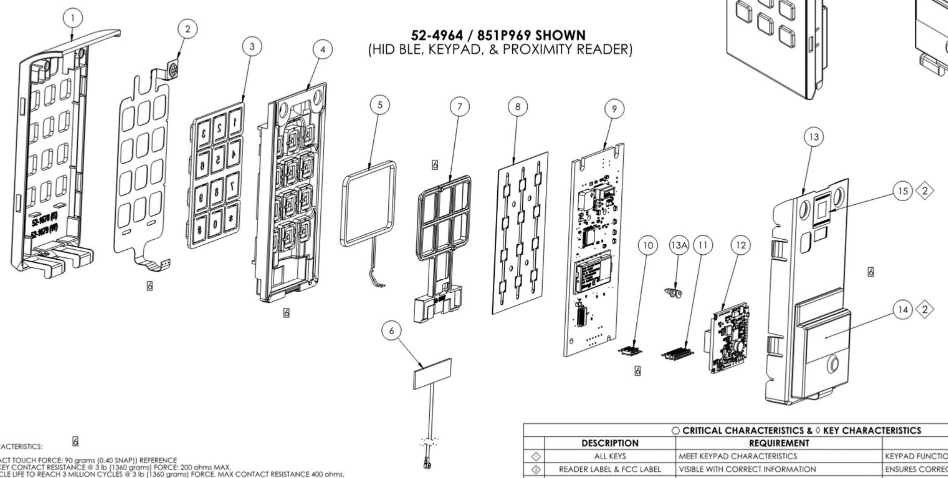
6 ITEM	DRAWING NO.	PART NO.	DESCRIPTION	HID BLE, KEYPAD, & PROXIMITY READER, BLACK QTY.	BLUE DIAMOND, KEYPAD, & PROXIMITY READER, BLACK QTY.
			SARGENT P/N	52-4964	52-4965
			CORBIN RUSSWIN P/N	851P969	851P979
			CATALOG STRINGS	BIKPS-B BIKP-B IKPS-B IKP-B IKPV-B BCKP-B CKP-B	IKPSU-B IKPU-B
1	52-1678TAB	52-1678	READER FRONT COVER - KEYPAD, BLACK	1	1
2	-	52-9114-0000-000	HIGH FREQUENCY ANTENNA AND ESD SHIELD ASSEMBLY	1	1
3	52-1682TAB	52-1682	READER KEYS - BLACK	1	1
4	-	52-1866	KEYPAD BOOT	1	1
5	-	52-1868	LOW FREQUENCY ANTENNA COIL	1	1
6	-	52-4954	HID BLE (BLUETOOTH LOW ENERGY) ANTENNA ASSEMBLY	1	-
7	-	52-1867	ANTENNA HOLDER	1	1
8	-	52-1687	SNAP DOME ARRAY	1	1
9	-	52-9117-0000-000	CREDENTIAL CONTROLLER PCB ASSEMBLY - PN HID BLUETOOTH	1	-
	-	52-9118-0000-000	CREDENTIAL CONTROLLER PCB ASSEMBLY - PN BLUE DIAMOND	-	1
10		52-1869	HIGH FREQUENCY ANTENNA STACK CONNECTOR	1	1
11	-	52-1692	SE32 BOARD STACK CONNECTOR		1
12	-	52-1753	HID SE32 READER MODULE	1	1
13	-	52-1690	READER BACK COVER	1	1
13A			SE32 PCB RETAINER (BREAK PART OFF READER COVER)	1	1
14	52-1830TAB	52-1830	PN FCC LABEL - HID	1	-
		52-1831	PN FCC LABEL - BLUEDIAMOND	-	1
15	-	52-1661	QR CODE LABEL	1	1
16	-	-	ANTI-STATIC BAG (NOT SHOWN)	1	1
17	52-1540TAB	52-1540	MODULE LABEL (NOT SHOWN)	1	1

REVISIONS

ZONE	REV.	DESCRIPTION	DATE	ENG
	3	REVISED PER ECO 720797: 1. ADDED ITEM 12 (ESD SHIELD) & ASSEMBLY STEP 7 (SHT 2) 2. REMOVED BOX (5-1541) FROM ASSEMBLY	9/14/2018	RL
C3, 2-C6	4	REVISED PER ECO 720250: 1. MOVED POSITION OF LABEL 12 2. ADDED ADHESIVE NOTE TO STEP 6 (SHEET 2)	1/24/2019	RL
B3, B7, C2, C6, C7, D5, H8, 2-B4, 2-B8, 2-D2, 2-D4, 2-F5, 2-G4	6	EN722057: **SH 1:** BOM: ADDED ITEM 10 "52-1869", RE-NUMBERED ITEM'S 1 THRU 17, EXPLODED VIEW: ITEM'S 2, 5, & 13 CHANGED PICTORIALLY, ADDED ITEM 10 TO VIEW, NOTES: DLTD NOTE 1.1, "MUST CONFORM TO ASSA ABLOY KEYPAD ASSY SPEC. A8141". **SH 2:** VIEWS FOR STEP 2, 3, 4, 7, 8 & 9 CHANGED PICTORIALLY, ADDED VIEW FOR STEP 11. ADD PROTECTIVE FILM FOR KEYS	6/21/2019	EWP



52-4964 / 851P969 SHOWN
(HID BLE, KEYPAD, & PROXIMITY READER)



NOTES:

1. KEYPAD CHARACTERISTICS: (◇1)
   1. (CONTACT TOUCH FORCE: 90 grams (0.40 SNAP)) REFERENCE
   2. INITIAL KEY CONTACT RESISTANCE @ 3 lb (1360 grams) FORCE: 200 ohms MAX.
   3. KEY CYCLE LIFE TO REACH 3 MILLION CYCLES @ 3 lb (1360 grams) FORCE, MAX CONTACT RESISTANCE 400 ohms.
2. FOR SUGGESTED MODULE ASSEMBLY REFERENCE STEPS & NOTES, REFER TO SHEET 2.
3. PLACE FULLY ASSEMBLED READER IN ANTI-STATIC BAG (15) .
4. APPLY MODULE LABEL (16) TO BAG (15) . SEE LABEL DRAWING FOR APPROPRIATE LABEL INFORMATION. (◇3)
5. ASSEMBLY TO BE RoHS COMPLIANT.
6. ALL DRAWING REQUIREMENTS SHALL BE AUDITED FOR COMPLIANCE. ITEMS IDENTIFIED AS KEY OR CRITICAL CHARACTERISTICS SHALL REQUIRE ADDITIONAL INSPECTION UNDER AN ONGOING LOT CONTROL PLAN.

⬡ CRITICAL CHARACTERISTICS & ◊ KEY CHARACTERISTICS

	DESCRIPTION	REQUIREMENT	REASON
◇1	ALL KEYS	MEET KEYPAD CHARACTERISTICS	KEYPAD FUNCTIONALITY & DURABILITY
◇2	READER LABEL & FCC LABEL	VISIBLE WITH CORRECT INFORMATION	ENSURES CORRECT WARRANTY INFORMATION
◇3	MODULE LABEL	APPLIED ON BAG WITH CORRECT INFORMATION	PRODUCT INFORMATION NEEDED FROM LABEL

UNLESS OTHERWISE SPECIFIED TOLERANCES
X.X ± .03
X.XX ± .01
X.XXX ± .005
ANGLES ± 0°30'
FRACTIONS ± 1/64
SURFACE FINISH 63

DRAWING COMPLIES WITH ASME Y14.5M - 1994
INCH / MM
THIRD ANGLE PROJECTION

ASSA ABLOY
Sargent Manufacturing Company
New Haven, CT

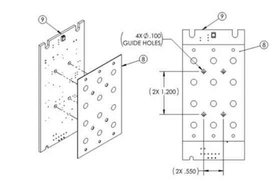
MATERIAL: SEE BOM		IN KEYPAD READER MODULE ASSEMBLY MORTISE LOCK	
HEAT TREATMENT		DATE CREATED: 04/26/2018	DRAWN BY: RL / DESIGNED BY: RL
SURFACE/FINISH		DOCUMENT ID: D000913210-000	SCALE: 1:1 / SIZE: C
MASS: lb / VOLUME: in³	SURFACE AREA: 152.997000 in²	DRAWING NUMBER (ALT ID): **52-4964TAB**	REV: 6

CONFIGURATION Default
LEGACY ID

Approved 2019-07-30

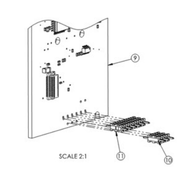
ZONE	REV.	DESCRIPTION	DATE	ENG
-	-	See Sheet1	-	-

REVISIONS



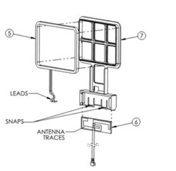
STEP 1:

- REMOVE LINER FROM SNAP DOME ARRAY (8), AND ADHERE TO SPECIFIED CREDENTIAL CONTROLLER PCBA (9), USING GUIDE HOLES SHOWN AS LOCATION ALIGNMENT.
- FIXTURE RECOMMENDED FOR THIS STEP.



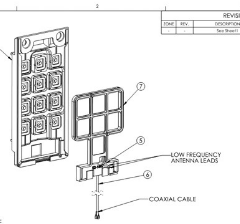
STEP 2:

- SOLDER HIGH FREQUENCY ANTENNA STACK CONNECTOR (10) & SE32 BOARD STACK CONNECTOR (11) TO SPECIFIED CREDENTIAL CONTROLLER PCBA (9) AS SHOWN.
- <PARA >FOLLOW IPC-A-610 LATEST REVISION FOR ACCEPTANCE.



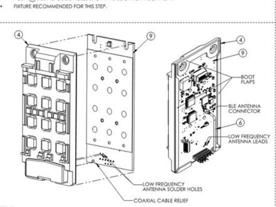
STEP 3:

- SLIDE LOW FREQUENCY ANTENNA (5) ONTO PLASTIC HOLDER (7), WITH LEADS DIRECTED AS SHOWN.
- **FOR HID BLE PROXIMITY READER VERSION (52-4964) ONLY:** SLIDE BLE ANTENNA (6) INTO PLASTIC HOLDER (7), AS SHOWN, UNTIL IT SNAPS INTO POSITION.
- MAKE SURE THE SIDE OF THE BLE ANTENNA (6) WITH THE VISIBLE ANTENNA TRACES FACES OUT, AS SHOWN.
  <PARA >**FOR BLUE DIAMOND PROXIMITY READER (52-4965):** SKIP THESE SUB STEPS.



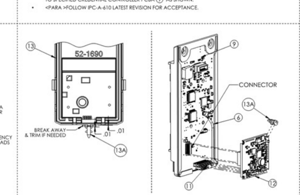
STEP 4:

- SLIDE ASSEMBLY FROM STEP 3 INTO POCKET OF KEYPAD BOOT (4), AS SHOWN.
- MAKE SURE LEADS FROM LOW FREQUENCY ANTENNA (5) EXIT THROUGH HOLE IN PLASTIC HOLDER (7), AS SHOWN.
- IF USED, MAKE SURE COAXIAL CABLE FROM THE BLE ANTENNA (6) EXITS UNDER THE PLASTIC HOLDER (7), AND IS FREE TO MOVE. (WIRES WILL BE ATTACHED IN THE FOLLOWING STEP)



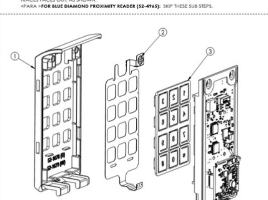
STEP 5:

- SOLDER LEADS OF LOW FREQUENCY ANTENNA TO SPECIFIED CREDENTIAL CONTROLLER PCBA (9) IN LOCATIONS SHOWN.
- ASSEMBLE C.C. PCBA (9) INTO KEYPAD BOOT (4) AS SHOWN.
- **FOR HID BLE READER VERSION ONLY (52-4964):** ROUTE BLE ANTENNA (5) COAXIAL CABLE THROUGH DESIGNATED SLOT IN C.C. PCBA (9), THEN PLUG BLE ANTENNA COAXIAL CABLE CONNECTOR INTO READER/KEYPAD PCB AS SHOWN.
- MAKE SURE ALL WIRES ARE NOT BENT OR PINCHED DURING ASSEMBLY.
- 4X BOOT FLAPS WILL OVERHANG PCB AROUND THE OUTER EDGES OF THE PCBA. MAKE SURE PCB IS COMPLETELY SEATED INTO BOOT, AND THAT NO FLAPS ARE PINCHED.



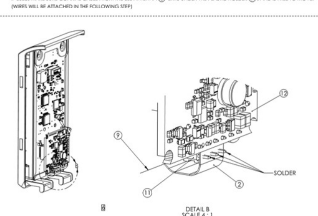
STEP 6:

- REMOVE BOTTOM PORTION (13A) OFF INSIDE READER COVER (13), AS SHOWN.
- SLIDE THIS BOTTOM PART (13A) INTO UPPER RIGHT SLOT OF SE32 READER MODULE (12), AS SHOWN.
  - APPLY ADHESIVE AS REQUIRED, TO RETAIN POST (13A) IN POSITION.
- PLUG SE32 READER MODULE (12) INTO CONNECTOR OF SPECIFIED CREDENTIAL CONTROLLER PCBA (9).
- SOLDER SE32 READER MODULE (12) TO SE32A CONNECTOR (9).
- FOLLOW IPC-A-610 LATEST REVISION FOR ACCEPTANCE.
- IF USED, MAKE SURE COAXIAL CABLE OF BLE ANTENNA (6) IS POSITIONED TO THE RIGHT OF (13A), AS SHOWN.



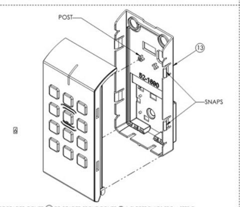
STEP 7:

- LAY HIGH FREQUENCY ANTENNA (2) INTO READER FRONT COVER (1) FOLLOWED BY READER KEYS (3), FOLLOWED BY ELECTRONICS. FROM STEP 6.



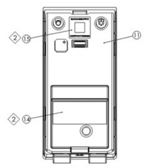
STEP 8:

- ROUTE HIGH FREQUENCY ANTENNA ITEM (2) ONTO HIGH FREQUENCY ANTENNA STACK CONNECTOR ITEM (11)
- SOLDER HIGH FREQUENCY ANTENNA ITEM (2) ONTO HIGH FREQUENCY ANTENNA STACK CONNECTOR ITEM (11)
- FOLLOW IPC-A-610 LATEST REVISION FOR ACCEPTANCE.

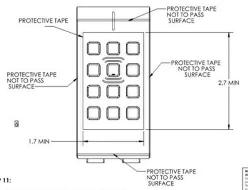


STEP 9:

- SNAP INSIDE READER COVER (13) TO READER FRONT COVER (1) & ELECTRONICS FROM STEP 7.
- ALIGN POST FEATURE OF INSIDE READER COVER (13) WITH GUIDE HOLE IN SPECIFIED CREDENTIAL CONTROLLER PCBA (9) DESCRIBED IN STEP 1.
  AVOID PINCHING HF ANTENNA ITEM (2)



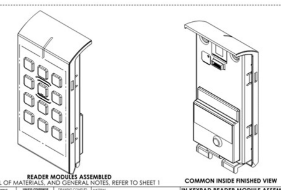
STEP 10:
APPLY LABELS (14) AND (15) TO BACK OF READER



STEP 11:

- APPLY PROTECTIVE TAPE TO READER OVER ALL KEYS

SURFACE PROTECTIVE TAPE SHALL BE ANTI-STATIC, TRANSPARENT, LOW TACK, ADHESIVE WITH CLEAN REMOVAL, AND RATED FOR PLASTIC F ELECTRONIC DEVICES



READER MODULES ASSEMBLED
FOR BILL OF MATERIALS, AND GENERAL NOTES, REFER TO SHEET 1

COMMON INSIDE FINISHED VIEW

IN KEYPAD READER MODULE ASSEMBLY MORTISE LOCK

MATERIAL	SEE BOM
DATE CREATED	04/26/2018
DRAWN BY	RL
DESIGNED BY	RL
DOCUMENT ID	D000913210-000
SCALE	1:1
SIZE	D
DRAWING NUMBER (ALT ID)	52-4964TAB
REV	6

ASSA ABLOY
Sargent Manufacturing Company
New Haven, CT

CONFIGURATION _Step 1

SHEET 2 OF 2

Approved 2019-07-30