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### Primary control program

Release\_LP\_AINLX\_v2.61.zip:

22 c2 dc 69 6b 10 74 80 5e 8e d4 e3 d8 af 77 cf 7a 4d 58 dd 48 4a ad 33 59 de e6 ee 10 f6 c5 e4 a0  
f1 37 a5 c0 7d 9d 8e c2 1c d1 b7 71 17 c6 1e 0f b8 e7 e2 1e a6 ee 3e 5e b5 11 e7 c2 79 91 d5

Release\_LP\_AINLX\_v2.62.0.0.zip:

b1 4a 2f 2e c4 10 3d 9d 3c d7 72 94 78 88 02 bd 7c 66 84 62 87 59 e4 0a 49 da 86 03 60 7c ee d4  
19 ce 22 cf 28 87 b3 12 73 68 35 23 5a f3 82 07 1c 03 69 60 62 da 93 be 4d 06 2f 11 c1 79 38 b6

Release\_LP\_AINLX\_v2.70.0.0.zip:

12 f2 ce 83 b1 1f e2 dc e9 4e 4e 76 90 65 49 63 bd 1f fa 1a ea 2a 26 72 f4 ca 82 23 4c 59 ac a9 a4  
33 db d4 cb e4 92 d9 d7 59 82 1f d1 b9 c6 bd 34 36 ab 02 94 8e 48 6a 88 10 f4 cd f7 eb 20 ba

Release\_LP\_AINLX\_v2.71.0.0.zip

74 34 1f d6 f8 fb b5 dc b4 37 51 b7 0d 5a 48 d9 16 2b bd 31 55 83 23 47 f1 08 ef b0 f4 e0 fb 79 17  
de 90 69 7e 30 1f 07 e1 a2 56 b9 97 95 e6 e8 f3 04 0f 56 5e 44 3b 3b 1d 7a a4 b5 9e 98 a2 de

Release\_LP\_AINLX\_v2.72.0.0.zip

55 0b 4a 98 b9 e6 a0 d5 25 fe 54 bd 39 d7 e4 d1 fc 3a 35 24 b8 e7 fc 79 db a3 3a 8f 74 e9 8f d5 43  
24 22 06 80 a7 17 bf 7d f5 32 f2 02 0e a6 02 12 b4 c7 0c 3b 04 9a 1e 2f 31 24 8d 70 14 fc 0e

Release\_LP\_AINLX\_v2.80.zip

99 fa b8 15 3f 36 21 d1 63 1e 4f aa 82 b9 c3 a4 4b d1 d1 66 83 e4 7c 38 b8 4a fe 4f b5 97 12 57 90  
b9 4d d2 50 a8 cc 88 e8 06 f2 4a 56 67 e7 2a 1e 91 9f cb 2e 8c e4 bd 5d 5b 0f 1e 74 69 e1 23

Release\_LP\_AINLX\_v2.82.zip

3b fe 8b 53 9f de d6 ad 3e ed 79 2a 5a 01 34 95 2a 1c df 6f 3e 31 2d 36 65 d6 eb 2a 7a b1 8d bd 65  
84 04 59 27 a1 85 94 55 07 51 b3 e3 ac a4 31 c2 c6 17 c7 38 e0 4c fd 2b 11 b8 ef f3 95 1a dc

Release\_LP\_AINLX\_v2.90.0.0.zip

2d eb bc 0b eb e0 b9 88 42 a5 7b 31 59 6d 01 77 ba 7c 9f 8d 03 a9 86 ef ca 73 d8 fc 41 f0 f8 11 2a  
aa 54 ba 4d b2 47 34 d7 52 fc 6f 1f e4 24 23 53 9e ef 6b a3 d3 11 d3 8e 1c 12 4b 51 0c e9 d0

Release\_LP\_AINLX\_v3.10.0.0.zip

a8 79 25 b5 f9 74 9f 33 98 3f 31 93 6a 4a 04 d8 a6 a4 64 9f 2e ce f3 b6 43 9c d9 3b 16 d1 9b 8b 93  
62 22 52 fb 7a 54 70 c0 6e f4 55 03 1a 40 70 3e 2e 51 0a 19 e2 6f 3a 80 98 76 7f 93 09 68 c4

Release\_LP\_AINLX\_v3.11.0.0.zip

ab 53 da 1c c2 e4 6d d2 34 49 67 3b ad a8 2c fc fe 61 ed 36 bf eb 68 e5 6f 69 66 df f2 ea 70 a8 89  
ee 20 74 9b e9 41 65 f4 8f d2 5c a3 cd 89 ca 7d ce 4d 4d 13 c9 87 83 5c a7 75 ec f5 a7 b3 ad

### Test bench control program



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Release\_LP\_ATBLX\_v2.92.0.0.zip

bc 41 92 85 ef f7 77 18 63 2d 6d cc b8 59 95 12 c5 75 c4 78 e9 30 64 cc 8c 31 d8 8e ad 94 0e ea 99  
ca ac 7d d0 81 9a 59 e6 0c 7a 92 c9 f9 4f 7d e2 d8 28 05 cd cd 40 37 50 17 ce 6c 0a 1d c4 87

Release\_LP\_ATBLX\_v2.93.0.0.zip

ab 64 b0 e5 d1 30 7b 4b f3 6f 2d 6c 99 73 08 16 0f 2e 86 0c b2 05 29 bf 3f 12 da 45 a9 50 21 52 6c  
ed 5b 80 ee 6f 55 f9 a7 2f b7 be 68 15 57 0e 08 42 0a a9 31 c6 14 78 51 93 54 b1 6b da 09 35

### IGBT supply control program

AISLX v2.60.0.0 Loading package.zip:

72 f2 f1 b7 16 90 2a 6d ac 6e fa 83 5a 80 5a 31 94 3c 23 b9 e9 f5 0b 0d 18 d9 ed 07 b8 41 e3 62 bb  
46 f0 71 3e f1 f7 73 95 8b ad 22 b8 f9 6d c4 b8 4d e3 73 d4 3a 03 60 ce 86 db fe ca f3 ca 96

AISLX v2.71.0.0 Loading package.zip:

6e 98 cc cd 2f 62 1a a3 2b 72 52 17 08 59 55 24 c3 1b 51 3d c1 8e 98 2c 51 2d f4 01 82 7a 61 39 2b  
6a b1 da b2 62 2f 08 a5 36 55 7c 74 17 c2 b7 70 10 7f bb 94 7e b5 b5 bd 31 7f f1 a4 73 55 84

AISLX v2.72.0.0 Loading package.zip:

97 5b 41 2e b7 31 91 dd 2f b1 85 f1 74 45 10 90 47 d5 91 73 ad 59 b8 2e e5 b7 1a 0f 4e 87 09 5f e7  
27 15 fa 2b 46 1f 6f c2 89 80 d0 2d 4b 67 cb c0 b3 4d f0 1d 38 06 31 cf c4 55 e6 ed a4 a2 db

Release\_LP\_AISLX\_v2.74.0.0.zip

dc 49 2d 93 6a f4 04 fd 87 6c 72 1c d6 a9 66 ec b1 cc 1f fd 1e 09 95 6f 28 a8 09 32 ea 6a 28 20 77  
5a 3d 12 cc e8 8f 87 d6 7c bf 41 3a 9c f8 21 35 0a 5e d7 2f 41 90 f7 98 96 ae 5d 85 74 27 51

Release\_LP\_AISLX\_v3.00.0.0.zip

e8 c7 0d 2b 7a 18 9c 98 57 ec 6a a8 b2 3b 6d 9c 02 d0 f9 e0 5a 10 22 76 7a 6c 0d 86 e0 9c d7 1f 10  
d8 68 81 28 f6 4d 8f a4 b0 da d0 79 da d9 a3 87 3a eb ee 09 a4 c1 77 70 71 e9 08 51 58 63 73

Release\_LP\_AISLX\_v3.01.0.0.zip

b8 97 e7 22 fd b6 d7 0a b6 cd 91 3f 4f bb 6e 3d 88 43 ed a2 e7 40 e9 c6 4c f4 45 da 3f 6d 15 47 d3  
8a 1d df f0 24 ea 6e ad 0d 22 99 4f a3 81 0e 1c 90 36 b1 3c e5 9f 2c d9 d7 a8 d5 2e 0e 3b 54

Release\_LP\_AISLX\_v3.02.0.0.zip

e57ad2f16cb2ae0b38b69d55381eb3c025148cedbe3194affa6839175d5260d77f4b164521b64afd4  
d7da86c9ffaa3990bf18a7c127395ae28491336b0a1a741

Release\_LP\_AISLX\_v3.21.0.0.zip

10bfbfb832ead98f545d1e94718f0b0c713a6ca2510d6f9fe72fb7e109a97e2efba37a47eb702f90779  
e424ecb0a593dfffd2908101ac8d3b1842a9410e349039



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### IGBT supply control program (2Q)

ALHLX v2.60.0.0 Loading package.zip:

84 36 e4 69 65 47 36 78 f3 c5 89 a9 53 0e 1a b8 a6 89 b4 d5 a8 65 80 db fe b9 f6 39 15 09 b0 cb 1b  
86 c4 3e 66 6b 4d a8 89 23 a7 af 72 e8 a4 8a f1 5d ed 1a 9d 4a ca e8 11 ea c2 17 b2 c0 dc 9e

ALHLX v2.61.0.0 Loading package.zip:

ba af 22 52 7d 73 54 11 2f d2 2b c9 9e 6c 45 12 5a d7 d8 b3 60 43 46 6c af a0 83 95 37 15 f0 fc 86  
f5 29 41 91 69 f5 0d d6 59 40 83 53 96 ca ba 70 bc 32 9c 8e 5b 5e d3 e7 35 2e 49 c2 c0 66 f8

ALHLX v2.71.0.0 Loading package.zip:

50 ad e6 6b 01 ac 7d 9d 52 31 2b 1c 96 ba 68 a9 e5 fc 37 d9 2e e5 e0 d2 c7 35 8e 36 3f 66 b6 c7 91  
4e 05 e5 9c c4 d3 de 98 73 f6 de 8d 2a ec 2d 1d 42 3d b8 f8 67 3c cf fb 13 6d a4 cb 98 fd 10

ALHLX v2.72.0.0 Loading package.zip:

62 86 76 d6 5c d6 da 93 d3 be 86 d9 f2 11 8e 4d e4 3b db a4 1b 44 10 04 b5 4e b6 8c d7 f8 1f fd c3  
6e 04 09 12 25 51 44 ab 60 47 f1 87 eb 26 ab d0 2e 20 b5 b4 1d 8f 9f 8b 9c f8 79 52 b5 5a fa

ALHLX v2.73.0.0 Loading package.zip:

9a fb eb 96 16 85 d1 a9 33 26 92 03 32 a8 3b d9 5c 5a e4 72 53 e9 4f 56 78 fe c1 f4 b1 65 e5 25 69  
15 1f ae 8e 0d cd 27 b4 76 af 13 65 e0 c8 97 3f aa 37 e5 03 4d 0a 2e 69 e0 bb ca 5c 72 c1 1d

Release\_LP\_ALHLX\_v2.74.0.0.zip

b1 6c c2 03 83 c6 56 1f 42 ad 17 2b 19 66 f2 22 6b 84 bb 87 b6 05 32 56 31 be 1a 06 85 12 8b a8 e6  
a2 06 e6 20 e4 a7 e9 e2 41 a0 8a e0 bb 51 9d c9 77 6f 4e 51 73 02 fb 0d 1d f1 d2 72 97 81 ae

Release\_LP\_ALHLX\_v3.00.0.0.zip

4b 18 88 c7 7e a0 88 7f 6e a6 3b cb cc fe 4d 0a 52 b4 70 ee 62 37 6b 56 ba dc 53 a2 d9 27 ac 13 89  
9c 5a b4 3f 5e c9 75 38 b2 3d 0a 6f b8 02 e8 91 e4 2e e1 66 7f 97 28 c9 65 b8 c1 96 ff 1e 90

Release\_LP\_ALHLX\_v3.01.0.0.zip

e6 ef 0f ee c1 a4 50 c3 9a d1 df d2 95 65 e9 cc c5 99 61 39 3e af 4e ab ea ce a9 c9 e0 88 57 07 bc  
36 04 78 ba 84 1f b9 80 fb 9a c1 83 af cb b3 a7 27 de 1c 42 05 cf b7 60 6c 37 52 0b c1 9c 40

Release\_LP\_ALHLX\_v3.02.0.0.zip

2b796d76b3ce22ab6f30f138e723851daf499bc7d2fd547f7fe803a3289f63dbd7da6d6e4cc3627ced  
8ba7bedd63e6e2ca4cedc79eb11374169c868a64831042

Release\_LP\_ALHLX\_v3.21.0.0.zip

b6ba6702cc30520ec9a5fe47f2ee275e2b7adb3ec5c0186964c922e6076cfab2f8ed8a9cb3cb553680  
f9cd7e5727df21f9f810b39a94c3aa94697ce707eb4b5c

### Diode supply control program



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Release\_LP\_ADILX\_v2.51.0.0.zip:

56 79 6e 22 2d f6 64 6e 83 3e 22 ae dc 3b 57 2f f5 42 a4 ac 54 b8 4a 5c 7e b1 83 43 b4 54 fd 76 11  
31 df 89 9f 32 a5 44 c8 60 b2 cc 5d f6 f0 19 93 8b a9 59 18 2d 30 7c 67 67 43 81 ab 35 ad 85

Release\_LP\_ADILX\_v3.01.0.0.zip:

1a 20 86 7e 9c 5d d0 a7 47 fd 64 64 25 c6 c0 8d 3a 94 87 72 51 0f 28 6e 36 48 44 7c ed d6 30 5d f8  
b2 ac 68 a6 4b 9d b7 67 b6 48 e4 4b 72 e9 a3 48 e7 4d d1 0d 58 7f 0d 9b 1c 7f df f1 a1 9c 9c

Release\_LP\_ADILX\_v3.02.0.0.zip:

21 8f 69 3c 69 45 ef 02 ec 5e f2 f8 fd 34 7c 2a 54 75 35 28 66 a6 37 bc de 3b 4a fa bf 0a 92 9b 55 3e  
a6 0d 80 2a c3 ff 47 2b d1 e8 12 12 6f 2a 6c 03 c2 55 17 3a 89 5e c6 2a 81 5d b9 c3 7f 9b

Release\_LP\_ADILX\_v3.03.0.0.zip:

07197f27aea1a20c4af2ebe6f391342a8b2960b7938746a74c094c06dd37e365027bc4587ee2d1204  
343d01584182526230ec2836712ff2937d3a071eb7c2b26

### **Brake chopper control program**

Release\_LP\_ABCLX\_v2.71.0.0.zip:

14 2c d4 4f 63 a2 f8 93 0d ff 53 6a a1 69 f9 ae 32 3a a3 85 4a 6c b5 a9 23 59 0e 11 0c 9e 98 eb ba  
bc 95 8e 91 c1 89 bc 5c e7 d9 8e 80 45 71 c0 f6 50 9b df 57 27 2d 35 22 3a bf 3e cb 93 04 0e

### **Winder control program (+N5000)**

Release\_LP\_AWILX\_v1.20.0.0.zip:

a7 6f 63 b6 18 c5 ab 83 ae 31 40 7d ec ce 97 98 ec 4b 8b 95 59 ae f6 45 84 5e 5d e4 fb 6e 1d 4a 7e  
21 15 49 ba 3b ad d5 d7 f7 9e d3 19 4f 27 f2 f3 12 6f ac 02 5b a6 7a 5e 25 a6 48 57 34 26 32

Release\_LP\_AWILX\_v1.21.0.0.zip:

33 33 b5 28 6b f2 ca 83 a4 39 f3 50 52 8c e8 37 21 1d 2e 48 d9 6b d3 07 1d c4 59 33 49 3f 97 73 9f  
b8 0f 49 2f 31 a9 a1 cc 4d 24 6b b8 38 32 13 83 04 ba 89 14 4d 94 92 99 4b 0f 46 9f 47 1b 05

Release\_LP\_AWILX\_v1.22.0.0.zip:

b3 1f e8 d1 7f e8 9f 4d 21 32 a4 ba f2 59 98 74 8e 45 05 4c ad db b8 ce 1b ef dc 36 8a f9 72 69 58  
aa fa 46 c9 9f 24 08 e6 a4 3b dd 92 01 87 35 3e 39 e7 0b 2e 8e ce 73 d0 27 57 93 37 6a c6 f5

Release\_LP\_AWILX\_v1.30.0.0.zip:

7e 29 3e f7 20 a8 3a a6 52 15 e7 6d d8 eb 56 9c fd 5e 58 3f 29 44 fe 2c 92 5d b3 69 68 aa 10 6c 3e  
35 ae a7 9d e0 c7 96 6c 08 2a 23 60 67 80 19 68 c2 62 53 8a a5 8d a4 c8 13 7f 54 4a 4b a0 25

Release\_LP\_AWILX\_v1.40.0.0.zip:

91 07 4c 8d 4a 8a c6 9f 3d 2a 72 94 0d 00 8d 6e 1f 96 0b 6c df 7e 5d 52 a5 dd 93 74 7e 1f 90 30 05  
37 9e 20 8a eb 8a 4f 7d d3 f6 01 da 50 ce 58 9b fe 57 bf 61 90 d1 f6 73 2d c4 16 33 17 ee 4c



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### Crane control program (+N5050)

Release\_LP\_ACRLX\_v4.03.0.0.zip:

40 20 4b 46 a6 75 93 0c 3b 8d 2d db 6c 3c b4 f2 27 ea 04 63 be d8 f2 e2 85 4e 0b 04 a4 67 48 a5 f9  
a8 fc ea 49 d5 1e 93 9a 16 c4 e8 20 c5 1a 0e dc f3 2f 14 74 ca 0a db 4f 57 2f 60 94 da 39 f2

Release\_LP\_ACRLX\_v4.04.0.0.zip:

0a 8e 29 9b 99 c8 38 92 1f fd 37 9c 22 48 13 ab 84 c0 5c 4c d2 aa 70 79 9b bf a4 37 27 ea 5d 95 b7  
e3 2d 5f 81 ff b2 59 b4 fa c4 27 08 99 c8 ed 75 8e 04 9d 83 79 9e 7a cf a4 21 04 79 83 fe 44

Release\_LP\_ACRLX\_v4.10.0.0.zip:

aa 89 40 66 27 16 2b 0d 92 69 6f ff c9 41 1b c1 8d 7e a4 32 9f fe ed 52 35 54 c8 c9 f7 b2 4e a1 ea  
ad 09 e1 cd d5 d2 3f ca 0b 92 27 be 11 08 57 8b 67 53 84 60 c4 be 8a 42 1f 5e a2 66 bb e0 0b

Release ACRLX v4.20.0.0 Loading package.zip:

1f 65 6a ae 8e ad a3 2d e8 aa 0c 31 ca b4 4f 01 01 93 91 15 07 1e 32 2b 8d cd 32 ee cb 3f 4f e0 da  
b9 3c 21 87 8c 07 2b fd e9 27 ac ea b2 07 0c c0 83 62 43 18 c6 3f 45 6b d2 49 7b 52 58 7a e3

Release ACRLX v4.30.0.0 Loading package.zip:

4f 96 f8 a6 08 71 18 a0 a2 4d 54 0d 80 69 82 d2 1e c6 d3 37 1b 91 f6 41 ff 3f 7b 6f 53 91 fa 93 cd 7c  
c8 12 94 19 f5 81 a9 a7 f7 0f 3b cf 0d 78 3d 2e 1f 3a 48 40 6d 96 4b 17 59 23 3c a3 b9 26

### Winch control program (+N5100)

Release\_LP\_AWCLX\_v3.02.0.0.zip:

10 3b 04 30 1b a2 03 d8 97 a4 00 1f 8c b3 7c 10 6a b8 ee b1 a7 46 44 60 7a e2 12 5f 20 b5 83 c6 ed  
0d 88 51 a5 b3 e4 8a 90 dd 27 8e c1 e0 e6 56 3f ef c5 52 58 56 33 5c bc 13 78 a3 a0 85 71 0a

Release\_LP\_AWCLX\_v3.03.0.0.zip:

3c 39 f3 c8 ed a9 18 d5 0e cd c4 88 ac 9d 9a 6e f6 9c 7d 09 e7 5f 74 4e 55 d6 23 7d 0c 4b de e7 8a  
aa e7 97 d1 29 7c bd 28 4a 6a e5 01 05 29 42 2f 6b 9a b0 0d 31 e2 b8 8a 5a 7d 4c 35 b7 7a 55

Release AWCLx\_v3.10.0.0.zip:

1e 83 3b c5 a6 98 2a 7f 25 9f 88 d3 6c 43 62 f4 1d 2c 1d 04 df d8 f7 a6 cb b1 49 28 63 93 b9 94 8e  
53 76 88 9d 4c 30 04 bf 67 19 76 b9 47 03 36 0f b1 41 a9 8c 88 14 32 83 ec 24 0a 3b 68 56 86

### Centrifuge/Decanter control program (+N5150)

Release\_LP\_ACDLx\_v1.10.0.0.zip:

a4 68 6e 6e 52 72 c1 bd 55 18 33 71 1d 43 b7 7c e1 11 02 ca 61 cb 15 3c e8 7a 60 76 07 aa b5 c1 b5  
81 12 9c a7 41 e0 78 16 cd 34 d6 99 03 3f a4 02 84 24 10 00 e3 db e7 90 6c 33 8f 64 23 52 06

Release\_LP\_ACDLx\_v1.11.0.0.zip:



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98 15 1d 81 49 18 57 a2 ae 19 7f 67 21 ab 37 2b a0 a6 82 5c 9f 85 c6 87 c5 0a 61 2c 61 1f b6 8e e7  
9e 9a a5 d7 f7 b5 f1 8b 4e 5e a9 4e 74 cb cb 45 65 fe 52 68 bf 75 70 fc 7f f7 ae b0 24 4e ac

Release\_LP\_ACDLX v1.20.0.0.zip:

ff 7e dd cb 5d 9c 90 77 26 ac 26 75 7c df 58 64 56 27 a9 f3 20 54 d7 d7 b6 db 55 d1 75 2e 3e e6 4d  
ac 7f 24 2a 59 65 1d be 4d 62 74 5e 25 ec 0d 83 f2 3a ae 77 a3 d6 06 d8 04 41 2f 40 1b 35 4c

### PCP control program (+N5200)

Release\_LP\_AOALx v1.21.0.0.zip:

f4 da 50 49 5e 4c 9b 1a 9a 92 8b c0 ed f4 7a 37 8d 69 f3 ac c8 3a aa 67 3c 6a a9 74 f9 8f 4d b9 86  
a9 8a e8 ee 53 a8 1d ad 08 17 50 45 02 72 ec 78 41 e9 5a 68 25 c1 34 9c 89 7a 72 d5 f1 5b 17

Release\_LP\_AOALx v1.30.0.0.zip:

e9 de 62 c7 5f d1 82 52 d8 6b e6 0d 42 95 8b b5 2b 43 c0 3b 74 28 fa 19 de 3a 96 0f 29 8c 8d 9d 9f  
11 d9 3a e3 37 36 e0 1a 63 b3 80 92 ba c9 3b be c5 ea 7d 74 58 ef a6 dc 1d f7 f9 99 56 16 39

Release\_LP\_AOALx v1.40.0.0.zip:

a4 8b d5 1c d9 ee 0e 1e 17 15 b2 98 8b 84 59 69 a9 6e d6 27 59 bd 8e 36 49 19 86 b9 54 c4 b6 e0  
33 f5 92 9e bc 5f 81 8c c1 28 85 fb ac c3 2a 11 84 92 2f 7b 16 75 04 1a a7 ae 2d 84 15 eb 8b 80

Release\_LP\_AOALX\_v1.61.0.0.zip:

e0 c4 2b a6 c4 55 c9 07 16 1e c9 87 9f 1b 06 c3 65 eb 90 20 b0 cd 42 63 c3 76 03 ed a5 9c 53 29 1b  
05 ac 12 d3 96 ff 8b b1 56 19 fe 45 44 a1 8c 99 bd 9b 70 92 63 91 c3 68 cc 03 2b 0e 95 04 94

Release\_LP\_AOALX\_v1.64.0.0.zip:

6e 26 cb bc 8d 80 1a 3a 91 a6 0a a6 a8 8a ba 6c ea 02 dd 86 66 12 9d 19 3a ec d8 f1 67 89 9c 14 53  
39 65 f0 6d 6f 64 d7 31 2f b5 a7 4d a5 b5 61 28 ec 17 8e 02 85 98 bf 15 4f a5 25 25 31 d8 4f

### Rod pump control program (+N5250)

Release\_LP\_ARPLC v1.12.0.0.zip:

f9 76 7e 85 17 8b 67 d2 de c6 6a 82 7d dd 94 1f 98 83 6f 47 b0 ad be 39 df 42 75 50 49 43 89 6b  
7d 7a 4c 0e ab eb 7a 76 d8 a5 5a 86 92 84 74 a4 38 65 ba b0 f1 9d 00 fc c3 e2 4e 05 60 39 73 58

Release\_LP\_ARPLC v1.20.0.0.zip:

1f f0 ba ea f0 3b 06 24 8a f4 41 b7 78 0f 0f ca 8f 86 3b 45 a3 5e 5a aa c9 26 6a 44 62  
ba 95 9c d7 a2 34 11 a0 b4 79 de f3 d4 1a 79 23 09 f6 f5 66 02 05 77 86 45 2f 17 5f 4b 31 1b 30  
a7 50 a6

Release\_LP\_ARPLX v1.30.0.0.zip:

36 b1 1c 5c 0f 79 32 01 7e cf d0 7e d1 bf bf a3 34 08 95 0d 97 0a 00 f7 b2 2b e8 b9 13 02 e0 52  
e4 44 1e 6b a7 15 81 43 1f 5b 6c 85 58 84 d9 91 ba e4 4c fc 01 42 a0 26 16 16 83 08  
68 26 04 00

### Cooling tower control program (+N5350)



Release BCTLx\_v2.00.3.1

24 c6 cc eb 53 06 45 e4 af 92 80 ab 70 7c 60 36 e5 51 cd 43 c2 f7 45 4a b1 06 bc ca 2e 89 d4 27 0f  
77 bc 9f 28 fb 8d 07 2f 1f 2e fc 17 6e 1f 81 84 99 4a a1 c5 04 e3 50 64 e2 a3 c7 06 f7 5c 42

Release BCTLx\_v2.00.3.3

5d 4e 5d 37 be 17 e9 77 18 c2 85 81 bb fd a0 84 a0 6e ef 2b c5 74 8d 21 f9 2a 28 b9 bf 3d 9e af af  
5c ee ee 85 cf cc e1 2e 92 f5 c9 a5 a3 b4 13 e6 a0 88 38 ca 6c cd e4 87 66 fd 1e c7 68 5c 48

### ACS880 Override control program (+N5450)

LP\_AOILX\_v1.10.0.0.zip

c8 ec ff 13 e4 2c 3b 15 c1 38 a7 ad 3c a7 f9 bb 3d 89 d3 c4 1c 32 ec 97 7d ea 32 ea 3e d8 2f 72 2f  
40 65 cb 23 dc a7 7e 0d 8c 56 01 89 47 51 3d 12 ad 9d 8b 0b 6e 7e 8d 3f 76 aa 2f 37 2a ec e5

### Spinning control program (+N5500)

Release LP\_ASPLC\_v2.10.0.0.zip:

c5 dd ba 43 a6 89 b0 52 e5 3f e0 8f 94 e2 21 86 6e 40 f0 64 d1 2c 03 58 e2 70 20 d9 dd a0 23 ed 25  
89 91 52 a6 b3 ef 34 17 44 1b 41 41 10 3d d8 93 92 54 72 c9 1a d2 3e d2 a4 27 f1 1e 86 09 11

Release LP\_ASPLC\_v2.11.0.0.zip:

33 99 a9 7b b3 22 05 a4 35 26 00 d2 30 18 41 cd dc 34 0c 86 38 82 2a d6 f0 9a 8f dc 3b ca c2 ac f0 4c 9c df  
f4 06 ca 6b 7c 4b 59 9e 88 dd 1d 04 1e 6f b5 55 cb ee 04 0b 7a 29 53 ea b1 69 f6 c3

### ESP control program (+N5600)

Release\_LP\_AESLx\_v1.00.0.0.zip:

a6 ee 62 da 07 51 09 6c 8b 8f de 3e 31 b6 40 34 e9 94 91 f3 79 20 2f 92 0c 2f 7c e8 5c 73 00 27 55  
0e 95 0f 95 73 ff 9b dd 05 16 e3 29 08 54 66 c5 32 52 f4 bf 46 32 d5 e3 b4 69 1a 45 03 53 e5

Release\_LP\_AESLx\_v1.01.0.0.zip:

09 b3 8d f9 8d df 75 1c 46 b4 bf 8e 4a 20 4d 05 bb 05 d2 15 c7 ef 6e 89 4e f9 4e d9 50 70 1f 72 a8  
aa 96 71 12 3a ac 6b 4b aa db b3 6c 50 64 ca c5 09 de 1d 29 07 f6 06 57 3f f8 f2 bf 91 29 85

Release\_LP\_AESLx\_v1.02.0.0.zip:

4b 69 f1 88 46 36 5a 10 59 dc 84 bb af 1d 98 21 e1 85 ff a4 dc e2 65 20 4e 9b a6 17 33 d8 94 54 36  
e2 95 5a 58 83 74 a2 9f 40 ce 25 d4 59 a8 85 38 3c 7a f4 28 f3 1e a0 24 fc cf d0 9b 58 7e 4c

Release\_LP\_AESLx\_v1.04.0.0.zip:

40 b9 37 55 a8 b5 a0 ba b2 b8 4e 01 39 17 64 71 d3 1a 10 ac be af a8 ff 56 f3 c5 d7 4d f5 72 3c a8  
12 27 80 cd 7a 83 f8 60 70 3b 94 65 e2 3b 10 95 f2 3b d2 d4 e9 f0 ed dc ab 16 e6 10 bf 25 8c

Release\_LP\_AESLx\_v1.06.zip:



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90 03 c2 8b 7d ba f4 17 1e a2 46 5a bc 3b 2b 42 71 63 6c b8 3a 2c 0c 52 5b b3 e4 5b 0c bd 8e 19 9a  
59 36 b8 b8 02 3d 88 17 f1 c8 21 bd e1 d2 e7 28 62 f9 86 7a a7 95 24 c2 31 43 71 46 a4 7f 3b

Release\_LP\_AESLX\_v1.08.zip:

4a 4c 43 83 2d e9 75 7a 69 70 2b 48 2e 40 89 14 65 04 9b c1 59 13 d6 0f ed 72 c4 22 2b d5 a4  
76 c3 41 85 1a a9 44 f1 fb 0c 8b b5 e9 10 8e 37 93 92 39 75 ed 01 fb b1 d5 8e 14 6f 84 5a 56 2f b5

#### **Tower crane control program (+N5650)**

LP\_ATCLC\_v1.00.0.0 Loading package.zip:

74 26 4d df 63 ef 39 da 86 f0 71 a3 b0 ff e8 b7 ce dd 83 6d 1f 54 35 39 05 d7 6d 25 2a c5 94 5f 3a  
29 25 ba 6f cb 5f cc 01 4d f5 ee b7 cf 17 02 59 61 5e e9 c0 da 2c 06 e4 46 53 cb 8c 2d 83 5f

LP\_ATCLC\_v1.10.0.0 Loading package.zip:

71 ef f2 60 32 1d 90 69 cf 8f 07 8d f5 4d af 42 08 da 42 47 59 7e cc 94 04 6f 01 b5 cb be 18 84 53  
e8 8f a0 33 d1 18 0c d6 f7 04 79 e3 10 03 4f d2 9f 73 2e 59 b7 dc 2a 53 40 4f 5b f1 c9 d4 4c

LP\_ATCLC\_v1.20.0.0 Loading package.zip:

f4 bd ee b9 a1 c4 a4 7d bf a6 d9 eb 40 a9 a2 32 7d 56 18 1e f7 eb 32 45 95 6d fc 40 59 cd 77 0c 3e  
09 8a 0e 9b c9 26 a9 6b a0 00 b7 9b 1c 1b 8b 16 94 92 ff 98 45 f6 81 39 ed 96 4a d7 7f ef 56

#### **ACS880 Anti-cavitation control program (+N5900)**

LP\_AACAP\_v1.00.0.0 Loading package:

8b ec 8a 63 29 5b 33 f5 a8 08 a4 41 11 e5 9c e0 29 03 4b f4 0e 40 58 a1 53 4f f9 82 d8  
74 d1 8c da e8 ab 0a 1e 57 98 c1 5f 67 dd 78 32 e6 97 b6 25 5d b9 73 c3 a6 63 8e 6b c2 57 dc  
0d 55 ed fd

#### **ACS880 Liquid cooling unit program**

Release\_LP\_ALCLX\_v2.50.0.0.zip

01 ff 0c 3c d7 52 14 e0 59 ca 8d 78 39 e7 81 47 c4 c8 a1 38 a5 1a 5b 81 c2 d7 b6 86 94 ee 96 2b cf  
bd a1 80 d8 20 7f 9c 49 cb 28 81 78 87 08 09 59 7b f4 89 09 d3 32 c1 4f b0 26 c2 0e f9 d4 ea

Release\_LP\_ALCL6\_v2.60.zip

c2 b7 6f e7 92 9b 94 d2 7e f6 c4 18 fb 67 a0 08 1f 6e 61 08 17 31 3c 05 82 7c cb d1 46 87 7c 5f 54  
8d 96 90 e2 2e a8 46 a6 45 84 65 19 4a 6d 5c 87 78 44 b6 42 cb a1 d8 84 4e 16 6a 66 a7 aa be

Release\_LP\_ALCL6\_v2.80.zip

03 0c e3 87 39 f1 cf 25 a5 51 ca 6c b2 24 b2 88 88 79 67 d7 15 87 d9 82 d0 22 4c de 78 fb ef f5 e8  
59 da ad e4 06 f2 ca cf a0 e4 a7 2f c6 3c 6a 6b 8a b5 35 78 ea 9d 16 98 95 6c b1 c0 a9 b1 8b

Release\_LP\_ALCL6\_v2.81.zip





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2c2e6b89cb072fe3b3f9844663e693a9c2e90a9f1fbacf63be2e40bf68f0667972a21e3df8120311c90  
4645ea7cae0723769def04dc0d201f9a9f0ad23326646

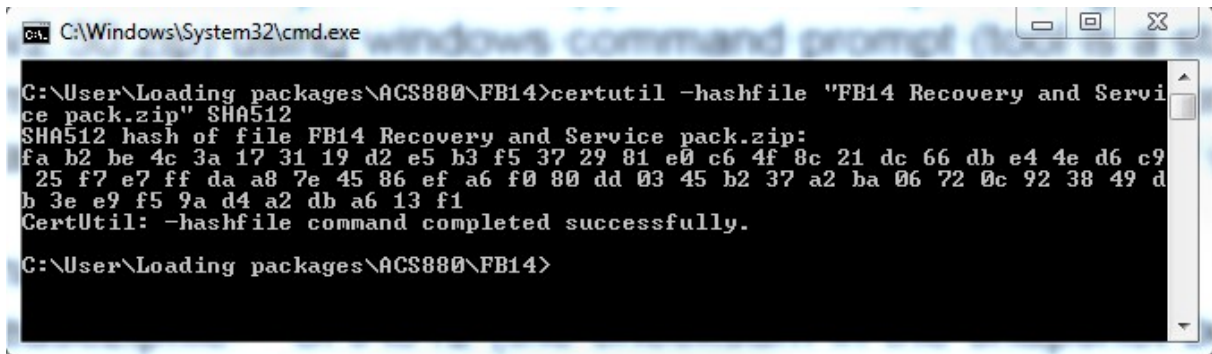
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## Instructions

To verify integrity of firmware downloaded eg. from IHMM, following additional steps are recommended. The purpose of integrity verification is to ensure that local copy of release zip file is consistent with zip file originally released by ABB.

Please note, that when downloading a loading package file from IHMM, its name may include also some additional data e.g. Release\_LP\_AINLX\_v3.11.0.0.zip in this document is actually Release\_LP\_AINLX\_v3.11.0.0\_3AXD10000104317\_AR.zip when downloaded from IHMM. However, this does not change the checksum.

- SHA-512 checksum consist of 64 bytes of hexadecimal values.
- Calculate SHA-512 checksum of your local copy of release zip file (e.g. Release\_LP\_AINLX\_v2.50.zip) using windows command prompt (tool is a standard Windows tool)
- Open windows command prompt by typing "cmd" to windows search and pressing enter
- Go to directory containing your local copy of release zip file, program itself is part Windows operating system
- Give following command to re-calculate SHA-512 checksum  
certutil -hashfile "<releasezipfile>" SHA512 (the checksum in the snapshot below is an example only)



```
C:\Windows\System32\cmd.exe
C:\User>Loading packages\ACS880\FB14>certutil -hashfile "FB14 Recovery and Service pack.zip" SHA512
SHA512 hash of file FB14 Recovery and Service pack.zip:
fa b2 be 4c 3a 17 31 19 d2 e5 b3 f5 37 29 81 e0 c6 4f 8c 21 dc 66 db e4 4e d6 c9
25 f7 e7 ff da a8 7e 45 86 ef a6 f0 80 dd 03 45 b2 37 a2 ba 06 72 0c 92 38 49 d
b 3e e9 f5 9a d4 a2 db a6 13 f1
CertUtil: -hashfile command completed successfully.

C:\User>Loading packages\ACS880\FB14>
```

Compare calculated checksum to checksum obtained from ABB library (this document) and proceed further in firmware download procedure if checksums are matching