

FS100 OPTION ADDENDUM

FOR EXPANDED I/O MAPPING

Upon receipt of the product and prior to initial operation, read these instructions thoroughly and retain for future reference.

MOTOMAN INSTRUCTIONS

- FS100 I/O MAPPING MANUAL
- FS100 INSTRUCTIONS
- FS100 OPERATOR'S MANUAL
- FS100 MAINTENANCE MANUAL

The FS100 operator's manual above corresponds to specific usage.
Be sure to use the appropriate manual.

Part Number: 164104-1CD
Revision: 0



MANDATORY

General items related to safety are listed in Section 2 of the *FS100 Controller Manual*. To ensure correct and safe operation, carefully read the *FS100 Controller Manual* before reading this manual.



CAUTION

- Yaskawa Motoman may modify this model without notice when necessary due to product improvements, or changes in specifications.
- If such a modification is made, the manual number will also be revised.
- If the addendum is damaged or lost, contact a Yaskawa Motoman Customer Service Representative to order a new copy. The representatives are listed on the back cover of this addendum. Be sure to tell the representative the manual number listed on the front cover.
- YASKAWA is not responsible for incidents arising from unauthorized modification of its products. Unauthorized modification voids the products warranty.

Introduction

This addendum supplies the instructions for the expanded Input/Output (I/O) mapping of the FS100.

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FS100 Standard I/O LIO-08R Circuit Board - Connector CN2

| CN2 Pin # | CI/O | Description | Signal Type | Inform Name | 159804-2 Breakout Card Pin # |
|-----------|-------|-----------------------|-------------|-------------|------------------------------|
| 1 | n/a | Input common 1 | | | |
| 5 | n/a | Input common 2 | | | 5 |
| 2 | 20010 | External Start | Input | n/a | 2 |
| 20 | 20011 | External Hold | Input | n/a | 21 |
| 3 | 20012 | Call master job | Input | n/a | 3 |
| 21 | 20013 | Alarm/Error reset | Input | n/a | 22 |
| 4 | 20014 | External Servo ON | Input | n/a | 4 |
| 22 | 20015 | Select Play mode | Input | n/a | 23 |
| 6 | 20016 | Select Teach mode | Input | n/a | 6 |
| 24 | 20017 | Digital Input 7 | Input | n/a | 25 |
| 7 | 20020 | Digital Input 8 | Input | n/a | 7 |
| 25 | 20021 | Digital Input 9 | Input | n/a | 26 |
| 8 | 20022 | Work prohibited | Input | n/a | 8 |
| 26 | 20023 | Digital Input 11 | Input | n/a | 27 |
| | 20024 | n/a | n/a | n/a | |
| | 20025 | n/a | n/a | n/a | |
| | 20026 | n/a | n/a | n/a | |
| | 20027 | n/a | n/a | n/a | |
| 9 | n/a | Input Common 1_24V | | | 9 |
| 27 | n/a | Input Common 2_24V | | | 28 |
| 19 | n/a | Input Common 1_0V | | | 20 |
| 23 | n/a | Input Common 2_0V | | | 24 |
| 13 | n/a | 24V for output load | | | 13 |
| 16 | n/a | 24V for output load | | | 16 |
| 31 | n/a | 24V for output load | | | 32 |
| 10 | 30010 | Running | Output | n/a | 10 |
| 28 | 30011 | Servo ON | Output | n/a | 29 |
| 11 | 30012 | Top of master job | Output | n/a | 11 |
| 29 | 30013 | Alarm/error occurred | Output | n/a | 30 |
| 14 | 30014 | Battery alarm | Output | n/a | 14 |
| 32 | 30015 | Remote mode selected | Output | n/a | 33 |
| 15 | 30016 | Play mode selected | Output | n/a | 15 |
| 33 | 30017 | Teach mode selected | Output | n/a | 34 |
| 17 | 30020 | In cube 1 | Output | n/a | 17 |
| 35 | 30021 | Digital Output 9 | Output | n/a | 36 |
| 18 | 30022 | Work home position | Output | n/a | 18 |
| 36 | 30023 | Intermediate start OK | Output | n/a | 37 |
| | 30024 | n/a | n/a | n/a | |
| | 30025 | n/a | n/a | n/a | |
| | 30026 | n/a | n/a | n/a | |
| | 30027 | n/a | n/a | n/a | |

FS100 Standard I/O LIO-08R Circuit Board - Connector CN1

| CN1 Pin # | C/I/O | Description | Signal Type | Inform Name | 159804-3 Break-out Card Pin # |
|-----------|---------|----------------------|-------------|-------------|-------------------------------|
| 1 | | Input common 3 | | | 1 |
| 6 | | Input common 4 | | | 6 |
| 2 | 20030 | User Input | Input | IN#(1) | 2 |
| 27 | 20031 | User Input | Input | IN#(2) | 19 |
| 3 | 20032 | User Input | Input | IN#(3) | 3 |
| 28 | 20033 | User Input | Input | IN#(4) | 20 |
| 4 | 20034 | User Input | Input | IN#(5) | 4 |
| 29 | 20035 | User Input | Input | IN#(6) | 21 |
| 5 | 20036 | User Input | Input | IN#(7) | 5 |
| 30 | 20037 | User Input | Input | IN#(8) | 22 |
| 7 | 20040 | User Input | Input | IN#(9) | 7 |
| 32 | 20041 | User Input | Input | IN#(10) | 24 |
| 8 | 20042 | User Input | Input | IN#(11) | 8 |
| 33 | 20043 | User Input | Input | IN#(12) | 25 |
| 9 | 20044 | User Input | Input | IN#(13) | 9 |
| 34 | 20045 | User Input | Input | IN#(14) | 26 |
| 10 | 20046 | User Input | Input | IN#(15) | 10 |
| 35 | 20047 | User Input | Input | IN#(16) | 27 |
| | 20050-7 | LIO-08R Status bits | Status | IN#(17-24) | |
| | 20060-7 | LIO-08R Status bits | Status | IN#(25-32) | |
| 11 | | Input common 3_24V | | | 11 |
| 36 | | Input common 4_24V | | | 28 |
| 26 | | Input common 3_0V | | | 18 |
| 31 | | Input common 4_0V | | | 23 |
| 15 | | +24V for output load | | | 15 |
| 22 | | +24V for output load | | | 42 |
| 25 | | +24V for output load | | | 48 |
| 40 | | +24V for output load | | | 32 |
| 47 | | +24V for output load | | | 43 |
| 12 | 30030 | User Output | Output | OT#(1) | 12 |
| 37 | 30031 | User Output | Output | OT#(2) | 29 |
| 13 | 30032 | User Output | Output | OT#(3) | 13 |
| 38 | 30033 | User Output | Output | OT#(4) | 30 |
| 16 | 30034 | User Output | Output | OT#(5) | 16 |
| 41 | 30035 | User Output | Output | OT#(6) | 33 |
| 17 | 30036 | User Output | Output | OT#(7) | 17 |
| 42 | 30037 | User Output | Output | OT#(8) | 50 |
| 19 | 30040 | User Output | Output | OT#(9) | 36 |
| 44 | 30041 | User Output | Output | OT#(10) | 37 |
| 20 | 30042 | User Output | Output | OT#(11) | 38 |
| 45 | 30043 | User Output | Output | OT#(12) | 39 |
| 23 | 30044 | User Output | Output | OT#(13) | 44 |
| 48 | 30045 | User Output | Output | OT#(14) | 45 |

| CN1 Pin # | C/I/O | Description | Signal Type | Inform Name | 159804-3 Break-out Card Pin # |
|------------------|--------------|--------------------|--------------------|--------------------|--------------------------------------|
| 24 | 30046 | User Output | Output | OT#(15) | 46 |
| 49 | 30047 | User Output | Output | OT#(16) | 47 |
| | 30050-7 | System Reservation | n/a | n/a | |
| | 30060-7 | System Reservation | n/a | n/a | |

FS100 Expanded I/O LIO-08R-A Circuit Board - Connector CN-2A

| CN2 Pin # | C/I/O | Description | Signal Type | Inform Name | 159804-2 Breakout Card Pin # |
|-----------|-------|---------------------|-------------|-------------|------------------------------|
| 1 | n/a | Input common 1 | | | 1 |
| 5 | n/a | Input common 2 | | | 5 |
| 2 | 20070 | User Input | Input | IN#(33) | 2 |
| 20 | 20071 | User Input | Input | IN#(34) | 21 |
| 3 | 20072 | User Input | Input | IN#(35) | 3 |
| 21 | 20073 | User Input | Input | IN#(36) | 22 |
| 4 | 20074 | User Input | Input | IN#(37) | 4 |
| 22 | 20075 | User Input | Input | IN#(38) | 23 |
| 6 | 20076 | User Input | Input | IN#(39) | 6 |
| 24 | 20077 | User Input | Input | IN#(40) | 25 |
| 7 | 20080 | User Input | Input | IN#(41) | 7 |
| 25 | 20081 | User Input | Input | IN#(42) | 26 |
| 8 | 20082 | User Input | Input | IN#(43) | 8 |
| 26 | 20083 | User Input | Input | IN#(44) | 27 |
| | 20084 | n/a | n/a | n/a | |
| | 20085 | n/a | n/a | n/a | |
| | 20086 | n/a | n/a | n/a | |
| | 20087 | n/a | n/a | n/a | |
| 9 | n/a | Input Common 1_24V | | | 9 |
| 27 | n/a | Input Common 2_24V | | | 28 |
| 19 | n/a | Input Common 1_0V | | | 20 |
| 23 | n/a | Input Common 2_0V | | | 24 |
| 13 | n/a | 24V for output load | | | 13 |
| 16 | n/a | 24V for output load | | | 16 |
| 31 | n/a | 24V for output load | | | 32 |
| 10 | 30070 | User Output | Output | OT#(33) | 10 |
| 28 | 30071 | User Output | Output | OT#(34) | 29 |
| 11 | 30072 | User Output | Output | OT#(35) | 11 |
| 29 | 30073 | User Output | Output | OT#(36) | 30 |
| 14 | 30074 | User Output | Output | OT#(37) | 14 |
| 32 | 30075 | User Output | Output | OT#(38) | 33 |
| 15 | 30076 | User Output | Output | OT#(39) | 15 |
| 33 | 30077 | User Output | Output | OT#(40) | 34 |
| 17 | 30080 | User Output | Output | OT#(41) | 17 |
| 35 | 30081 | User Output | Output | OT#(42) | 36 |
| 18 | 30082 | User Output | Output | OT#(43) | 18 |
| 36 | 30083 | User Output | Output | OT#(44) | 37 |
| | 30084 | n/a | n/a | n/a | |
| | 30085 | n/a | n/a | n/a | |
| | 30086 | n/a | n/a | n/a | |
| | 30087 | n/a | n/a | n/a | |

FS100 Expanded I/O LIO-08R-A Circuit Board - Connector CN-1A

| CN1 Pin # | C/I/O | Description | Signal Type | Inform Name | 159804-3 Break-out Card Pin # |
|-----------|---------|----------------------|-------------|-------------|-------------------------------|
| 1 | | Input common 3 | | | 1 |
| 6 | | Input common 4 | | | 6 |
| 2 | 20090 | User Input | Input | IN#(49) | 2 |
| 27 | 20091 | User Input | Input | IN#(50) | 19 |
| 3 | 20092 | User Input | Input | IN#(51) | 3 |
| 28 | 20093 | User Input | Input | IN#(52) | 20 |
| 4 | 20094 | User Input | Input | IN#(53) | 4 |
| 29 | 20095 | User Input | Input | IN#(54) | 21 |
| 5 | 20096 | User Input | Input | IN#(55) | 5 |
| 30 | 20097 | User Input | Input | IN#(56) | 22 |
| 7 | 20100 | User Input | Input | IN#(57) | 7 |
| 32 | 20101 | User Input | Input | IN#(58) | 24 |
| 8 | 20102 | User Input | Input | IN#(59) | 8 |
| 33 | 20103 | User Input | Input | IN#(60) | 25 |
| 9 | 20104 | User Input | Input | IN#(61) | 9 |
| 34 | 20105 | User Input | Input | IN#(62) | 26 |
| 10 | 20106 | User Input | Input | IN#(63) | 10 |
| 35 | 20107 | User Input | Input | IN#(64) | 27 |
| | 20110-7 | LIO-08R Status bits | Status | IN#(65-72) | |
| | 20120-7 | LIO-08R Status bits | Status | IN#(73-80) | |
| 11 | | Input common 3_24V | | | 11 |
| 36 | | Input common 4_24V | | | 28 |
| 26 | | Input common 3_0V | | | 18 |
| 31 | | Input common 4_0V | | | 23 |
| 15 | | +24V for output load | | | 15 |
| 22 | | +24V for output load | | | 42 |
| 25 | | +24V for output load | | | 48 |
| 40 | | +24V for output load | | | 32 |
| 47 | | +24V for output load | | | 43 |
| 12 | 30090 | User Output | Output | OT#(49) | 12 |
| 37 | 30091 | User Output | Output | OT#(50) | 29 |
| 13 | 30092 | User Output | Output | OT#(51) | 13 |
| 38 | 30093 | User Output | Output | OT#(52) | 30 |
| 16 | 30094 | User Output | Output | OT#(53) | 16 |
| 41 | 30095 | User Output | Output | OT#(54) | 33 |
| 17 | 30096 | User Output | Output | OT#(55) | 17 |
| 42 | 30097 | User Output | Output | OT#(56) | 50 |
| 19 | 30100 | User Output | Output | OT#(57) | 36 |
| 44 | 30101 | User Output | Output | OT#(58) | 37 |
| 20 | 30102 | User Output | Output | OT#(59) | 38 |
| 45 | 30103 | User Output | Output | OT#(60) | 39 |
| 23 | 30104 | User Output | Output | OT#(61) | 44 |

FS100

FS100 Expanded I/O LIO-08R-A Circuit Board - Connector CN-1A

| CN1 Pin # | C/I/O | Description | Signal Type | Inform Name | 159804-3 Break-out Card Pin # |
|------------------|--------------|--------------------|--------------------|--------------------|--------------------------------------|
| 48 | 30105 | User Output | Output | OT#(62) | 45 |
| 24 | 30106 | User Output | Output | OT#(63) | 46 |
| 49 | 30107 | User Output | Output | OT#(64) | 47 |
| | 30110-7 | System Reservation | n/a | 65-72 | |
| | 30120-7 | System Reservation | n/a | 73-80 | |

FS100 Expanded I/O LIO-08R-B Circuit Board - Connector CN-2B

| CN2 Pin # | CI/O | Description | Signal Type | Inform Name | 159804-2 Break-out Card Pin # |
|-----------|-------|---------------------|-------------|-------------|-------------------------------|
| 1 | n/a | Input common 1 | | | 1 |
| 5 | n/a | Input common 2 | | | 5 |
| 2 | 20130 | User Input | Input | IN#(81) | 2 |
| 20 | 20131 | User Input | Input | IN#(82) | 21 |
| 3 | 20132 | User Input | Input | IN#(83) | 3 |
| 21 | 20133 | User Input | Input | IN#(84) | 22 |
| 4 | 20134 | User Input | Input | IN#(85) | 4 |
| 22 | 20135 | User Input | Input | IN#(86) | 23 |
| 6 | 20136 | User Input | Input | IN#(87) | 6 |
| 24 | 20137 | User Input | Input | IN#(88) | 25 |
| 7 | 20140 | User Input | Input | IN#(89) | 7 |
| 25 | 20141 | User Input | Input | IN#(90) | 26 |
| 8 | 20142 | User Input | Input | IN#(91) | 8 |
| 26 | 20143 | User Input | Input | IN#(92) | 27 |
| | 20144 | n/a | n/a | n/a | |
| | 20145 | n/a | n/a | n/a | |
| | 20146 | n/a | n/a | n/a | |
| | 20147 | n/a | n/a | n/a | |
| 9 | n/a | Input Common 1_24V | | | 9 |
| 27 | n/a | Input Common 2_24V | | | 28 |
| 19 | n/a | Input Common 1_0V | | | 20 |
| 23 | n/a | Input Common 2_0V | | | 24 |
| 13 | n/a | 24V for output load | | | 13 |
| 16 | n/a | 24V for output load | | | 16 |
| 31 | n/a | 24V for output load | | | 32 |
| 10 | 30130 | User Output | Output | OT#(81) | 10 |
| 28 | 30131 | User Output | Output | OT#(82) | 29 |
| 11 | 30132 | User Output | Output | OT#(83) | 11 |
| 29 | 30133 | User Output | Output | OT#(84) | 30 |
| 14 | 30134 | User Output | Output | OT#(85) | 14 |
| 32 | 30135 | User Output | Output | OT#(86) | 33 |
| 15 | 30136 | User Output | Output | OT#(87) | 15 |
| 33 | 30137 | User Output | Output | OT#(88) | 34 |
| 17 | 30140 | User Output | Output | OT#(89) | 17 |
| 35 | 30141 | User Output | Output | OT#(90) | 36 |
| 18 | 30142 | User Output | Output | OT#(91) | 18 |
| 36 | 30143 | User Output | Output | OT#(92) | 37 |
| | 30144 | n/a | n/a | n/a | |
| | 30145 | n/a | n/a | n/a | |
| | 30146 | n/a | n/a | n/a | |
| | 30147 | n/a | n/a | n/a | |

FS100 Expanded I/O LIO-08R-B Circuit Board - Connector CN-1B

| CN1 Pin # | C/I/O | Description | Signal Type | Inform Name | 159804-3 Breakout Card Pin # |
|-----------|---------|----------------------|-------------|--------------|------------------------------|
| 1 | | Input common 3 | | | 1 |
| 6 | | Input common 4 | | | 6 |
| 2 | 20150 | User Input | Input | IN#(97) | 2 |
| 27 | 20151 | User Input | Input | IN#(98) | 19 |
| 3 | 20152 | User Input | Input | IN#(99) | 3 |
| 28 | 20153 | User Input | Input | IN#(100) | 20 |
| 4 | 20154 | User Input | Input | IN#(101) | 4 |
| 29 | 20155 | User Input | Input | IN#(102) | 21 |
| 5 | 20156 | User Input | Input | IN#(103) | 5 |
| 30 | 20157 | User Input | Input | IN#(104) | 22 |
| 7 | 20160 | User Input | Input | IN#(105) | 7 |
| 32 | 20161 | User Input | Input | IN#(106) | 24 |
| 8 | 20162 | User Input | Input | IN#(107) | 8 |
| 33 | 20163 | User Input | Input | IN#(108) | 25 |
| 9 | 20164 | User Input | Input | IN#(109) | 9 |
| 34 | 20165 | User Input | Input | IN#(110) | 26 |
| 10 | 20166 | User Input | Input | IN#(111) | 10 |
| 35 | 20167 | User Input | Input | IN#(112) | 27 |
| | 20170-7 | LIO-08R Status bits | Status | IN#(113-120) | |
| | 20180-7 | LIO-08R Status bits | Status | IN#(121-128) | |
| 11 | | Input common 3_24V | | | 11 |
| 36 | | Input common 4_24V | | | 28 |
| 26 | | Input common 3_0V | | | 18 |
| 31 | | Input common 4_0V | | | 23 |
| 15 | | +24V for output load | | | 15 |
| 22 | | +24V for output load | | | 42 |
| 25 | | +24V for output load | | | 48 |
| 40 | | +24V for output load | | | 32 |
| 47 | | +24V for output load | | | 43 |
| 12 | 30150 | User Output | Output | OT#(97) | 12 |
| 37 | 30151 | User Output | Output | OT#(98) | 29 |
| 13 | 30152 | User Output | Output | OT#(99) | 13 |
| 38 | 30153 | User Output | Output | OT#(100) | 30 |
| 16 | 30154 | User Output | Output | OT#(101) | 16 |
| 41 | 30155 | User Output | Output | OT#(102) | 33 |
| 17 | 30156 | User Output | Output | OT#(103) | 17 |
| 42 | 30157 | User Output | Output | OT#(104) | 50 |
| 19 | 30160 | User Output | Output | OT#(105) | 36 |
| 44 | 30161 | User Output | Output | OT#(106) | 37 |
| 20 | 30162 | User Output | Output | OT#(107) | 38 |
| 45 | 30163 | User Output | Output | OT#(108) | 39 |
| 23 | 30164 | User Output | Output | OT#(109) | 44 |

| CN1 Pin # | C/I/O | Description | Signal Type | Inform Name | 159804-3 Breakout Card Pin # |
|------------------|--------------|--------------------|--------------------|--------------------|-------------------------------------|
| 48 | 30165 | User Output | Output | OT#(110) | 45 |
| 24 | 30166 | User Output | Output | OT#(111) | 46 |
| 49 | 30167 | User Output | Output | OT#(112) | 47 |
| | 30170-7 | System Reservation | n/a | 113-120 | |
| | 30180-7 | System Reservation | n/a | 121-128 | |

FS100 Expanded I/O LIO-08R-C Circuit Board - Connector CN2-C

| CN2 Pin # | C/I/O | Description | Signal Type | Inform Name | 159804-2 Breakout Card Pin # |
|-----------|-------|---------------------|-------------|-------------|------------------------------|
| 1 | n/a | Input common 1 | | | 1 |
| 5 | n/a | Input common 2 | | | 5 |
| 2 | 20190 | User Input | Input | IN#(129) | 2 |
| 20 | 20191 | User Input | Input | IN#(130) | 21 |
| 3 | 20192 | User Input | Input | IN#(131) | 3 |
| 21 | 20193 | User Input | Input | IN#(132) | 22 |
| 4 | 20194 | User Input | Input | IN#(133) | 4 |
| 22 | 20195 | User Input | Input | IN#(134) | 23 |
| 6 | 20196 | User Input | Input | IN#(135) | 6 |
| 24 | 20197 | User Input | Input | IN#(136) | 25 |
| 7 | 20200 | User Input | Input | IN#(137) | 7 |
| 25 | 20201 | User Input | Input | IN#(138) | 26 |
| 8 | 20202 | User Input | Input | IN#(139) | 8 |
| 26 | 20203 | User Input | Input | IN#(140) | 27 |
| | 20204 | n/a | n/a | n/a | |
| | 20205 | n/a | n/a | n/a | |
| | 20206 | n/a | n/a | n/a | |
| | 20207 | n/a | n/a | n/a | |
| 9 | n/a | Input Common 1_24V | | | 9 |
| 27 | n/a | Input Common 2_24V | | | 28 |
| 19 | n/a | Input Common 1_0V | | | 20 |
| 23 | n/a | Input Common 2_0V | | | 24 |
| 13 | n/a | 24V for output load | | | 13 |
| 16 | n/a | 24V for output load | | | 16 |
| 31 | n/a | 24V for output load | | | 32 |
| 10 | 30190 | User Output | Output | OT#(129) | 10 |
| 28 | 30191 | User Output | Output | OT#(130) | 29 |
| 11 | 30192 | User Output | Output | OT#(131) | 11 |
| 29 | 30193 | User Output | Output | OT#(132) | 30 |
| 14 | 30194 | User Output | Output | OT#(133) | 14 |
| 32 | 30195 | User Output | Output | OT#(134) | 33 |
| 15 | 30196 | User Output | Output | OT#(135) | 15 |
| 33 | 30197 | User Output | Output | OT#(136) | 34 |
| 17 | 30200 | User Output | Output | OT#(137) | 17 |
| 35 | 30201 | User Output | Output | OT#(138) | 36 |
| 18 | 30202 | User Output | Output | OT#(139) | 18 |
| 36 | 30203 | User Output | Output | OT#(140) | 37 |
| | 30204 | n/a | n/a | n/a | |
| | 30205 | n/a | n/a | n/a | |
| | 30206 | n/a | n/a | n/a | |
| | 30207 | n/a | n/a | n/a | |

FS100 Expanded I/O LIO-08R-C Circuit Board - Connector CN1-C

| CN1 Pin # | C/I/O | Description | Signal Type | Inform Name | 159804-3 Breakout Card Pin # |
|-----------|---------|----------------------|-------------|--------------|------------------------------|
| 1 | | Input common 3 | | | 1 |
| 6 | | Input common 4 | | | 6 |
| 2 | 20210 | User Input | Input | IN#(145) | 2 |
| 27 | 20211 | User Input | Input | IN#(146) | 19 |
| 3 | 20212 | User Input | Input | IN#(147) | 3 |
| 28 | 20213 | User Input | Input | IN#(148) | 20 |
| 4 | 20214 | User Input | Input | IN#(149) | 4 |
| 29 | 20215 | User Input | Input | IN#(150) | 21 |
| 5 | 20216 | User Input | Input | IN#(151) | 5 |
| 30 | 20217 | User Input | Input | IN#(152) | 22 |
| 7 | 20220 | User Input | Input | IN#(153) | 7 |
| 32 | 20221 | User Input | Input | IN#(154) | 24 |
| 8 | 20222 | User Input | Input | IN#(155) | 8 |
| 33 | 20223 | User Input | Input | IN#(156) | 25 |
| 9 | 20224 | User Input | Input | IN#(157) | 9 |
| 34 | 20225 | User Input | Input | IN#(158) | 26 |
| 10 | 20226 | User Input | Input | IN#(159) | 10 |
| 35 | 20227 | User Input | Input | IN#(160) | 27 |
| | 20230-7 | LIO-08R Status bits | Status | IN#(161-168) | |
| | 20240-7 | LIO-08R Status bits | Status | IN#(169-176) | |
| 11 | | Input common 3_24V | | | 11 |
| 36 | | Input common 4_24V | | | 28 |
| 26 | | Input common 3_0V | | | 18 |
| 31 | | Input common 4_0V | | | 23 |
| 15 | | +24V for output load | | | 15 |
| 22 | | +24V for output load | | | 42 |
| 25 | | +24V for output load | | | 48 |
| 40 | | +24V for output load | | | 32 |
| 47 | | +24V for output load | | | 43 |
| 12 | 30210 | User Output | Output | OT#(145) | 12 |
| 37 | 30211 | User Output | Output | OT#(146) | 29 |
| 13 | 30212 | User Output | Output | OT#(147) | 13 |
| 38 | 30213 | User Output | Output | OT#(148) | 30 |
| 16 | 30214 | User Output | Output | OT#(149) | 16 |
| 41 | 30215 | User Output | Output | OT#(150) | 33 |
| 17 | 30216 | User Output | Output | OT#(151) | 17 |
| 42 | 30217 | User Output | Output | OT#(152) | 50 |
| 19 | 30220 | User Output | Output | OT#(153) | 36 |
| 44 | 30221 | User Output | Output | OT#(154) | 37 |
| 20 | 30222 | User Output | Output | OT#(155) | 38 |
| 45 | 30223 | User Output | Output | OT#(156) | 39 |
| 23 | 30224 | User Output | Output | OT#(157) | 44 |

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FS100 Expanded I/O LIO-08R-C Circuit Board - Connector CN1-C

| CN1 Pin # | C/I/O | Description | Signal Type | Inform Name | 159804-3 Breakout Card Pin # |
|------------------|--------------|--------------------|--------------------|--------------------|-------------------------------------|
| 48 | 30225 | User Output | Output | OT#(158) | 45 |
| 24 | 30226 | User Output | Output | OT#(159) | 46 |
| 49 | 30227 | User Output | Output | OT#(160) | 47 |
| | 30230-7 | System Reservation | n/a | 161-168 | |
| | 30240-7 | System Reservation | n/a | 169-176 | |

FS100 Expanded I/O LIO-08R-D Circuit Board - Connector CN2-D

| CN2 Pin # | C/I/O | Description | Signal Type | Inform Name | 159804-2 Breakout Card Pin # |
|-----------|-------|---------------------|-------------|-------------|------------------------------|
| 1 | n/a | Input common 1 | | | 1 |
| 5 | n/a | Input common 2 | | | 5 |
| 2 | 20250 | User Input | Input | IN#(177) | 2 |
| 20 | 20251 | User Input | Input | IN#(178) | 21 |
| 3 | 20252 | User Input | Input | IN#(179) | 3 |
| 21 | 20253 | User Input | Input | IN#(180) | 22 |
| 4 | 20254 | User Input | Input | IN#(181) | 4 |
| 22 | 20255 | User Input | Input | IN#(182) | 23 |
| 6 | 20256 | User Input | Input | IN#(183) | 6 |
| 24 | 20257 | User Input | Input | IN#(184) | 25 |
| 7 | 20260 | User Input | Input | IN#(185) | 7 |
| 25 | 20261 | User Input | Input | IN#(186) | 26 |
| 8 | 20262 | User Input | Input | IN#(187) | 8 |
| 26 | 20263 | User Input | Input | IN#(188) | 27 |
| | 20264 | n/a | n/a | n/a | |
| | 20265 | n/a | n/a | n/a | |
| | 20266 | n/a | n/a | n/a | |
| | 20267 | n/a | n/a | n/a | |
| 9 | n/a | Input Common 1_24V | | | 9 |
| 27 | n/a | Input Common 2_24V | | | 28 |
| 19 | n/a | Input Common 1_0V | | | 20 |
| 23 | n/a | Input Common 2_0V | | | 24 |
| 13 | n/a | 24V for output load | | | 13 |
| 16 | n/a | 24V for output load | | | 16 |
| 31 | n/a | 24V for output load | | | 32 |
| 10 | 30250 | User Output | Output | OT#(177) | 10 |
| 28 | 30251 | User Output | Output | OT#(178) | 29 |
| 11 | 30252 | User Output | Output | OT#(179) | 11 |
| 29 | 30253 | User Output | Output | OT#(180) | 30 |
| 14 | 30254 | User Output | Output | OT#(181) | 14 |
| 32 | 30255 | User Output | Output | OT#(182) | 33 |
| 15 | 30256 | User Output | Output | OT#(183) | 15 |
| 33 | 30257 | User Output | Output | OT#(184) | 34 |
| 17 | 30260 | User Output | Output | OT#(185) | 17 |
| 35 | 30261 | User Output | Output | OT#(186) | 36 |
| 18 | 30262 | User Output | Output | OT#(187) | 18 |
| 36 | 30263 | User Output | Output | OT#(188) | 37 |
| | 30264 | n/a | n/a | n/a | |
| | 30265 | n/a | n/a | n/a | |
| | 30266 | n/a | n/a | n/a | |
| | 30267 | n/a | n/a | n/a | |

FS100 Expanded I/O LIO-08R-D Circuit Board - Connector CN1-D

| CN1 Pin # | C/I/O | Description | Signal Type | Inform Name | 159804-3 Breakout Card Pin # |
|-----------|---------|----------------------|-------------|-------------|------------------------------|
| 1 | | Input common 3 | | | 1 |
| 6 | | Input common 4 | | | 6 |
| 2 | 20270 | User Input | Input | IN#(193) | 2 |
| 27 | 20271 | User Input | Input | IN#(194) | 19 |
| 3 | 20272 | User Input | Input | IN#(195) | 3 |
| 28 | 20273 | User Input | Input | IN#(196) | 20 |
| 4 | 20274 | User Input | Input | IN#(197) | 4 |
| 29 | 20275 | User Input | Input | IN#(198) | 21 |
| 5 | 20276 | User Input | Input | IN#(199) | 5 |
| 30 | 20277 | User Input | Input | IN#(200) | 22 |
| 7 | 20280 | User Input | Input | IN#(201) | 7 |
| 32 | 20281 | User Input | Input | IN#(202) | 24 |
| 8 | 20282 | User Input | Input | IN#(203) | 8 |
| 33 | 20283 | User Input | Input | IN#(204) | 25 |
| 9 | 20284 | User Input | Input | IN#(205) | 9 |
| 34 | 20285 | User Input | Input | IN#(206) | 26 |
| 10 | 20286 | User Input | Input | IN#(207) | 10 |
| 35 | 20287 | User Input | Input | IN#(208) | 27 |
| | 20290-7 | LIO-08R Status bits | Status | 209-216 | |
| | 20300-7 | LIO-08R Status bits | Status | 217-224 | |
| 11 | | Input common 3_24V | | | 11 |
| 36 | | Input common 4_24V | | | 28 |
| 26 | | Input common 3_0V | | | 18 |
| 31 | | Input common 4_0V | | | 23 |
| 15 | | +24V for output load | | | 15 |
| 22 | | +24V for output load | | | 42 |
| 25 | | +24V for output load | | | 48 |
| 40 | | +24V for output load | | | 32 |
| 47 | | +24V for output load | | | 43 |
| 12 | 30270 | User Output | Output | OT#(193) | 12 |
| 37 | 30271 | User Output | Output | OT#(194) | 29 |
| 13 | 30272 | User Output | Output | OT#(195) | 13 |
| 38 | 30273 | User Output | Output | OT#(196) | 30 |
| 16 | 30274 | User Output | Output | OT#(197) | 16 |
| 41 | 30275 | User Output | Output | OT#(198) | 33 |
| 17 | 30276 | User Output | Output | OT#(199) | 17 |
| 42 | 30277 | User Output | Output | OT#(200) | 50 |
| 19 | 30280 | User Output | Output | OT#(201) | 36 |
| 44 | 30281 | User Output | Output | OT#(202) | 37 |
| 20 | 30282 | User Output | Output | OT#(203) | 38 |
| 45 | 30283 | User Output | Output | OT#(204) | 39 |
| 23 | 30284 | User Output | Output | OT#(205) | 44 |

| CN1 Pin # | C/I/O | Description | Signal Type | Inform Name | 159804-3 Breakout Card Pin # |
|------------------|--------------|--------------------|--------------------|--------------------|-------------------------------------|
| 48 | 30285 | User Output | Output | OT#(206) | 45 |
| 24 | 30286 | User Output | Output | OT#(207) | 46 |
| 49 | 30287 | User Output | Output | OT#(208) | 47 |
| | 30290-7 | System Reservation | n/a | 209-216 | |
| | 30300-7 | System Reservation | n/a | 217-224 | |

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OPTION ADDENDUM

FOR EXPANDED I/O MAPPING

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