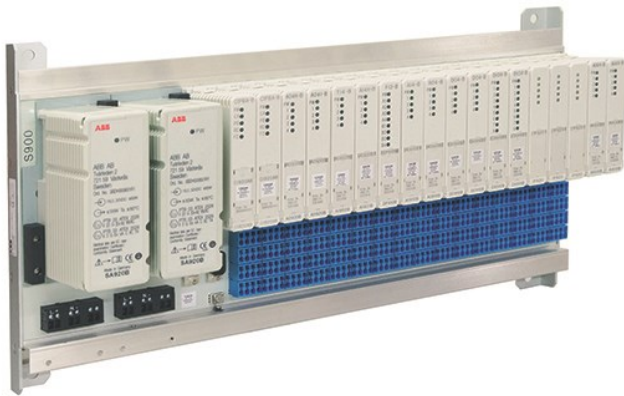


# I/O Systems - S900 I/O

## ABB Ability™ System 800xA® hardware selector



S900 is a remote I/O family designed for applications with hazardous-rated areas according to ATEX. The I/O system can be safely located directly in ATEX Zone 1 and 2, saving wiring and signal conditioning costs.

S900 I/O incorporates complete redundant networking capability, including redundancy in power supply, communication interface, and PROFIBUS DP connection.

The main areas of application are the chemical industry, the pharmaceutical industry, and the oil and gas industry. Throughout its proven track record and wide temperature range and coating, the S900 I/O has been used in many areas where durable and long-standing equipment is needed.

Extended diagnostic functions and the use of HART®-compliant field devices in the Fieldbus system reduce the maintenance effort and therefore, lead to savings throughout the service life of the plant.

For updated information regarding System 800xA please visit our 800xA Hardware Selector. In the HW-selector, you can compare different communication modules, AC 800M controllers, S800 I/O modules, S900 I/O modules, Select I/O modules, module termination units, network equipment, panels, power supplies, and voters, and also print your PDF files or save an outline of all modules in the product area.

Below is an outline of the range of different S900 I/O modules available.



| Specific feature <sup>1</sup>        | AI910B (AI4-B)                       | AI910N (AI4)    | AI910S (AI4-Ex)     | AI930B (AI4H-B) |
|--------------------------------------|--------------------------------------|-----------------|---------------------|-----------------|
| <b>General info</b>                  |                                      |                 |                     |                 |
| Article number                       | 3KDE175512L9100                      | 3KDE175513L9100 | 3KDE175511L9100     | 3KDE175512L9300 |
| Type                                 | Analog Input                         |                 |                     |                 |
| Number of channels                   | 4                                    |                 |                     |                 |
| Signal type                          | 4...20 mA                            |                 |                     |                 |
| HART                                 | No                                   |                 |                     | Yes             |
| SOE                                  | N/A                                  |                 |                     |                 |
| Redundancy                           | No                                   |                 |                     |                 |
| Intrinsic safety                     | Yes                                  | No              | Yes                 |                 |
| Mechanics                            | S900                                 |                 |                     |                 |
| <b>Dimensions</b>                    |                                      |                 |                     |                 |
| Width                                | 20 mm (0.79 in.)                     |                 |                     |                 |
| Depth                                | 104 mm (4.09 in.)                    |                 |                     |                 |
| Height                               | 104 mm (4.09 in.)                    |                 |                     |                 |
| Weight                               | 0.13 kg (0.29 lbs.)                  |                 | 0.14 kg (0.31 lbs.) |                 |
| <b>Environment and certification</b> |                                      |                 |                     |                 |
| RoHS compliance                      | DIRECTIVE/2011/65/EU (EN 50581:2012) |                 |                     |                 |
| WEEE compliance                      | DIRECTIVE/2012/19/EU                 |                 |                     |                 |

<sup>1</sup> For detailed information on each module, please visit: [800xahardwareselector.automation.abb.com](http://800xahardwareselector.automation.abb.com)



| Specific feature <sup>1</sup>        | AI930N (AI4H)                        | AI930S (AI4H-Ex)    | AI931B (AI4H-B)     | AI931N (AI4H)        |
|--------------------------------------|--------------------------------------|---------------------|---------------------|----------------------|
| <b>General info</b>                  |                                      |                     |                     |                      |
| Article number                       | 3KDE175513L9300                      | 3KDE175511L9300     | 3KDE175512L9310     | 3KDE175513L9310      |
| Type                                 | Analog Input                         |                     |                     |                      |
| Number of channels                   | 4                                    |                     |                     |                      |
| Signal type                          | 4...20 mA                            |                     |                     |                      |
| HART                                 | Yes                                  |                     |                     |                      |
| SOE                                  | N/A                                  |                     |                     |                      |
| Redundancy                           | No                                   |                     |                     |                      |
| Intrinsic safety                     | No                                   | Yes                 |                     | No                   |
| Mechanics                            | S900                                 |                     |                     |                      |
| <b>Dimensions</b>                    |                                      |                     |                     |                      |
| Width                                | 20 mm (0.79 in.)                     |                     |                     |                      |
| Depth                                | 104 mm (4.09 in.)                    |                     |                     |                      |
| Height                               | 104 mm (4.09 in.)                    |                     |                     |                      |
| Weight                               | 0.135 kg (0.297 lbs.)                | 0.14 kg (0.30 lbs.) | 0.13 kg (0.28 lbs.) | 0.125 kg (0.28 lbs.) |
| <b>Environment and certification</b> |                                      |                     |                     |                      |
| RoHS compliance                      | DIRECTIVE/2011/65/EU (EN 50581:2012) |                     |                     |                      |
| WEEE compliance                      | DIRECTIVE/2012/19/EU                 |                     |                     |                      |

<sup>1</sup> For detailed information on each module, please visit: [800xahardwareselector.automation.abb.com](http://800xahardwareselector.automation.abb.com)



| Specific feature <sup>1</sup>        | AI931S (AI4H-Ex)                     | AI950B (TI4-B)       | AI950N (TI4)        | AI950S (TI4-Ex)      |
|--------------------------------------|--------------------------------------|----------------------|---------------------|----------------------|
| <b>General info</b>                  |                                      |                      |                     |                      |
| Article number                       | 3KDE175511L9310                      | 3KDE175522L9500      | 3KDE175523L9500     | 3KDE175521L9500      |
| Type                                 | Analog Input                         |                      |                     |                      |
| Number of channels                   | 4                                    |                      |                     |                      |
| Signal type                          | 4...20 mA                            |                      |                     |                      |
| HART                                 | Yes                                  |                      |                     |                      |
| SOE                                  | N/A                                  |                      |                     |                      |
| Redundancy                           | No                                   |                      |                     |                      |
| Intrinsic safety                     | Yes                                  |                      | No                  | Yes                  |
| Mechanics                            | S900                                 |                      |                     |                      |
| <b>Dimensions</b>                    |                                      |                      |                     |                      |
| Width                                | 20 mm (0.79 in.)                     |                      |                     |                      |
| Depth                                | 104 mm (4.09 in.)                    |                      |                     |                      |
| Height                               | 104 mm (4.09 in.)                    |                      |                     |                      |
| Weight                               | 0.13 kg (0.28 lbs.)                  | 0.135 kg (0.30 lbs.) | 0.13 kg (0.29 lbs.) | 0.135 kg (0.30 lbs.) |
| <b>Environment and certification</b> |                                      |                      |                     |                      |
| RoHS compliance                      | DIRECTIVE/2011/65/EU (EN 50581:2012) |                      |                     |                      |
| WEEE compliance                      | DIRECTIVE/2012/19/EU                 |                      |                     |                      |

<sup>1</sup> For detailed information on each module, please visit: [800xahardwareselector.automation.abb.com](http://800xahardwareselector.automation.abb.com)



| Specific feature <sup>1</sup>        | AO910B (AO4-B)                       | AO910N (AO4)              | AO910S (AO4-Ex)      | AO920B (AO4I-B)     |
|--------------------------------------|--------------------------------------|---------------------------|----------------------|---------------------|
| <b>General info</b>                  |                                      |                           |                      |                     |
| Article number                       | 3KDE175532L9100                      | 3KDE175533L9100           | 3KDE175531L9100      | 3KDE175532L9200     |
| Type                                 | Analog Output                        |                           |                      |                     |
| Number of channels                   | 4                                    |                           |                      |                     |
| Signal type                          | 4...20 mA                            | 0/4...20 mA for actuators |                      |                     |
| HART                                 | No                                   |                           |                      |                     |
| SOE                                  | N/A                                  |                           |                      |                     |
| Redundancy                           | No                                   |                           |                      |                     |
| Intrinsic safety                     | Yes                                  | No                        | Yes                  |                     |
| Mechanics                            | S900                                 |                           |                      |                     |
| <b>Dimensions</b>                    |                                      |                           |                      |                     |
| Width                                | 20 mm (0.79 in.)                     |                           |                      |                     |
| Depth                                | 104 mm (4.09 in.)                    |                           |                      |                     |
| Height                               | 104 mm (4.09 in.)                    |                           |                      |                     |
| Weight                               | 0.135 kg (0.30 lbs.)                 | 0.13 kg (0.29 lbs.)       | 0.135 kg (0.30 lbs.) | 0.14 kg (0.31 lbs.) |
| <b>Environment and certification</b> |                                      |                           |                      |                     |
| RoHS compliance                      | DIRECTIVE/2011/65/EU (EN 50581:2012) |                           |                      |                     |
| WEEE compliance                      | DIRECTIVE/2012/19/EU                 |                           |                      |                     |

<sup>1</sup> For detailed information on each module, please visit: [800xahardwareselector.automation.abb.com](http://800xahardwareselector.automation.abb.com)



| Specific feature <sup>1</sup>        | AO920N (AO4I)                        | AO920S (AO4I-Ex) | AO930B (AO4H-B) | AO930N (AO4H)       |
|--------------------------------------|--------------------------------------|------------------|-----------------|---------------------|
| <b>General info</b>                  |                                      |                  |                 |                     |
| Article number                       | 3KDE175533L9200                      | 3KDE175531L9200  | 3KDE175532L9300 | 3KDE175533L9300     |
| Type                                 | Analog Output                        |                  |                 |                     |
| Number of channels                   | 4                                    |                  |                 |                     |
| Signal type                          | 0/4...20 mA for actuators            | 4...20 mA        |                 |                     |
| HART                                 | No                                   |                  | Yes             |                     |
| SOE                                  | N/A                                  |                  |                 |                     |
| Redundancy                           | No                                   |                  |                 |                     |
| Intrinsic safety                     | No                                   | Yes              | No              |                     |
| Mechanics                            | S900                                 |                  |                 |                     |
| <b>Dimensions</b>                    |                                      |                  |                 |                     |
| Width                                | 20 mm (0.79 in.)                     |                  |                 |                     |
| Depth                                | 104 mm (4.09 in.)                    |                  |                 |                     |
| Height                               | 104 mm (4.09 in.)                    |                  |                 |                     |
| Weight                               | 0.135 kg (0.30 lbs.)                 |                  |                 | 0.13 kg (0.28 lbs.) |
| <b>Environment and certification</b> |                                      |                  |                 |                     |
| RoHS compliance                      | DIRECTIVE/2011/65/EU (EN 50581:2012) |                  |                 |                     |
| WEEE compliance                      | DIRECTIVE/2012/19/EU                 |                  |                 |                     |

<sup>1</sup> For detailed information on each module, please visit: [800xahardwareselector.automation.abb.com](http://800xahardwareselector.automation.abb.com)



| Specific feature <sup>1</sup>        | AO930S (AO4H-Ex)                     | CI920AB (CIPBA-B)   | CI920AN (CIPBA)         | CI920AS (CIPBA-Ex)  |
|--------------------------------------|--------------------------------------|---------------------|-------------------------|---------------------|
| <b>General info</b>                  |                                      |                     |                         |                     |
| Article number                       | 3KDE175531L9300                      | 3BDH000691R1        | 3BDH000692R1            | 3BDH000690R1        |
| Type                                 | Analog Output                        |                     |                         |                     |
| Number of channels                   | 4                                    |                     |                         |                     |
| Signal type                          | 4...20 mA                            |                     | Communication interface |                     |
| HART                                 | Yes                                  |                     |                         |                     |
| SOE                                  | N/A                                  |                     |                         |                     |
| Redundancy                           | No                                   | Yes                 |                         |                     |
| Intrinsic safety                     | Yes                                  |                     | No                      | Yes                 |
| Mechanics                            | S900                                 |                     |                         |                     |
| <b>Dimensions</b>                    |                                      |                     |                         |                     |
| Width                                | 20 mm (0.79 in.)                     |                     |                         |                     |
| Depth                                | 104 mm (4.09 in.)                    |                     |                         |                     |
| Height                               | 104 mm (4.09 in.)                    |                     |                         |                     |
| Weight                               | 0.135 kg (0.30 lbs.)                 | 0.13 kg (0.29 lbs.) |                         | 0.14 kg (0.31 lbs.) |
| <b>Environment and certification</b> |                                      |                     |                         |                     |
| RoHS compliance                      | DIRECTIVE/2011/65/EU (EN 50581:2012) |                     |                         |                     |
| WEEE compliance                      | DIRECTIVE/2012/19/EU                 |                     |                         |                     |

<sup>1</sup> For detailed information on each module, please visit: [800xahardwareselector.automation.abb.com](http://800xahardwareselector.automation.abb.com)



| Specific feature <sup>1</sup>        | DO910B (D04-B)                       | DO910N (D04)         | DO910S (D04-Ex) | DO930N (R06)        |
|--------------------------------------|--------------------------------------|----------------------|-----------------|---------------------|
| <b>General info</b>                  |                                      |                      |                 |                     |
| Article number                       | 3KDE175322L9100                      |                      | 3KDE175321L9100 | 3BDS014114          |
| Type                                 | Digital Output                       |                      |                 |                     |
| Number of channels                   | 4                                    |                      |                 |                     |
| Signal type                          | Solenoid driver                      |                      |                 |                     |
| SOE                                  | N/A                                  |                      |                 |                     |
| Redundancy                           | No                                   |                      |                 |                     |
| Intrinsic safety                     | Yes                                  | No                   | Yes             | No                  |
| Mechanics                            | S900                                 |                      |                 |                     |
| <b>Dimensions</b>                    |                                      |                      |                 |                     |
| Width                                | 20 mm (0.79 in.)                     |                      |                 |                     |
| Depth                                | 104 mm (4.09 in.)                    |                      |                 |                     |
| Height                               | 104 mm (4.09 in.)                    |                      |                 |                     |
| Weight                               | 0.13 kg (0.28 lbs.)                  | 0.135 kg (0.30 lbs.) |                 | 0.17 kg (0.37 lbs.) |
| <b>Environment and certification</b> |                                      |                      |                 |                     |
| RoHS compliance                      | DIRECTIVE/2011/65/EU (EN 50581:2012) |                      |                 |                     |
| WEEE compliance                      | DIRECTIVE/2012/19/EU                 |                      |                 |                     |

<sup>1</sup> For detailed information on each module, please visit: [800xahardwareselector.automation.abb.com](http://800xahardwareselector.automation.abb.com)





| Specific feature <sup>1</sup>        | DP910B (FI2-B)                       | DP910N (FI2)    | DP910S (FI2-Ex) | DX910B (DIO8-B) |
|--------------------------------------|--------------------------------------|-----------------|-----------------|-----------------|
| <b>General info</b>                  |                                      |                 |                 |                 |
| Article number                       | 3KDE175362L9100                      | 3KDE175363L9100 | 3KDE175361L9100 | 3KDE175312L9100 |
| Type                                 | Pulse counter                        |                 |                 | Digital Input   |
| Number of channels                   |                                      |                 |                 | 8               |
| Signal type                          | Frequency input                      |                 |                 |                 |
| SOE                                  | N/A                                  |                 |                 |                 |
| Redundancy                           | No                                   |                 |                 |                 |
| Intrinsic safety                     | Yes                                  | No              | Yes             |                 |
| Mechanics                            | S900                                 |                 |                 |                 |
| <b>Dimensions</b>                    |                                      |                 |                 |                 |
| Width                                | 20 mm (0.79 in.)                     |                 |                 |                 |
| Depth                                | 104 mm (4.09 in.)                    |                 |                 |                 |
| Height                               | 104 mm (4.09 in.)                    |                 |                 |                 |
| Weight                               | 0.125 kg (0.27 lbs.)                 |                 |                 |                 |
| <b>Environment and certification</b> |                                      |                 |                 |                 |
| RoHS compliance                      | DIRECTIVE/2011/65/EU (EN 50581:2012) |                 |                 |                 |
| WEEE compliance                      | DIRECTIVE/2012/19/EU                 |                 |                 |                 |

<sup>1</sup> For detailed information on each module, please visit: [800xahardwareselector.automation.abb.com](http://800xahardwareselector.automation.abb.com)



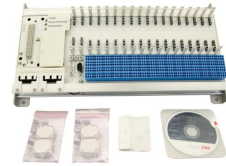
| Specific feature <sup>1</sup>        | DX910N (DIO8)                        | DX910S (DIO8-Ex) | IP920                 | SA920B Power Supply          |
|--------------------------------------|--------------------------------------|------------------|-----------------------|------------------------------|
| <b>General info</b>                  |                                      |                  |                       |                              |
| Article number                       | 3KDE175313L9100                      | 3KDE175311L9100  | 3KDE175831L9200       | 3BDH000601R1                 |
| Type                                 | Digital Input                        |                  |                       |                              |
| Number of channels                   | 8                                    |                  |                       |                              |
| Signal type                          |                                      |                  | Cover for empty slots | Power supply                 |
| SOE                                  | N/A                                  |                  |                       |                              |
| Redundancy                           | No                                   |                  |                       | Yes                          |
| Intrinsic safety                     | No                                   | Yes              |                       | Yes                          |
| Mechanics                            | S900                                 |                  |                       |                              |
| Signal specification                 |                                      |                  |                       | 24 V d.c. (19.2 - 32 V d.c.) |
| <b>Dimensions</b>                    |                                      |                  |                       |                              |
| Width                                | 20 mm (0.79 in.)                     |                  |                       | 47 mm (1.85 in.)             |
| Depth                                | 104 mm (4.09 in.)                    |                  |                       | 117 mm (4.6 in.)             |
| Height                               | 104 mm (4.09 in.)                    |                  |                       | 129 mm 5.1 in.)              |
| Weight                               | 0.125 kg (0.27 lbs.)                 |                  | 0.10 kg (0.22 lb)     | 1.6 kg (3.5 lbs.)            |
| <b>Environment and certification</b> |                                      |                  |                       |                              |
| RoHS compliance                      | DIRECTIVE/2011/65/EU (EN 50581:2012) |                  |                       |                              |
| WEEE compliance                      | DIRECTIVE/2012/19/EU                 |                  |                       |                              |

<sup>1</sup> For detailed information on each module, please visit: [800xahardwareselector.automation.abb.com](http://800xahardwareselector.automation.abb.com)



| Specific feature <sup>1</sup>        | SA920N Power Supply                  | SA920S Power Supply | TU921B RTU (TU16R-B)       | TU921N RTU (TU16R) |
|--------------------------------------|--------------------------------------|---------------------|----------------------------|--------------------|
| <b>General info</b>                  |                                      |                     |                            |                    |
| Article number                       | 3BDH000600R1                         | 3BDH000602R1        | 3KDE175112L9210            | 3KDE175113L9210    |
| Signal type                          | Power supply                         |                     | Redundant termination unit |                    |
| SOE                                  | N/A                                  |                     |                            |                    |
| Redundancy                           | Yes                                  |                     | No                         |                    |
| Intrinsic safety                     | No                                   | Yes                 |                            |                    |
| Mechanics                            | S900                                 |                     |                            |                    |
| Signal specification                 | 24 V d.c. (19.2 - 32 V d.c.)         |                     |                            |                    |
| <b>Dimensions</b>                    |                                      |                     |                            |                    |
| Width                                | 47 mm (1.85 in.)                     |                     | 498 mm (19.6 in.)          |                    |
| Depth                                | 117 mm (4.6 in.)                     |                     | 147 mm (5.8 in.)           |                    |
| Height                               | 129 mm 5.1 in.)                      |                     | 274 mm (10.8 in.)          |                    |
| Weight                               | 1.6 kg (3.5 lbs.)                    | 1.55 kg (3.42 lbs.) | 3.54 kg (7.80 lbs.)        | 3.7 kg (8.15 lbs.) |
| <b>Environment and certification</b> |                                      |                     |                            |                    |
| RoHS compliance                      | DIRECTIVE/2011/65/EU (EN 50581:2012) |                     |                            |                    |
| WEEE compliance                      | DIRECTIVE/2012/19/EU                 |                     |                            |                    |

<sup>1</sup> For detailed information on each module, please visit: [800xahardwareselector.automation.abb.com](http://800xahardwareselector.automation.abb.com)



|                                      |                                      |
|--------------------------------------|--------------------------------------|
| <b>Specific feature <sup>1</sup></b> | <b>TU921S RTU (TU16R-Ex)</b>         |
| <b>General info</b>                  |                                      |
| Article number                       | 3KDE175111L9210                      |
| Signal type                          | Redundant termination unit           |
| SOE                                  | N/A                                  |
| Redundancy                           | No                                   |
| Intrinsic safety                     | Yes                                  |
| Mechanics                            | S900                                 |
| <b>Dimensions</b>                    |                                      |
| Width                                | 498 mm (19.6 in.)                    |
| Depth                                | 147 mm (5.8 in.)                     |
| Height                               | 274 mm (10.8 in.)                    |
| Weight                               | 3.79 kg (8.35 lbs.)                  |
| <b>Environment and certification</b> |                                      |
| RoHS compliance                      | DIRECTIVE/2011/65/EU (EN 50581:2012) |
| WEEE compliance                      | DIRECTIVE/2012/19/EU                 |

<sup>1</sup> For detailed information on each module, please visit: [800xahardwareselector.automation.abb.com](http://800xahardwareselector.automation.abb.com)

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