

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 IO modules, S900 IO modules, Select IO modules, module termination units, networks equipment, panels, power supplies, and voters, and also print your own 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 ¹	AI910B (AI4-B)	AI910N (AI4)	AI910S (AI4-Ex)	AI930B (AI4H-B)
General info				
Article number	3KDE175512L9100	3KDE175513L9100	3KDE175511L9100	3KDE175512L9300
Type	Analog Input			
Number of channels	4			
Signal type	4...20 mA			
HART	No			Yes
SOE	Yes			
Redundancy	No			
Intrinsic safety	Yes	No	Yes	
Mechanics	S900			
Dimensions				
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.)	
Environment and certification				
RoHS compliance	DIRECTIVE/2011/65/EU (EN 50581:2012)			
WEEE compliance	DIRECTIVE/2012/19/EU			

¹ For detailed information on each module, please visit: 800xahardwareselector.com



Specific feature ¹	AI930N (AI4H)	AI930S (AI4H-Ex)	AI931B (AI4H-B)	AI931N (AI4H)
General info				
Article number	3KDE175513L9300	3KDE175511L9300	3KDE175512L9310	3KDE175513L9310
Type	Analog Input			
Number of channels	4			
Signal type	4...20 mA			
HART	Yes			
SOE	Yes			
Redundancy	No			
Intrinsic safety	No	Yes		No
Mechanics	S900			
Dimensions				
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.)
Environment and certification				
RoHS compliance	DIRECTIVE/2011/65/EU (EN 50581:2012)			
WEEE compliance	DIRECTIVE/2012/19/EU			

¹ For detailed information on each module, please visit: 800xahardwareselector.com



Specific feature ¹	AI931S (AI4H-Ex)	AI950B (TI4-B)	AI950N (TI4)	AI950S (TI4-Ex)
General info				
Article number	3KDE175511L9310	3KDE175522L9500	3KDE175523L9500	3KDE175521L9500
Type	Analog Input			
Number of channels	4			
Signal type	4...20 mA			
HART	Yes			
SOE	Yes			
Redundancy	No			
Intrinsic safety	Yes		No	Yes
Mechanics	S900			
Dimensions				
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.)
Environment and certification				
RoHS compliance	DIRECTIVE/2011/65/EU (EN 50581:2012)			
WEEE compliance	DIRECTIVE/2012/19/EU			

¹ For detailed information on each module, please visit: 800xahardwareselector.com



Specific feature ¹	AO910B (AO4-B)	AO910N (AO4)	AO910S (AO4-Ex)	AO920B (AO4I-B)
General info				
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	Yes			
Redundancy	No			
Intrinsic safety	Yes	No	Yes	
Mechanics	S900			
Dimensions				
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.)
Environment and certification				
RoHS compliance	DIRECTIVE/2011/65/EU (EN 50581:2012)			
WEEE compliance	DIRECTIVE/2012/19/EU			

¹ For detailed information on each module, please visit: 800xahardwareselector.com



Specific feature ¹	AO920N (AO4I)	AO920S (AO4I-Ex)	AO930B (AO4H-B)	AO930N (AO4H)
General info				
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	Yes			
Redundancy	No			
Intrinsic safety	No	Yes		No
Mechanics	S900			
Dimensions				
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.)
Environment and certification				
RoHS compliance	DIRECTIVE/2011/65/EU (EN 50581:2012)			
WEEE compliance	DIRECTIVE/2012/19/EU			

¹ For detailed information on each module, please visit: 800xahardwareselector.com



Specific feature ¹	AO930S (AO4H-Ex)	CI920AB (CIPBA-B)	CI920AN (CIPBA)	CI920AS (CIPBA-Ex)
General info				
Article number	3KDE175531L9300	3BDH000691R1	3BDH000692R1	3BDH000690R1
Type	Analog Output			
Number of channels	4			
Signal type	4...20 mA		Communication interface	
HART	Yes			
SOE	Yes			
Redundancy	No	Yes		
Intrinsic safety	Yes		No	Yes
Mechanics	S900			
Dimensions				
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.)
Environment and certification				
RoHS compliance	DIRECTIVE/2011/65/EU (EN 50581:2012)			
WEEE compliance	DIRECTIVE/2012/19/EU			

¹ For detailed information on each module, please visit: 800xahardwareselector.com



Specific feature ¹	DO910B (D04-B)	DO910N (D04)	DO910S (D04-Ex)	DO930N (RO6)
General info				
Article number	3KDE175322L9100		3KDE175321L9100	3BDS014114
Type	Digital Output			
Number of channels	4			
Signal type	Solenoid driver			
SOE	Yes			
Redundancy	No			
Intrinsic safety	Yes	No	Yes	No
Mechanics	S900			
Dimensions				
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.)
Environment and certification				
RoHS compliance	DIRECTIVE/2011/65/EU (EN 50581:2012)			
WEEE compliance	DIRECTIVE/2012/19/EU			

¹ For detailed information on each module, please visit: 800xahardwareselector.com



Specific feature ¹	DP910B (FI2-B)	DP910N (FI2)	DP910S (FI2-Ex)	DX910B (DIO8-B)
General info				
Article number	3KDE175362L9100	3KDE175363L9100	3KDE175361L9100	3KDE175312L9100
Type	Pulse counter			Digital Input
Number of channels				8
Signal type	Frequency input			
SOE	Yes			
Redundancy	No			
Intrinsic safety	Yes	No	Yes	
Mechanics	S900			
Dimensions				
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.)			
Environment and certification				
RoHS compliance	DIRECTIVE/2011/65/EU (EN 50581:2012)			
WEEE compliance	DIRECTIVE/2012/19/EU			

¹ For detailed information on each module, please visit: 800xahardwareselector.com



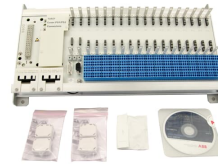
Specific feature ¹	DX910N (DIO8)	DX910S (DIO8-Ex)	IP920	SA920B Power Supply
General info				
Article number	3KDE175313L9100	3KDE175311L9100	3KDE175831L9200	3BDH000601R1
Type	Digital Input			
Number of channels	8			
Signal type			Cover for empty slots	Power supply
SOE	Yes			Yes
Redundancy	No			Yes
Intrinsic safety	No	Yes		Yes
Mechanics	S900			
Signal specification				24 V d.c. (19.2 - 32 V d.c.)
Dimensions				
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.)
Environment and certification				
RoHS compliance	DIRECTIVE/2011/65/EU (EN 50581:2012)			
WEEE compliance	DIRECTIVE/2012/19/EU			

¹ For detailed information on each module, please visit: 800xahardwareselector.com



Specific feature ¹	SA920N Power Supply	SA920S Power Supply	TU921B RTU (TU16R-B)	TU921N RTU (TU16R)
General info				
Article number	3BDH000600R1	3BDH000602R1	3KDE175112L9210	3KDE175113L9210
Signal type	Power supply		Redundant termination unit	
SOE	Yes			
Redundancy	Yes		No	
Intrinsic safety	No	Yes		
Mechanics	S900			
Signal specification	24 V d.c. (19.2 - 32 V d.c.)			
Dimensions				
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.)
Environment and certification				
RoHS compliance	DIRECTIVE/2011/65/EU (EN 50581:2012)			
WEEE compliance	DIRECTIVE/2012/19/EU			

¹ For detailed information on each module, please visit: 800xahardwareselector.com



Specific feature ¹	TU921S RTU (TU16R-Ex)
General info	
Article number	3KDE175111L9210
Signal type	Redundant termination unit
Redundancy	No
Intrinsic safety	Yes
Mechanics	S900
Dimensions	
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.)
Environment and certification	
RoHS compliance	DIRECTIVE/2011/65/EU (EN 50581:2012)
WEEE compliance	DIRECTIVE/2012/19/EU

¹ For detailed information on each module, please visit: 800xahardwareselector.com

solutions.abb/800xA
solutions.abb/controlsystems

800xA and Symphony Plus is a registered trademark of ABB. All rights to other trademarks reside with their respective owners.

We reserve the right to make technical changes to the products or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB does not assume any responsibility for any errors or incomplete information in this document.

We reserve all rights to this document and the items and images it contains. The reproduction, disclosure to third parties or the use of the content of this document – including parts thereof – are prohibited without ABB's prior written permission.

Copyright© 2023 ABB All rights reserved