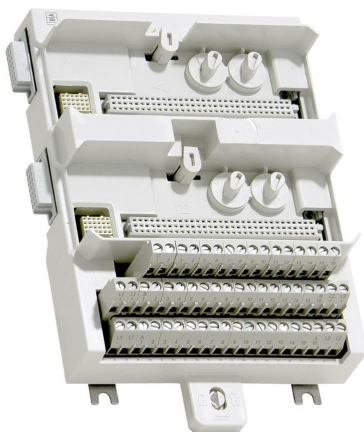# I/O MTUs - S800 I/O
Freelance hardware selector

S800 I/O is a comprehensive, distributed, and modular process I/O system that communicates with parent controllers over industry-standard field buses. Module Termination Units (MTUs) host S800 I/O modules and are keyed to ensure the correct module is used. Many Module Termination Units (MTUs) options are available for various S800 I/O modules to meet your project requirements.

By permitting installation in the field, close to sensors and actuators, S800 I/O reduces the installation cost by reducing the cost of cabling. And thanks to features such as "hot swap" of modules, "online" reconfiguration, and redundancy options, it contributes to keeping production – and thereby profits – up.

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, networks 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 MTUs for S800 I/O modules available.

Specific feature [1]	TU805K01	TU810V1	TU811V1	TU812V1
General info				
Article number	3BSE035990R1	3BSE013230R1	3BSE013231R1	3BSE013232R1
Connection	Terminal block			25 pin D-sub
Channels	16		8	16
Voltage	50 V		250 V	50 V
Use with I/O	DI801, DO801	AI810, AI815, AI820, AI830, AI830A, AI835, AI835A, AI845, AO810, AO810V2, AO815, AO820, AO845, AO845A, DI810, DI811, DI814, DI830, DI831, DI840, DI880, DI885, DO810, DO814, DO815, DO840, DO880, DP820, DP840	DI820, DI821, DO820, and DO821	AI810, AI815, AI820, AI830, AI830A, AI835, AI835A, AI845, AO810, AO810V2, AO815, AO820, AO845, AO845A, DI810, DI811, DI814, DI830, DI831, DI840, DI880, DI885, DO810, DO814, DO840, DO880, DP820 and DP840
Process connections	2 x 2 Process power terminals 2 x 16 Process power distribution terminals	2 x 2 Process power, 5 x 2 Process power (0 V)		25 pin (male) D-Sub connector up to 16 I/O signals
Type		Compact		
Mounting		Both directions		
Mounting detail		Horizontal 55 ºC (131 °F) Vertical 40 ºC (104 °F)	Horizontal 55 Cº (131 °F) Vertical 40 ºC (104 °F)	Horizontal 55 ºC (131 °F) Vertical 40 ºC (104 °F)
Single/redundant I/O		Single		
Dimensions				
Width	86.1 mm	64 mm (2.52 in.) including connector, 58.5 mm (2.3 in.) edge to edge installed	64 mm (2.52 in.) including connector, 58.5 mm (2.3 in.) edge to edge installed	
Depth	40.5 mm	64 mm (2.52 in.) including terminals	64 mm (2.52 in.), including terminals	
Height	40.5 mm	170 mm (6.7 in.) including latch		170 mm (6.7 in.), including latch
Weight	0.3 kg	0.17 kg (0.37 lbs)		
Environment and certification				
RoHS compliance	EN 50581:2012			
WEEE compliance	DIRECTIVE/2012/19/EU			

[1] For detailed information on each module, please visit: **freelancehardwareselector.automation.abb.com**

Specific feature [1]	TU813	TU814V1	TU818	TU819
General info				
Article number	3BSE036714R1	3BSE013233R1	3BSE069209R1	3BSE068891R1
Connection	Crimp Snap-in connector		Terminal block	25 pin D-sub
Channels	8	16	32	
Voltage	250 V	50 V		
Use with I/O	DI820, DI821, DI825, DO820, DO821 and AI825	AI810, AI815, AI820, AI830, AI835A, AI835, AI845, AO810, AO810V2, AO815, AO820, AO845, AO845A, DI810, DI811, DI814, DI830, DI831, DI840, DI880, DI885, DO810, DO814, DO815, DO840, DO880, DP820 and DP840	AI810, AI815, AI835A, AI843, AI845, AI880A, DI810, DI811, DI818, DI830, DI831, DI840, DI880, DI885, DO818, DP840	DI818 and DO818
Process connections	16	30 up to 16 I/O channels 2 x 2 Process power 2 x 5 Process power (0 V)	40 pole screw terminal	Two D-sub connectors 25 pin (male) up to 32 I/O signals
Type	Compact			
Mounting	Both directions			
Mounting detail	Horizontal 55 ºC (131 °F) Vertical 40 ºC (104 °F)			
Single/redundant I/O	Single		Single	
Dimensions				
Width	64 mm (2.52 in.) including connector, 58.5 mm (2.3 in.) edge to edge installed			
Depth	64 mm (2.52 in.), including terminals			
Height	170 mm (6.7 in.) including latch			
Weight	0.17 kg (0.37 lbs)			
Environment and certification				
RoHS compliance	EN 50581:2012			
WEEE compliance	DIRECTIVE/2012/19/EU			

[1] For detailed information on each module, please visit: **freelancehardwareselector.automation.abb.com**

Specific feature [1]	TU830V1	TU831V1	TU833	TU835V1
General info				
Article number	3BSE013234R1	3BSE013235R1	3BSE038726R1	3BSE013236R1
Connection	Terminal block		Crimp Snap-in connector	Terminal block
Channels	16	8	16	8
Voltage	50 V	250 V	50 V	
Use with I/O	AI810, AI815, AI820, AI830, AI830A, AI835, AI835A, AI843, AI845, AO810, AO810V2, AO815, AO820, AO845, AO845A, DI810, DI811, DI814, DI818, DI830, DI831, DI840, DI880, DI885, DO810, DO814, DO815, DO818, DO840, DO880, DP820 and DP840	DI820, DI821, DO820, and DO821	AI810, AI815, AI820, AI830, AI830A, AI835, AI835A, AI843, AI845, AO810, AO810V2, AO815, AO820, AO845, AO845A, DI810, DI811, DI814, DI830, DI831, DI840, DI880, DI885, DO810, DO814, DO815, DO840, DO880, DP820 and DP840	AI810, AI815 and AI845
Process connections	56	16 up to 8 I/O channels (2 terminals per channel)	56 up to 16 I/O channels (2 terminals per channel) 4 Process power 6.3 A 10 x 2 Process power (0 V)	16 up to 8 I/O channels (2 terminals per channel) 4 Process power 4 Process power (0V)
Type	Extended			
Mounting	Both directions			
Mounting detail	55 ºC (131 °F)			
Single/redundant I/O	Single			
Dimensions				
Width	126 mm (5 in.) including connector, 120.5 mm (4.74 in.) edge to edge installed	126 mm (5 in.) including connector, 120.5 mm (4.74 in.) edge to edge installed	126 mm (5 in.) including connector, 120.5 mm (4.74 in.) edge to edge installed	
Depth	64 mm (2.52 in.) including terminals			
Height	110 mm (4.3 in.)		105 mm (4.1 in.)	110 mm (4.3 in.)
Weight	0.28 kg (0.6 lbs)	0.22 kg (0.48 lbs)	0.28 kg (0.6 lbs)	0.26 kg (0.57 lbs)
Environment and certification				
RoHS compliance	EN 50581:2012			
WEEE compliance	DIRECTIVE/2012/19/EU			

[1] For detailed information on each module, please visit: **freelancehardwareselector.automation.abb.com**

Specific feature [1]	TU836V1	TU837V1	TU838	TU839
General info				
Article number	3BSE013237R1	3BSE013238R1	3BSE008572R1	3BSE046966R1
Connection	Terminal block			
Channels	8		16	8
Voltage	250 V		50 V	250 V
Use with I/O	DO820, and DO821		AI810, AI815, AI845, DI810, DI811, DI814, DI830, DI831, DI840 and DO814	DI820, DI821and DI825
Process connections	16 up to 8 I/O channels (2 terminals per channel) 4 Process power 4 Process power (0V)	28 up to 8 I/O channels (2 terminals per channel) 2 x 6 power common terminals	40 up to 16 I/O channels 8 fused sensor power outlets 4 Process power 12 Process power (0 V)	28 up to 8 I/O channels (2 terminals per channel) 2x6 Process Power terminals 0.2 A
Type	Extended			
Mounting	Both directions			
Mounting detail	55 °C (131 °F)			
Single/redundant I/O	Single			
Dimensions				
Width	126 mm (5 in.) including connector, 120.5 mm (4.74 in.) edge to edge installed			126 mm (5 in.) including connector, 120.5 mm (4.74 in.) edge to edge installed.
Depth	64 mm (2.52 in.) including terminals			
Height	110 mm (4.3 in.)			
Weight	0.26 kg (0.57 lbs)			0.28 kg (0.6 lbs)
Environment and certification				
RoHS compliance	EN 50581:2012			
WEEE compliance	DIRECTIVE/2012/19/EU			

[1] For detailed information on each module, please visit: **freelancehardwareselector.automation.abb.com**

Specific feature [1]	TU842	TU843	TU844	TU845
General info				
Article number	3BSE020850R1	3BSE021443R1	3BSE021445R1	3BSE021447R1
Connection	Terminal block			
Channels	16		8	
Voltage	50 V			
Use with I/O	AI843, AO845, AO845A, DI840, DI880, DO840, DO880 and DP840		AI845, AI880, AI880A and DP840	
Process connections	56 up to 16 I/O channels (2 terminals per channel), 4 Process power, 20 Process power (0 V)	56 up to 16 I/O channels (2 terminals per channel) 4 Process power 20 Process power (0 V)	40 up to 8 I/O channels (2 terminals per channel) 4 Process power 20 Process power (0 V)	
Type	Redundant			
Mounting	Horizontal	Vertical	Horizontal	Vertical
Mounting detail	55 º (131 °F)			
Single/redundant I/O	Redundant			
Dimensions				
Width	131 mm (5.16") including connector, 124 mm (4.88") edge to edge installed	131 mm (5.16") including connector, 124 mm (4.88") edge to edge installed		
Depth	64 mm (2.52") including terminals			
Height	186.5 mm (7.34") including locking device			
Weight	0.6 kg (1.3 lbs.)			
Environment and certification				
RoHS compliance	EN 50581:2012			
WEEE compliance	DIRECTIVE/2012/19/EU			

[1] For detailed information on each module, please visit: **freelancehardwareselector.automation.abb.com**

Specific feature [1]	TU850	TU851	TU852	TU854
General info				
Article number	3BSE050930R1	3BSE068782R1	3BSE069964R1	3BSE069966R1
Connection	Terminal block		25 pin D-sub	
Channels	16			
Voltage	50 V	250 V	50 V	
Use with I/O	AI810, DI810, DI811,DI830, DI831	DI820, DI821, DI825, DI828, DO820, DO821, and DO828	AI843, AO845A, DI840, DI880, DO840, DO880 and DP840	AI845, AI880A and DP840
Process connections	40 up to 16 I/O channels 16 current limited sensor/transmitter power outlets D-sub connectors 25 pin (male)	32 up to 16 I/O channels	16 up to 16 I/O channels (2 terminals per channel), Two D-sub connectors 25 pin (male)	up to 8 I/O channels (2 terminals per channel) D-sub connector 25 pin (male)
Type	Extended		Redundant	
Mounting	Both directions		Horizontal	
Mounting detail	55 º (131 °F)			55 ºC (131 °F)
Single/redundant I/O	Single		Redundant	
Dimensions				
Width	126 mm (5 in.) including connector, 120.5 mm (4.74 in.) edge to edge installed		131 mm (5.16 in.) including connector, 124 mm (4.88 in.) edge to edge installed	
Depth	64 mm (2.52 in.) including terminals			
Height	110 mm (4.3 in.)		186.5 mm (7.34 in.) including locking device	
Weight	0.26 kg (0.57 lbs)	0.22 kg (0.48 lbs)	0.55 kg (1.2 lbs)	260 g (9.17 oz)
Environment and certification				
RoHS compliance	EN 50581:2012			
WEEE compliance	DIRECTIVE/2012/19/EU			

[1] For detailed information on each module, please visit: **freelancehardwareselector.automation.abb.com**

Specific feature [1]	TU890	TU891
General info		
Article number	3BSC690075R1	3BSC840157R1
Connection	Terminal block	
Channels	8	
Voltage	24 V	
Use with I/O	AI890, AI893, AI895, AO890, AO895, DI890, DO890	
Process connections	27 blue terminals	27 gray terminals
Type	Compact	
Mounting	Horizontal	
Mounting detail	55 º (131 °F)	55 ºC (131 °F)
Single/redundant I/O	Single	
Dimensions		
Width	64 mm (1.77 in.) including connector, 58.5 mm (2.3 in.) edge to edge installed	
Depth	58 mm (2.28 in.), 106 mm (4.2 in.) including terminals	
Height	194 mm (7.6 in.) including latch	
Weight	0.17 kg (0.37 lbs.)	0.17 kg (0.37 lbs)
Environment and certification		
RoHS compliance	EN 50581:2012	
WEEE compliance	DIRECTIVE/2012/19/EU	

[1] For detailed information on each module, please visit: **freelancehardwareselector.automation.abb.com**

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