800F Enclosed E-Stop Stations

Quick Installation for GuardLink and SensaGuard Applications

Allen-Bradley

Features and Benefits

- Pre-wired for quick connect with 5- or 8-pin SensaGuard™ switches and 5-pin EMSS GuardLink enabled tap
- Pre-tested and factory sealed for time savings on wiring and set-up
- Illuminated when activated for ease and speed of identification
- External mounting feet for faster installation
- Self-monitoring contact block for increased safety
- Maintains PLe, Cat 4, SIL 3 rating
- Flexibility to use in non-SensaGuard wired illuminated E-stop series

GuardLink™

GuardLink is a safety-based communications protocol that links safety to The Connected Enterprise. Allen-Bradley® Guardmaster® smart safety devices featuring GuardLink technology deliver information, advanced functionality and flexibility, while enhancing safety and increasing efficiency machine- and plant-wide.

Pre-configured wiring for easy installation in GuardLink and SensaGuard applcations

When it comes to machine safety, Rockwell Automation knows that protection of personnel and equipment is your main concern. At the same time, flexibility and productivity are points that must also be considered as you design your safety system. Optimize all these with the Allen-Bradley® Bulletin 800F E-stop push button stations pre-wired for use with the GuardLink enabled taps and the SensaGuard™ family of non-contact safety switches.

The pre-wired 800F E-stop push button stations allow for quick installation with the 5-pin EMSS GuardLink enabled tap and the 5- and 8-pin SensaGuard switches. The combination allows for flexibility of configurations to meet your application needs. The PLe, Cat 4, SIL 3 rating is maintained in both GuardLink and SensaGuard series connections.

Bulletin 440N SensaGuard Non-Contact Switches

Ideal for sliding, hinged or lift off machine guard doors, non-contact switches offer simple setup and alignment, less mechanical wear and fully-sealed IP67 housings. They include:
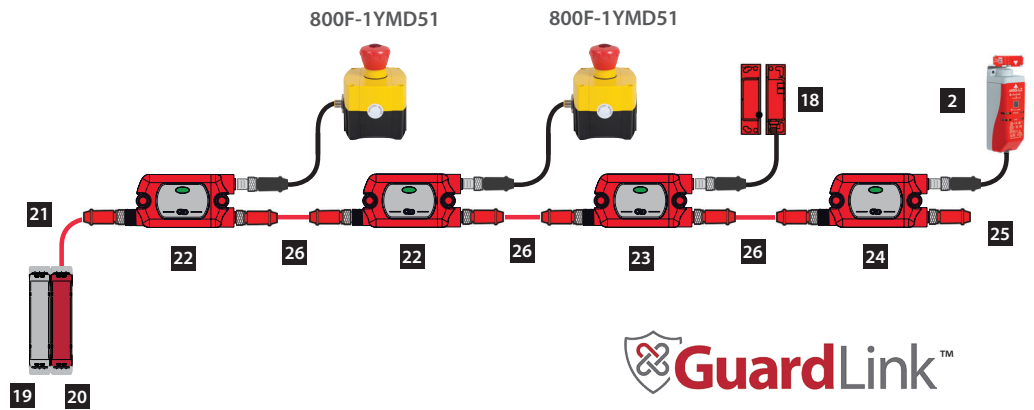
- RFID-coded switches (standard and unique coding)
- Plastic or metal housings

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Application Configurations

The following are several possible wiring configurations utilizing the 5- and 8-pin 800F enclosed E-stop stations with the GuardLink and SensaGuard product lines:
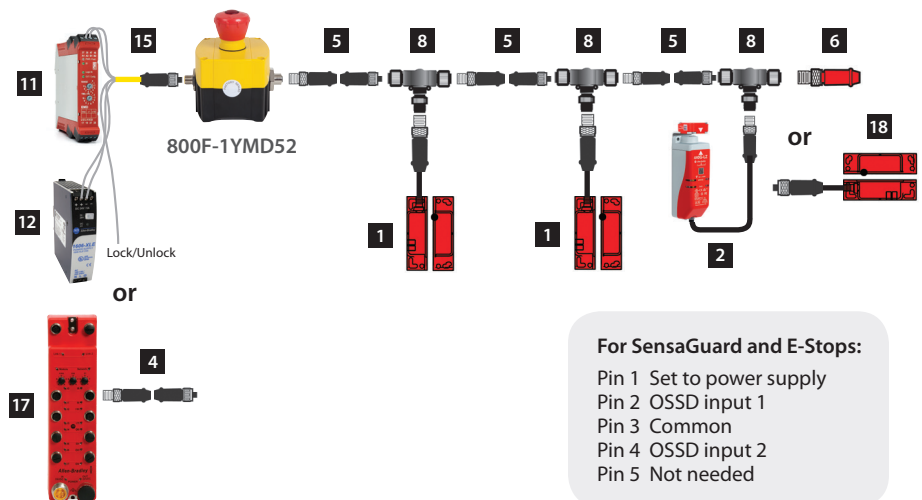
800F-1YMD51

- For use with GuardLink enabled taps
- Illuminated when activated
- 2 N.C. circuits (safety)
- 24V AC/DC
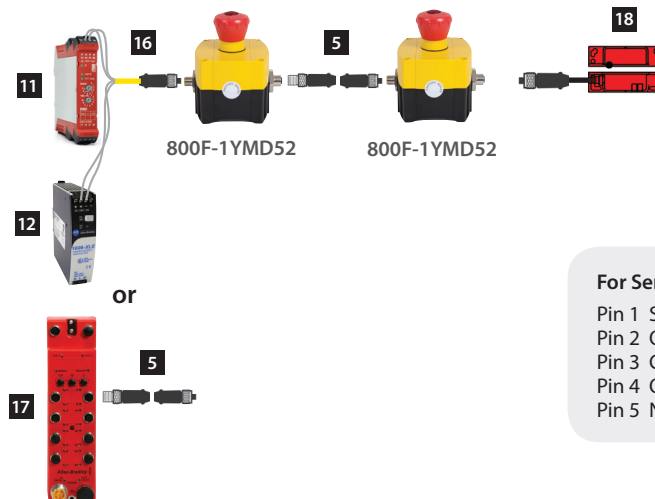- External panel mounting holes

800F-1YMD52

- For use with 5-pin SensaGuard or 8-pin 440G-LZ and TLS-Z Guard Locking Switches with t-ports
- Illuminated when activated
- 2 N.C. circuits (safety)
- 1 N.O. circuit (illumination)
- 24V AC/DC
- External panel mounting holes

For SensaGuard and E-Stops:

Pin 1 Set to power supply
Pin 2 OSSD input 1
Pin 3 Common
Pin 4 OSSD input 2
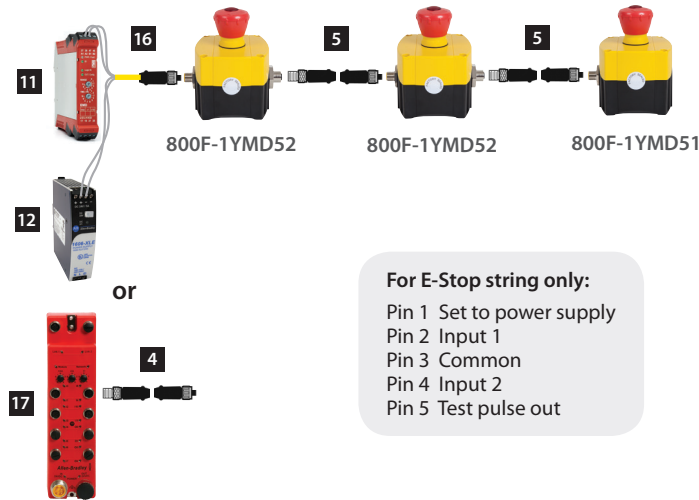Pin 5 Not needed

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- Illuminated when activated
- 2 N.C. circuits (safety)
- 1 N.O. circuit (illumination)
- 24V AC/DC
- External panel mounting holes

For SensaGuard and E-Stops:

Pin 1 Set to power supply
Pin 2 OSSD input 1
Pin 3 Common
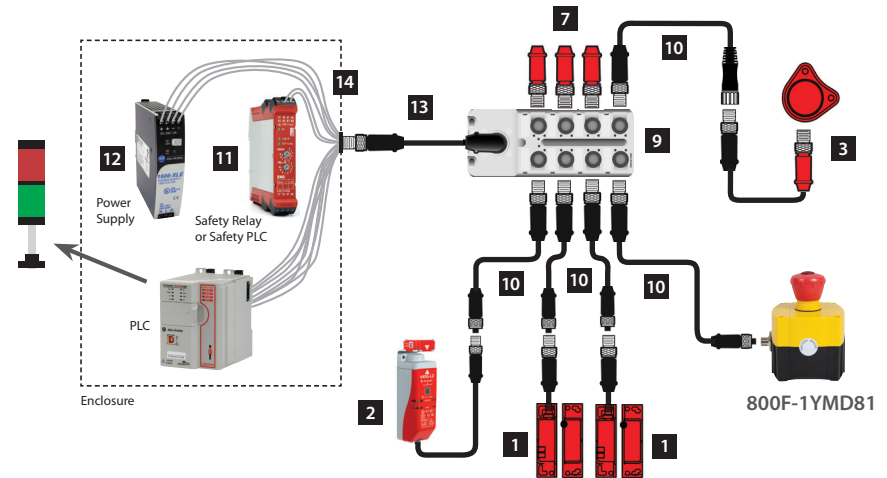Pin 4 OSSD input 2
Pin 5 Not needed

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- Non SensaGuard application
- For 5-pin series E-Stop applications
- Illuminated when activated
- 2 N.C. circuits (safety)
- 1 N.O. circuit (illumination)
- 24V AC/DC
- External panel mounting holes

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or

For E-Stop string only:

Pin 1 Set to power supply
Pin 2 Input 1
Pin 3 Common
Pin 4 Input 2
Pin 5 Test pulse out

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- For 8-pin safety distribution boxes
- Illuminated when activated
- 2 N.C. circuits (safety)
- 1 N.O. circuit (illumination)
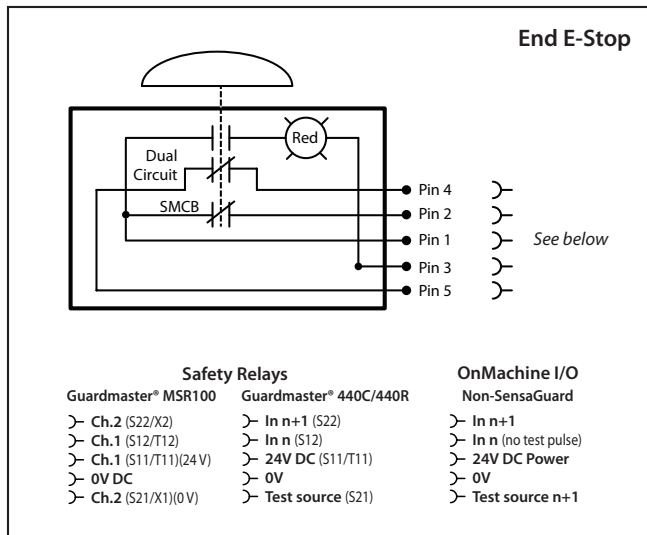- 24V AC/DC
- External panel mounting holes

Power Supply

Safety Relay or Safety PLC

PLC

Enclosure

800F-1YMD81

Represented Products

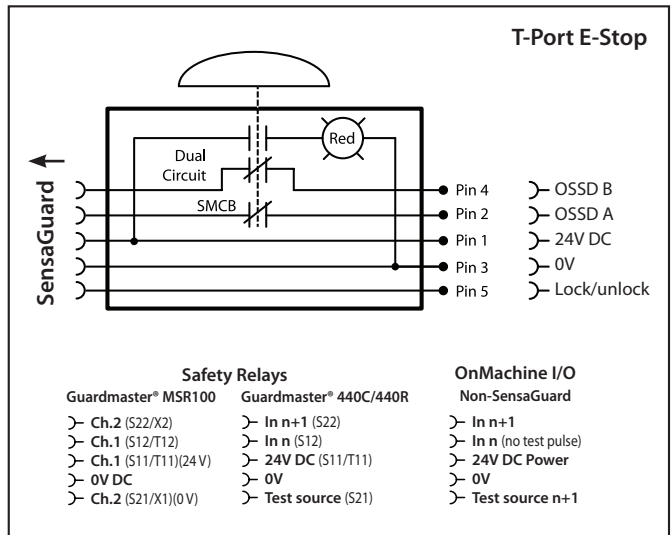| #	Catalog Number	Product Name	Product Description
1	440N-Z21SS2HN	SensaGuard	Plastic rectangular, 2 x PNP, 6 in. pigtail, 8-pin micro (M12), margin indication
2	440G-LZS21UPRH	Guard Locking Switch	Solenoid voltage: 24V DC, 2 x PNP, 1 x PNP – RFID unique, 6 in. pigtail with M12 8-pin QD
3	440N-Z21S16H	SensaGuard	18 mm plastic, 2 x PNP, 0.2A, max safety output, 6 in. pigtail, 8-pin micro (M12)
4	889D-F4ACDM-1	Patchcord: DC Micro (M12)	Female, straight, 4 pin, PVC cable, yellow, unshielded, DC micro, male, straight, 1 m
5	889D-F5ACDM-1	Patchcord: DC Micro (M12)	Female, straight, 5 pin, PVC cable, yellow, unshielded, DC micro, male, straight, 1 m
6	898D-418U-DM	Shorting Plug	For use with SensaGuard compatible T-ports only, nickel-plated brass
7	898D-81RU-DM	Shorting Plug	For unused ports on Distribution Blocks
8	898D-438Y-D8	T-Port	Dual channel, for use with SensaGuard switches only
9	898D-P88RT-M19	Safety Wired Distribution Box	8 ports, LED, 10…30V DC, M23 output
10	889D-F8ABDM-1	Patchcord: DC Micro (M12)	Female, straight, 8 pin, PVC cable, black, unshielded, DC micro, male, straight, 1 m
11	440R-S12R2	Guardmaster® Single Input Safety Relay (SI)	1 dual-channel universal input, 1 N.C. solid-state auxiliary output
12	1606-XLP30E	Compact Power Supply	24-28V DC, 30 W, 120/240V AC/85-375V DC input voltage
13	889M-R19PMMM-2	Patchcord: M23	Female, right angle, 19-P, PVC cable, red, unshielded, M23, male, straight, 2 m
14	888M-F19AE-3F	Receptacle: M23	Female, straight, 19 pin, 18AWG, 3 ft
15	889D-F4AC-1	Cordset: DC Micro (M12)	Female, straight, 4 pin, PVC cable, yellow, unshielded, DC micro, 1 m
16	889D-F5AC-1	Cordset: DC Micro (M12)	Female, straight, 5 pin, PVC cable, yellow, unshielded, DC micro, 1 m
17	1732ES-IB12XOB4	EtherNet/IP Safety ArmorBlock® Input Module	12 inputs, 4 solid-state sourcing outputs
18	440N-Z21SS2JN	SensaGuard	Plastic rectangular, 2 x PNP, 6-inch pigtail, 5-pin micro (M12), margin indication
19	440R-ENETR	Ethernet Gateway	Guardmaster Ethernet Gateway
20	440R-DG2R2T	Safety Relay	Guardmaster Safety Relay Dual GuardLink Master
21	889D-F4NE-2	Cordset: DC Micro (M12)	Female, straight, 4 pin, PVC cable, red, unshielded, DC micro, 2 m
22	440S-MF5D	GuardLink enabled tap	GuardLink enabled tap for use with 5-pin Electromechanical Safety Devices
23	440S-SF5D	GuardLink enabled tap	GuardLink enabled tap for use with 5-pin Electronic Safety Input Devices
24	440S-SF8D	GuardLink enabled tap	GuardLink enabled tap for use with 8-pin Electronic Safety Input Devices
25	898D-418U-DM2	Terminator	Terminator for last GuardLink enabled tap
26	889D-F4NEDM-1	Patchcord: DC Micro (M12)	Female, straight, 4 pin, PVC cable, red, unshielded, DC micro, male, straight, 1 m

Note: If non-GuardLink enabled Safety Relays are used, at lease one SensaGuard or LZ/TLSZ should be the furthest from the safety relay. The SensaGuard/LZ/TLSZ will provide pulse testing through the contacts of the E-Stop for cross fault detection.
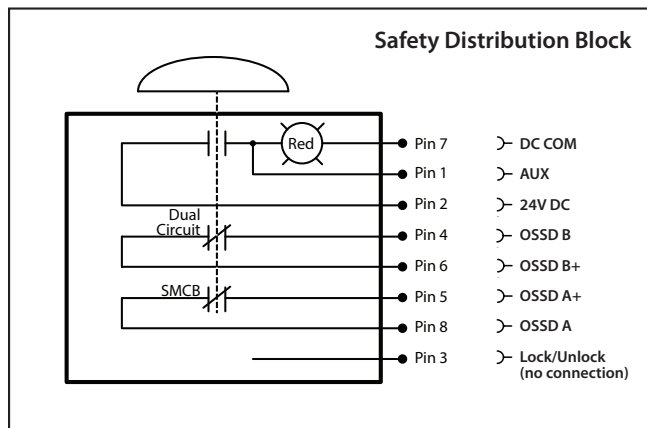
Internal Wiring Diagrams

800F-1YMD51

End E-Stop

	Pin 4		
	Pin 2		
	Pin 1		*See below*
	Pin 3		
	Pin 5		

Safety Relays

Guardmaster® MSR100	Guardmaster® 440C/440R	OnMachine I/O Non-SensaGuard
Ch.2 (S22/X2)	**In n+1** (S22)	**In n+1**
Ch.1 (S12/T12)	**In n** (S12)	**In n** (no test pulse)
Ch.1 (S11/T11)(24 V)	**24V DC** (S11/T11)	**24V DC Power**
0V DC	**0V**	**0V**
Ch.2 (S21/X1)(0 V)	**Test source** (S21)	**Test source n+1**

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T-Port E-Stop

SensaGuard

	Pin 4		OSSD B
	Pin 2		OSSD A
	Pin 1		24V DC
	Pin 3		0V
	Pin 5		Lock/unlock

Safety Relays

Guardmaster® MSR100	Guardmaster® 440C/440R	OnMachine I/O Non-SensaGuard
Ch.2 (S22/X2)	**In n+1** (S22)	**In n+1**
Ch.1 (S12/T12)	**In n** (S12)	**In n** (no test pulse)
Ch.1 (S11/T11)(24 V)	**24V DC** (S11/T11)	**24V DC Power**
0V DC	**0V**	**0V**
Ch.2 (S21/X1)(0 V)	**Test source** (S21)	**Test source n+1**

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Safety Distribution Block

	Pin 7		DC COM
	Pin 1		AUX
	Pin 2		24V DC
	Pin 4		OSSD B
	Pin 6		OSSD B+
	Pin 5		OSSD A+
	Pin 8		OSSD A
	Pin 3		Lock/Unlock (no connection)