

Allen Bradley 440P Safety Rated Limit Switches

Step 1: Select the Housing Type



30mm Metal



22mm Plastic



22mm Metal with flying lead



15mm Plastic

Step 2: Choose the actuator that best suits your application (Note: Adjustable actuators can't be used in Safety applications)



Short Roller Lever



Adjustable Roller Lever



Dome Plunger



Roller Plunger



Panel Mount Roller Plunger



Rod Lever



Spring Rod



Telescopic Arm



Hinge Lever



Offset Hinge



Cross Roller Plunger

Step 3: Determine Contacts and Contact type

Contacts: Determine the number of NO/NC contacts required for the limit switch depending on how many electrical loads are switched

Contact Type: Select between snap or slow action

Open Closed

Snap Action:

Output Actuator

Contacts change instantaneously at point of actuation.

Slow Action:

Output Actuator

Contacts make or break at separate points of actuation.

Step 4: Select Connection type (Note: Preferred Stock M20)



M20



Quick Disconnect

Step 5: Select suitable patchcords and cables



Step 01	Step 02	Step 03			Step 04 (Note: Preferred Stock M20)		Step 05	
Description		Safety Contacts	Auxiliary Contacts	Contact Type	M20 Conduit	Quick Disconnect	Recommended Compatible Cable	
30 mm metal	Short Roller Lever	1 N.C. 2 N.C.	1 N.O. 2 N.O.	Snap acting Slow acting	440P-MSLS11B 440P-MSLS11B	440P-MSLS11N5 440P-MSLB22M9	889N-F5AE-6F 889M-FX9AE-2	
	Adjustable Roller Lever	1 N.C. 2 N.C.	1 N.O. 2 N.O.	Snap acting Slow acting	440P-MSLS11B 440P-MSLS11B	440P-MALS11N5 440P-MALB22M9	889N-F5AE-6F 889M-FX9AE-2	
	Dome Plunger	1 N.C. 2 N.C.	1 N.O. 2 N.O.	Snap acting Slow acting	440P-MSLS11B 440P-MDPB22B	440P-MDPS11N5 440P-MDPB22M9	889N-F5AE-6F 889M-FX9AE-2	
	Metal Roller Plunger	1 N.C. 2 N.C.	1 N.O. 2 N.O.	Snap acting Slow acting	440P-MRPS11B 440P-MRPB22B	440P-MRPS11N5 440P-MRPB22M9	889N-F5AE-6F 889M-FX9AE-2	
	Adjustable Rod Lever	1 N.C. 2 N.C.	1 N.O. 2 N.O.	Snap acting Slow acting	440P-MARS11B 440P-MARB22B	440P-MARS11N5 440P-MARB22M9	889N-F5AE-6F 889M-FX9AE-2	
	Spring Rod	1 N.C. 2 N.C.	1 N.O. 2 N.O.	Snap acting Slow acting	440P-MSRS11B 440P-MSRB22B	440P-MSRS11N5 440P-MSRB22M9	889N-F5AE-6F 889M-FX9AE-2	
	Telescopic Arm	1 N.C. 2 N.C.	1 N.O. 2 N.O.	Snap acting Slow acting	440P-MTAS11B 440P-MTAB22B	440P-MTAS11N5 440P-MTAB22M9	889N-F5AE-6F 889M-FX9AE-2	
	22 mm plastic	Short Roller Lever	1 N.C. 2 N.C.	1 N.O. 1 N.O.	Snap acting Slow acting	440P-CSLS11B 440P-CSLB12B	440P-CSLS11D4 440P-CSLB12R6	889D-F4AC-2 889R-F6ECA-2
		Adjustable Roller Lever	1 N.C. 2 N.C.	1 N.O. 1 N.O.	Snap acting Slow acting	440P-CALS11B 440P-CALB12B	440P-CALS11D4 440P-CALB12R6	889D-F4AC-2 889R-F6ECA-2
Dome Plunger		1 N.C. 2 N.C.	1 N.O. 1 N.O.	Snap acting Slow acting	440P-CDPS11B 440P-CRPS11B	440P-CDPS11D4 440P-CRPS11D4	889D-F4AC-2 889R-F6ECA-2	
Plastic Roller Plunger		1 N.C. 2 N.C.	1 N.O. 1 N.O.	Snap acting Slow acting	440P-CRPS11B 440P-CRPS11B	440P-CRPS11D4 440P-CRPS11D4	889D-F4AC-2 889R-F6ECA-2	
Hinge Lever		1 N.C. 2 N.C.	1 N.O. 1 N.O.	Snap acting Slow acting	440P-CHLS11B 440P-CHLB12B	440P-CHLS11D4 440P-CHLB12R6	889D-F4AC-2 889R-F6ECA-2	

Description		Safety Contacts	Auxiliary Contacts	Contact Type	2 m Bottom Cable	2 m Side Cable
22 mm metal with flying lead	Short Roller Lever	1 N.C.	1 N.O.	Snap acting	440P-ASLS11C	440P-ASLS11CS
	Adjustable Roller lever	1 N.C.	1 N.O.	Snap acting	440P-AALS11C	440P-AALS11CS
	Dome Plunger	1 N.C.	1 N.C.	Snap acting	440P-ADPS11C	440P-ADPS11CS
	Metal Roller Plunger	1 N.C.	1 N.O.	Snap acting	440P-ARPS11C	440P-ARPS11CS

Description		Safety Contacts	Auxiliary Contacts	Contact Type	1/2 in' NPT
15mm plastic	Roller Plunger	1 N.C.	1 N.O.	Snap acting	440P-M18001
	Cross Roller Plunger	1 N.C.	1 N.O.	Snap acting	440P-M18002

Specifications

Utilisation Categories AC-15	240V / 3A
IP Rating	IP66
Operating temperature	-25°C...+65°C
Actuation Frequency, Max.	6000 operations per hr.
Mechanical Life	10 million operations

Cordsets and Patchcords

Description	Cat. No.
4-pin DC micro (M12), 2 m	889D-F4AC-2
6-pin AC micro (M12), 2 m	889R-F6ECA-2
5-pin mini, 2 m	889N-F5AE-6F
12-pin, 9-wire, 2 m	889M-FX9AE-2

Steute Basic and HAE Rated Limit Switches

Step 1:

Select the Housing Type



**Basic
EM/ES95**
30mm Plastic M20



**HAE
EEX14/EXM14**
30mm Plastic flying lead



**HAE
EEXEM97/ES97**
30mm Plastic M20

Step 2:

Choose the actuator that best suits your application

Actuators
Basic ES/EM95
30mm - Plastic M20



Short Rocking Roller Lever D



Adjustable Rocking Roller Lever DS



Plunger with Collar W



Roller Plunger R



Roller Lever with Collar WH

Actuators
HAE EEX14/EXM14
30mm - Plastic flying lead



Short Rocking Roller Lever D



Adjustable Rocking Roller Lever DS



Long Rocking Roller Lever DL



Roller Plunger R



Roller Plunger for Front Mounting FR

Actuators
HAE EEXEM97/ES97
30mm - Plastic M20



Short Rocking Roller Lever D



Adjustable Rocking Roller Lever DS



Rod Lever DD



Roller Plunger R



Spring Rod with Plastic Tip TK

Step 3:

Determine Contacts and Contact type

Contacts: Determine the number of NO/NC contacts required for the limit switch depending on how many electrical loads are switched

Contact Type: Select between snap or slow action

Open Closed

Snap Action:



Contacts change instantaneously at point of actuation.

Slow Action:



Contacts make or break at separate points of actuation.

Step 4:

Select Connection type



M20



Flying lead

Step 01	Step 02	Step 03			Step 04
Description		Safety Contacts	Auxiliary Contacts	Contact Type	Item Number
Basic EM/ES95 30mm Plastic M20	Short Rocking Roller Lever D	1NC	1NO	Snap acting	EM95D1O1S*
	Adjustable Rocking Roller Lever DS	1NC 1NC	1NO 1NO	Snap acting Slow acting	EM95DS1O1S ES95DS1O1S
	Plunger with Collar W	1NC 1NC	1NO 1NO	Snap acting Slow acting	EM95W1O1S* ES95W1O1S*
	Roller Plunger R	1NC	1NO	Snap acting	EM95R1O1S*
	Roller Lever with Collar WH	1NC	1NO	Snap acting	EM95WH1O1S*
	HAE EEX14/EXM14 30mm Plastic flying lead	Short Rocking Roller Lever D	1NC 1NC	1NO 1NO	Snap acting Slow acting
Adjustable Rocking Roller Lever DS		1NC 1NC	1NO 1NO	Snap acting Slow acting	EEXM14DS1O1SS5M EEX14DS1O1SS5M
Long Rocking Roller Lever DL		1NC	1NO	Slow acting	EEX14DL1O1SS5M*
Roller Plunger R		1NC	1NO	Snap acting	EEXM14R1O1SS5M
Roller Plunger for Front Mounting FR		1NC	1NO	Snap acting	EEX14R1O1SS5M*
HAE EEXEM97/ES97 30mm Plastic M20		Short Rocking Roller Lever D	1NC 1NC	1NO 1NO	Snap acting Slow acting
	Adjustable Rocking Roller Lever DS	1NC 1NC	1NO 1NO	Snap acting Slow acting	EEXEM97DS1160C EEXES97DS1160C
	Rod Lever DD	1NC 1NC	1NO 1NO	Snap acting Slow acting	EEXEM97DS1160C EEXES97DS1160C
	Roller Plunger R	1NC 1NC	1NO 1NO	Snap acting Slow acting	EEXEM97R1160C* EEXES97R1160C*
	Spring Rod with Plastic Tip TK	1NC 1NC	1NO 1NO	Snap acting Slow acting	EEXEM97TK1160C EEXES97TK1160C

Note: * denotes with safety function

Specifications

	EM/ES95	EEX14/EXM14	EEXEM97/ES97
Hazardous Area Classification	-	Zone 1, 2, 21, 22	Zone 1, 2, 21, 22
Utilisation Categories AC-15	240V AC/ 6A	250V AC/ 5A	250V AC/ 5A
IP Rating	IP66	IP65	IP66
Operating temperature	-25...+65°C	-20...+60°C	-20...+60°C
Actuation Frequency, Max.	6000 operations per hour	1800 operations per hour	1800 operations per hour
Mechanical Life	10 million operations	>1 million operations	>1 million operations

Hazardous Zone Classifications

Gas & Vapour	Zone 1	Explosive gas-air mixture is likely to occur for short periods in normal operation
	Zone 2	Explosive gas-air mixture is not likely to occur, and if it occurs it will only exist for a short time
Dust	Zone 21	Combustible or conductive dusts are present and likely to occur for short periods in normal operation
	Zone 22	Explosive dust mixture is not likely to occur, and if it occurs it will only exist for a very short time