

Configuration guide 41-00000-514-EN

SEM-SAFE® High-pressure water mist section valve assembly

Modular design

SEM SAFE® section valve arrangement is grouped in separate fire sections and installed outside the section or area of the high-pressure water mist firefighting system. Design and sizing of the section valves are based on design capacity for each individual section - and type of system.

Select between the interchangeable modules and configure a SEM SAFE® section valve assembly that meets the performance specification of every type of high-pressure water mist firefighting system. Find a brief explanation of the characteristic of the modules together with a review of the product code string.

INLET MODULE

Non return valve [Wet only]

A non return valve is chosen if you need to isolate the section from the rest of the system. Select if there is a need to isolate the backflow from the section due to air in system or to control the backflow large scaled systems. The non return valve is installed before the flow switch.

Motor valve [Pre-action/Deluge only]

A motor valve is chosen if there is a need for an automatic opening of the section valve with a flow over 150 l/m or if power consumption is important in the design of the system. The motor valve has a higher power consumption and flow than the solenoid valve.

Solenoid valve [Pre-action/Deluge/DN25 only]

A solenoid valve is chosen if there is a need for an automatic opening of the section valve with a flow up to 150 l/m or if power consumption is important in the design of the system. The solenoid valve has a lower power consumption and flow than the motor valve.



BASE UNIT MODULE

Service unit

Base unit with service function. The service function makes maintenance easier once installed. Highly recommended for wet systems with non return valves. Best choice where low maintenance cost is preferred over the lifetime of the system.

Base unit

Base unit without service function. Maintenance is performed as usual. Best choice where installation cost is more important than maintenance cost.

Both units includes

- Pressure gauge.
- Flow switch.
- Pre-action module: pressure switch incl. inlet.(Pre-action only)



SHUT-OFF MODULE

Shut-off valve

Highly recommended for isolating the section valve assembly when service, alteration and expansion of an existing section is required. Different types of valves can be selected as shut-off valve. Ball valves among others.



OUTLET MODULE

The outlet module is installed behind the flow switch.

Non return valve [Wet only]

A non return valve is chosen if you need to isolate the section from the rest of the system. Select if there is a need to isolate the backflow from the section due to air in system or to control the backflow large scaled systems.

Non-return test assembly [Wet only]

The non return test assembly is made up of a non return valve, a T-Adaptor, a test valve and a pressure gauge. The non return test assembly is chosen if you need to isolate the section from the rest of the system and there is a need to monitor the pressure and to drain the system behind the outlet. This option is selected if there is a need to isolate the backflow from the section due to air in system or to control the backflow large scaled systems.



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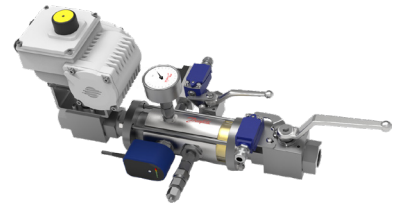
SEM-SAFE® High-pressure water mist section valve assembly

Pre-action pipe systems

The SEM-SAFE® high-pressure pre-action section valve arrangement is comprised of an inlet isolating ball valve, a motor operated ball valve or solenoid operated valve, a test valve, a pressure indicator, a flow switch and an outlet isolation ball valve. The inlet and outlet isolation valves and the test valve are supplied with an electrical limit switch for monitoring the valve position indicators.

The SEM-SAFE® pre-action section valve arrangement also contains a pressure switch/transmitter (alarm device) and connection through a non-return valve for compressed air. If the pre-action section valve arrangement pressure switch/transmitter (alarm device) is activated due to a leak in the pipe system or a glass bulb in the automatic nozzle has burst and the nozzle has opened, an alarm signal is provided to the fire alarm panel. Note: Valve function normally closed.

When water flows through the pre-action section valve, the flow switch detects this and a signal from the flow switch can be transferred to the fire alarm panel to show the exact section affected.



SPECIFICATIONS

Item number	700301	700302	700304	700303	700279	700280
Design pressure [bar]	140	140	160	160	160	160
Voltage [VDC]	24	230	24	230	24	230
Power operation [max]	16W	17W 50Hz 14W 60Hz	66W	92W	108W	173W
Opening time [max/sec]	5	5	15	15	18	18
Flow controller voltage	**24 VDC (30 VAC/ VDC, 0.5 A) (Max. Switching Voltage, Current)					

CONNECTION TYPE

Connection [BSPP]	1"	1"	1"	1"	2"	2"

SHUT-OFF MODULE

Inlet - ball valve	×	×	×	×	×	×
Outlet - ball valve	✓	✓	✓	✓	✓	✓

INLET MODULE

Solenoid valve	✓	✓	×	×	×	×
Motor valve	×	×	✓	✓	✓	✓

BASE UNIT TYPE

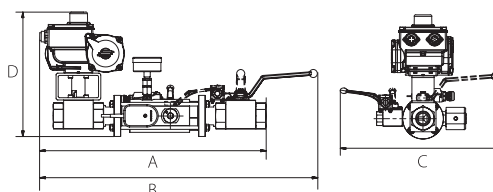
Service unit	✓	✓	✓	✓	✓	✓
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BASE MODULE

Test valve	✓	✓	✓	✓	✓	✓
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DIMENSIONS

A - Installation length [mm]	487	487	476	476	550	550
B - Total length [mm]	602	602	620	620	749	749
C - Width [mm]	393	393	356	356	425	425
D - Height [mm]	177	177	278	278	333	333



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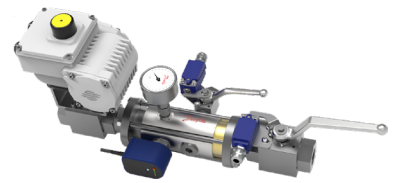
SEM-SAFE® High-pressure water mist section valve assembly

Deluge / dry pipe systems

The SEM-SAFE® deluge high-pressure section valve arrangement is comprised of an inlet isolating ball valve, a test valve, a pressure indicator, a flow switch and an outlet isolation ball valve. The inlet and outlet isolation valves and the test valve are supplied with an electrical limit switch for monitoring the valve position indicators.

By opening the deluge section valve a pressure drop in the pipe system is created immediately - and in addition to an electrical signal set to open the deluge section valve, the pressure drop in the pipe system will also activate the SEM-SAFE® high-pressure water mist pump unit. Note: Valve function normally closed.

When water flows through the deluge section valve, the flow switch detects this and a signal from the flow switch can be transferred to the fire alarm panel and here which shows the exact section affected.



SPECIFICATIONS

Item number	700297	700298	700299	700300	700277	700278
Design pressure [bar]	140	140	160	160	160	160
Voltage [VDC]	24	230	24	230	24	230
Power operation [max]	16W	17W 50Hz 14W 60Hz	66W	92W	108W	173W
Opening time [max/sec]	5	5	15	15	18	18
Flow switch voltage	**24 VDC (30 VAC/ VDC, 0.5 A) (Max. Switching Voltage, Current)					

CONNECTION TYPE

Connection [BSPP]	1"	1"	1"	1"	2"	2"

SHUT-OFF MODULE

Inlet - ball valve	×	×	×	×	×	×
Outlet - ball valve	✓	✓	✓	✓	✓	✓

INLET MODULE

Solenoid valve	✓	✓	×	×	×	×
Motor valve	×	×	✓	✓	✓	✓

BASE UNIT TYPE

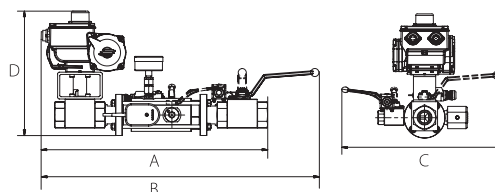
Service unit	✓	✓	✓	✓	✓	✓
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BASE MODULE

Test valve	✓	✓	✓	✓	✓	✓
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DIMENSIONS

A - Installation length [mm]	487	487	476	476	550	550
B - Total length [mm]	602	602	620	620	749	749
C - Width [mm]	393	393	356	356	425	425
D - Height [mm]	177	177	278	278	333	333

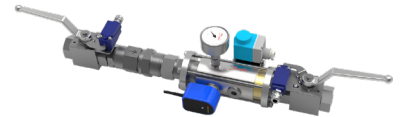


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SEM-SAFE® high-pressure water mist section valve assembly

Wet pipe systems

The SEM-SAFE® wet pipe high-pressure section valve arrangement comprises of an inlet isolating ball valve, a non-return valve, a test valve, a pressure indicator, a flow switch and an outlet isolation ball valve. The inlet and outlet isolation valves and the test valve are supplied with an electrical limit switch for monitoring the valve position indications. Note: valve function normally open.



The system is activated when the thermal-sensitive glass bulb in the automatic nozzle bursts and the nozzle opens. This is caused by an increase of the temperature at the nozzle during fire. Opening of the nozzle creates a pressure drop in the pipe system, which activates the SEM-SAFE® high-pressure water mist pump unit. The pump unit immediately delivers water under high pressure in the pipe system.

The water flows through the section valve, the flow switch detects this and a signal from the flow switch can be transferred to the fire alarm panel, where it shows the exact section affected.

SPECIFICATIONS

Item number	700305	700287	700306	700307	700281	700282
Design pressure [bar]	160	160	160	160	160	160
Flow switch voltage	**24 VDC (30 VAC/ VDC, 0.5 A) (Max. Switching Voltage, Current)					

CONNECTION TYPE

Connection [BSPP]	1"	1"	1"	1"	2"	2"
Connection [BSPP]	1"	1"	1"	1"	2"	2"

SHUT-OFF MODULE

Inlet - ball valve	×	✓	✓	✓	×	✓
Outlet - ball valve	✓	✓	✓	✓	✓	✓

INLET MODULE

Non return valve	✓	✓	×	×	✓	✓
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BASE UNIT TYPE

Service unit	✓	✓	✓	✓	✓	✓
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BASE MODULE

Test valve	✓	✓	✓	×	✓	✓
Block test valve	×	×	✓	✓	×	×

OUTLET MODULE

Non return test assembly	×	×	✓	×	×	×
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DIMENSIONS

A - Installation length [mm]	508	641	767	476	540	686
B - Total length [mm]	623	871	996	705	703	1016
C - Width [mm]	281	356	389	342	425	456
D - Height [mm]	177	177	177	177	205	205

