

BOSS X-POT XP LF COMPLIANCE PACK

Code	BOSS™ Ref	Description
16920772	Compliance Pack X-POT XP LF	Compliance Pack for X-POT XP Low Flow (Up to 2.875l/s)

Compliance Pack for X-POT XP Low Flow (Up to 2.875 l/s)

Compliance Pack Components

1No. Dynamic Balancing Valve	Frese SIGMA Compact DN50
1No. Dynamic Pressure Valve Insulation Jacket	Frese SIGMA Compact DN50 Insulation Cover
1No. PD Monitor	BOSS PD Monitor (MODBUS)

Operating Parameters - Frese SIGMA Compact DN50 Low Flow

Connection Size	DN50 BSP Female		
Valve Body	Ductile Iron GJS-400		
Flow Setting	PA6 (20% glass)		
Spring	Stainless Steel		
Diaphragm	HNBR		
O-Rings	EPDM		
Operational Flow Rate	0.250 - 2.875 l/s (15.0 - 172.5 l/min)		
Max Differential Pressure	400 kPa		
Kvs	20.3		
Max Pressure Rating	25 Bar		
Glycolic Mixtures	Up to 50% (Ethylene and propylene)		
Operating Temperatures	-10 °C to 120 °C		
Dimensions	L1	138 mm	
	L2	76 mm	
	L3	131 mm	
Weight	3.4 kg		

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PD Monitor (MODBUS) (As Supplied in Compliance Pack)

Technical Data

Parameters	Differential Pressure
IP Protection	IP54
Mounting Position	Internal Wall - Frost Free
Display	Dot Matrix (Red)
Electrical Connections	0.9M Flying Lead (supplied) connected to Isolator (by others)
Power Supply	230V AC, 50Hz, 13.5mA
Dimensions	200mm x 150mm x 85mm (enclosure)
Weight	1.3kg
Ambient Operating Temperatures	>5°C to 45°C, <90%RH
Pressure Sensor Cable	Packard Plug + cable (1.8m in length)
Pressure Sensor Material	ANSI 316L
Max Working Pressure (Sensors)	<30 Bar
Differential Pressure Setting Increments	0.1 Bar
Range of Pressure Differential	0.1 to 7 Bar
4-20mA Sensor Connections:	¼" BSP
Max Working Temperature (Sensor)	100°C
Min Working Temperature (Sensor)	-40°C
Medium	Water / Liquids
CE / EMC Compatibility	IEC 61010-1: 2010 + A1: 2019 and EN 61010-1: 2010 + A1:2019
BMS Signal	MODBUS RS485 (Address List on Page 10) & 5-amp Common Alarm Relay used to contact BMS System (Normally Open)

Materials of Construction

Housing	Techno polymer GWPLAST 75
Pressure Sensor	ANSI 316L

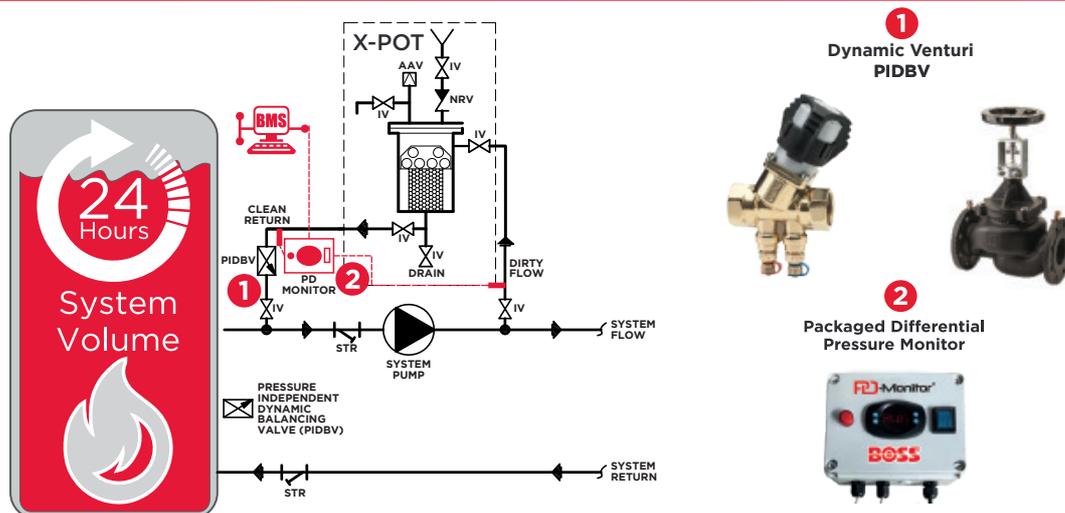
Features

Application	Blockages in plant equipment such as filters, strainers, plate heat exchangers and heater coils can have a detrimental effect on the system efficiency and building comfort. BOSS™ PD-Monitor can be used to detect blockages and will alarm locally with audible buzzer and visual beacon and remotely via a BMS fault signal (relay / Modbus) when connected to a BMS system.
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Feature	Description
Frese SIGMA Compact Dynamic Balancing Valve	The Frese SIGMA Compact is an externally adjustable dynamic balancing valve that provides simple, accurate and reliable flow limitation and isolation in heating and cooling systems.
Application	The Frese SIGMA Compact can be used in both heating and cooling systems for the effective distribution of flow in various sections of the system. The Frese SIGMA Compact can be used instead of traditional double regulating valves and can be installed in both variable flow systems and constant flow systems.
Operation	The Frese SIGMA Compact can be set to the required position easily by using the scale, to limit the flow rate in certain parts of a system, eliminating overflows and the unnecessary wastage of energy. The internal differential pressure control function of the Frese SIGMA Compact ensures that the set flow rate is limited irrespective of differential pressure fluctuations in the system. The hand wheel can be used to close the valve and to open it to the preset flow.
Preset Scale	Easy adjustment of the flow using the clear preset scale on the valve/ Hand Wheel (Pre-Set Setpoints can be found in the Instruction Booklet).
Isolation	Hand wheel provides an isolation function up to 10 bar differential pressure.
Location	No minimum straight pipe lengths required before or after the valve.
PT Plugs	Built-in P/T plugs for needle system

SYSTEM SCHEMATICS



The schematic above shows an indicative example only. For further support please contact the BOSS™ Technical Team: 03330 341920 / BOSStechicalteam@bssgroup.com

BOSS X-POT XP LF PRODUCT ILLUSTRATIONS

**X-POT Compact /6/ XP Low Flow
Compliance Pack**

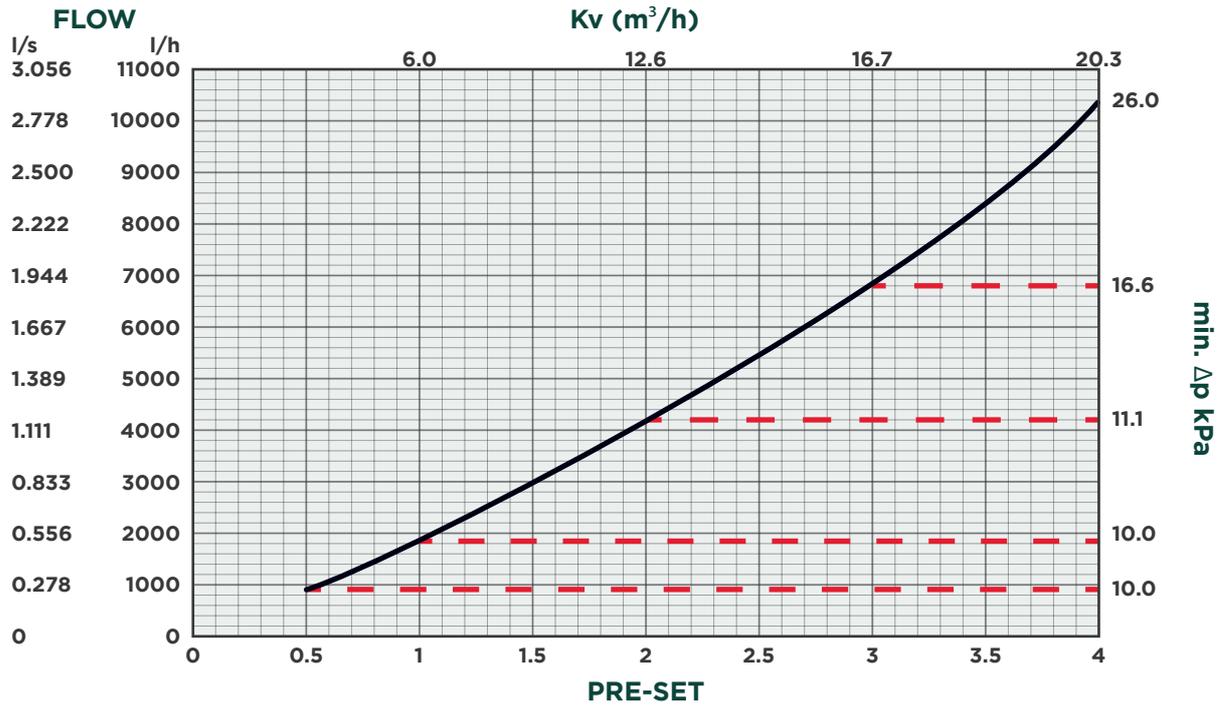


**X-POT XP DN50 High Flow
Compliance Pack**



FRESE SIGMA COMPACT SETPOINTS

COMPLIANCE PACK FOR X-POT XP LOW FLOW (UP TO 2.875 l/s)



MODBUS ADDRESS LIST

Preliminary Settings

Baud Rate	9600
Word Length	8
Parity	NO
Stop Bits	1

Addresses

X Variable Address	Denomination	Description	Format	Type	Data Conversion	Units	Variable Range
40001	Pressure Sensor 1	Value of sensor 1	Word	Read		Decimal of Bar/PSI	
40002	Pressure Sensor 2	Value of sensor 2	Word	Read		Decimal of Bar/PSI	
40003	Current	Value of the actual current through pump	Word	Read		mA	
40006	Pump Relay	Status of Pump Relay	Word	Read	0=OFF 1=ON		
40007	Filter Pump Alarm Relay	Status of Pump Alarm Relay	Word	Read	0=OFF 1=ON		
40008	General Alarm Relay	Status of General Alarm Relay	Word	Read	0=OFF 1=ON		
40009	Buzzer	Status of Buzzer	Word	Read	0=OFF 1=ON		
40013	Filter Blocked Alarm	Status of Filter Blocked Alarm	Word	Read	0=Alarm Not Present 1= Alarm Present		
40014	Pump Failure Alarm	Status of Pump Failure Alarm	Word	Read	0=Alarm Not Present 1= Alarm Present		
40015	Sensor 1 Alarm	Status of Sensor 1 Alarm	Word	Read	0=Alarm Not Present 1= Alarm Present		
40016	Sensor 2 Alarm	Status of Sensor 2 Alarm	Word	Read	0=Alarm Not Present 1= Alarm Present		
40023	Par. Pressure Differential	Value of the parameter	Word	Read/Write		Decimal of Bar/PSI	1 -> 70
40024	Par. Alarm Relay Contact	Value of the parameter	Word	Read/Write	0=Normally Open 1=Normally Close		0 -> 1
40025	Par. Minimum Pressure	Value of the parameter	Word	Read/Write		Decimal of Bar/PSI	0 -> Par. Maximum Pressure
40026	Par. Maximum Pressure	Value of the parameter	Word	Read/Write		Decimal of Bar/PSI	Par. Minimum Pressure -> 30
40027	Par. Current Sense	Value of the parameter	Word	Read/Write	4=Not Active 5=Active		4 -> 5
40028	Par. Bar/PSI Unit	Value of the parameter	Word	Read/Write	2=Bar 3=PSI		2 -> 3
40029	Par. Buzzer Enabled	Value of the parameter	Word	Read/Write	4=Not Active 5=Active		4 -> 5
40030	Par. ID Number	Value of the parameter	Word	Read/Write			0 -> 99
40031	Par. Pump Hours	Value of the parameter	Word	Read/Write		Hours	0 -> 9999
40031	Par. Alarm Counter	Value of the parameter	Word	Read/Write			0 -> 1000