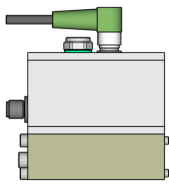


SAC - SERVI ADDON COMPONENTS

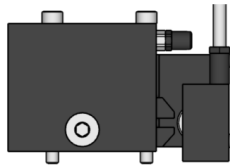
- Electronic components for precise regulation of proportional valves
- Modular design allows easy assembly directly on the valves (OBE)
- Field upgrade of valves possible
- Approved for usage in explosive environment up to Ex zone 1
- Modern 16 bit controller with power reserve
- Extension flexibility by software and hardware.
- Easy parameterization via PC-tool
- Very good corrosion protection

Example 1: Hawe PSV - SLF3 upgrade with SAC > OBE (On Board Electronics)

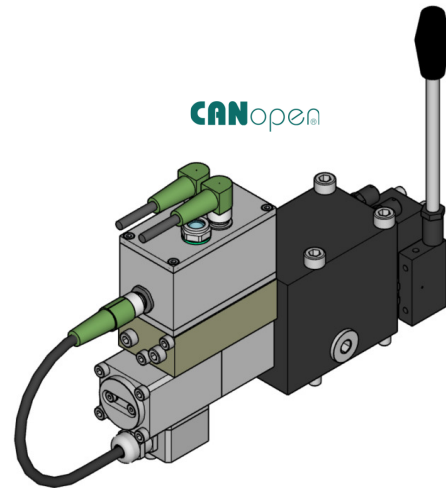
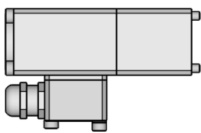
ODC (Onboard Digital Controller)



SLF3
Hawe standard prop valve

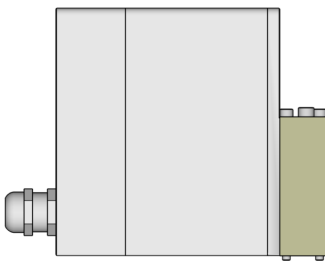


HPRS
(High Performance Range Sensor)

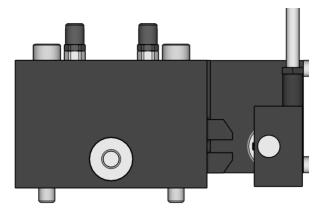


Example 2: Hawe PSV - SLF5 upgrade with SAC > OBE (On Board Electronics)

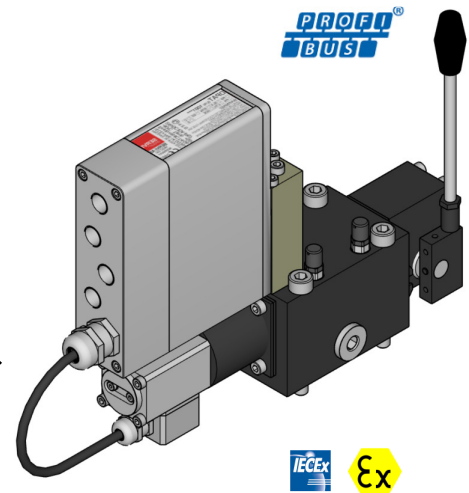
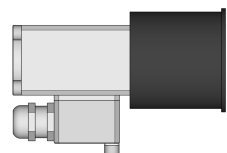
OPAT (Onboard Profibus Atex Twinsolenoid)



SLF5
Hawe standard prop valve



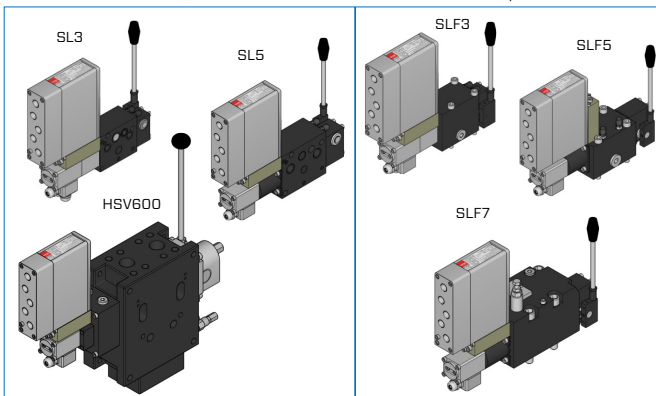
HPRS
(High Performance Range Sensor)



Ex versions

Sectional

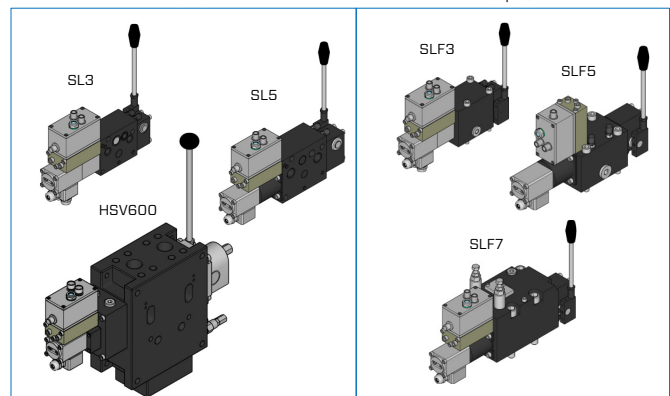
Subplate



Non Ex versions

Sectional

Subplate



SAC - SERVI ADDON COMPONENTS

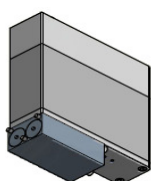
OPAT - Main features

OPAT is an electromechanical control unit for proportional directional and pressure relief valves. OPAT is ATEX and IECEx approved according to NS-EN60079 (IECEx 60079) for use in potentially explosive atmospheres.

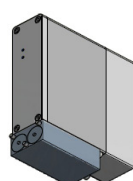
Units with model codes BTN or SDE feature a built-in solenoid, whereas units with model code XS have a separate connection housing for an external solenoid.

The control system communicates with Profibus or CANbus, depending on type. All types have a series of analogue inputs for use when bus communication is not required.

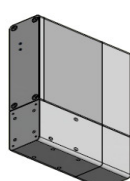
BTN



SDE



XS



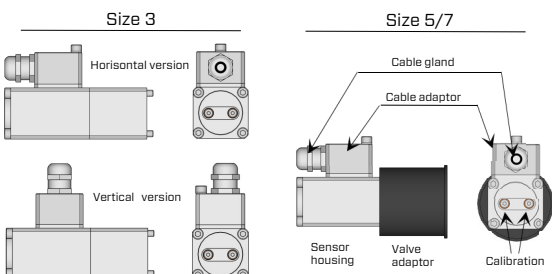
Type Approval:	Presafe 14 ATEX 5271C€ 2480 IECEx PRE 14.0036X
Identification:	II 2G Ex eb ib mb IIC T4 Gb
Temperature Range:	Ambient: -40 to +55 °C (-4 to +131 °F)
IP Class:	IP67
Max. Current:	1 [A]
External Fuse:	10 [A]
Max. Voltage:	24 VDC SELV DC supply with max. 24 VDC +10%
BUS Protocols:	Profibus DP V2 CANbus (proprietary, internal communication)

HPRS - Main features

HPRS is a electronic position sensor with high measuring accuracy approved for use in potentially explosive atmospheres, approved acc EN60079 (IECEx 60079). The unit is primarily to be used together with hydraulic proportional valves

The unit consists of a coil section with integrated electronic, which detect position change of the proportional valve spool

Sensor housing is connected to a valve adaptor fitted for the different valve sizes. The unit has flying lead and vertical or horizontal versions of cable adaptor.



Type Approval:	Presafe 14 ATEX 5124C€ 2460 IECEx PRE 14.0021X
Identification:	II 2G Ex d IIB T6 Gb
Temperature range:	Ambient: -40 til +70°C (-40 to+158°F)
IP Class:	IP67
Max Current:	62 mA
External Fuse:	100 mA
Max Voltage:	24 VDC (SELV DC supply with max. 24VDC +20%)
Output signal:	4-20 mA

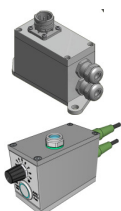
ODC - Main features

ODC, the non Ex SAC component can control and regulate all conventional proportional solenoids, e.g. hydraulic valves with a current draw of up to 2500mA. It can be controlled by a number of different control signals, both analogue and digital (BUS), and has sensor inputs for valve and/or process closed loop regulation.

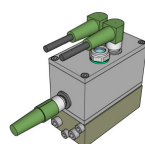
The unit has a modular design and can easily be adapted to a range of interfaces, but it is specifically prepared and adjusted for direct mounting (onboard) on Hawe PSL/PSV series, Servi HSV 600 proportional valves serie, and Servi MB winch block serie.

ODC is well suited for outdoor use, including marine environments, and has a robust design to withstand vibrations, temperature fluctuations and electronic noise (EMC).

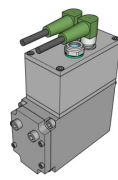
ODC - Stand alone
Custom design examples



ODC - Twin
Solenoid integrated
Separate position sensor



ODC -AUH
Solenoid and position
sensor integrated



Supply :	12 V -10%... 32 V +10%
Solenoid selection:	0,15A ... 0,80A for twin solenoid 0,63A ... 2,50A for stand alone
Temperature range:	Ambient: -25°C ... +80°C; storage -25°C ... +80°C
IP Class:	Up to IP69k
EMC:	In accordance with applicable CE standards
Analogue inputs	Ub*0,5 ± Ub*0,25; 0 ± 10 V; 4 V ± 4 V; 5 V ± 5 V; 0(4) - 20 mA, 12 ± 8 mA
Reference Output:	8 V, 10 V max 20 mA
Status signaling:	1 Status LED 2 colors at top lid