

# TEMPRESS

## SwipGuard Type P1360



### Installation guide

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P1360		Specifications	
Standard ranges	Ver. 1	+1 +10 bar	
	Ver. 2	+7 +35 bar	
	Ver. 3	+25 +125 bar	
Repeatability	± 0.5% FS (typical)		
	± 1% FS (max. allowable)		
Response time	< 4 ms		
Max. switch frequency	30/min. (0.5 Hz)		
Life time	Mechanical	> 100.000 cycles at 80 °C	
	Electrical at max. contact load	> 1.000.000 cycles	
Pressure		Ver.1	Ver.2
	Max. operating pressure	10bar	35bar
	Test pressure	15bar	53bar
	Burst pressure	>40bar	>140bar
<b>Electrical specifications</b>			
Switches	Contact arrangement SPDT		
Contact load	DC resistive	5 A, 24V	
	DC inductive	4 A, 24V	
Leakage signal. Capacitive	NPN	Max. 100 MA, 24 V	
<b>Mechanical specifications</b>			
Pressure connection	Thread or diaphragm seal	Dimension & design acc. to order	
Electrical connection	Plug	IEC529, IP65, M20x1.5	
Internal material	Bellow	Bronze	
	O-ring	NBR	
External material	Housing	AISI304	
	Plug fixture	Glass filled polyamide, PA 6.6	
Weight	0.4 kg		
<b>Environmental conditions</b>			
Temperature	Ambient and Operation, only with liquid.	-10 to +70 °C	
	Transport	-40 to +80 °C	
Enclosure	IEC529, IP65		
Vibration stability, sinusoidal	4 g, 25 Hz – 100 Hz	IEC60028-2-6	
Hysteresis	Typical 5-10 %	Not less than 3% T20	
		Not less than 5% T70	

Thank you for choosing Tempress' SwipGuard, type P1360. Please make sure the set point corresponds to your specifications. Also check that the operating span corresponds to the maximum pressure expected for the installation.

#### Mechanical

To comply with the PED requirements for redundancy the equipment **must** be installed in such a way that two mechanical independent switches are attached to the same pressure carrying system. This set-up is shown in fig. 1. **The CE marking is only valid when the installation is made to comply with this principle.**

#### Electrical security circuitry

To comply with the requirements for incorporating the signal in the security circuitry, the two switches **must** be connected in series. This set-up is shown in fig. 2. **The CE marking is only valid when the installation is made to comply with this principle.**

#### Electrical process circuitry

The switch is fitted with a second switch, which can be used as a process surveillance switch. This set-up is shown in fig. 3. This switch can be delivered as NO (normally open) or NC (normally closed). The actual setting will appear on the label. The internal leakage surveillance appears as a NPN signal.

#### Maintenance

To make sure that the switches operate as intended, the preset switch point should be tested once a year by means of a controlled pressure. Either after a cleaning process in place, or by moving the switches to a test-rig. The housing resists common cleaning agents and should be dried after cleaning.

**The top cover is never to be removed!** Tampering with the sealing will void any and all guarantee of setting as well as approval according to the PED. Note that a readjustment can only take place at Tempress A/S.

*The switches should not be exposed to mechanical impact. The electrical connection is IP65.*

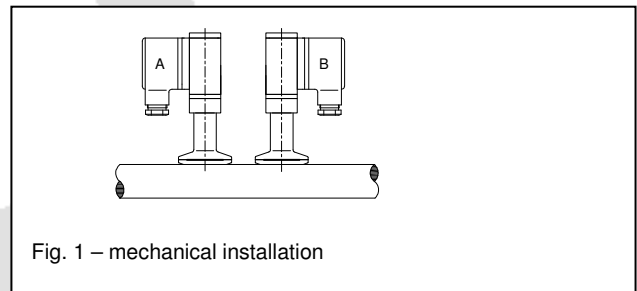


Fig. 1 – mechanical installation

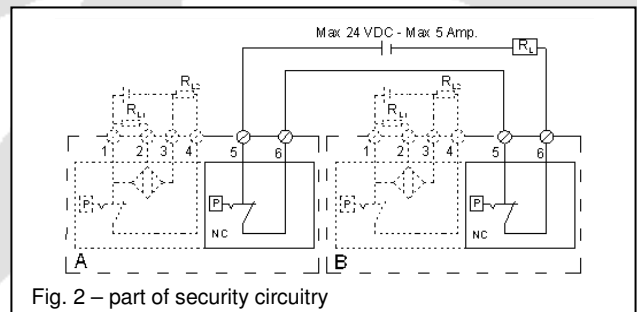


Fig. 2 – part of security circuitry

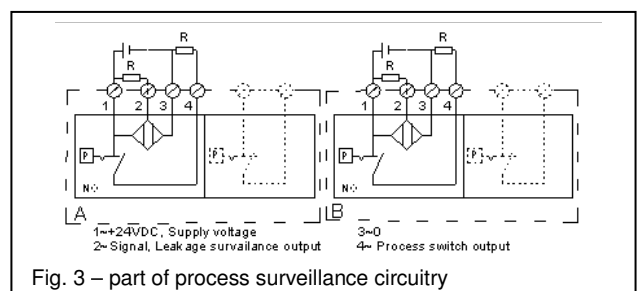


Fig. 3 – part of process surveillance circuitry



P1360		Specifikationer	
Standard anvendelse	Ver. 1 Ver. 2 Ver. 3	+1 +10 bar +7 +35 bar +25 +125 bar	
Gentagelses nøjagtighed		± 0.5% FS (typisk) ± 1% FS (max. tilladt)	
Reaktionstid		< 4 ms	
Max. kontakt frekvens		30/min. (0.5 Hz)	
Levetid	Mekanisk Elektrisk ved max. kontakt belastning	> 100.000 gange ved 80 °C > 1.000.000 gange	
Tryk		Ver.1 Ver.2	
	Max. arbejdstryk	10bar	35bar
	Prøvetryk	15bar	53bar
	Sprængningstryk	>40bar	>140bar
Elektriske specifikationer			
Kontakter	Kontakt arrangement	SPDT	
Kontakt belastning	DC modstand	5 A, 24V	
	DC induktiv	4 A, 24V	
Lækage signal. kapacitiv	NPN	Max. 100 MA, 24 V	
Mekaniske specifikationer			
Tryktilslutning	Gevind eller trykformidler	Dimension & design efter ordre	
Elektrisk tilslutning	Stik	IEC529, IP65, M20x1,5	
Indvendigt materiale	Bælg O-ring	Bronze NBR	
Udvendigt materiale	Hus Stik	AlSi304 Glasfyldt polyamid, PA 6.6	
Vægt		0,4 kg	
Installationsbetingelser			
Temperatur	Omgivelse og drift, kun med væske. Transport	-10 to +70 °C -40 to +80 °C	
Tæthed		IEC529, IP65	
Vibrations stabilitet, sinuskurve	4 g, 25 Hz – 100 Hz	IEC60028-2-6	
Hysteres	Typisk 5-10 %	Ikke mindre end 3% T20 Ikke mindre end 5% T70	

## Installationsvejledning

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Tak fordi I valgte Tempress' SwipGuard, type P1360. Undersøg venligst at set-punktet stemmer overens med specifikationerne. Ligeledes undersøg at operationsområdet stemmer overens med det forventede maksimale tryk for installationen.

### Mekanisk

For at overholde kravene i PED for redundans skal Tempress' SwipGuard Type P1360 installeres således, at to mekanisk uafhængige switche er monteret på det samme trykbærende rørsystem. Den principielle montage er vist i fig. 1. **CE mærkningen er kun gyldig, når installationen er gennemført i overensstemmelse med de nævnte principper.**

### Elektrisk sikkerhedskreds

For at overholde kravene i PED for samling af signal i sikkerhedskredsen skal de to switche forbindes i serie. Dette er vist i fig. 2. **CE mærkningen er kun gyldig, når installationen er gennemført i overensstemmelse med de nævnte principper.**

### Elektrisk proceskreds

Switchene er udstyret med endnu en switch, som kan anvendes til overvågning af processen. Dette er vist i fig. 3. Switchen kan leveres som NO (normal åben) eller NC (normal lukket). Den aktuelle indstilling vil fremgå af label. Den interne lækageovervågning fremkommer som et "NPN" signal.

### Vedligeholdelse

For at sikre at switchene virker som tilsigtet, skal switch-punkt afprøves én gang pr. år ved hjælp af et kontrolleret tryk. Dette kan udføres enten i forbindelse med "CIP" eller ved at demontere switchene og gennemføre testen i en prøveopstilling. Instrumentet tåler de fleste rengøringsmidler og bør aftørres efter rengøring. Topdæksel må **IKKE** demonteres! Bemærk at al garanti for justering, indstilling og myndighedsgodkendelse bortfalder, hvis plomberingen er brudt. Bemærk desuden at genjustering kun kan finde sted hos Tempress. Switchene bør ikke udsættes for mekanisk overlast. IP tætheden er 65.

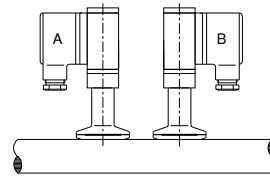


Fig. 1 – mekanisk installation

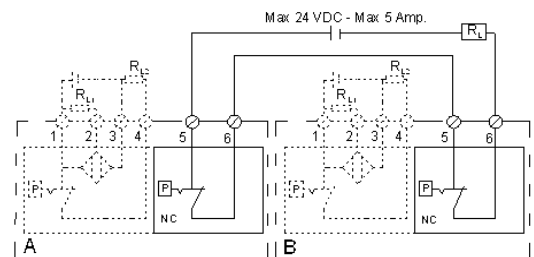


Fig. 2 – del af sikkerhedskredsløb

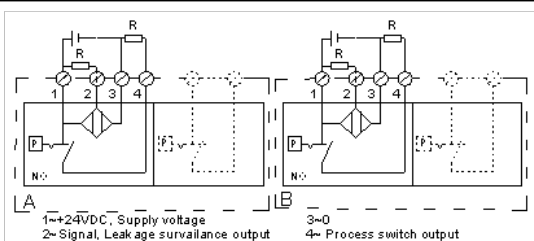


Fig. 3 – del af procesovervågningskredsløb