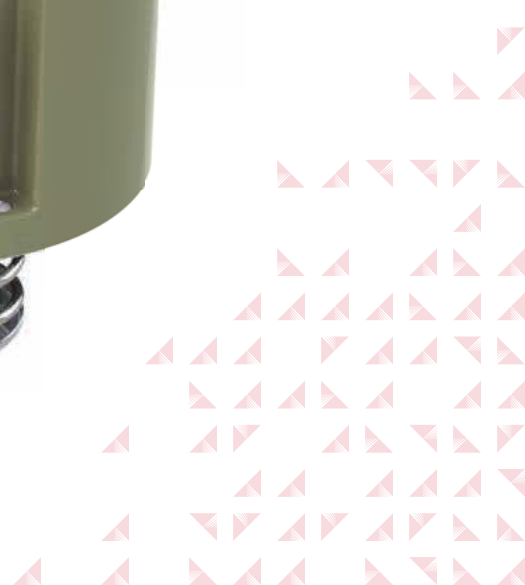




**MP**  
**metsonpower**  
TRANSFORMER ACCESSORIES



**PRESSURE  
SAFETY  
VALVES**



# PRESSURE SAFETY VALVE

TYPE: MPRV

TYPE	CODE NO
MPRV - 50	MP26
MPRV - 80	MP21

## APPLICATION

Pressure Safety Valves are used to prevent the rapid build up of pressure within the transformer tank that might cause an explosion hazard. They are designed to operate and discharge any pressure greater than their set value to the atmosphere.

## CONSTRUCTION

This valve type consist of a flanged body and a corrosion proof aluminum alloy disc/sleeve arrangement. The disc/sleeve is attached to a central rod which is spring loaded. The valve has two gaskets, one is of a special design that is fully compressed by the disk under normally closed conditions, and the other is a lateral o-ring that operates on the sleeve part of the disc.

Valves are designed such that the operating components are mounted inside the valve body. Hence the mechanism is protected from external influences. They have an additional outside cover made of aluminum which further increases the protection against the atmospheric conditions.

They have also a visual operation indicator on the top section.

The external surfaces are protected against all climatic conditions. Steel parts are stainless or nickel plated steel and those parts in aluminum alloy are additionally protected with two layers of special paint. Hence the valves are suitable for operating in temperatures between -25C and +100C.

Valves can be calibrated to operate any pressure between 0.3 and 0.7 bar.

An optional switch is available which is operated by the same rod as the visual indicator and can be used to electrically trigger a warning locally or remotely. The switch is protected by a watertight box, and remains pressed until the visual indicator reset manually.

The switch characteristics are as follows:

AC 11 220 / 380 V ~ 5 / 3 A

## OPERATION

When the internal pressure pushes the disc and starts to compress the spring, the specially designed gasket maintains the seal for up to 2 mm of movement and the lateral o-ring also maintains the seal. Increasing pressure causes the special gasket to break seal but the lateral o-ring seal remains. At this stage the overall area of the disc/sleeve containing the pressure has been increased. Further pressure causes the valve to open fully and discharge instantly.

When the pressure is equalized the spring action closes the valve, first effecting the seal via lateral o-ring and then the special gasket. When the valve operates, it also causes a central rod to protrude from the protective casing giving an immediate visual indication

## INSTALLATION

Our valves are available in 2 sizes according to their discharge areas and are selected according to the transformer oil volume as follows:

TRANSFORMER OIL VOLUME ( dm3 )	VALVE TYPE
up to 3000	MPRV - 50
up to 9000	MPRV - 80

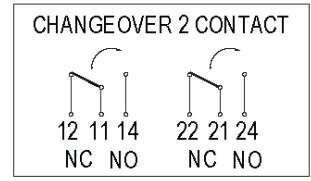
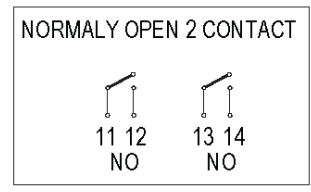
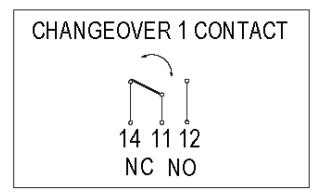
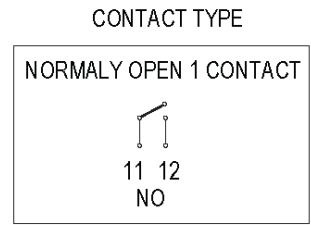
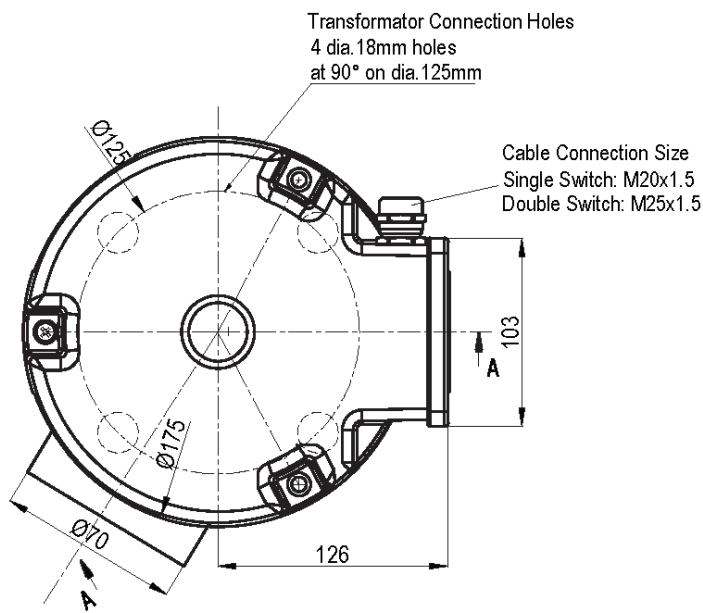
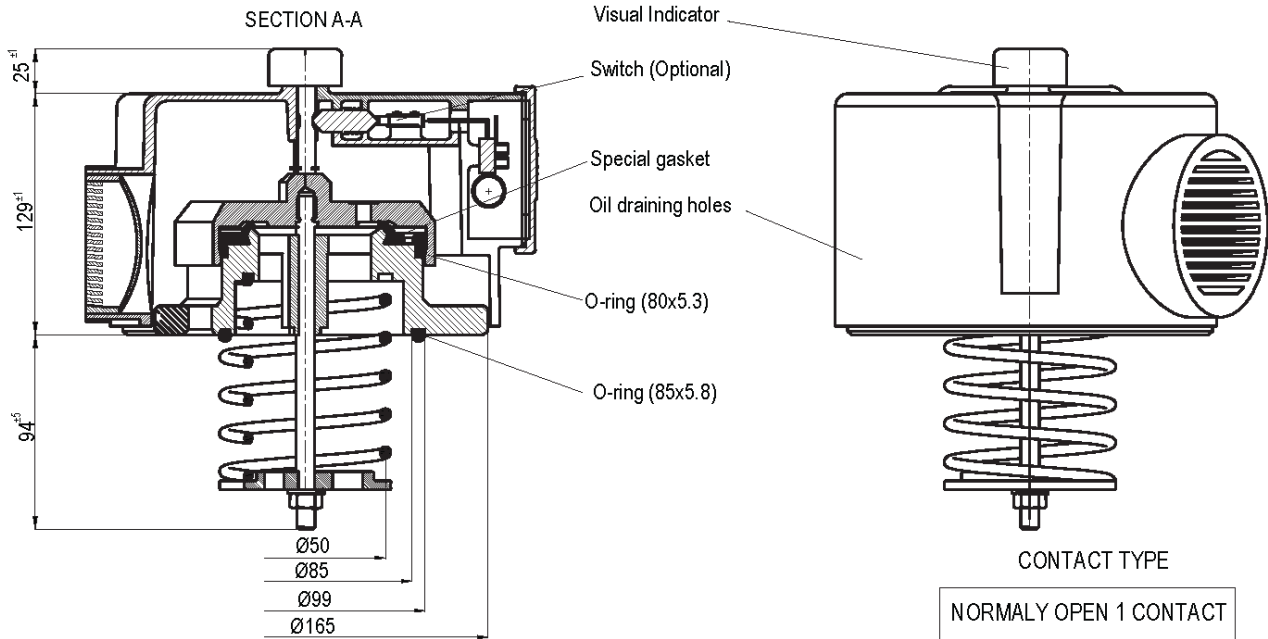
For the higher volumes of oil, two or more valves should be used. It is recommended to use two or more valves of smaller section than one valve of large section. Valves can be positioned at critical points above a winding where the pressure effect is more acute during a short circuit.

In order to ensure correct operation of the valve, any trapped air should be bled via the screw provided so that the oil is intimate contact with the disc.

# PRESSURE SAFETY VALVE

TYPE: MPRV-50

CODE NO: MP 26



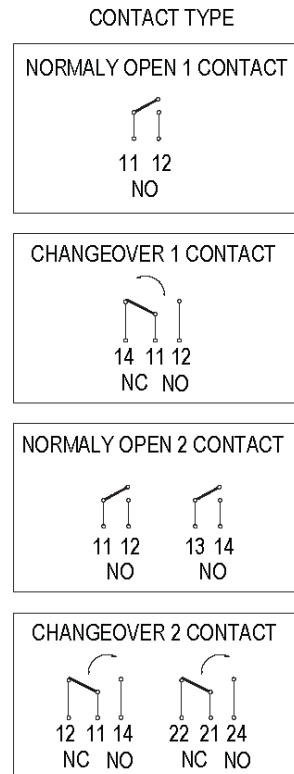
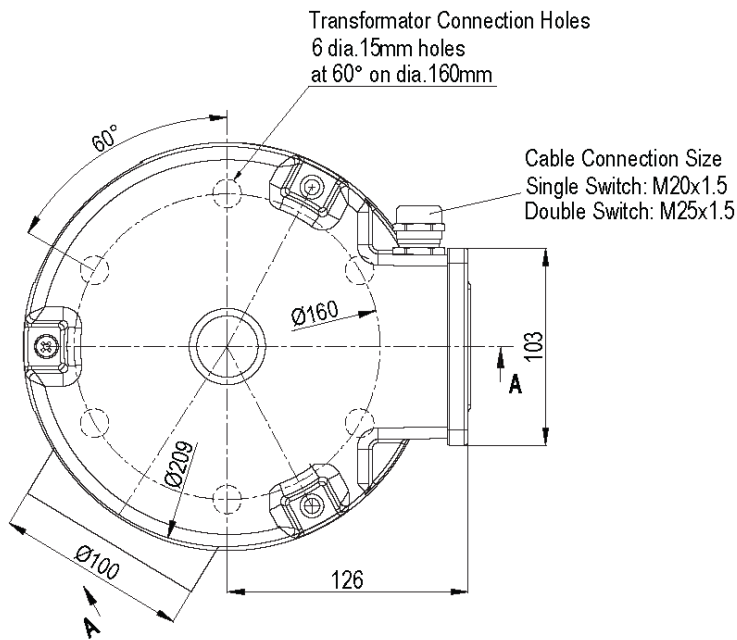
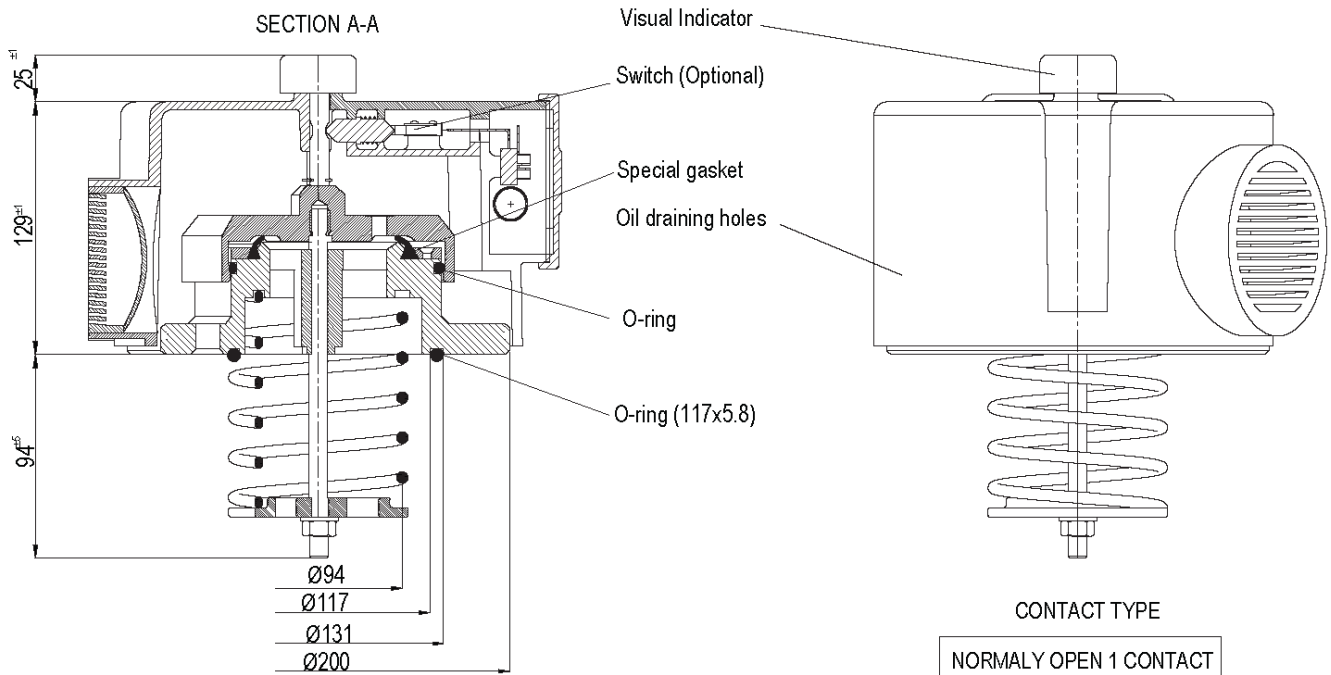
Recommended Maximum Electrical Ratings (Switch Characteristics)

Switch Type	Voltage (V)	Resistive Load (A)	Motor Load (A)	Approvals ENEC		Approvals UL	
				(A)	(V)	(A)	(V)
XCG	250 (AC)	6	2	6 (2)	250 (AC)	5	250 (AC)
XCG	30 (DC)	6	2	6 (2)	30 (DC)	---	---
XCG	125 (AC)	1,5	0,5	1,5 (0,5)	125 (DC)	---	---

# PRESSURE SAFETY VALVE

TYPE: MPRV-80

CODE NO: MP 21

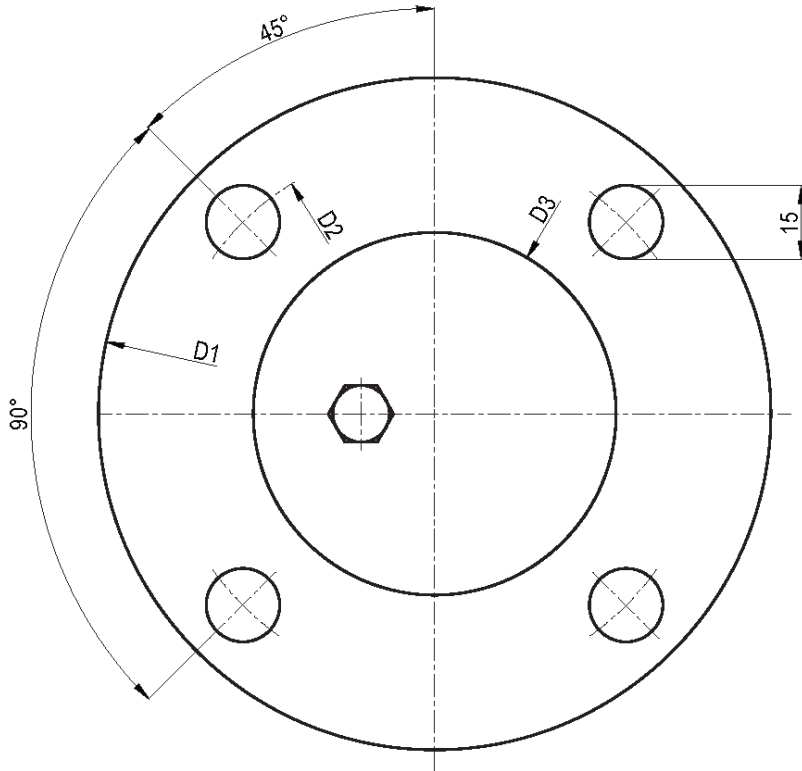
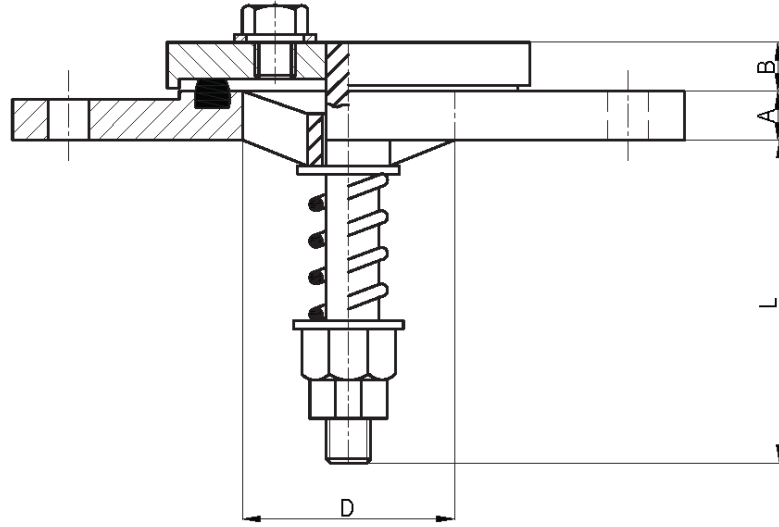


Recommended Maximum Electrical Ratings (Switch Characteristics)

Switch Type	Voltage (V)	Resistive Load (A)	Motor Load (A)	Approvals ENEC		Approvals UL	
				(A)	(V)	(A)	(V)
XCG	250 (AC)	6	2	6 (2)	250 (AC)	5	250 (AC)
XCG	30 (DC)	6	2	6 (2)	30 (DC)	---	---
XCG	125 (AC)	1,5	0,5	1,5 (0,5)	125 (DC)	---	---

# PRESSURE SAFETY VALVE

TYPE: MPRD-80V - 50V



CODE NO	TYPE	L MAX	A	B	D	D1	D2	D3
MP22	MPRD 50 V	92	12	6	52	165	125	79
MP23	MPRD 80 V	139	14	6	80	200	160	117

# PRESSURE SAFETY VALVE

TYPE: MPRV-10

TYPE	CODE NO	CONNECTION DIA.
MPRD - 10	MP01	½" NPT

## DESCRIPTION

This type of Pressure Relief Valves features a one-piece brass housing. A stainless steel spring, factory selected to a predetermined rating, is designed to release pressure build-up from within a sealed tank. A rubber O'ring seals the valve.

There is a stainless steel pull ring attached to the valve shaft to allow for manual operation.

These valves are designed to operate under environmental conditions encountered on outdoor applications. The exhaust port is protected by a "bug shield" cover which inhibits foreign matter from entering the valve body. The valve setting is stamped on the "bug shield" for fast and easy identification.

These types are suitable hermetically sealed type transformers

## OPERATION

When gas pressure in the tank exceeds a specified limit, the valve automatically compresses the spring and drives the poppet, breaking the seal and venting potentially dangerous pressure. With the pressure reduced the valve automatically reseals itself to prevent entry of outside air.

