

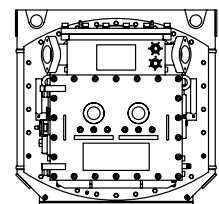
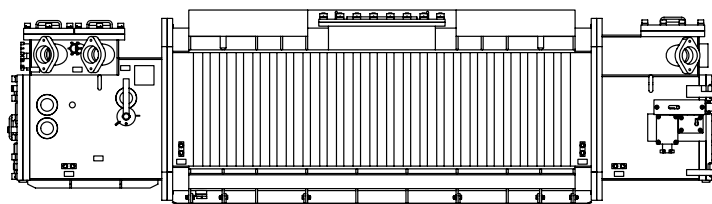
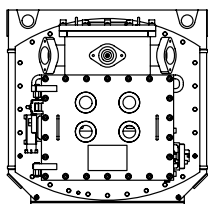


## Flame-proof transformer stations for mining type **MAR...**, **MAR-G...**, **MAR-GI...**



Capacity		200 kVA	315 kVA	400 kVA	630 kVA	1000 kVA	1200 kVA	1400 kVA	1800 kVA
upper voltage from 3 kV to 6 kV ( 3 kV, 3,3 kV, 6 kV)		+	+	+	+	+	+	+	+
High voltage chamber equipment	disconnector with an earthing switch	+	+	+	+	+	+	+	+
	disconnector with ROLLARC contactor and earthing switch	+	+	+	+	+	+	+	+
Lower voltage	525 V (od 400 V do 690 V)	+	+	+	+	-	-	-	-
	525 V and 1050 V (400 V do 690 V and 690 V - 1050 V)	-	-	-	+	+	+	+	
	1050 V (690 V - 1050 V)	-	-	+	+	+		+	+
Number of outflows	1-outflow	+	+	+	+	+	-	-	-
	2-outflow	+	+	+	+	+	+	+	+
	3-outflow	+	+	+	+	+	+	+	+
	4-outflow	+	+	+	+	+	+	+	+
Lower voltage chamber equipment	contactor with supplementary protection and the PM relay	+	+	+	+	+	+	+	+

### Example of configuration of flame-proof transformer station



## ■ PURPOSE

The flame-proof transformer stations of the type MAR-...-.../.../.../...PM and MAR-GI-...-.../.../.../...PM are designed provide current to electric machines and devices operated in mains. They are adapted to work in non-methane and methane headings classified to "a", "b" or "c" degree of methane explosion hazard and to the places classified to "A" or "B" class of coal dust explosion hazard.

The flame-proof transformer stations of the type MAR-...-.../.../.../...PM and MAR-GI-...-.../.../.../...PM are complete substations consisting of a transformer and a switching and protective gear. It is equipped with a microprocessor control-protective relay of the type PM-2 that guarantees protection from the results of short circuits, overloads and ground insulation faults of the outflow.

The whole gear is placed in the flame-proof designed for an easy and quick transport and installation.

The flame-proof transformer stations of the type MAR-...-.../.../.../...PM and MAR-GI-...-.../.../.../...PM on the primary side are powered with the voltage from 3kV to 6kV. On the secondary side they provide voltage from 400V to 1140V with the option of voltage control of  $\pm 5\%$ .

## ■ EQUIPMENT

The flame-proof transformer stations of the type MAR-...-.../.../.../...PM are equipped with a disconnecter with the earthing switch placed in high voltage chamber with high voltage chamber in - terlocking.

The flame-proof transformer stations of the type MAR-GI-...-.../.../.../...PM are equipped with a contactor or a disconnecter with the earthing switch placed in the high voltage chamber with high voltage chamber interlocking.

The main transformer is placed in the transformer chamber. On the side of low voltage stations have a vacuum contactor with supplementary protection and microprocessor protection of the type PM-2.

The PM-2 relay covers the following control-measurement functions:

- over-current relay containing:
  - overload unit,
  - short-circuit unit,
  - asymmetry unit,
- leakage relay do 1140V,
- control relay,
- earthing continuity control relay,
- monitoring control,
- control of local and remote actuators,
- control of the main contactor and auxiliary contactors by means of actuating relays,
- display on the LCD screen the information on work status and faulty statuses and to pass such information to external monitoring systems.

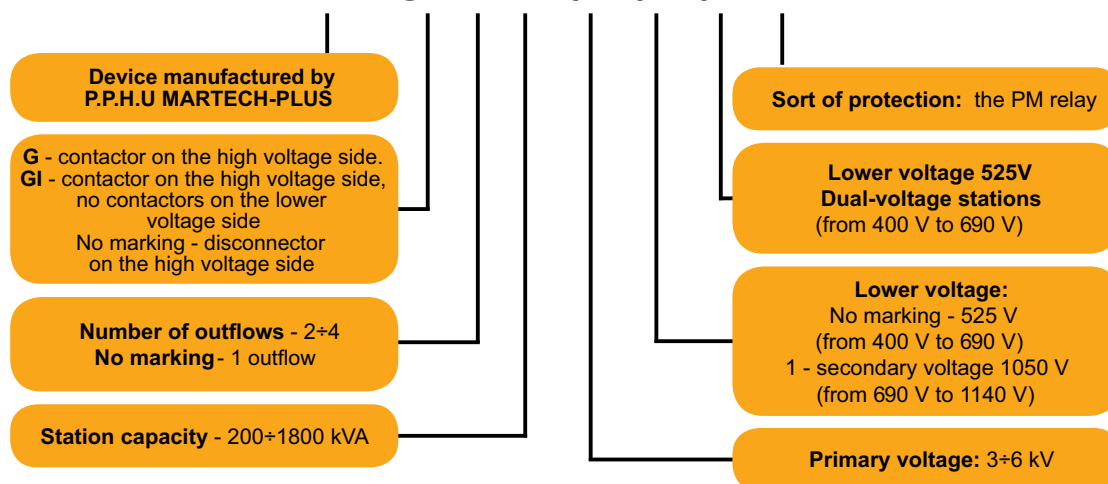
The use of the PM-2 relay in transformer station makes it possible to work in the following modes:

- local switching by means of the button on the housing,
- remote switching by means of the buttons ON and OFF extended as wanted,
- self-acting switching after applying voltage (subject to the lack of failures).

In all work modes it is possible to set the relay to work:

- with the memory of the latest interlocking – the station switching-on will be possible once the reasons of its switching-off are eliminated and the interlocking is canceled by means of STOP,
- without the memory of the latest interlocking – the station switching-on will be possible once the reasons of its switching-off recede.

## MAR-GI -...-... /... /... /... PM



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