„ Interior CT and CM switch boxes manufactured by ETI Polam „

ETI Polam is a well-known manufacturer of the modular equipment and electric low-voltage switch boxes. Many from these solutions we have introduced on “Electro-system” pages . In these article we presented the high grade plastic modular interior switch boxes, CT and CN series, mounted on or under the wall plaster. These switch boxes are using interesting technical solutions and the interesting pattern-designing.

Roman Kłopocki

Interior switch tured as devices mounted on or under the wall plaster, with full door (PO) or transparent door (PT)- Fig. 1. They can be installed both in newly constructed buildings and in old buildings, where electric wiring is modernized. They are adapted mostly in apartments buildings, family houses and in commercial facilities. Switch boxes are available in one row version up to three row version. In every row there is the place for12+1 standard- modules with the width 17, 5 mm. They are intended for the assembly of the standard- modular equipment. Switch boxes series CT and CM have great interest everywhere, the quality and aesthetics of works is important. Thanks to the modern style and design, they are in tune with the inside decorations of every kind of the interior. They have original casing shape with round edges and decorated with moldings doors. The construction of switch boxes makes possible the door opening on left or the right side with angle of 180^{o}. Casing is made from self-extinguishing material ABS, with very good mechanical proprieties and big resistivity. They are available in the white color - RAL 9010. Complete set is provided with clamps {connectors} N and PE - Fig. 4, which can be installed in upper or the lower part of the switch box. All switch boxes have high fire and flame resistance (respectively in 650^{o}C and 850^{o}C temperatures according to PN-IEC 60695-2-1 norm), they have isolations class II, cover protection degree IP40 and the protection degree against mechanical shocks IK 08. They comply also with requirements of many European and Polish norms, e.g. PN-IEC 439-3, IEC 670 and EN 60439-3.

Assembly

A basic advantage of CM and CT switch boxes is the ease of the assembly on all kinds of walls, from traditional - concrete and brick walls - to plaster- walls. Switch boxes can be placed in walls and sectional sides with small thickness, their depth is only approx. 72 mm. Switch boxes consist of two parts : back, to which are attached mounting rails TH 35 intended to the modular equipment and clamps {connectors} N and PE, and also screwed to the front cover door.

Fig. 2 CM..PT Switch box with transparent door mounted on the wall plaster

Easily removed mounting rails are fastened with screws to the base. Electricians like this method of switch boxes construction, which makes easy the work, considerably saves the assembly time and equipments. The base of the switch box can be fastened to the wall with screws, embedded by polyurethane foam or simply built in. Modular devices mounted on rails are connected with lines (in accordance with project) in the manufacturer's electric workshop or on the assembly table on the construction side. This can avoid uncomfortable installation devices directly on the wall and can avoid damages or even destructions of the switch box during other builder's-assembly-works. The frontal plate is equipped with mask (hood), which can be easily break off, according to the number of modular devices provided for installation. The breakup of masks in required places for the purpose of installing the definite number of modular devices is quick and not inconvenient. In case of the incorrect masks breakup, there is the possibility of the repeated blindness of not used areas with spare covers. Then, mounting rails are screwed to the switch box base, breaks off special extractions for making easy insertion of wires and connects inputs and outputs of the circuits. The whole device is covered with the front cover along with door, screwed with screws in four corners of the switch box. The cover is equipped with special masks (hoods), which protect screws.

Fig. 3 Switch box mounted on the wall-plaster CT…NS – IP55

Fig. 4 N and PE terminals with bracket

Wires ducting

Switch boxes have enough space for ducting the electric conductors, what considerably makes installation works easy. Wires can be put in inwards of the switch box from every side. The construction of the box makes also possible the free and safe access to the installed equipment. The size of the box ensures a lot of places for the additional equipment and cables and lets the free access to wires during the assembly. Wires can be easily lead next to devices or under the TH35 rail. In switch boxes, mounted under the wall plaster, the part assembled in the plaster, has special extractions, whose breakup makes possible cables insertion from all sides. In switch boxes, mounted on the wall plaster, similar extractions are placed in backside of the casing, assuring an aesthetical look of the device.

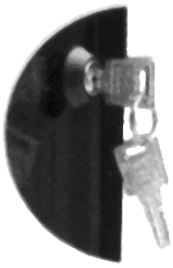

Fig. 5 Patent-lock

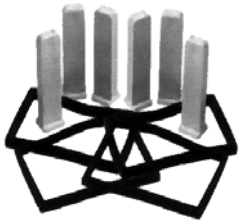

Fig. 6 Connecting elements with gaskets

Additional accessories

Switch boxes type CT and CM are provided with following accessories: the patent- lock with the key (Fig. 5), which can be individually installed to the switch box door, and connecting elements along with gaskets for coupling switch boxes into groups with protection degree IP55. Under a row of devices, self-adhesive tags with device signature can be placed. Every switch box can be sealed up, what protects the device from the interference of un-authorized persons. Summing up, thanks to such advantages as universal use, interesting pattern-designing, the high grade of used materials and the simply assembly and installation, switch boxes series CT and CM, have great interest among electricians, architects and investors.

Inż. Roman Kłopocki