



PH-XX, PS-XX

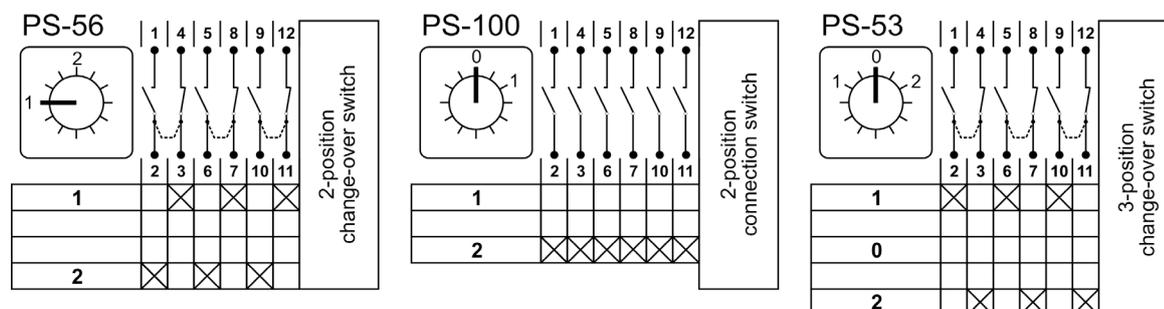
SWITCHES, PUSHBUTTONS
AND CONTROL LAMPS

APPLICATION

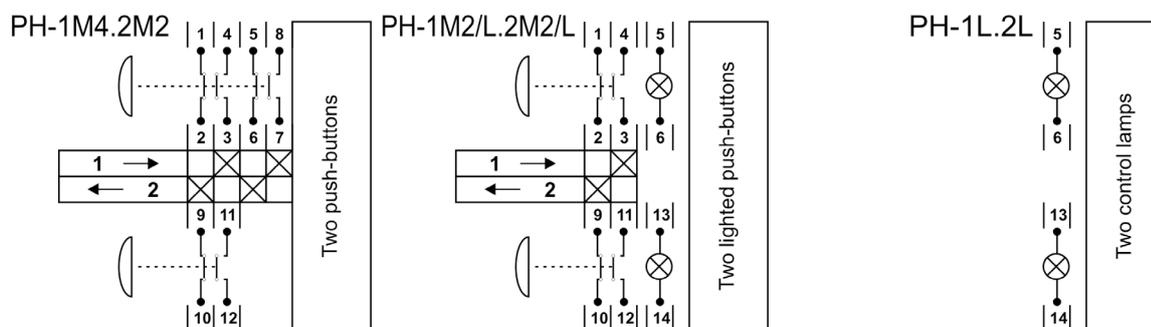
Modules of switches and lighted push-buttons PS-xx and PH-xx are meant for use in steering, signalling and protection circuits. They represent supplementary equipment to the whole *Re-Line* family of relays enabling construction of steering switches mounted on level of relays, using same type of housing and sockets. The PS-xx has a cam switch type 4G10 produced by "Aparator" with a chosen diagram of connections. It is possible to use a switch with maximally 5 packages and maximally 14 terminals. The PH-xx module have EAO fitting mounted inside. It is possible to mount lighted pushbutton with any colour of the shade with maximally 3 packages each and maximally 14 terminals. Those combinations enable multiple steering solutions in the external circuits.

CONSTRUCTION

Modules of switches and lighted push-buttons are mounted in a typical housing size 110 × 55 × 77 mm, with 14 terminations in a form of a plug, suitable to be mounted in a GZ-14 socket (plate-mounting) or GZ-14U (bus-mounting) or GZ14Z - to be mounted in a relay chassis type R8614Z. The scheme of connections (terminations) is presented on Picture 1.



Picture 1. Chosen (typical) schemes PS-xx modules.



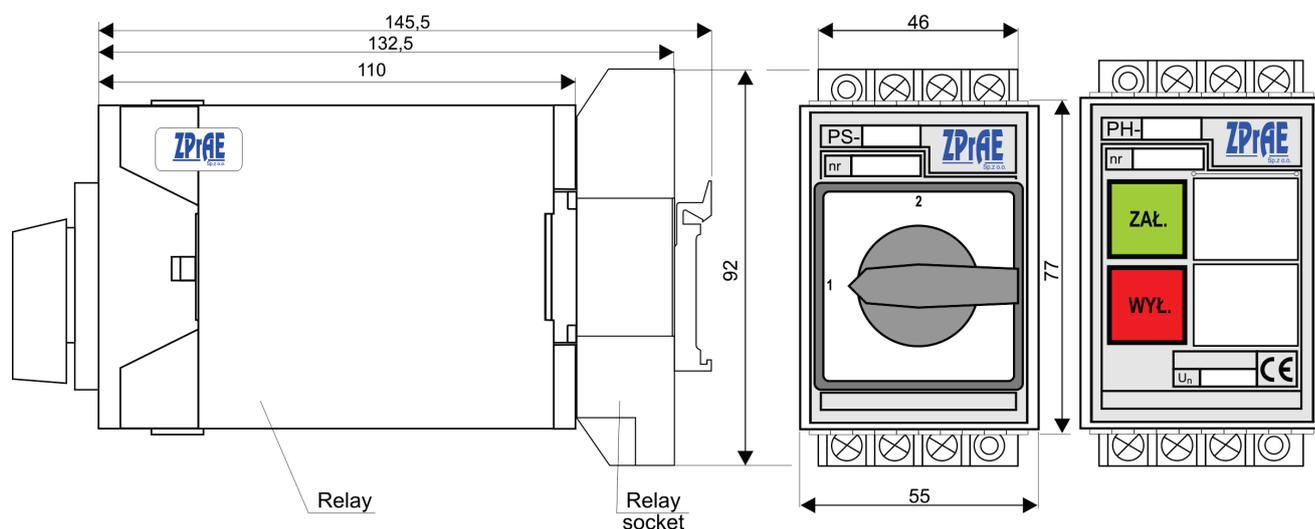
Picture 2. Chosen (typical) schemes PH-xx modules.

MODULE VERSIONS

There is a large number of combinations of connections and terminations diagrams for PS-xx and PH-xx modules. Pictures 1 and 2 present only chosen, typical versions. We are open for contact and suggestions in case, a different (custom) diagram or combination of connections is needed. After confirming feasibility of a proposed solution we will provide you with ordering number PS-... or PH-... . In practice it is possible to mount any switch type 4G10 sized up to 5 packages accordingly to catalogue „4G Cam switches” by APATOR. In PH-xx it is possible to mount any Swisstac-type fitting produced by EAO from 55mm group, with frame sized 18x18 mm. Those can be mono-stable (M), bistable (B) changeover (P), key switches (K) or control lamps (L). Due to large number of possible solutions we ask for contact or detailed description of a chosen module.

TECHNICAL INFORMATION

| Connecting data of PS-xx | |
|--|--------------------------------------|
| Rated continuous current | 10 A |
| Rated breaking capability for alternating current (1 pole) | 220 V AC / 8 A |
| Rated breaking capability for direct current (1 pole, T=15 ms) | 220 V DC / 0,5 A |
| | 110 V DC / 3,0 A |
| Connecting data of PH-xx | |
| Pick-up voltage / pick-up current | min. 5 V AC / 10 mA |
| | max. 250 V AC / 3 A |
| | 250 V DC / 0,5 A |
| | 24 V DC / 3 A |
| Versions of lamps PH-xx | |
| Voltage of lamps and lighted buttons | 24 V AC/DC, 110 V AC/DC, 220 V AC/DC |
| Colours of lamps and lighted buttons | Red / Green / Yellow / Blue / White |
| Colours of buttons | As above + Black / Grey |
| Versions of buttons | Monostable (M) / Bistable (B) |
| Insulation | |
| Rated insulation voltage | 250 V |
| Electrical strength of insulation | 2 kV; 50 Hz; 1 min. |
| Overvoltage category | III |
| General Data | |
| Ingress Protection of the housing (IP) | IP40 |
| Ambient temperature | od -5 °C do +40 °C |
| Ambient protection | RT II |
| Terminations (socket/plug) | GZ14 |
| Dimensions | 77 × 55 × 110 mm (W×S×G) |
| Mounting | as R15 4P to the mounting socket |



Picture 3. Dimensions of the PS-xx i PH-xx. modules

Attention:

We have prepared a vast offer of auxiliary equipment in order to support mounting of our relays (cases, sockets, plugs). The auxiliary equipment is designed based on our clients suggestions and many years of our own experience. More information can be found in catalogue: "GZ-14/GZ-14Z, R-8614/R8614Z, ZAS-55, ZAS-70, plugs, sockets and relay-chassis" available at www.zprae.pl

PH-XX PS-XX



OFFER



RSH-3, RSH-3S - tripping

RS-6, RPD-2, RPP-4, RPP-6 - interposing

RMS-2 - signalling

RCW-3, RCDW-1 - circuit continuity monitoring

RKO-3 - power supply circuit
continuity monitoring

RB-1, RBS-1, RBS-2 - bistable

RT-22 - time

RUT-2, RUT-3 - time-voltage

RJT-1, RJT-3 - time-current

RKU-1, RKS-1 - final controlling

LZ-1, LZ-2 - operation counters

RPZ-1 - supply source switching

GPS-1 - time synchronisation

MDD-6, MDS-12 - Diode modules

PH-XX, PS-XX - Modules of switches,
pushbuttons and control lamps

Relay racks

Busbar protections and breaker failure
protections type TSL-9r, TSL-11

Auxiliary and signalization
relays

Reserve Central Signalling System
type MSA-9, MSA-12, MSA-24

Protection relays
type AZT-9, APP-9

Disturbance recorder RZS-9

Energy measurement system
and event recorder ZRZ-28

Load Resistors
for measuring transformers

DC and AC auxiliary
power supply switchgears

Cubicle-contained sets of control
and supervision protections

Modular power supplies, measuring suitcases,
measuring and registering system RFQ-8

PROFIL-L cubicles

Periodical and post-failure tests,
as well as repairs and overhauls
of busbar protections TSL

Servicing, strting-up
and post assembly tests

ZPrAE
Sp.z o.o.

ZAKŁAD PRODUKCYJNY APARATURY ELEKTRYCZNEJ

Sp. z o.o. 41-100 Siemianowice Śląskie, ul. Marii Konopnickiej 13
tel: 32 22 00 120; fax: 32 22 00 125; e-mail: biuro@zprae.pl