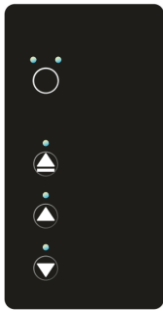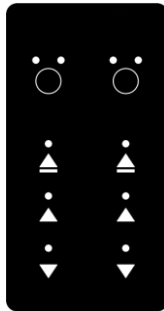# PULT01 / PULT02

Desk panels for barriers and pedestrian gates

| PULT01 Desk panel 1-channel | PULT02 Desk panel 2-channel |

The desk panels PULT01 / PULT02 are used for manual control of barriers and / or pedestrian gates, e.g. from a porter's lodge or from a reception. The 1-channel version PULT01 can control only one barrier or one pedestrian gate, with PULT02 two independent barriers or pedestrian gates or also a combination of a barrier and a pedestrian gate can be controlled.

A sheet with standardised sticker symbols is supplied. This can be used to paste over the membrane buttons if another function is to be switched with it. White blank stickers are also supplied, with which the membrane buttons can also be labelled using a waterproof pen if required.

Technical data

Characteristic	Value	Notice
Number of channels	PULT 01 = 1-channel PULT 02 = 2-channel	
Power supply, separate for each channel	24 V DC ± 10 %	Reverse polarity protection by diode
Number of buttons per channel	4	2 simple push buttons, 2 push buttons with memory function
Number of inputs per channel	2 pieces, 24V DC	Indication of status via LED
Number of outputs per channel	5 pieces, 24 V DC	
Number of LED per channel	5 pieces	
Dimensions L x W x H	165 x 90 x 48 mm	
IP protection	IP 65	
Connection cable	10-core, 3 m length	
Standards EMC	EN61000-6-2 EN61000-6-3	

Control and display elements
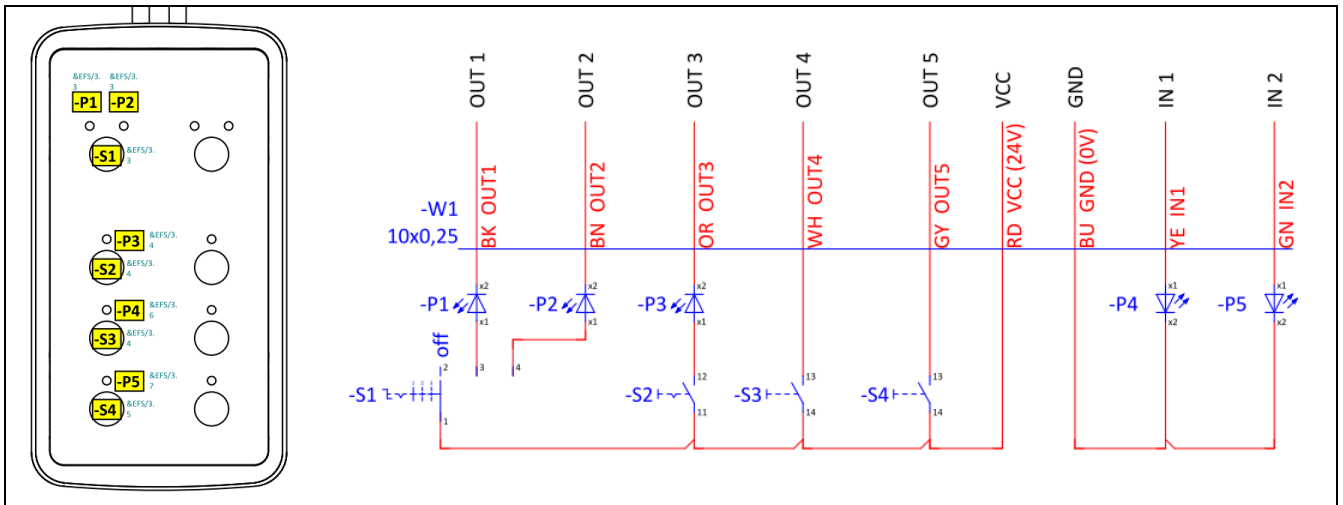
Button S1:
Works like a multi-stage switch. By pressing several times, one of two outputs (OUT1/OUT2) is cyclically switched on, then both outputs are switched off. The associated LEDs P1 and P2 indicate the switching status of the two outputs.
Initial position at start-up: Outputs off
Power failure: Previous switching state remains after voltage recovery

Button S2:
Works like an ON/OFF switch. Pressing once switches the output (OUT3) on, pressing a second time switches it off again, etc. The corresponding LED P3 indicates the switching status of the output.
Initial position at start-up: Output off
Power failure: Previous switching state remains after voltage recovery

Buttons S3 and S4:
Simple push buttons without memory function. The corresponding output (OUT4/OUT5) is switched on as long as the respective button is pressed.

LED P4 and P5:
The two LEDs are switched via one input (IN1/IN2) each. They are located near the two buttons S3 and S4, but unlike P1 to P3, they are not permanently coupled to the buttons. This means that a completely different feedback can be given via P4 and P5 than to the functions that are switched via the S3 and S4 buttons.

Power supply:
The desk panels must be operated with 24V (VCC/GND). The polarity must be observed.
With PULT 02, the two channels are galvanically separated from each other so that two barriers or pedestrian gates or a combination of both can be operated independently of each other.

Technology:
Each channel is controlled by a separate microcontroller.
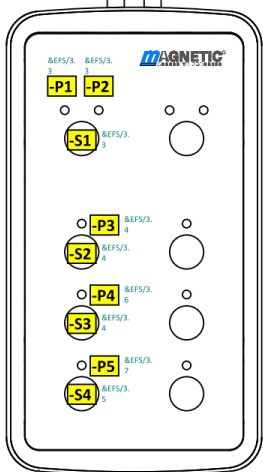
Use with barriers and pedestrian gates

For MHTM™ MicroDrive barriers and FlowMotion™ products, the desk panel is connected to the control unit MGC / MGC Pro. Please also refer to the circuit diagram supplied with the desk panels.

The desk panels can also be used with older barriers, e.g. with control unit MLC10 or MUB3. They can also be used for pedestrian gates with control unit MBC110 / 111, e.g. MPP, MPS.

The functionalities described in following show only a part of the possible switching functions.
The available buttons and displays can be individually assigned and thus adapted to different customer requirements.

Functionality with MicroDrive barriers

With a desk panel PULT01, one barrier can be operated, with a PULT02, two barriers can be operated via three separate buttons each. For this, the barriers must be set to either operating mode 4 (two-pulse control) or operating mode 2 (deadman).

	Button	Display LED
	Button S1: With barriers being freely available	LED P1 / P2: Depending on the function of button S1
	Button S2: Permanent-OPEN	LED P3: Display permanent-OPEN activated
	Button S3: Open barrier	LED P4: Display barrier opened
		LED P5: Display barrier closed
	Button S4: Close barrier	

Operating mode 4 (2 buttons, typical porter operation):
- Button S1 and the two LEDs P1 and P2 are not normally required for barriers, but can be used for other functions.
- By briefly pressing button S2, the barrier can be opened and held in the open position (permanent-OPEN). A closing signal is then ignored. The status permanent-OPEN is indicated via LED P3. Pressing button S2 again briefly switches off the permanent-OPEN function, LED P2 goes out. The barrier can then be closed again via a closing signal.
- The barrier can be opened by briefly pressing button S3 if no closing signal is present.
- The barrier can be closed by briefly pressing button S4 if there is no permanent-OPEN signal.

Important notice: The logical state of buttons S1 and S2 is saved each time the button is pressed. After a power failure, the outputs of S1 and S2 return to the same state as before the power failure. The status of buttons S3 and S4 is not saved.

Operating mode 2 (deadman):
This operating mode differs from operating mode 2 in that the buttons S3 or S4 must be kept pressed until the barrier boom has reached the respective end position. If the respective button is released before reaching the end position, the barrier boom stops moving. The function permanent-OPEN works in the same way as in operating mode 4.

Connection cable
A 10-core cable is required between the barrier and the desk panel. To ensure functional safety between the control unit and the desk panel, a cable cross-section of at least 0.5 mm² must be laid for a maximum cable length of 100 metres.

There are 3-metre long, flexible connection cables on the desk panels. With PULT02 there are two separate cables. The cables can be extended on site using junction boxes if required.

Replacement for previous desk panels PG01 to PG04

A desk panel PULT01 or PULT02 can replace an old desk panel PG01 or PG02. If PG03 or PG04 are to be replaced, two panels must be used.

It must be noted that only control units that are operated with a 24V supply can be used with PULT01 or PULT02. Any special solutions that were supplied with other operating voltages are therefore not possible.

It should also be noted that the switch for "permanent-OPEN" used on the desk panels PG01 to PG04 is no longer wired internally in parallel with the "Barrier OPEN" button. Instead, the output that is switched with button S2 (permanent-OPEN) must be wired to an input with the function "Open high priority".

The switching state of button S2 is stored in the event of a power failure, so the button behaves in the same way as the previous solution with a "permanent-OPEN" switch.
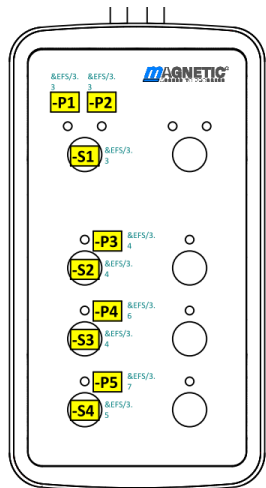
Functionality with FlowMotion

A desk panel PULT01 can be used to operate one pedestrian gate, and a PULT02 can be used to operate two pedestrian gates, each via 4 separate buttons. A large number of possible functions can be switched and displayed with one desk panel.

mTripod / mSwing / mWing
The buttons and the associated LEDs can be assigned individually according to customer requirements.

Below you will find a <u>possible</u> example for the use of a desk panel PULT01 / 02 with a mWing. Alternatively, you could also assign the function "Illumination off" or "Inhibit opening" to button S2, for example.

<table>
<tr>
<td rowspan="6"></td>
<td>Button</td>
<td>Display LED</td>
</tr>
<tr>
<td>Button S1: press several times
Position 0 = normal operation
Position 1 = permanent open R1
Position 2 = permanent open R2</td>
<td>LED P1: Permanent open R1 active
LED P2: Permanent open R2 active</td>
</tr>
<tr>
<td>Button S2: Switch on random check function / confirm hits</td>
<td>LED P3: Display "Random check function" switched on</td>
</tr>
<tr>
<td>Button S3: Open individually in direction R1</td>
<td>LED P4: briefly lights up when a person has passed through from direction R1</td>
</tr>
<tr>
<td>Button S4: Open individually in direction R2</td>
<td>LED P5: briefly lights up when a person has passed through from direction R2</td>
</tr>
</table>

- Button S1: In the initial position (switch position 0), LED P1 and LED P2 are not illuminated. The mWing is in normal operation (opening by validation or signal on button S3 or S4). Press once to switch to switching position 1. The mWing is now operated permanent open for direction R1, the associated LED P1 lights up. Pressing button S1 again switches to switching position 2. The mWing is now operated permanent open for direction R2, the associated LED P2 lights up. Press again to return to the initial position and the mWing returns to normal operation.
- The random check function can be switched on by briefly pressing button S2. The corresponding LED P3 then lights up. Pressing it again switches the random check function off again. If a random hit has been triggered by the random check function (external light / siren is on), the hit must be confirmed by pressing button S2 twice (external light / siren off again).
- By briefly pressing button S3, a passage open can be given for a person in the direction of R1. LED P4 lights up when a person has passed through in the direction of R1.
- By briefly pressing button S4, a passage open can be given for a person in the direction of R2. LED P5 lights up when a person has passed through in the direction of R2.

Important notice: The logical state of buttons S1 and S2 is saved each time the button is pressed. After a power failure, the outputs of S1 and S2 return to the same state as before the power failure. The status of buttons S3 and S4 is not saved.