

# TS 959 door control

Hold-to-run control panel for GfA-ELEKTROMATEN® drives  
with DES digital limit switch or NES mechanical limit switch

## Approvals and certificates

### TS 959

Type test according to:

DIN EN 12453                      DIN EN 12978  
DIN EN 60335-1                DIN EN 60335-2-103  
DIN EN ISO 13849-1        TÜV NORD CERT GmbH



## TS 959 – Hold-to-run control panel for DES / NES limit switches

### Technical data

- For GfA ELEKTROMATEN<sup>1)</sup> drives with DES or NES
- Supply voltage:  
1N~230 V, PE / 3~230 V, PE / 3N~400 V, PE / 3~400 V, PE
- Operating frequency: 50 Hz / 60 Hz
- Mains supply ratings for external devices: 230 V AC (1.6A)
- Permissible temperature range: -10 °C...+50 °C

### Housing

- Dimensions W x H x D [mm]: 155 x 386 x 90 (118<sup>2)</sup>)
- IP65 rated when hard wired or IP54 if CEE plug used
- Protection against contact provided by covers for live parts
- Connection cable that plugs into the ELEKTROMATEN unit, insertable from below or above

### Design

- Integrated OPEN-STOP-CLOSE control device
- Safety reversing contactor (with 2 independent shutdown options)
- Settings via selector switch with digital display
- Pluggable connection technology
- Connection cable running to ELEKTROMATEN available in various lengths
- Independent, programmable relay contact, e.g. usable for green traffic-lights or ramp enabling
- Slack-rope and pass-door plug-in connection points

### Accessories

- Mains switch/isolator
- Emergency STOP switch
- Key switch
- For description and details on further accessories, see 8.039

### Functions

- Automatic detection of DES or NES limit switches
- Change of rotating direction from control panel push buttons
- Adjustment of limit positions (only DES) and all functions from the operator level

<sup>1)</sup> The door control TS 959 is not suitable for drive units with frequency inverters (ELEKTROMATEN FI).

<sup>2)</sup> Version with mains switch

TS 959

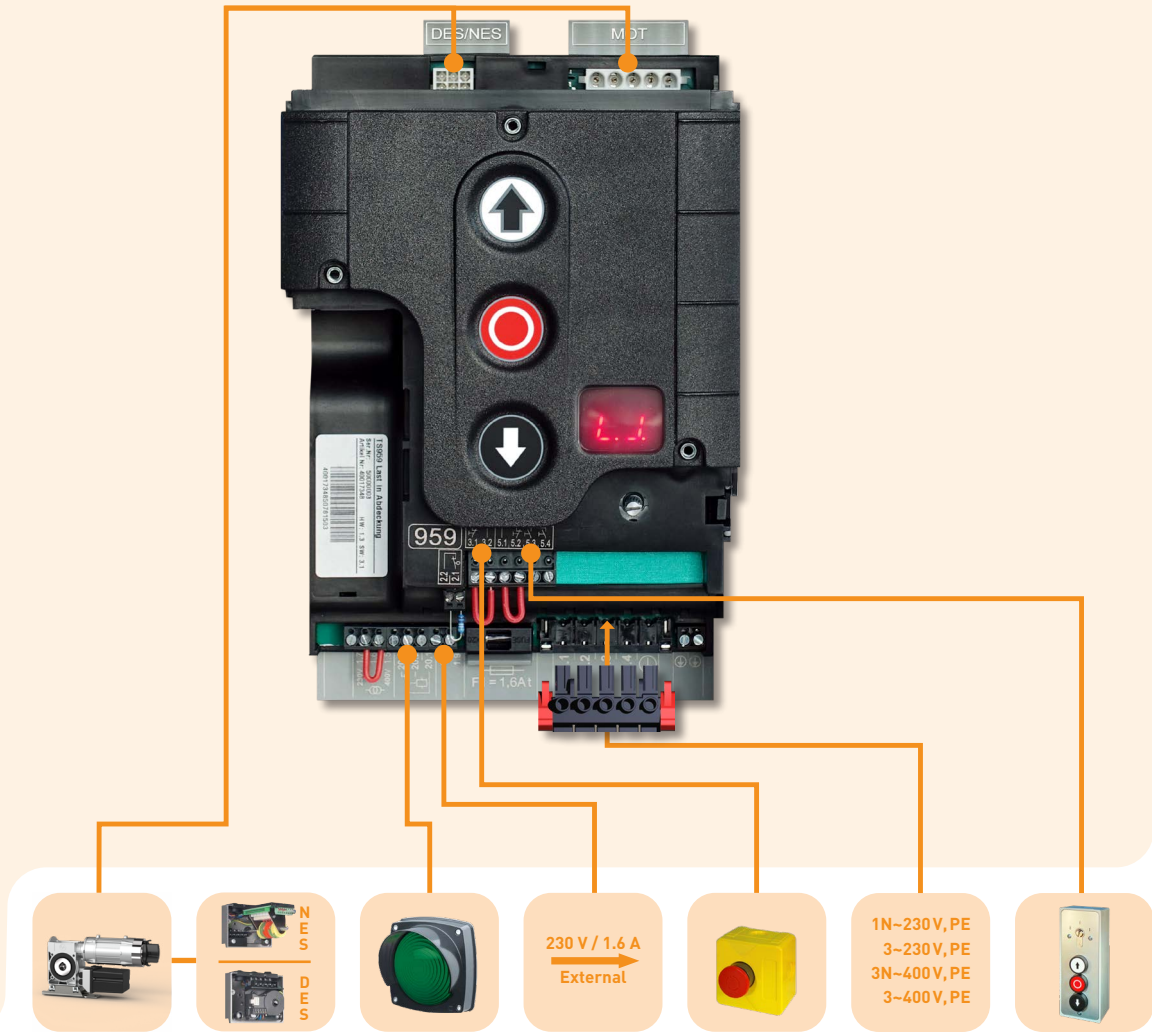


- Selectable operating mode:
  - CLOSE / OPEN in hold-to-run mode
  - CLOSE in hold-to-run mode / OPEN in self-hold mode
  - Hold to run FULLY CLOSE FUNCTION / self-hold OPEN  
Keep the CLOSE button pressed until the door is completely CLOSED. If the CLOSE button is released early, the door will reverse automatically to its OPEN position.
- Status and information display (including display of 6 most-recent faults); extended evaluation by using optionally available GfA-Stick (see 8.039)
- Cycle counter (non-resettable)
- Maintenance-cycle counter:
  - Setting range: 1,000 - 99,000 cycles
  - Display indication or switch to hold-to-run operation once the maintenance-cycle limit is reached
- Detects door / drive blockage (only DES); in this event the control deactivates the drive unit
- Dynamic run time monitoring (only NES):
  - With every door movement, the time taken to run between the end positions is measured and compared with the most-recently set reference duration
  - If the run duration is increased (pre-settable deviation), the control panel is deactivated
- Settable force monitoring in OPEN direction (only DES):
  - For counterbalanced doors, sudden changes to the counter-balancing are detected
  - Self-learning feature and consequently no activation of force monitoring function due to, e.g., a change in spring tension

## Connection options

Part no. installation drawing: 50001664

TS 959



## Complete door control with connection kit



1

### Designation

TS 959 with connection kit, when hardwired

### Description

1 With mains supply terminal and slide gland

### Part no.

20095900.00001



2

TS 959 with CEE 3N-400 V (5-pole)

2 With pluggable mains supply cable of length 0.7 m

20095900.00002

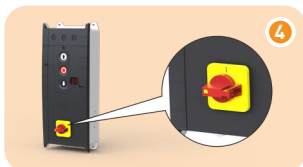


3

TS 959 with CEE 1N-230 V (3-pole)

3 With pluggable mains supply cable of length 0.7 m

20095900.00006



4

TS 959 with mains switch/isolator 3N-400 V

4 With mains switch/isolator in large cover

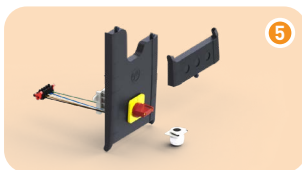
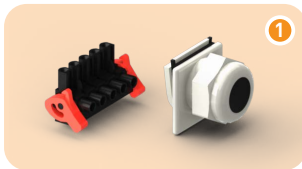
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TS 959 with mains switch/isolator 1N-230 V

4 With mains switch/isolator in large cover

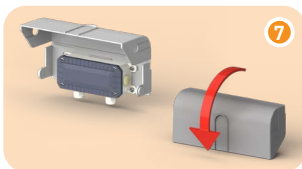
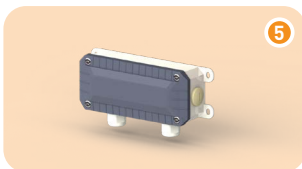
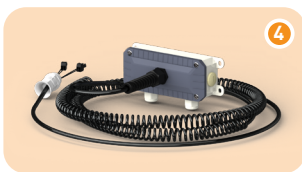
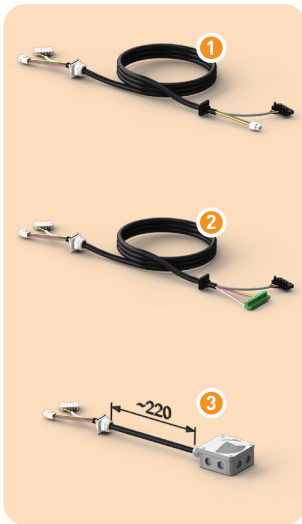
20095900.00026

## Separate connection kits



Designation	Description	Part no.
Connection kit, when hardwired	1 Mains supply terminal and slide gland	30005132.00001
Connection kit CEE 3N-400 V (5-pole.)	2 With pluggable mains supply cable of length 0.7m	30005132.00002
Connection kit CEE 3N-400 V, IP65 (5-pole)	3 With pluggable mains supply cable of length 0.7m	30005132.00004
Connection kit CEE 1N-230 V (3-pole)	4 With pluggable mains supply cable of length 0.7m;	30005132.00006
Connection kit CEE 1N-230 V asym. (3-pole)	4 For SI 25.15 WS / SI 45.7 WS / ST 16.24 WS; with pluggable mains supply cable of length 0.7m	30005132.00014
Connection kit CEE 3-230 V (4-pole)	4 With pluggable mains supply cable of length 0.7m	30005132.00017
Mains switch/isolator with connection kit 3N-400 V	5 Assembly kit for mains switch/isolator (complete)	30005132.00021
Mains switch/isolator with connection kit 1N-230 V	5 Assembly kit for mains switch/isolator (complete)	30005132.00026

## Accessories

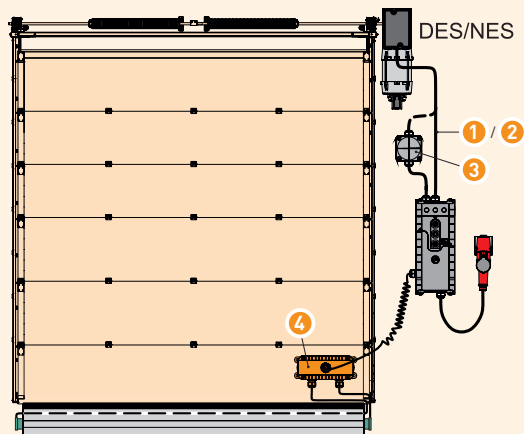


Designation	Description	Part no.
DES connection cable	<b>1</b> Connection to ELEKTROMATEN drives with digital limit switch, pluggable on both sides; length of cable <sup>1)</sup> : 3 m 5 m 7 m 9 m 11 m 13 m 15 m	20002420.00300 20002420.00500 20002420.00700 20002420.00900 20002420.01100 20002420.01300 20002420.01500
NES connection cable	<b>2</b> Connection to ELEKTROMATEN drives with mechanical limit switch, pluggable on both sides; length of cable <sup>1)</sup> : 3 m 5 m 7 m 9 m 11 m 13 m 15 m	20002320.00300 20002320.00500 20002320.00700 20002320.00900 20002320.01100 20002320.01300 20002320.01500
Connection set TS / clamp	<b>3</b> Connection of the ELEKTROMATEN using the terminals in the box; use, for example, for routing the connection cable through the wall; Length of cable: 0.22 m	30005728
Spiral cable with junction box (IP65)	<b>4</b> Straight cable ends (2 m / 0.35 m); length of coiled cable: 0.9 m; max. stretched length: 4 m - Suitable for System 1 and System 2 - System 1 = one junction box - System 2 = junction box + junction end box;  Are also required for system 2: <b>5 + 6</b>	20002620.00020
Junction end box (IP65) for system 2	<b>5</b> With plug-in connection points for transmitter / receiver, as well as for pass-door and slack-rope switches	30004834
Connection cable for system 2	<b>6</b> Pluggable on both sides, 5-wire, cable length: 4.5 m 6.5 m 8.5 m 10.5 m	20002630.00450 20002630.00650 20002630.00850 20002630.01050
Splash guard	<b>7</b> Mechanical protection against water; For spiral cable with junction box <b>4</b> and junction end box <b>5</b>	40017478.00001

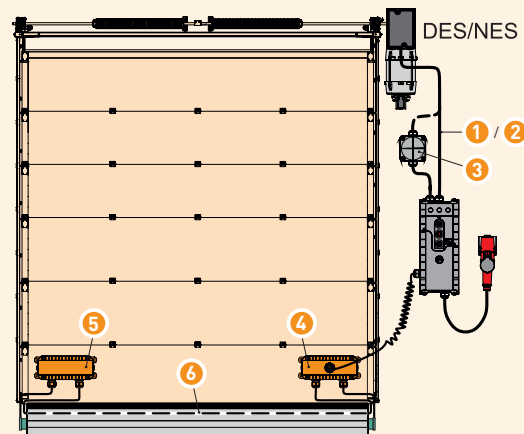
■ Further accessories are described in Section 9

■ 1) Further lengths available, upon request

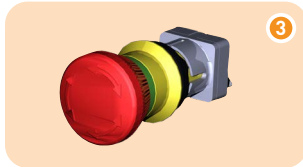
Example with system 1



Example with system 2

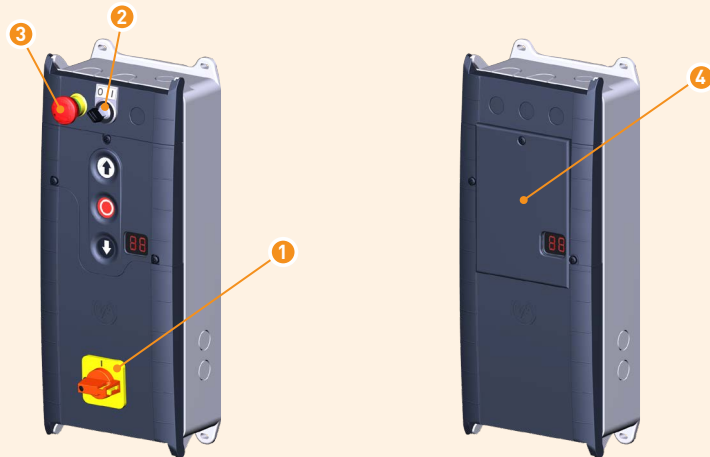


## Accessories



Designation	Description	Part no.
Mains switch/isolator with connection kit	1 See "Separate connection kits" on page 8.037	
Key switch	2 Assembly kit for installation in small cover, supplied with 2 keys	30004616
Emergency STOP switch	3 Assembly kit for installation in small cover	30004615
Keypad cover	4 For preventing unintentional pressing of keypad buttons (e.g. for use in underground car parks), increased protection against direct contact with water	40017317.00001
GfA-Stick	5 For use with smartphone or tablet PC together with the "GfA+" App; for reading out and displaying of important data from the door control (e.g. programming, stored error logs, etc.)	20003696

## Arrangement



## Spare parts TS 959



Designation	Description	Part no.
TS 959 board	1 Within cover incl. keyboard	30005241.00001
Bottom section of housing TS-B	2 For installation of the TS-board	40019859
Cover kit TS-B1	3+4+6 Consists of: small cover, large cover	30005192.00001
Cover kit TS-B1 for mains switch	3+5+6 Consists of: small cover, large cover, prepared for mains switch	30005192.00006
Spacer foot TS-B	6 4 pc	40016530

