

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 60335-2-103

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 ELEKTROMATEN¹ drives with DES or NES
- Supply voltage:
1N~230V, PE / 3~230V, PE / 3N~400V, PE / 3~400V, PE
- Operating frequency: 50 / 60 Hz
- Mains supply ratings for external devices: 230V AC (1.6A)
- Permissible temperature range: -10°...+50°C

Housing

- Dimensions W x H x D [mm]: 155 x 386 x 90 (117°)
- 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

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

² Version with mains switch

TS 959

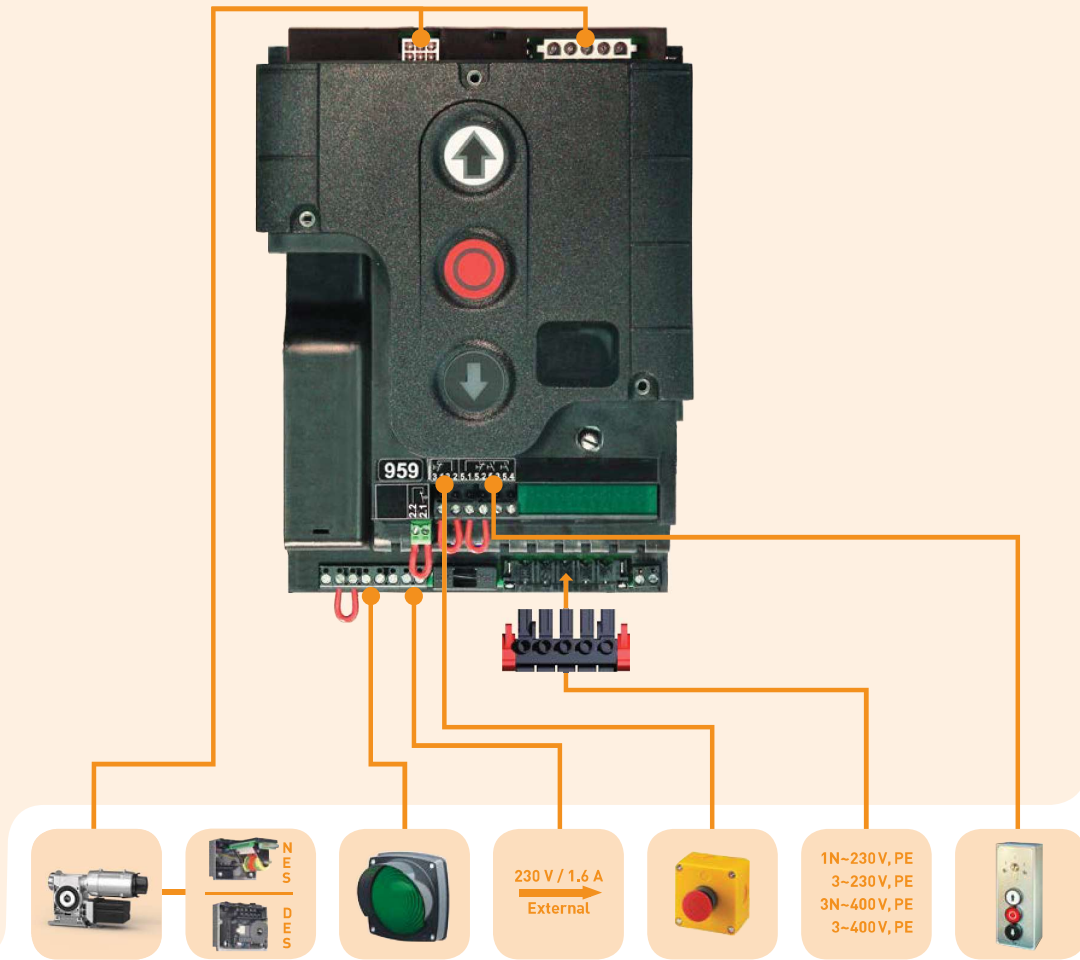


- Selectable operating mode:
 - CLOSE / OPEN in hold-to-run mode
 - CLOSE in hold-to-run mode / OPEN in self-hold mode
 - Hold to run FULLY CLOSE FUNCTION / self-hold OPENKeep the CLOSE button pressed until the door is completely CLOSED. If the CLOSE button is released early, the door will reverse automatically 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 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

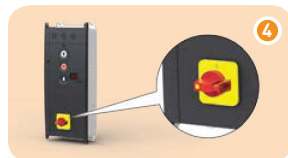
Connection options

Part no. installation drawing: 50001664

TS 959

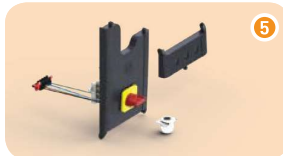
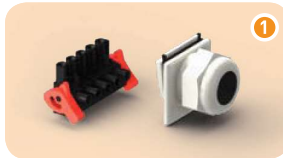


Complete door control with connection kit



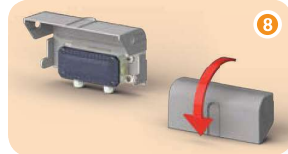
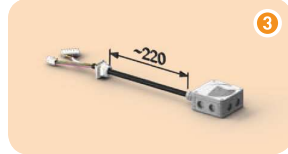
Designation	Description	Part no.
TS 959 with connection kit, when hardwired	1 With mains supply terminal and slide gland	20095900.00001
TS 959 with CEE 3N-400V (5-pole)	2 With pluggable mains supply cable of length 0.7m	20095900.00002
TS 959 with CEE 1N-230V (3-pole)	3 With pluggable mains supply cable of length 0.7m	20095900.00006
TS 959 with CEE 1N-230V asym. (3-pole)	3 For SI 25.15 WS / SI 45.7 WS / ST 16.24 WS; with pluggable mains supply cable of length 0.7m	20095900.00014
TS 959 with mains switch/isolator 3N-400V	4 With mains switch/isolator in large cover	20095900.00021
TS 959 with mains switch/isolator 1N-230V	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-400V (5-pole.)	2 With pluggable mains supply cable of length 0.7m	30005132.00002
Connection kit CEE 3N-400V, IP65 (5-pole)	3 With pluggable mains supply cable of length 0.7m	30005132.00004
Connection kit CEE 1N-230V (3-pole)	4 With pluggable mains supply cable of length 0.7m;	30005132.00006
Connection kit CEE 1N-230V 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 3-230V (4-pole)	4 With pluggable mains supply cable of length 0.7m	30005132.00017
Mains switch/isolator with connection kit 3N-400V	5 Assembly kit for mains switch/isolator (complete)	30005132.00021
Mains switch/isolator with connection kit 1N-230V	5 Assembly kit for mains switch/isolator (complete)	30005132.00026

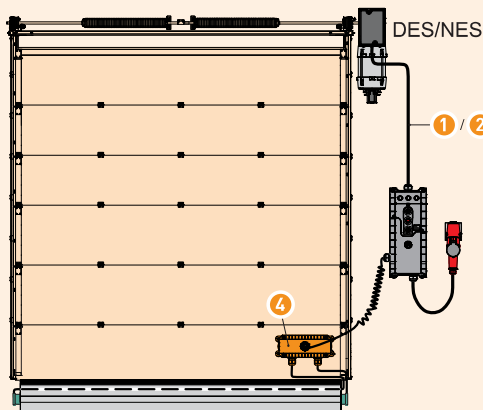
Accessories



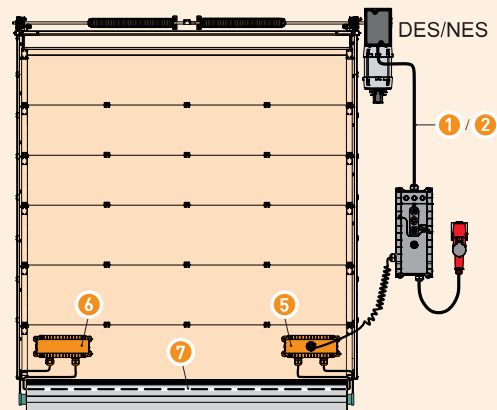
Designation	Description	Part no.
DES connection cable	1 Connection to ELEKTROMATEN drives with digital limit switch, pluggable on both sides; length of cable: 3,0m 5,0m 7,0m 9,0m 11,0m 13,0m 15,0m Further lengths available, upon request	20002420.00300 20002420.00500 20002420.00700 20002420.00900 20002420.01100 20002420.01300 20002420.01500
NES connection cable	2 Connection to ELEKTROMATEN drives with mechanical limit switch, pluggable on both sides; length of cable: 3,0m 5,0m 7,0m 9,0m 11,0m 13,0m 15,0m Further lengths available, upon request	20002320.00300 20002320.00500 20002320.00700 20002320.00900 20002320.01100 20002320.01300 20002320.01500
Connection set TS / clamp	3 Connection of the ELEKTROMATEN using the terminals in the box; use, for example, for routing the connection cable through the wall; Length of cable: 0,22m	30005728
Spiral cable with junction box (IP65) for System 1	4 System 1 = one junction box; Straight cable ends (2.0m/0.35m); length of coiled cable: 0.9m; max. stretched length: 4.0m	20002340.00008
Spiral cable with junction box (IP65) for System 2	5 System 2 = junction box + junction end box; Straight cable ends (2.0m/0.35m); length of coiled cable: 0.9m; max. stretched length: 4.0m Are also required for system 2: 6 + 7	20002620.00020
Junction end box (IP65) for system 2	6 With plug-in connection points for for pass-door and slack-rope switches	30004834
Connection cable for system 2	7 Pluggable on both sides, 5-wire, cable length: 4,5m 6,5m 8,5m 10,5m	20002630.00450 20002630.00650 20002630.00850 20002630.01050
Splash guard	8 Mechanical protection against water; For spiral cable with junction box 4 / 5 and junction end box 6	40017478.00001

■ Further accessories are described in Section 9

Example with system 1



Example with system 2

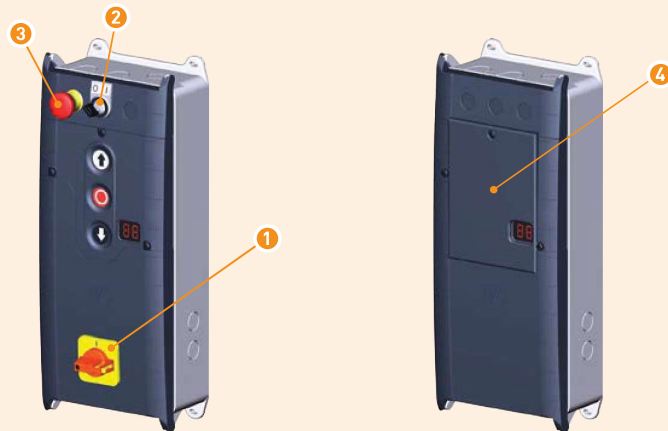


Accessories



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	40016517
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

