

SIEMENS

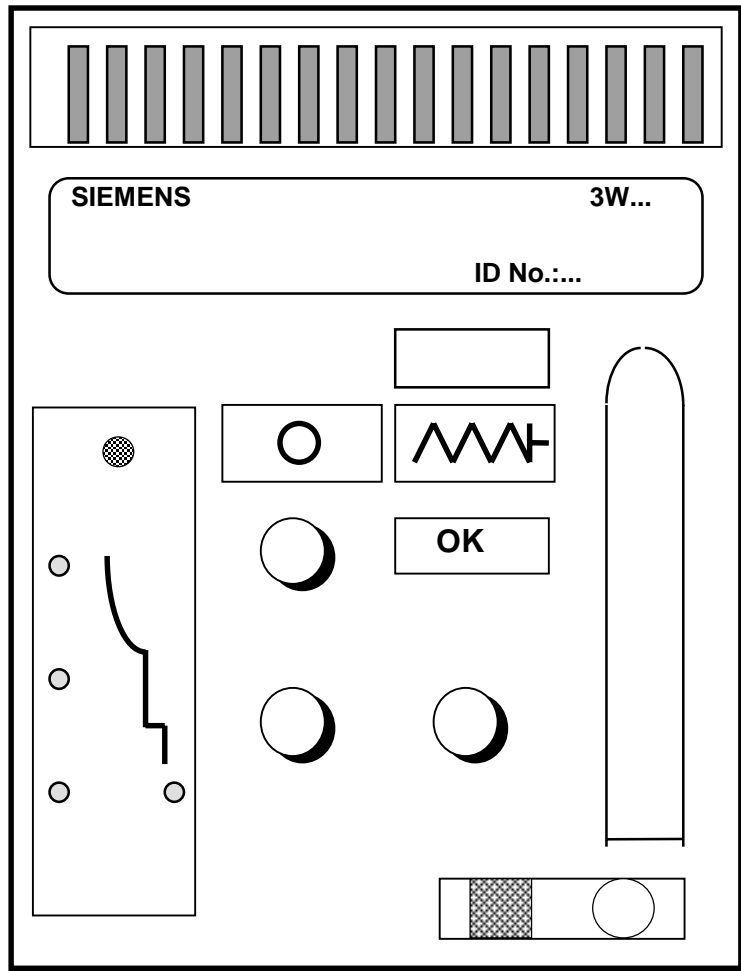
3WN1 /5 /6, 3WS1


Remote Diagnostics Support


as copy and fax form

Instructions

Order No. 3ZX1812-0WN60-0AC0 / 9239 9916 176



**Caution !**



Dangerous high voltage!
Dangerous storage spring!
De-energize the equipment
and secure against re-activation before maintenance.

The equipment may only be installed and assembled by qualified personnel!

Non-observance can result in death, severe personal injury or substantial property damage.

Contents

<u>Topic</u>	<u>Page</u>
• I Master data	3
• View and schematic diagram of the operator's console	4
• II Tensioning the storage spring	5
• III Circuit-breaker ready to close	6
• IV Closing the circuit-breaker	7
• V Opening the circuit-breaker	
With the opening solenoid	8
With the electrical release	9
• 3WN6 electronic overcurrent release	
Version C/G	10
Version E/F	11
• 3WN6 - start-up - communication	
Circuit-breaker	12
Interface	14
Signals	16
• Contacts	17

SIEMENS

3WN1/ 5/ 6, 3WS1

Remote Diagnostics Support

I Master data

Date:

Contact (Sales)

Name:
Department:
Tel.:
Fax:

Circuit-breaker data

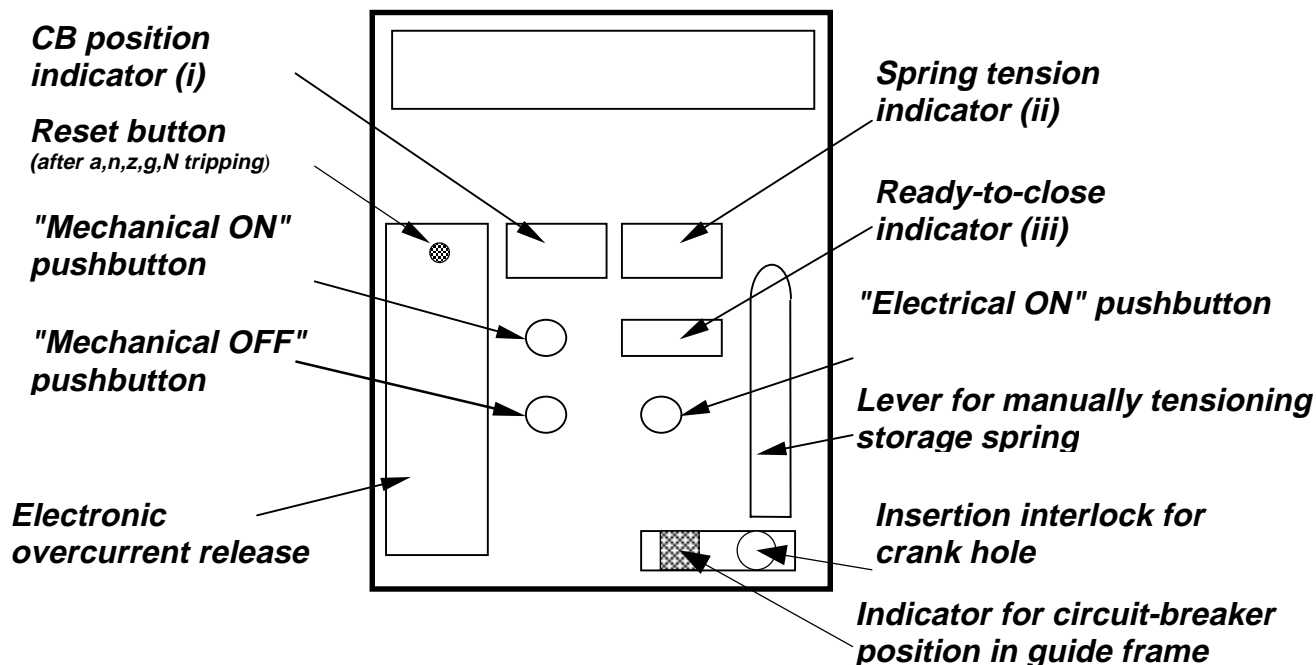
Circuit-breaker ID no.:
Delivery notice no.:
MRPD:
Equipment used for:
Type of load:
Closing conditions:
Location:

Customer

Name:
Address:
Tel.:
Fax:

Notes (fault symptoms/cause/action):

Fig. 1: Front view and schematic diagram of the operator's console



Possible status indications on the operator's console:

(i) **Circuit-breaker position indicator**

 **Circuit-breaker open**

 **Circuit-breaker closed**

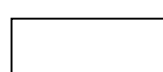
(ii) **Spring tension indicator**


 **Storage spring released**

 **Storage spring tensioned**

(iii) **Ready-to-close indicator**

 **CB ready to close**

 **CB not ready to close**
(from 03.97)

 **CB not ready to close**
(prior to 03.97)

Please confirm the circuit-breaker functions as far as possible on the next few pages (Sections II to IV).

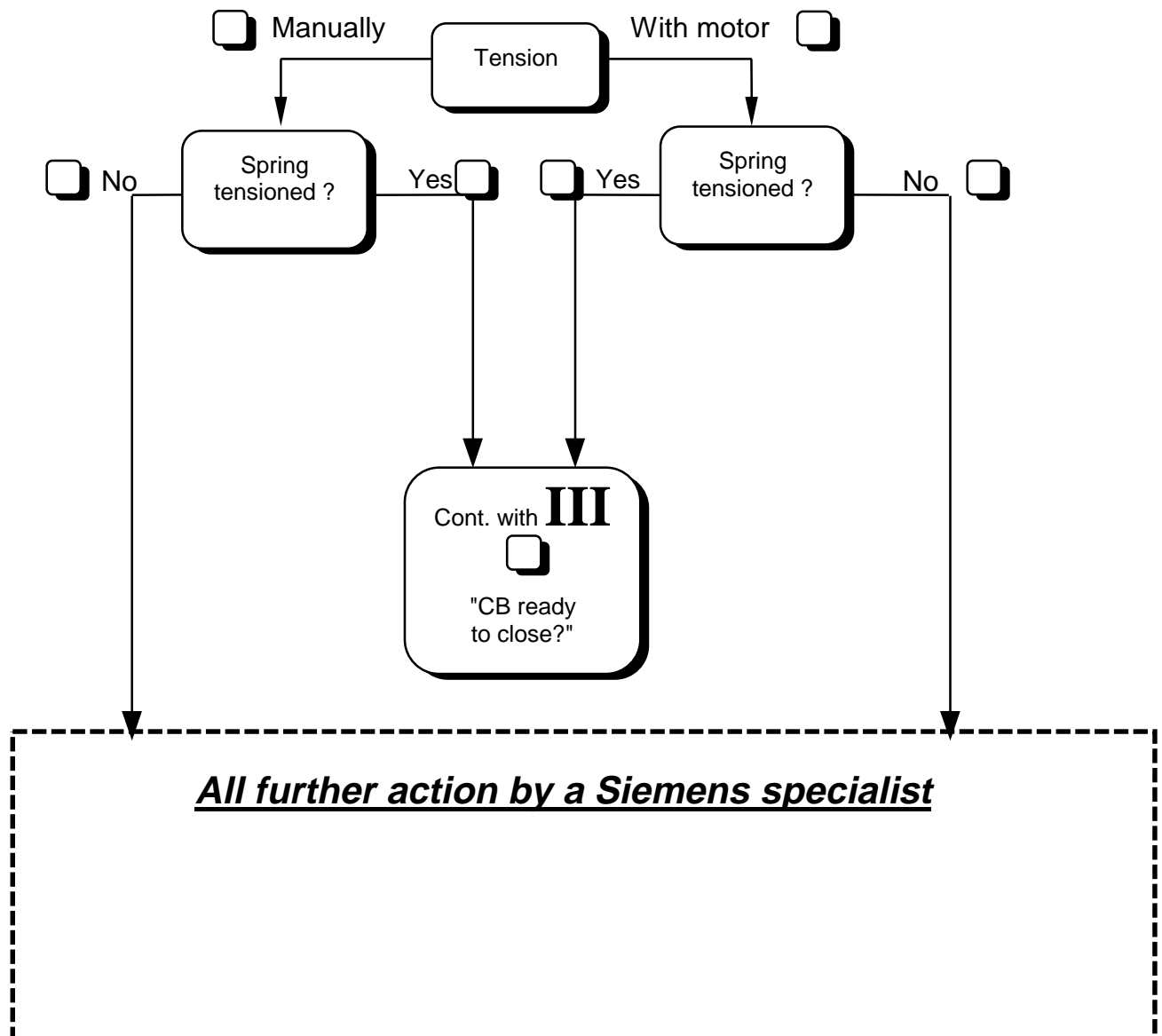
You can find the instructions for the circuit-breaker at the following Internet address: http://www.asi.siemens.de/asi/frameset/e_f_kios.html.

Tick the boxes after you have checked the functions:

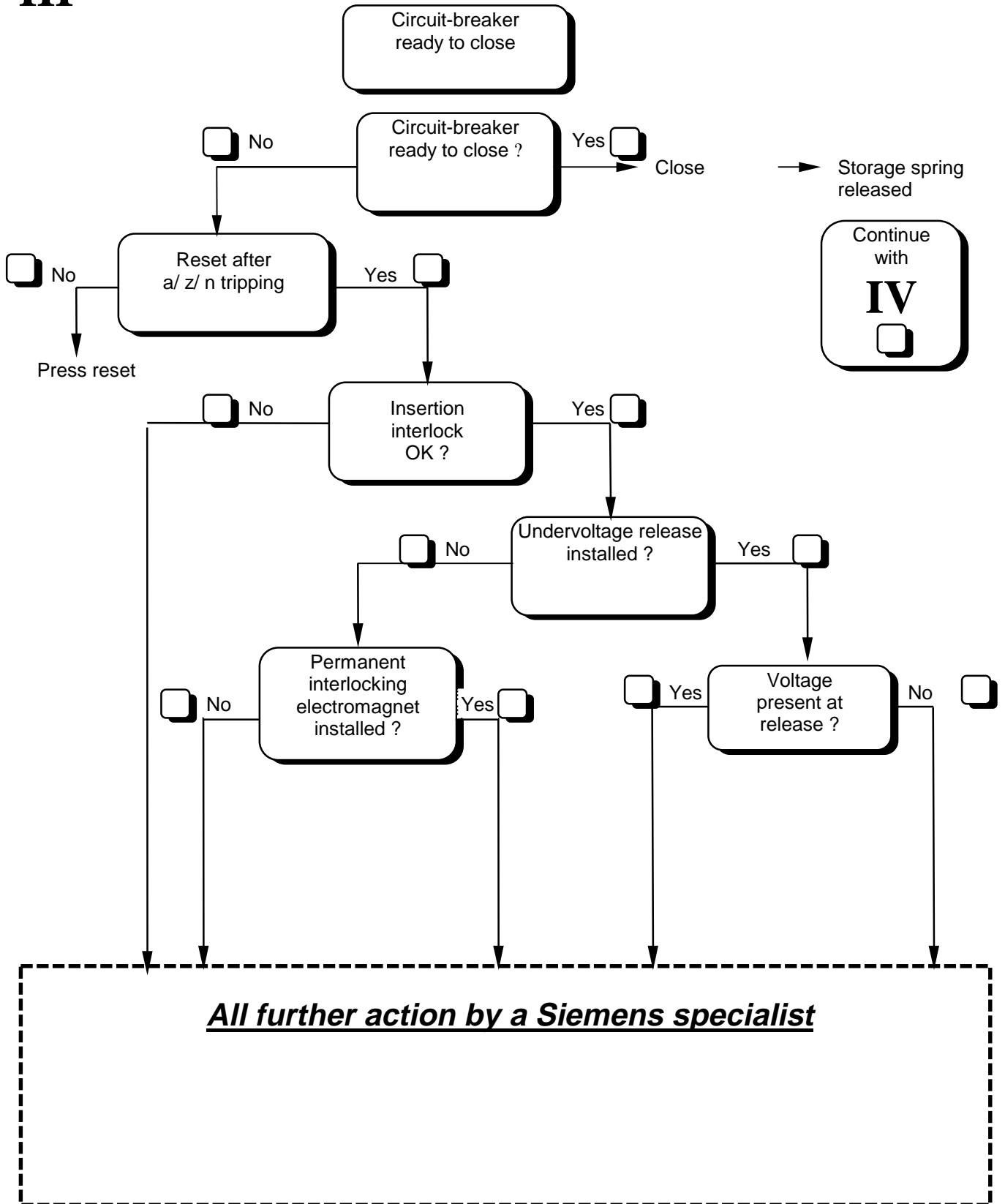


II

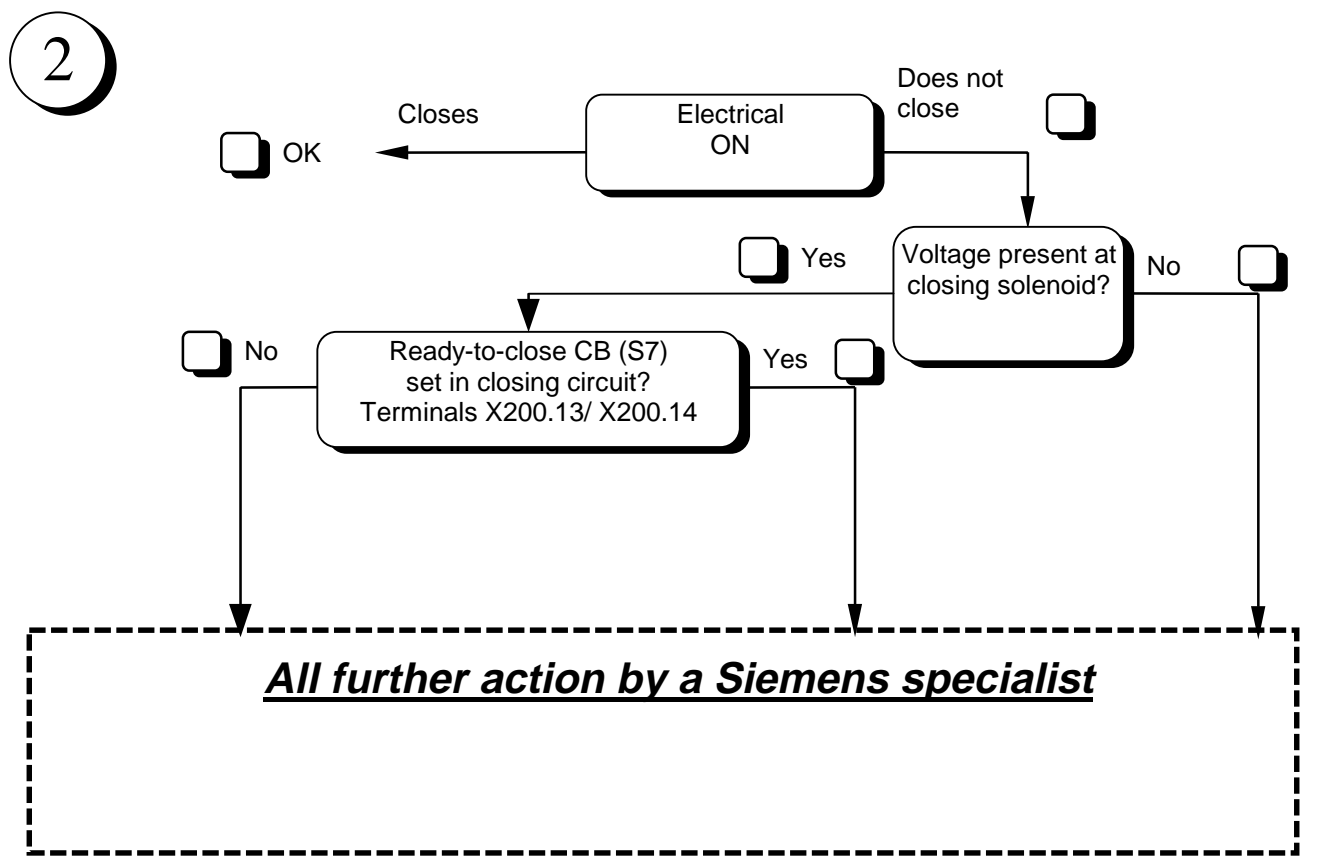
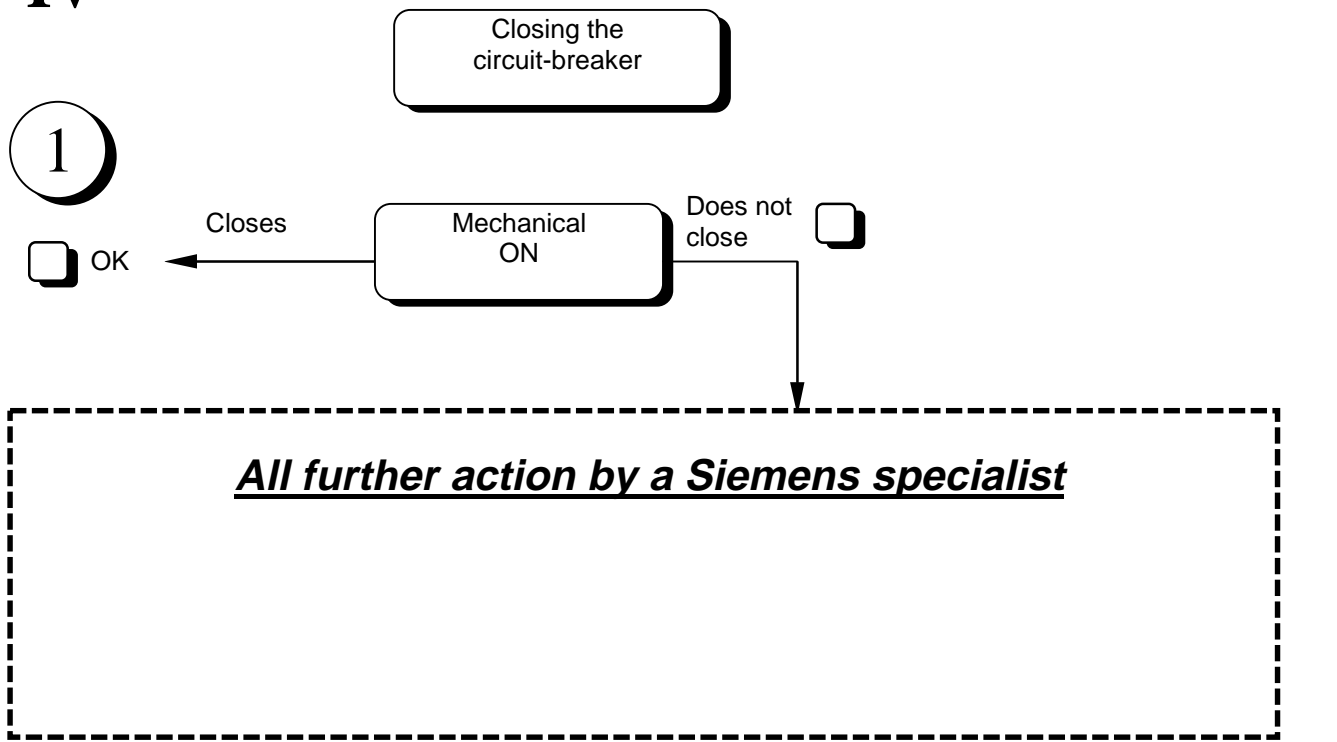
Tensioning the storage spring



III



IV



V

Opening the
circuit-breaker

1

With the opening solenoied:

Voltage release F1



Permanent interlocking
electromagnet



Undervoltage release

Undelayed
F3



Delayed
F3_C



Please check the following:

→ Auxiliary power supply ?

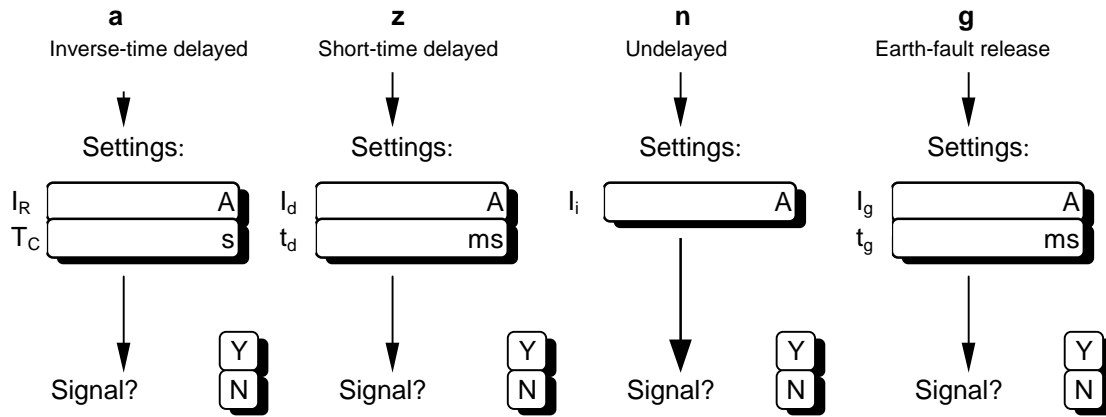
→
→
→
→

All further action by a Siemens specialist

2

With the electronic release (see Fig.2 and Fig.3 on pages 8/9) :

Y = Yes
 N = No



Additional information:

- Deviation from settings (see above) ?.....
- Type of load ?.....
- Spurious tripping under load ?.....
- Location / type of line voltage (harmonics) ?.....

Other details:.....

Check the tripping functions:

.....▶ With the tester (available as an accessory under MRPD: 3WX36 47-5JA00)

- "a" tripping OK? Y N
- "n" tripping OK? Y N

.....▶

All further action by a Siemens specialist

Fig 2: **Electronic overcurrent release** (3WN6 Version C/G shown here as an example)

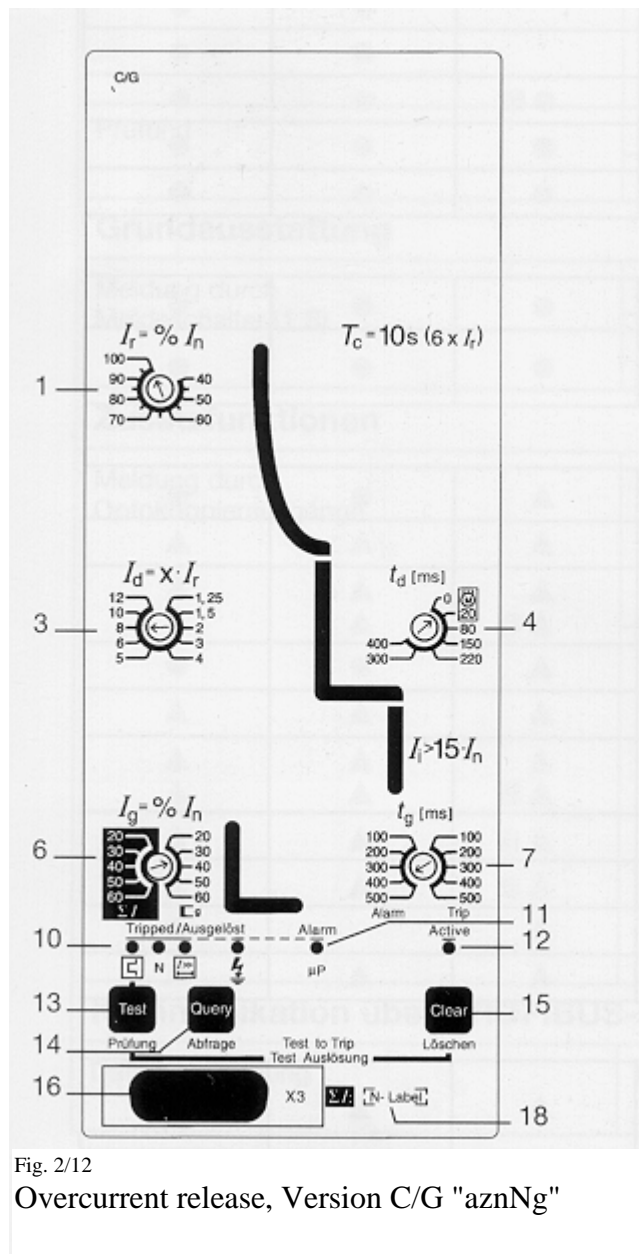


Fig. 2/12
Overcurrent release, Version C/G "aznNg"

Overload release settings

- Operational current I_r
- Time lag class T_C

Short-circuit release settings

- Operating current I_d of short-time delayed short-circuit release
- Delay time t_d or inertia t_d of short-time delayed short-circuit release
- Operating current I_l of undelayed short-circuit release

Earth-fault release settings

- Operating current I_g
- ΣI : Vector sum of phase currents and N-conductor current (if N-conductor current transformer installed)
- I_g : Direct measurement with current transformer at transformer neutral point
- Delay time t_g or selection of $I^2 * t_g$ tripping

Settings on operator's panel

- All settings made with 4 cursor keys plus Enter key, menu guidance on LC display (9)

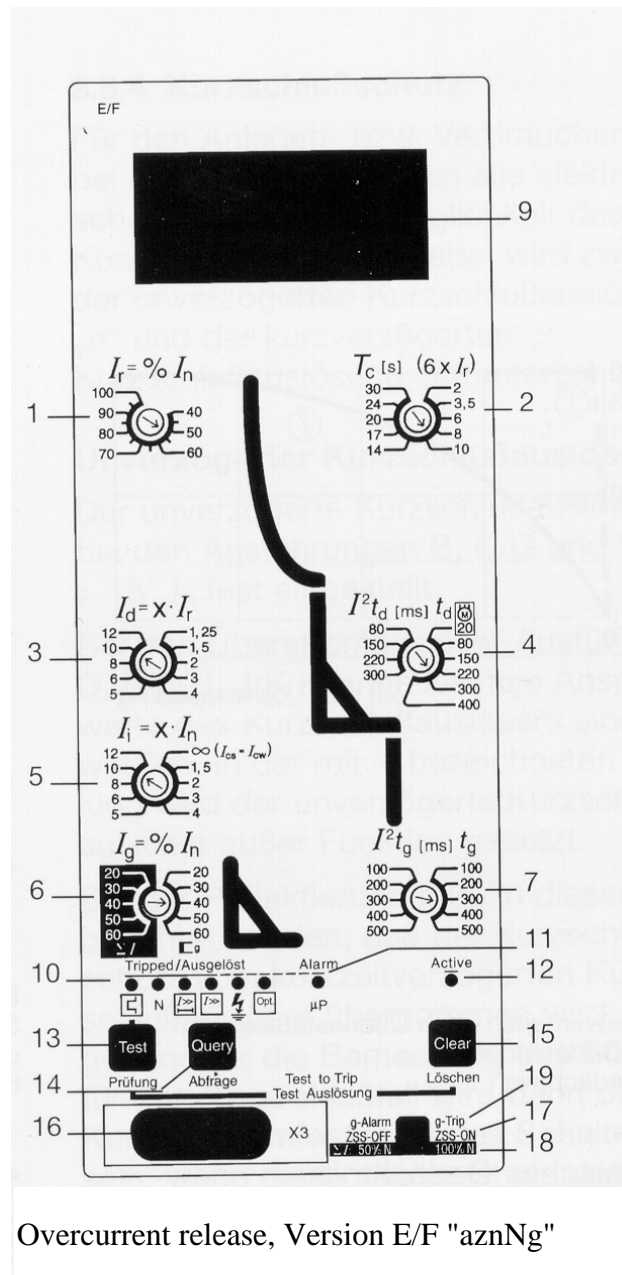
Indications

- LC display, 2-line
- "Tripped" LEDs
 - for overload
 - for N-conductor overload
 - for short-time delayed short-circuit release
 - for undelayed short-circuit release
 - for earth fault
 - for freely selectable indications
- Indicator
 - for microprocessor fault
 - for overtemperature
 - for phase unbalance
- Release "active" indicator (blinks when release ready)

Test functions

- Test button for functional test
- Query button for displaying reason for release
- Clear button for "tripped" indicator
- Test connector, plug connections for tester and (Versions D, E/F, H, J/K, N and P only) hand-held terminal
- N-conductor protection with switch
 - for 50 % $I_{rated}/100$ % I_{rated}
- Short-time grading control, reversible
- Earth-fault release "g"
 - Alarm: Earth fault only indicated by LED
 - Trip: Earth fault indicated by LED and circuit-breaker tripped

Fig 3: **Electronic overcurrent release** (3WN6 Version E/F shown here as an example)



Overload release settings

- 1 Operational current I_r
- 2 Time lag class T_c

Short-circuit release settings

- 3 Operating current I_d of short-time delayed short-circuit release
- 4 Delay time t_d or inertia t_d of short-time delayed short-circuit release
- 5 Operating current I_i of undelayed short-circuit release

Earth-fault release settings

- 6 Operating current I_g
- ΣI : Vector sum of phase currents and N-conductor current (if N-conductor current transformer installed)
- I_g : Direct measurement with current transformer at transformer neutral point
- 7 Delay time t_g or selection of $I^2 * t_g$ tripping

Settings on operator's panel

- 8 All settings made with 4 cursor keys plus Enter key, menu guidance on LC display (9)

Indications

- 9 LC display, 2-line
- 10 "Tripped" LEDs

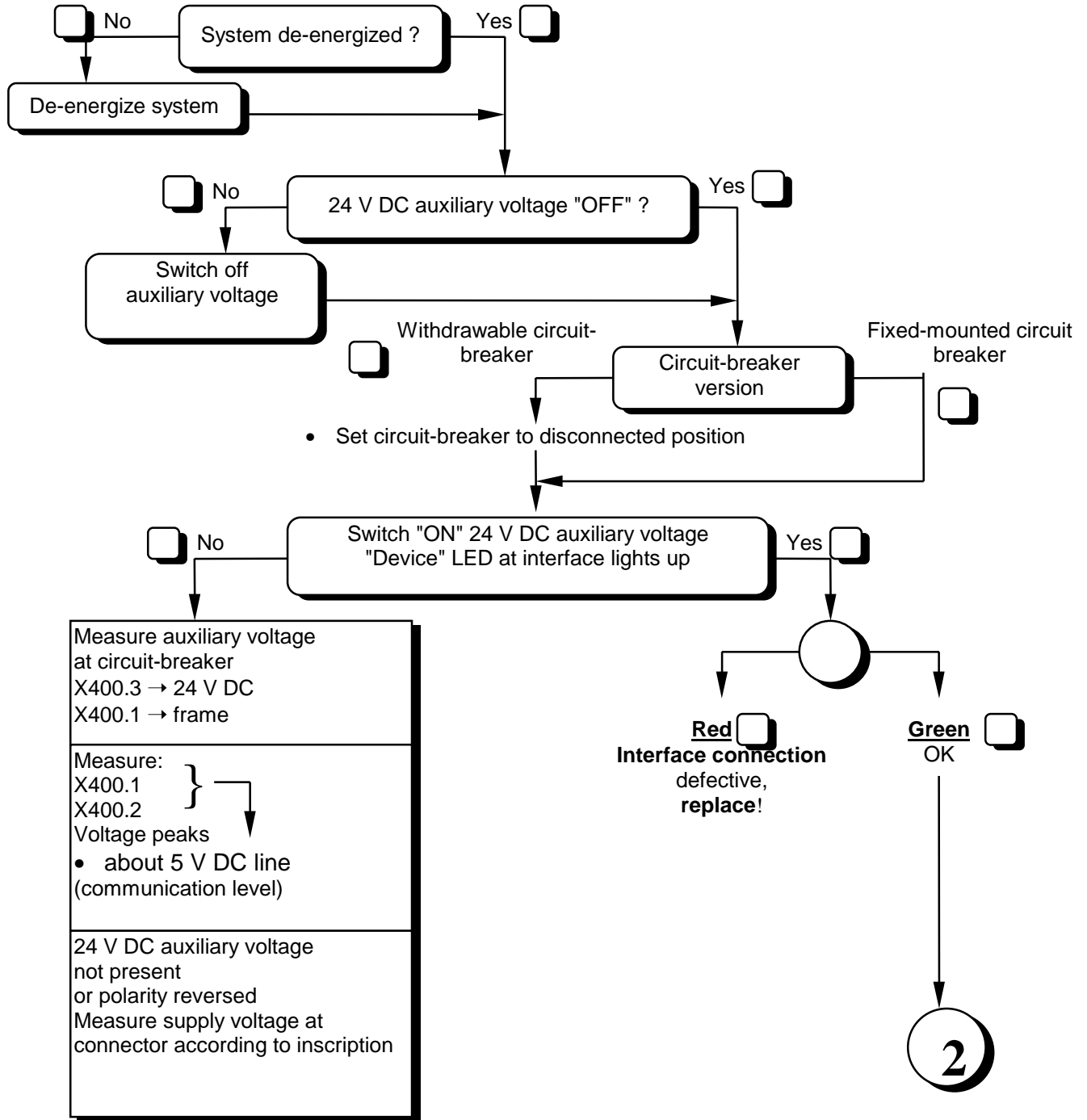
- for overload
- for N-conductor overload
- for short-time delayed short-circuit release
- for undelayed short-circuit release
- for earth fault
- for freely selectable indications
- 11 indicator
- for microprocessor fault
- for overtemperature
- for phase unbalance
- 12 phase "active" indicator (blinks when release ready)

Test functions

- 13 Test button for functional test
- 14 Query button for displaying reason for release
- 15 Clear button for "tripped" indicator
- 16 Test connector, plug connections for tester and (Versions D, E/F, H, J/K, N and P only) hand-held terminal
- 18 N-conductor protection with switch for 50 % I_{rated} /100 % I_{rated}
- 19 Short-time grading control, reversible
- Earth-fault release "g"
 - Alarm: Earth fault only indicated by LED
 - Trip: Earth fault indicated by LED and circuit-breaker tripped

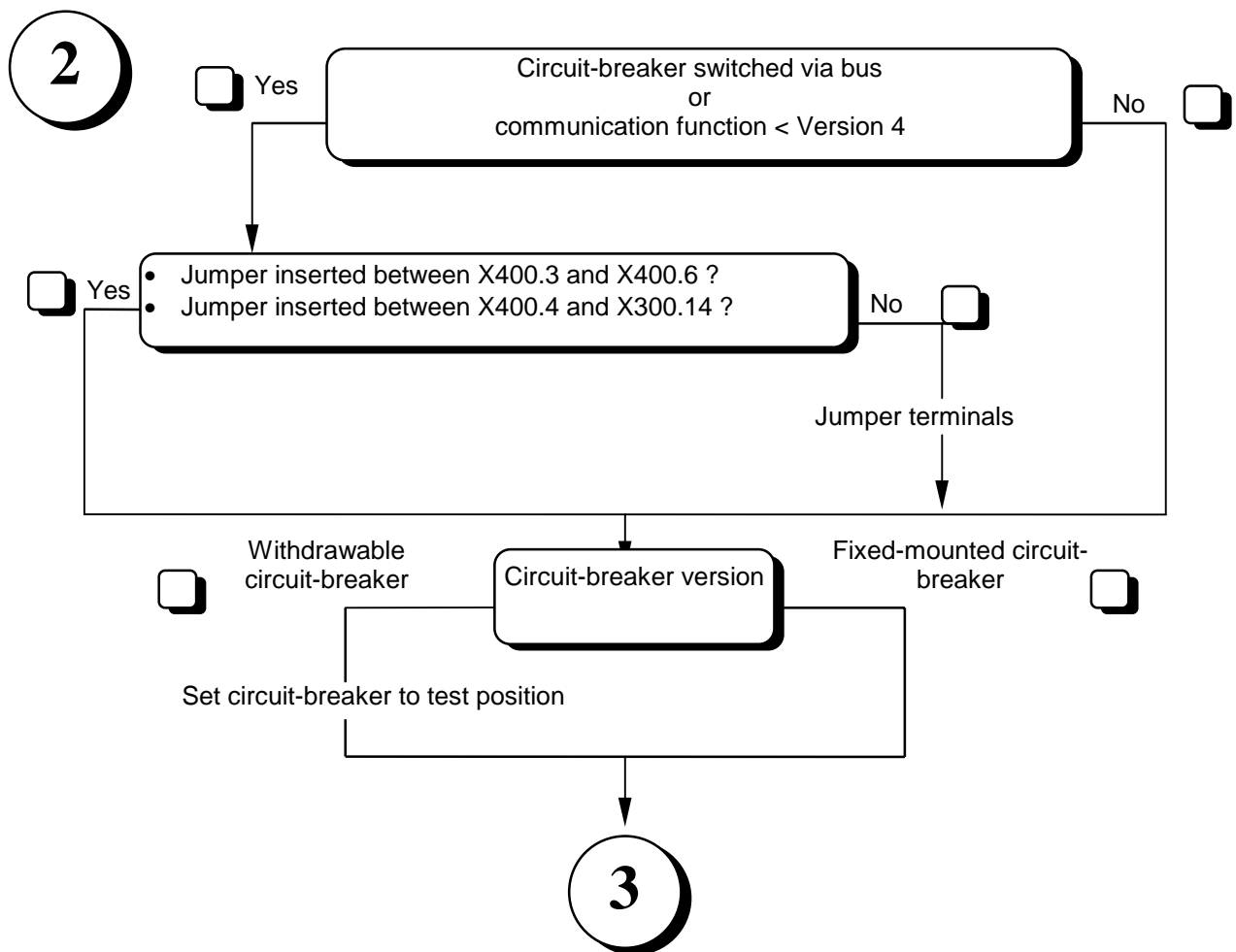
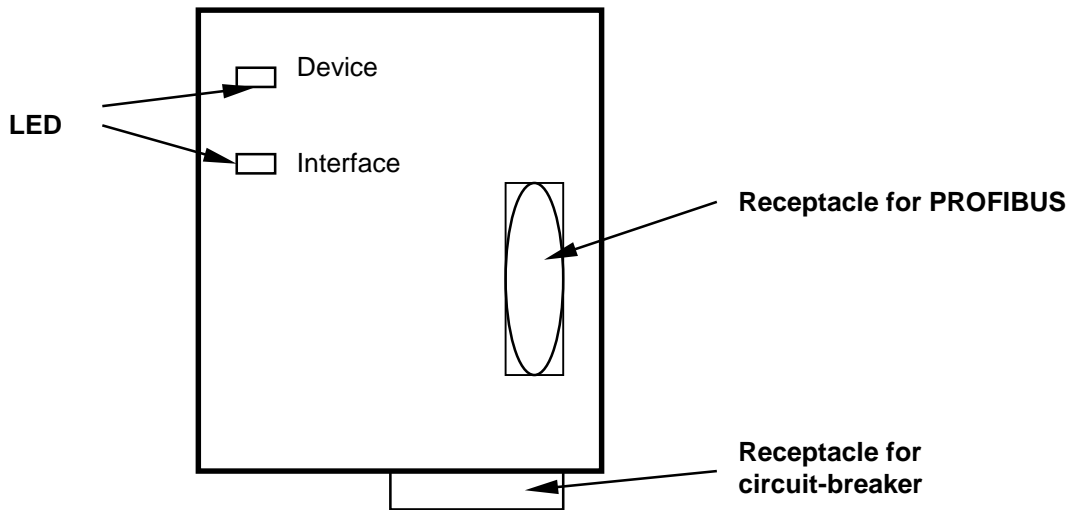
3WN6 - start-up - communication

1 Circuit-breaker

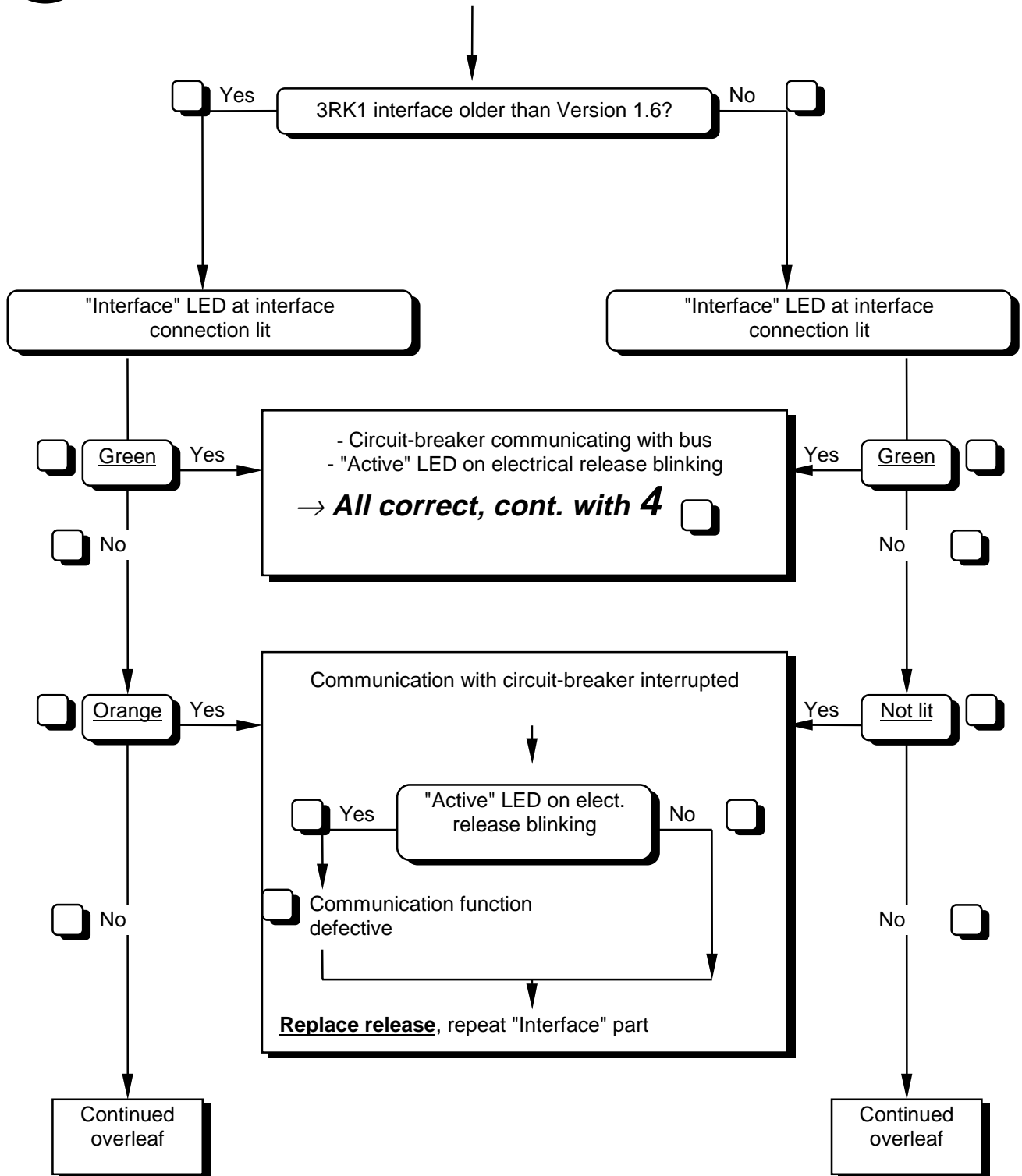


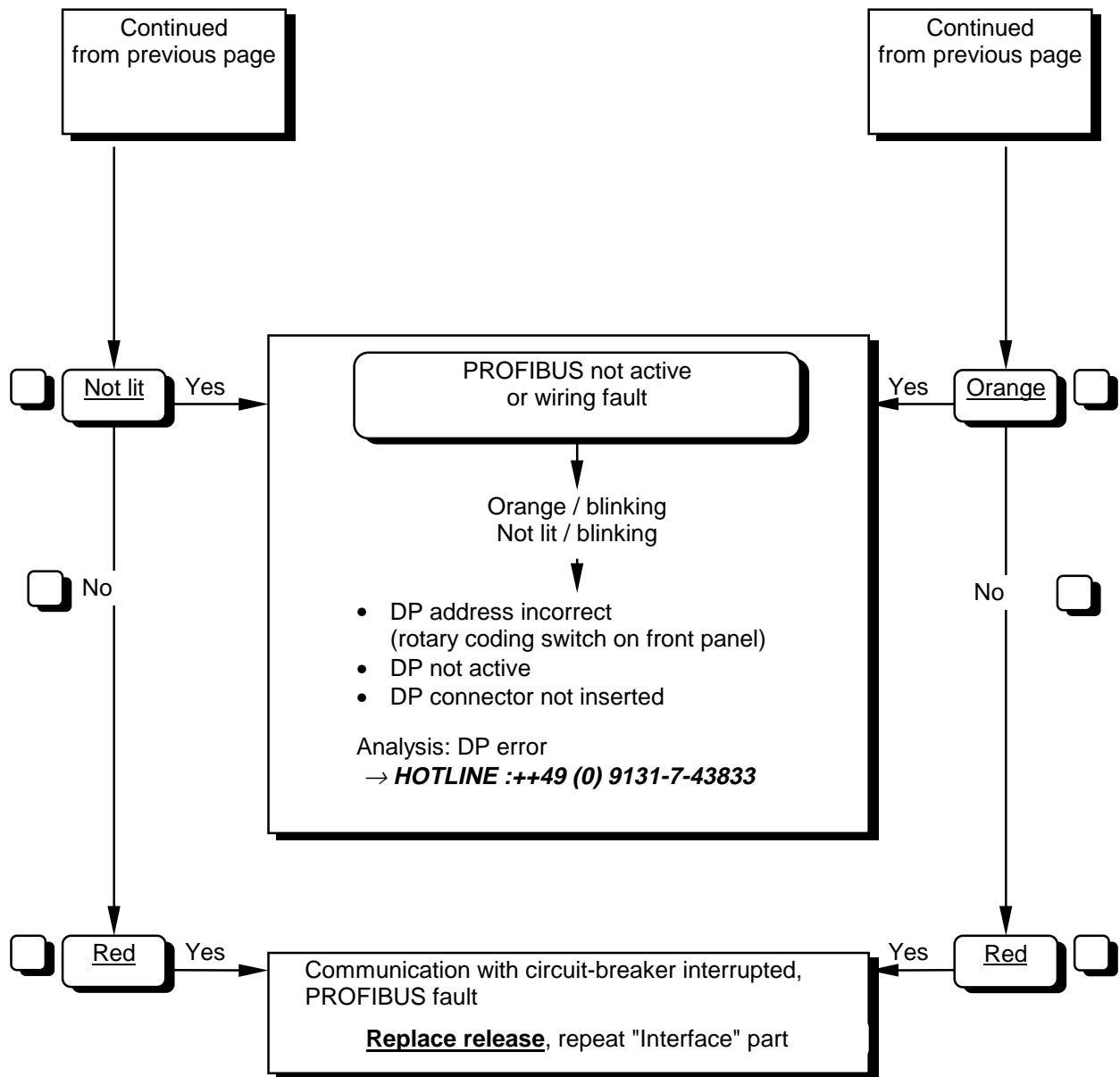
→ If all correct,
but LED still does not light up:
replace interface connection !

Fig 4 3RK1 interface connection

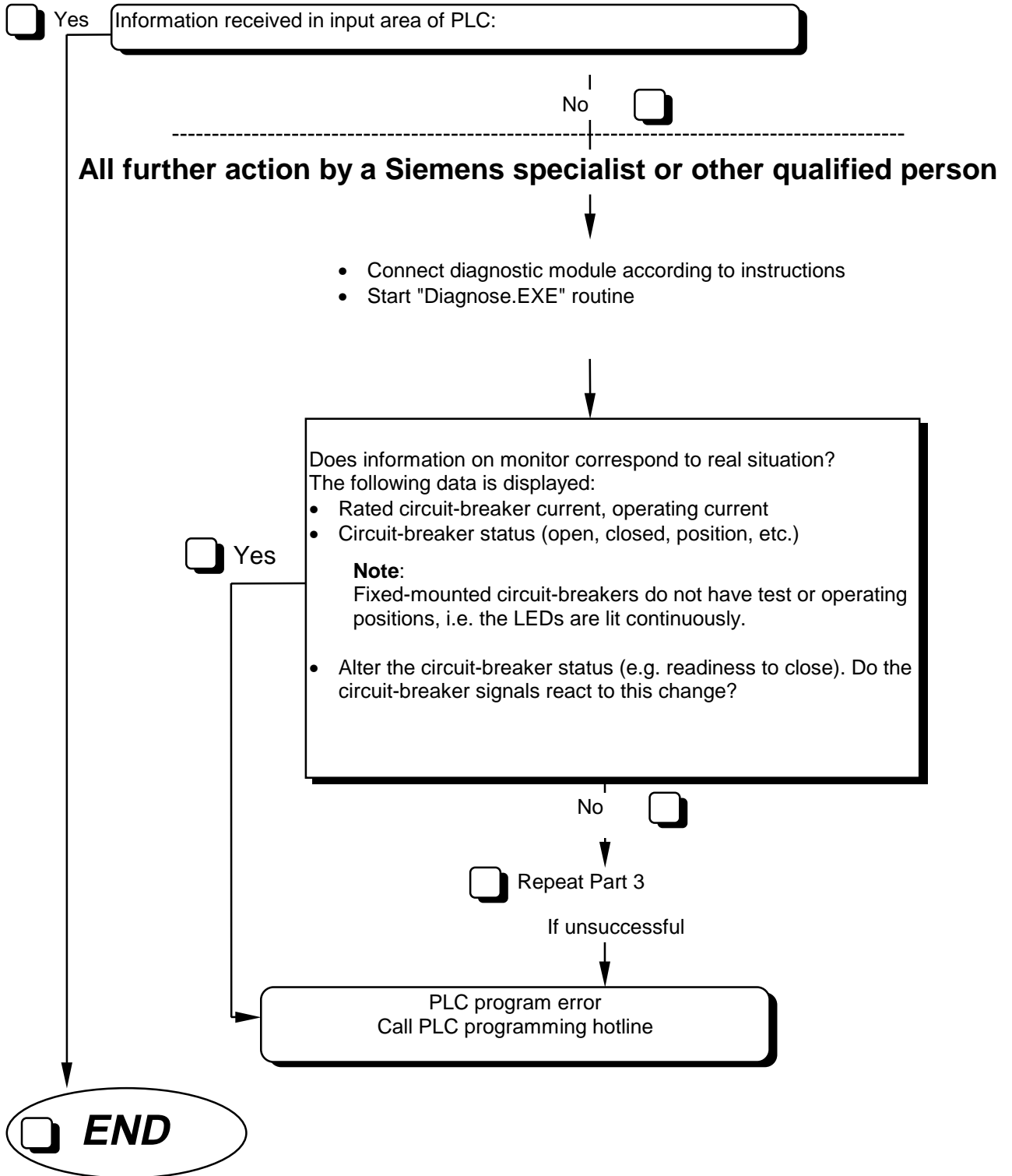


3 Interface connection





4 Signals



SIEMENS

3WN1/ 5/ 6, 3WS1

Remote Diagnostics Support

Contacts:

Low-voltage controlgear, switchgear and systems

- Technical Support (hotline) Tel. ++49/ (0) 9131-7-43833
- Emergency delivery service
(outside normal office hours,
extra charge) Tel. ++49/ (0) 9621-80-2210
- Field service for circuit-breakers Tel. ++49/ (0) 9131-7-43333

SINUMERIK

- Technical Support Tel. ++49/ (0) 180-5258000

Automation

- SIMATIC Basic Hotline Tel. ++49/ (0) 911-895-7000

Variable-speed drives

- Product Support Tel. ++49/ (0) 9131-7-46492

Action to be taken by Siemens specialist

Herausgegeben von
Bereich Automatisierungs- und Antriebstechnik
Gebiet Niederspannungs-Schalttechnik
Schaltwerk Berlin

D - 13623 Berlin

Änderungen vorbehalten

Siemens Aktiengesellschaft

Issued by
Automation & Drives Group
Low Voltage Controls & Distribution
Berlin Schaltwerk switchgear factory

D - 13623 Berlin
Federal Republic of Germany

Subject to change without prior notice

Order No.: 3ZX1812-0WN60-0AC0 / 9239 9916 176
Orders to: A&D CD SE LK2 Berlin