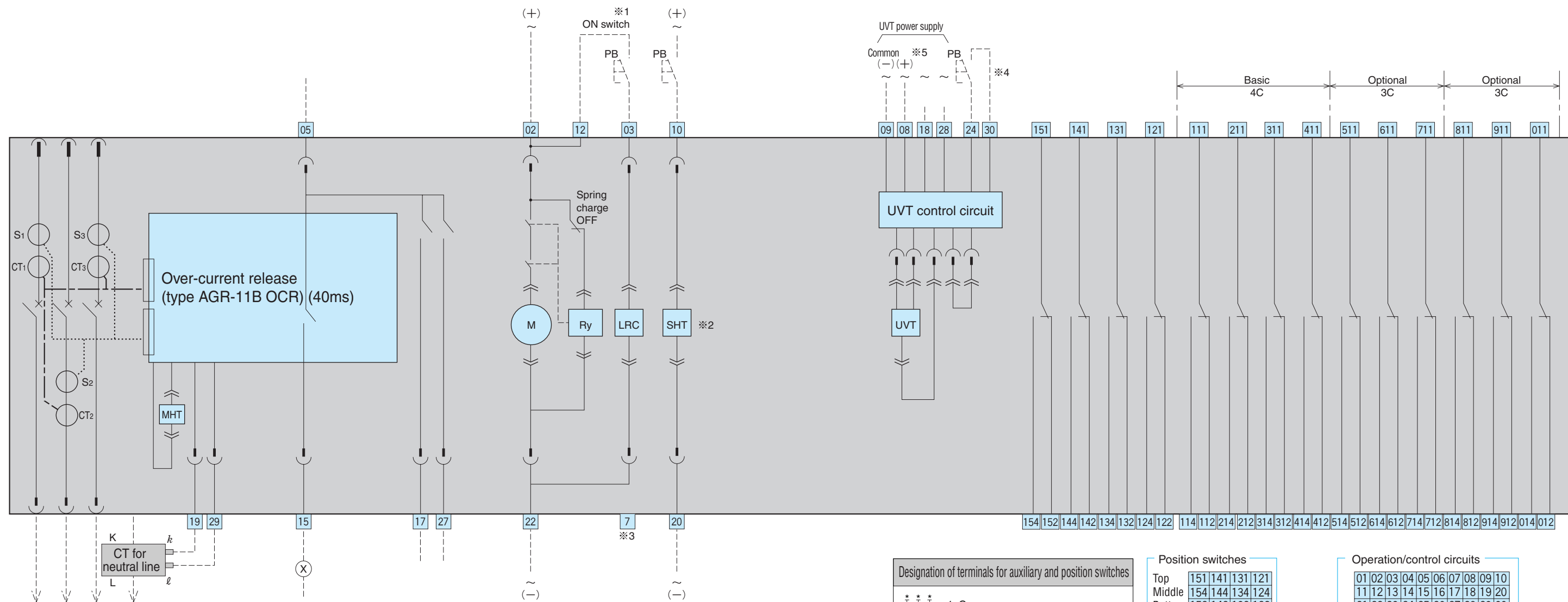


# 6 Circuit Diagram (with AGR-11B OCR)

Main circuit    CT for neutral line    Operation    <sup>※3</sup> Motor charging/ Operation circuit    Continuously-rated shunt trip    Undervoltage trip    Position switches    Auxiliary switches



### Terminal description

- Check OCR voltage before connecting.
- 02, 22 Control power supply AC100 - 240V, DC100 - 250V, DC24V, DC48V
  - 12 Operation switch, common
  - 03 ON switch
  - 05 Operation indication terminal, common
  - 15 OCR trip indication or single-contact trip indication (40ms signal)
  - 17 Trip indication (not ready indication)
  - 27 Spring charge indicator
  - 10, 20 Continuously-rated shunt trip
  - 19 Separate CT for neutral line ( k )
  - 29 Separate CT for neutral line ( ℓ )
  - 08, 18, 28 UVT power supply
  - 09 UVT power supply common
- Do not exceed specified voltages

**UVT power supply**

Term. No.	AC 100V unit	AC 200V unit	AC 400V unit
08 - 09	100V	200V	380V
18 - 09	110V	220V	415V
28 - 09	120V	240V	440V

Term. No.	DC 24V unit	DC 48V unit	DC 100V unit
08 - 09	24V	48V	100V

### Symbols for accessories

- CT1 - CT3 : Power CTs
  - S1 - S3 : Current sensors
  - M : Charging motor
  - LRC : Latch release coil
  - MHT : Magnetic Hold Trigger
  - ⊖ Isolating terminal connector (for draw-out type)
  - ⊖ Manual connector
  - User wiring
  - ⊖(X) Relay or indicator lamp
- ※1: Do not connect "b" contact of auxiliary switch to ON switch in series, otherwise, pumping may occur.
- ※2: See P. 23 for the circuit diagram of the continuously-rated shunt trip device with capacitor trip device.
- ※3: For motor split circuit, terminals 02, 22 and 03, 07 are used for charging and closing operation respectively. (Please specify when ordering)
- ※4: Refer to page 24 (short pulse only)
- ※5: Only one of terminals 08, 18, 28 must be used as this is a single phase UVT.
- Note: In case of a UVT and a Shunt fitted together or Double opening or closing coil, use an aux. switch to prevent burnout. Contact TERASAKI for wiring.

**Designation of terminals for auxiliary and position switches**

- 1: Common
- 2: b-contact
- 4: a-contact

- 1: Auxiliary switch
- 2: Position switch (for CONNECTED)
- 3: Position switch (for TEST)
- 4: Position switch (for ISOLATED)
- 5: Position switch (for INSERT)

(1 - 0: Switch numbers  
A, B, C: Auxiliary switches for microload)

CONNECTED position : 121-124 ON  
121-122 OFF

TEST position : 131-134 ON  
131-132 OFF

ISOLATED position : 141-144 ON  
141-142 OFF

INSERT position : 151-154 ON  
151-152 OFF

For operation sequence of position switches, see page 19.

**Position switches**

Top	151	141	131	121
Middle	154	144	134	124
Bottom	152	142	132	122

**Operation/control circuits**

01	02	03	04	05	06	07	08	09	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

**Auxiliary switches**

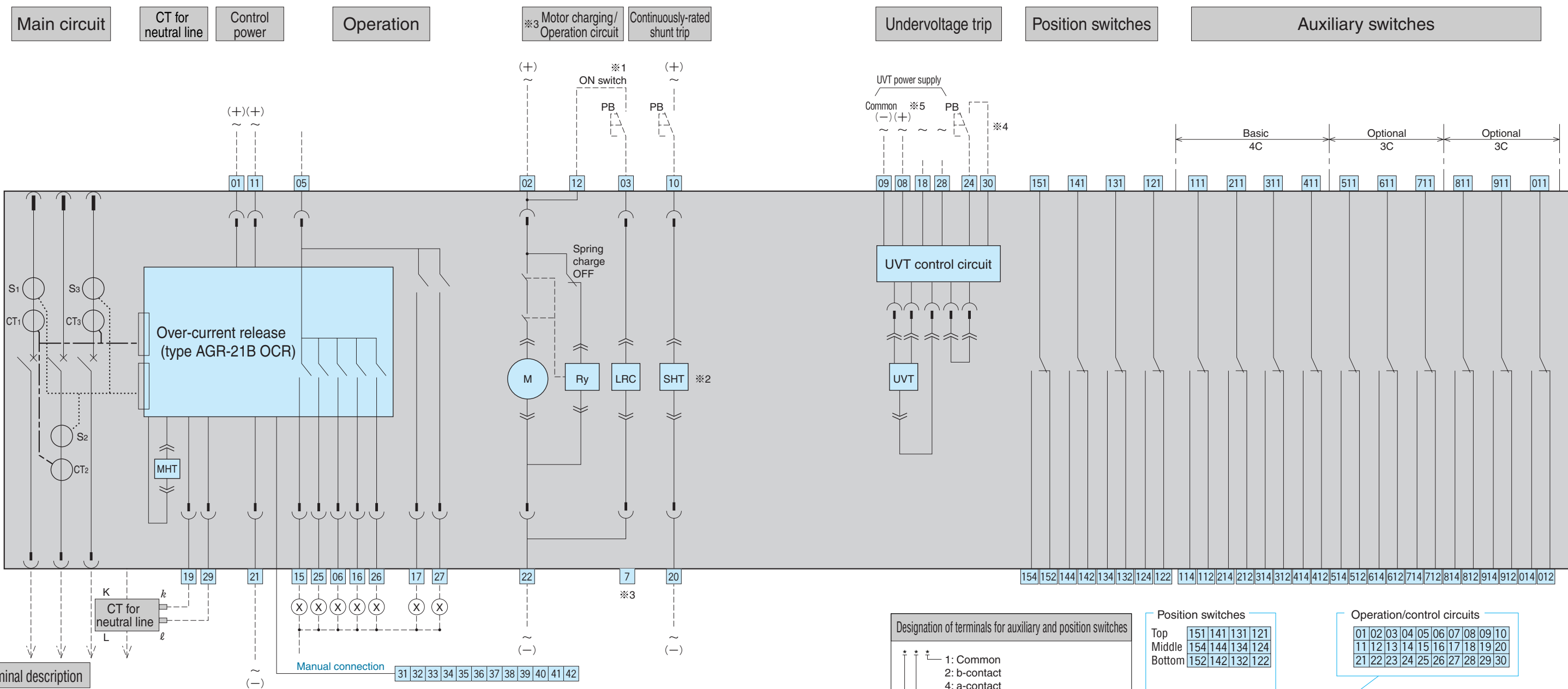
(4c + optional 6c arrangement)

111	211	311	411	511	611	711	811	911	011
114	214	314	414	514	614	714	814	914	014
112	212	312	412	512	612	712	812	912	012

(4c arrangement)

111	211	311	411
114	214	314	414
112	212	312	412

# 6 Circuit Diagram (with AGR-21B OCR)



### Terminal description

Check OCR voltage before connecting.

- 01 21 Control power supply AC200 - 240V, DC200 - 250V, DC48V
- 01 11 Control power supply AC100 - 120V
- 11 21 Control power supply DC100 - 125V, DC24V
- 02 22 Control power supply AC100 - 240V, DC100 - 250V, DC24V, DC48V
- 12 Operation switch, common
- 03 ON switch
- 05 Operation indication terminal, common
- 15 LT trip indication
- 25 ST, INST trip indication
- 06 PTA indication
- 16 GF trip indication
- 26 System alarm indication
- 17 REF, NS or trip indication
- 27 Spring charge indication
- 10 20 Continuously-rated shunt trip
- 19 Separate CT for neutral line (k)

- 29 Separate CT for neutral line (ℓ)
- 08, 18, 28 UVT power supply
- 09 UVT power supply common
- 35 Separate CT for REF (k)
- 36 Separate CT for REF (ℓ)
- 41 Communication line (-)
- 42 Communication line (+)
- 32 Communication line (common)

**Do not exceed specified voltages**

Term. No.	AC 100V unit	AC 200V unit	AC 400V unit
08 - 09	100V	200V	380V
18 - 09	110V	220V	415V
28 - 09	120V	240V	440V

Term. No.	DC 24V unit	DC 48V unit	DC 100V unit
08 - 09	24V	48V	100V

### Symbols for accessories

- CT1 - CT3 : Power CTs
  - S1 - S3 : Current sensors
  - M : Charging motor
  - LRC : Latch release coil
  - MHT : Magnetic Hold Trigger
  - ← Isolating terminal connector (for draw-out type)
  - ↔ Manual connector
  - User wiring
  - (X)-- Relay or indicator lamp
- ※1: Do not connect "b" contact of auxiliary switch to ON switch in series, otherwise, pumping may occur.  
 ※2: See P. 23 for the circuit diagram of the continuously-rated shunt trip device with capacitor trip device.  
 ※3: For motor split circuit, terminals 02, 22 and 03, 07 are used for charging and closing operation respectively. (Please specify when ordering)  
 ※4: Refer to page 24 (short pulse only)  
 ※5: Only one of terminals 08, 18, 28 must be used as this is a single phase UVT.  
 Note: In case of a UVT and a Shunt fitted together or Double opening or closing coil, use an aux. switch to prevent burnout. Contact TERASAKI for wiring.

### Designation of terminals for auxiliary and position switches

- 1: Common
  - 2: b-contact
  - 4: a-contact
- 1: Auxiliary switch  
 2: Position switch (for CONNECTED)  
 3: Position switch (for TEST)  
 4: Position switch (for ISOLATED)  
 5: Position switch (for INSERT)
- (1 - 0: Switch numbers  
 A, B, C: Auxiliary switches for microload)
- CONNECTED position : 121-124 ON  
 121-122 OFF  
 TEST position : 131-134 ON  
 131-132 OFF  
 ISOLATED position : 141-144 ON  
 141-142 OFF  
 INSERT position : 151-154 ON  
 151-152 OFF
- For operation sequence of position switches, see page 19.

### Position switches

Top	151	141	131	121
Middle	154	144	134	124
Bottom	152	142	132	122

Top	131	121
Middle	134	124
Bottom	132	122

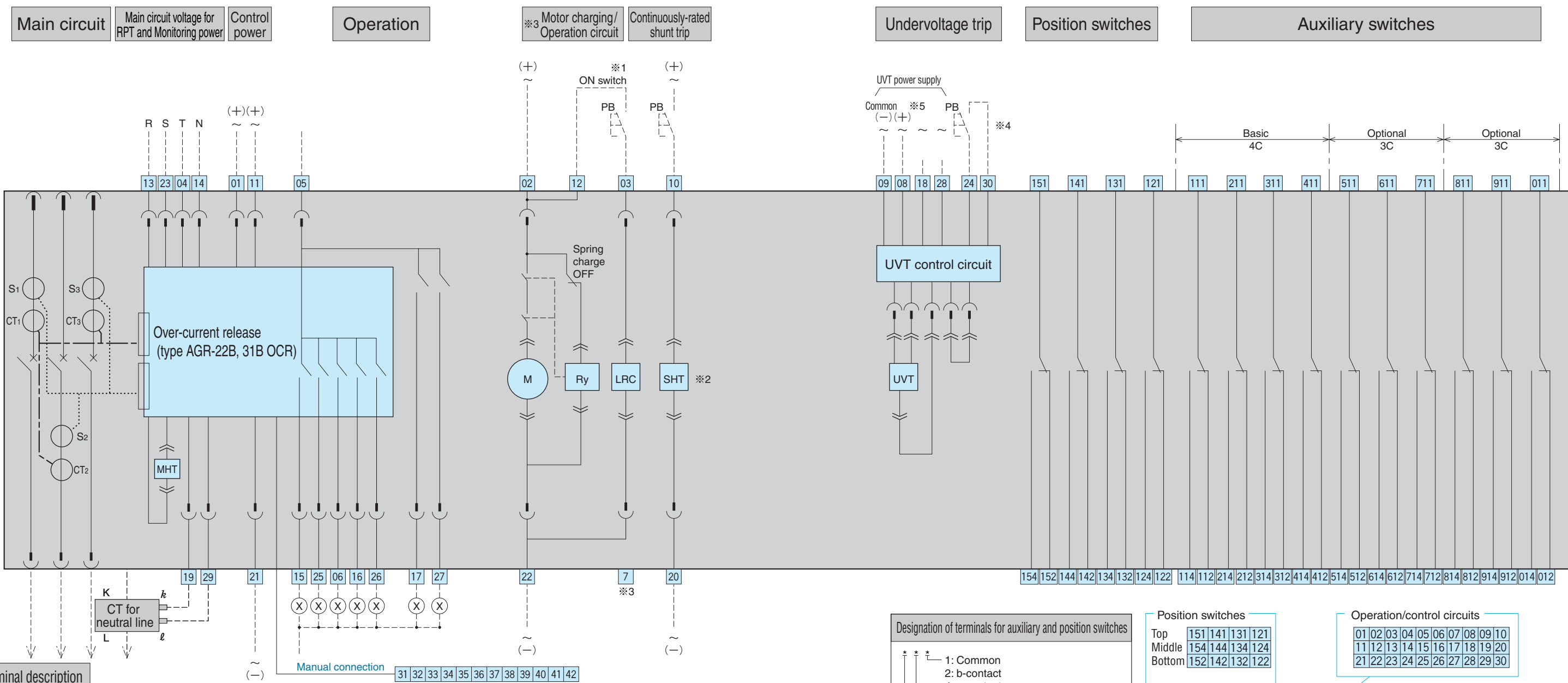
### Operation/control circuits

01	02	03	04	05	06	07	08	09	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

### Auxiliary switches

- (4c + optional 6c arrangement)
- |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 111 | 211 | 311 | 411 | 511 | 611 | 711 | 811 | 911 | 011 |
| 114 | 214 | 314 | 414 | 514 | 614 | 714 | 814 | 914 | 014 |
| 112 | 212 | 312 | 412 | 512 | 612 | 712 | 812 | 912 | 012 |
- (4c arrangement)
- |     |     |     |     |
|-----|-----|-----|-----|
| 111 | 211 | 311 | 411 |
| 114 | 214 | 314 | 414 |
| 112 | 212 | 312 | 412 |
- 31 32 33 34 35 36 37 38 39 40 41 42 Manual connection
- If the ground fault protection on the line side or communication function is incorporated, control circuit terminals are of manual connection type.

# 6 Circuit Diagram (with AGR-22B, 31B OCR)



### Terminal description

Check OCR voltage before connecting.

- 01, 21 Control power supply AC200 - 240V, DC200 - 250V, DC48V
- 01, 11 Control power supply AC100 - 120V
- 11, 21 Control power supply DC100 - 125V, DC24V
- 02, 22 Control power supply AC100 - 240V, DC100 - 250V, DC24V, DC48V
- 12 Operation switch, common
- 03 ON switch
- 05 Operation indication terminal, common
- 15 LT trip indication
- 25 ST, INST trip indication
- 06 PTA indication
- 16 GF trip indication or RPT trip indication
- 26 System alarm indication
- 17 REF, NS or trip indication
- 27 PTA2, UV or spring charge indication
- 10, 20 Continuously-rated shunt trip
- 19 Separate CT for neutral line (k)

- 29 Separate CT for neutral line (ℓ)
- 08, 18, 28 UVT power supply
- 09 UVT power supply common
- 35 Separate CT for REF (k)
- 36 Separate CT for REF (ℓ)
- 41 Communication line (-)
- 42 Communication line (+)
- 32 Communication line (common)

• Do not exceed specified voltages

**UVT power supply**

Term. No.	AC 100V unit	AC 200V unit	AC 400V unit
08 - 09	100V	200V	380V
18 - 09	110V	220V	415V
28 - 09	120V	240V	440V

Term. No.	DC 24V unit	DC 48V unit	DC 100V unit
08 - 09	24V	48V	100V

### Symbols for accessories

- CT1 - CT3 : Power CTs
  - S1 - S3 : Current sensors
  - M : Charging motor
  - LRC : Latch release coil
  - MHT : Magnetic Hold Trigger
  - ⊖ Isolating terminal connector (for draw-out type)
  - ⊖ Manual connector
  - User wiring
  - ⊖(X) Relay or indicator lamp
- ※1: Do not connect "b" contact of auxiliary switch to ON switch in series, otherwise, pumping may occur.  
 ※2: See P. 23 for the circuit diagram of the continuously-rated shunt trip device with capacitor trip device.  
 ※3: For motor split circuit, terminals 02, 22 and 03, 07 are used for charging and closing operation respectively. (Please specify when ordering)  
 ※4: Refer to page 24 (short pulse only)  
 ※5: Only one of terminals 08, 18, 28 must be used as this is a single phase UVT.  
 Note: In case of a UVT and a Shunt fitted together or Double opening or closing coil, use an aux. switch to prevent burnout. Contact TERASAKI for wiring.

### Designation of terminals for auxiliary and position switches

- 1: Common
  - 2: b-contact
  - 4: a-contact
- 1: Auxiliary switch  
 2: Position switch (for CONNECTED)  
 3: Position switch (for TEST)  
 4: Position switch (for ISOLATED)  
 5: Position switch (for INSERT)
- (1 - 0: Switch numbers  
 A, B, C: Auxiliary switches for microload)
- CONNECTED position : 121-124 ON  
 121-122 OFF  
 TEST position : 131-134 ON  
 131-132 OFF  
 ISOLATED position : 141-144 ON  
 141-142 OFF  
 INSERT position : 151-154 ON  
 151-152 OFF
- For operation sequence of position switches, see page 19.

### Position switches

Top	151	141	131	121
Middle	154	144	134	124
Bottom	152	142	132	122

Top	131	121
Middle	134	124
Bottom	132	122

### Operation/control circuits

01	02	03	04	05	06	07	08	09	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

### Auxiliary switches

(4c + optional 6c arrangement)

111	211	311	411	511	611	711	811	911	011
114	214	314	414	514	614	714	814	914	014
112	212	312	412	512	612	712	812	912	012

(4c arrangement)

111	211	311	411
114	214	314	414
112	212	312	412

31 32 33 34 35 36 37 38 39 40 41 42 Manual connection

If the ground fault protection is incorporated and a separate current transformer for neutral line is used, or any one of ground fault protection on the line side, zone interlock, external display or communication function is incorporated, control circuit terminals are of manual connection type.