

YCC8DC series high-voltage DC contactor



Feature

- Unique magnetic arc extinguishing design with 1500V cut-off function.
- Unique contact structure with higher surge resistance and current tolerance.
- Environmentally friendly products (RoHS compliant).
- Load connection without polarity.
- Unique anti short circuit structure, Short circuit resistance: 20A~40A: /; 60A~100A: ≥4000A; 150A~1000A: ≥8000A.
- High and low voltage withstand voltage above 4000V.
- The coil connections are all non-polar (60A~100A). The coil can be energy-saving, and the energy-saving coil is connected with polarity (150A~1000A).

Model and Meaning

YCC8 DC - 1000 / 1000 - XX - H A C 5 - 3

- Coil characteristics: 3-PWM energy-saving type
- Main contact lead out form: 5-internal thread
- Form of coil lead out end: C-connector
- Auxiliary contact form: A: normally open; Q: QC lead out end
- Main contact form: H-normally open
- Coil Voltage
- Load Voltage
- Load Current
- Direct Current
- Product design serial number

Environmental Characteristics

| | | |
|-------------------------------|----------------|---------------------------|
| Shock | Stability test | 196m/s ² (20G) |
| | Strength test | 490m/s ² (50G) |
| Resistance to vibration | | 10Hz~200Hz, 5G |
| Operating ambient temperature | | -40℃ ~ +85℃ |
| Operating ambient humidity | | 5%~85% RH |
| IP Grade | | IP67(inner space) |
| Altitude | | ≤4000m |

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Main contact parameters

| Model | YCC8DC-20 | YCC8DC-40 | YCC8DC-60 | YCC8DC-100 | YCC8DC-150 | YCC8DC-200 | YCC8DC-250 | YCC8DC-300 | YCC8DC-400 | YCC8DC-500 | YCC8DC-600 | YCC8DC-800 | YCC8DC-1000 |
|-------------------------------|---|-------------------------|--|---|--|--|--|--|---|---|---|---|---|
| Structure | H | | | | | | | | | | | | |
| Contact Material | Silver alloy | | Silver copper alloy | | | | | | | | | | |
| Contact resistance | ≤5mΩ (@1A) | ≤0.5mΩ (@60A) | ≤0.5mΩ (@100A) | ≤0.3mΩ (@150A) | ≤0.3mΩ (@200A) | ≤0.3mΩ (@250A) | ≤0.3mΩ (@300A) | ≤0.2mΩ (@400A) | ≤0.2mΩ (@500A) | ≤0.2mΩ (@600A) | ≤0.3mΩ (@800A) | ≤0.15mΩ (@1000A) | |
| Contact pressure drop | / | | | | | | | | | | | | |
| Rated Load | DC1000V 20A | DC1000V 40A | DC1500V 60A | DC1500V 100A | DC1500V 150A | DC1500V 200A | DC1500V 250A | DC1500V 300A | DC1500V 400A | DC1500V 500A | DC1500V 600A | DC1500V 800A | DC1500V 1000A |
| Switching electrical lifespan | 20A/1000V 10000times | 20A/1000V 10000times | 60A/450V 50000times | / | | | | | | | | | |
| Power on lifespan | 20A,1500V 20000times | 40A,450V 25000times | 60A,450V 70000times 60A,750V 50000times 60A,1500V 8000times | 100A,450V 50000times 100A,750V 30000times 100A,1500V 5000times | / | / | / | / | Steady state 400A, C=1100 37.5V, 20000 times | Steady state 500A, C=1100 37.5V, 20000 times | Steady state 600A, C=1100 37.5V, 20000 times | Steady state 800A, C=1100 37.5V, 20000 times | Steady state 800A, C=1100 37.5V, 20000 times |
| Impact electrical life | / | / | / | / | 150A/1500μF 20V, 100000 cycles | 200A/1500μF 20V, 100000 cycles | 250A/1500μF 20V, 100000 cycles | 300A/1500μF 20V, 50000 cycles | / | / | / | / | / |
| Power outage lifespan | 200A,300V 1times | 200A,300V 1times | 60A,1500V 100times 200A,450V 50times | 100A,1500V 50times 200A,450V 50times | 20A,1500V 15000times 80A,1500V 500times | 20A,1500V 15000times 80A,1500V 500times | 20A,1500V 15000times 80A,1500V 500times | 20A,1500V 15000times 80A,1500V 500times | 400A,1500V 200times 400A,1000V 500times | 500A,1500V 100times 500A,1000V 200times | 600A,1500V 50times 600A,1000V 100times | 800A,1000V 50times 750A,1500V 100times | 1000A,750V 50times 800A,1000V 50times 750A,1500V 100times 1000A,1500V 1times |
| Short-circuit Current | / | / | 4000A (5ms) 1times | 4000A (5ms) 1times | 6000A (5ms) 1times | 8000A (5ms) 1times | 8000A (5ms) 1times | 8000A (5ms) 1times | 8000A (5ms) 1times | 8000A (5ms) 1times | 8000A (5ms) 1times | 8000A (5ms) 1times | 8000A (5ms) 1times |
| Rated current | 20A | 40A | 60A | 100A | 150A | 200A | 250A | 300A | 400A | 500A | 600A | 800A | 1000A |
| Minimum load current | 6V/1A | | | | | | | | | | | | |
| Mechanical durability | 200000 times (0.5 seconds on and 0.5 seconds off) | | | | | | | | | | | | |

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| Performance Parameter | | | | | | | | | | | | | |
|--------------------------------|--|----------------------|----------------------|----------------------|----------------------|------------|------------|------------|----------------------|------------|------------|------------|-------------|
| Model | YCC8DC-20 | YCC8DC-40 | YCC8DC-60 | YCC8DC-100 | YCC8DC-150 | YCC8DC-200 | YCC8DC-250 | YCC8DC-300 | YCC8DC-400 | YCC8DC-500 | YCC8DC-600 | YCC8DC-800 | YCC8DC-1000 |
| Insulation Resistance | Between coils and contacts | Above 1000M Ω | | | | | | | | | | | |
| | Between same pole contacts | / | / | Above 1000M Ω | | | | / | Above 1000M Ω | / | | | |
| | Between main and auxiliary contacts | / | Above 1000M Ω | / | Above 1000M Ω | | | | | | | | |
| Voltage resistance | Between coils and contacts | AC4000V for 1 minute | | | | | | | | | | | |
| | Between same pole contacts | / | / | AC4000V for 1 minute | | | | / | AC4000V for 1 minute | / | | | |
| | Between main and auxiliary contacts and auxiliary contacts | / | AC4000V for 1 minute | / | AC4000V for 1 minute | | | | | | | | |
| Withstand impulse voltage | 10kV (1.2 x 50 μ s) between coil and contact | | | | | | | | | | | | |
| Action time | Below 30ms | | | | | | | | | | | | |
| Release time | Below 10ms | | | | | | | | | | | | |
| Suction rebound | Below 5ms | | | | | | | | | | | | |
| Operating ambient temperature | -40~+85°C (without freezing or condensation) | | | | | | | | | | | | |
| Operating environment humidity | 5% ~ 85%RH | | | | | | | | | | | | |

Auxiliary contact parameters

| Model | YCC8DC-20 | YCC8DC-40 | YCC8DC-60 | YCC8DC-100 | YCC8DC-150 | YCC8DC-200 | YCC8DC-250 | YCC8DC-300 | YCC8DC-400 | YCC8DC-500 | YCC8DC-600 | YCC8DC-800 | YCC8DC-1000 |
|-------------------------------|-----------|-----------|-----------|-----------------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Structure | / | | | A | | | | | | | | | |
| Contact Resistance | / | | | ≤100mΩ (@0.1A) | | | | | | | | | |
| Rated Load | / | | | DC12V 0.1A | | | | | | | | | |
| Switching electrical lifespan | / | | | DC12V 0.1A 10000times | | | | | | | | | |

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| Coil Parameters | | | | | | | | | | | | |
|------------------------------------|-----------|-------|----------|-----------|-------|----------|-----------|-------|----------|------------|-------|----------|
| Model | YCC8DC-20 | | | YCC8DC-40 | | | YCC8DC-60 | | | YCC8DC-100 | | |
| | 12 | 24 | PWM type | 12 | 24 | PWM type | 12 | 24 | PWM type | 12 | 24 | PWM type |
| Rated voltage (Vd. c.) | 12 | 24 | PWM type | 12 | 24 | PWM type | 12 | 24 | PWM type | 12 | 24 | PWM type |
| Action voltage (Vd. c.) | ≤9 | ≤18 | / | ≤9 | ≤18 | / | ≤9 | ≤18 | / | ≤9 | ≤18 | / |
| Working voltage (Vd. c.) | 9~14 | 18~28 | / | 9~14 | 18~28 | / | 9~16 | 18~32 | / | 9~16 | 18~32 | / |
| Release voltage (Vd. c.) | ≥1 | ≥2 | / | ≥1 | ≥2 | / | ≥1 | ≥2 | / | ≥1 | ≥2 | / |
| Coil resistance (Ω) (1 ± 7%) | 55.4 | 221.6 | / | 48 | 192 | / | 27.7 | 111 | / | 27.7 | 111 | / |
| Starting current (A) | 0.22 | 0.11 | / | 0.25 | 0.125 | / | 0.43 | 0.22 | / | 0.43 | 0.22 | / |
| Start time (ms) | / | / | / | / | / | / | / | / | / | / | / | / |
| Rated current (A) | 0.22 | 0.11 | / | 0.25 | 0.125 | / | 0.43 | 0.22 | / | 0.43 | 0.22 | / |
| Starting power consumption (W) | 2.6 | 2.6 | / | 3 | 3 | / | 5.2 | 5.2 | / | 5.2 | 5.2 | / |
| Steady state power consumption (W) | 2.6 | 2.6 | / | 3 | 3 | / | 5.2 | 5.2 | / | 5.2 | 5.2 | / |

Coil Parameters

| Model | YCC8DC-150 | | | YCC8DC-200 | | | YCC8DC-250 | | | YCC8DC-300 | | | YCC8DC-400 | | |
|------------------------------------|------------|-------|----------|------------|-------|----------|------------|-------|----------|------------|-------|----------|------------|---|---|
| | 12 | 24 | PWM type | 12 | 24 | PWM type | 12 | 24 | PWM type | 12 | 24 | PWM type | 12/24 | / | / |
| Rated voltage (Vd. c.) | 12 | 24 | PWM type | 12 | 24 | PWM type | 12 | 24 | PWM type | 12 | 24 | PWM type | 12/24 | / | / |
| Action voltage (Vd. c.) | ≤9 | ≤18 | ≤9 | ≤9 | ≤18 | ≤9 | ≤9 | ≤18 | ≤9 | ≤9 | ≤18 | ≤9 | ≤9 | / | / |
| Working voltage (Vd. c.) | 9~16 | 18~32 | 9~36 | 9~16 | 18~32 | 9~36 | 9~16 | 18~32 | 9~36 | 9~16 | 18~32 | 9~36 | 9~36 | / | / |
| Release voltage (Vd. c.) | ≥1 | ≥2 | ≥5 | ≥1 | ≥2 | ≥5 | ≥1 | ≥2 | ≥5 | ≥1 | ≥2 | ≥5 | ≥5 | / | / |
| Coil resistance (Ω) (1 ± 7%) | 24 | 96 | 3.1 | 24 | 96 | 3.1 | 24 | 96 | 3.1 | 24 | 96 | 3.1 | 3.1 | / | / |
| Starting current (A) | 0.5 | 0.25 | 3.8 | 0.5 | 0.25 | 3.8 | 0.5 | 0.25 | 3.8 | 0.5 | 0.25 | 3.8 | 3.8 | / | / |
| Start time (ms) | / | / | ≤150 | / | / | ≤150 | / | / | ≤150 | / | / | ≤150 | ≤150 | / | / |
| Rated current (A) | 0.5 | 0.25 | 0.2 | 0.5 | 0.25 | 0.2 | 0.5 | 0.25 | 0.2 | 0.5 | 0.25 | 0.2 | 0.33 | / | / |
| Starting power consumption (W) | 6 | 6 | 46 | 6 | 6 | 46 | 6 | 6 | 46 | 6 | 6 | 46 | 48 | / | / |
| Steady state power consumption (W) | 6 | 6 | 2.5 | 6 | 6 | 2.5 | 6 | 6 | 2.5 | 6 | 6 | 2.5 | 4 | / | / |

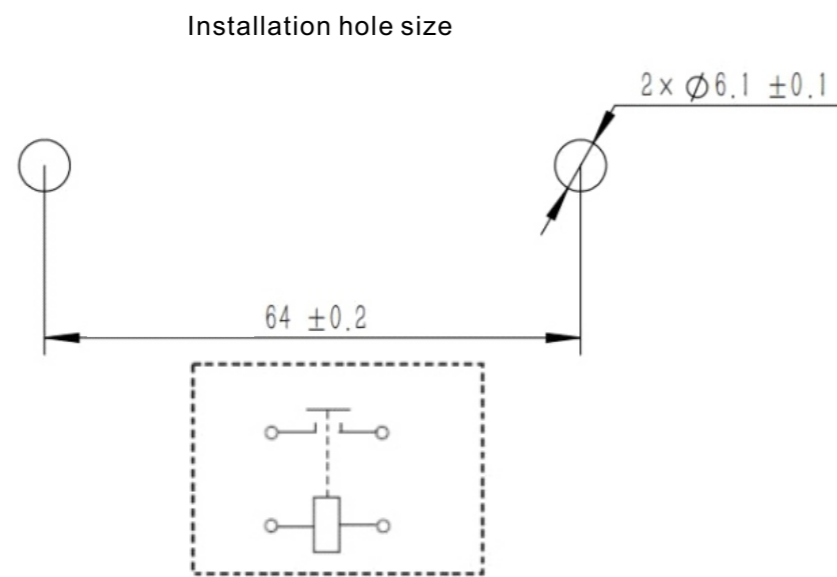
YCC8DC series high-voltage DC contactor

Coil Parameters

| Model | YCC8DC-500 | | | YCC8DC-600 | | | YCC8DC-800 | | | YCC8DC-1000 | | |
|------------------------------------|------------|---|---|------------|---|---|------------|---|---|-------------|---|---|
| | | | | | | | | | | | | |
| Rated voltage (Vd. c.) | 12/24 | / | / | 12/24 | / | / | 12/24 | / | / | 12/24 | / | / |
| Action voltage (Vd. c.) | ≤9 | / | / | ≤9 | / | / | ≤9 | / | / | ≤9 | / | / |
| Working voltage (Vd. c.) | 9~36 | / | / | 9~36 | / | / | 9~36 | / | / | 9~36 | / | / |
| Release voltage (Vd. c.) | ≥5 | / | / | ≥5 | / | / | ≥5 | / | / | ≥5 | / | / |
| Coil resistance (Ω) (1 ± 7%) | 3.1 | / | / | 3.1 | / | / | 3.1 | / | / | 3.1 | / | / |
| Starting current (A) | 3.8 | / | / | 3.8 | / | / | 3.8 | / | / | 3.8 | / | / |
| Start time (ms) | ≤150 | / | / | ≤150 | / | / | ≤150 | / | / | ≤150 | / | / |
| Rated current (A) | 0.33 | / | / | 0.33 | / | / | 0.33 | / | / | 0.33 | / | / |
| Starting power consumption (W) | 48 | / | / | 48 | / | / | 48 | / | / | 48 | / | / |
| Steady state power consumption (W) | 4 | / | / | 4 | / | / | 4 | / | / | 4 | / | / |

Product appearance, installation, and wiring diagram

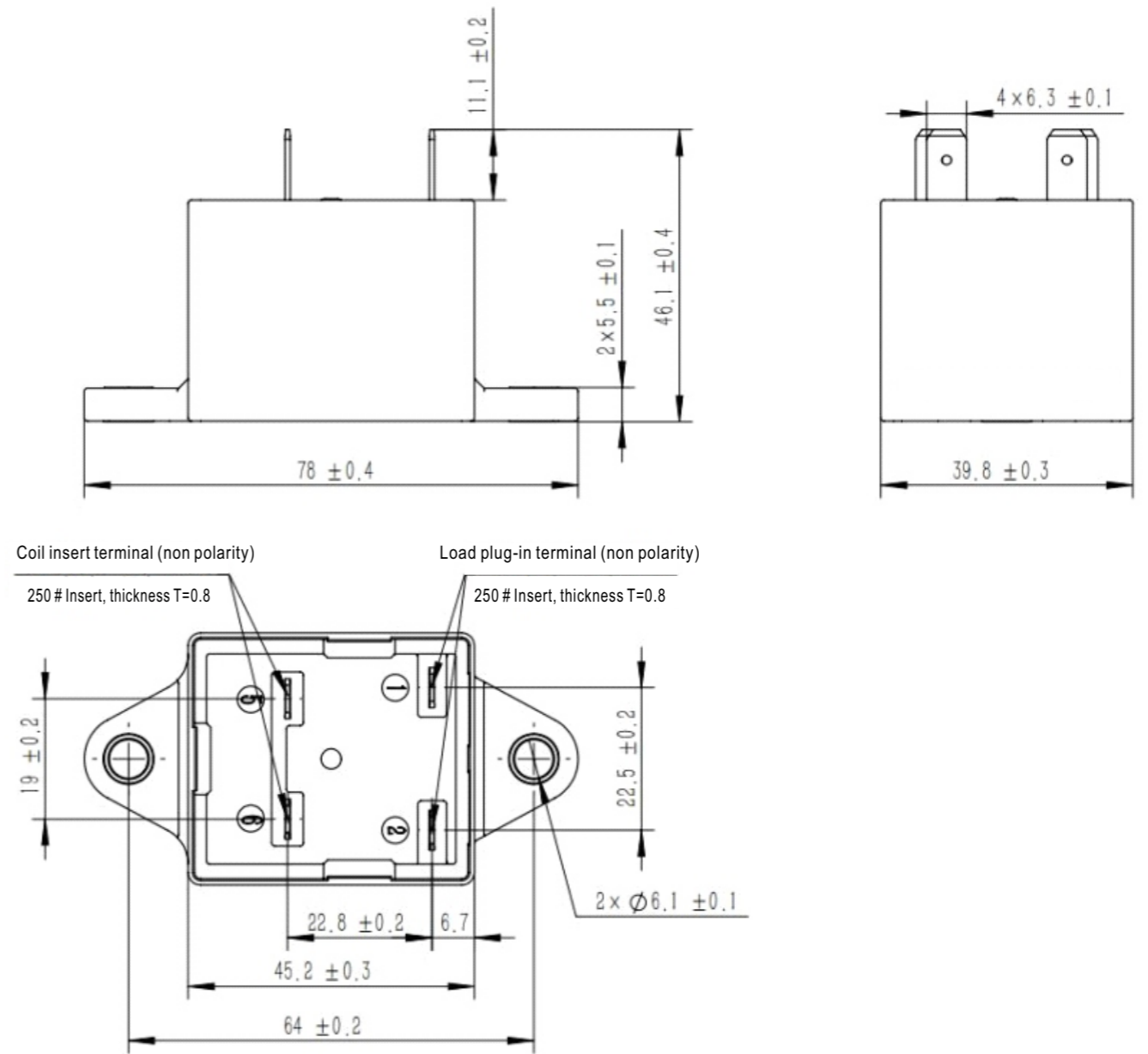
YCC8DC-20~40 Product appearance, installation, and wiring diagram



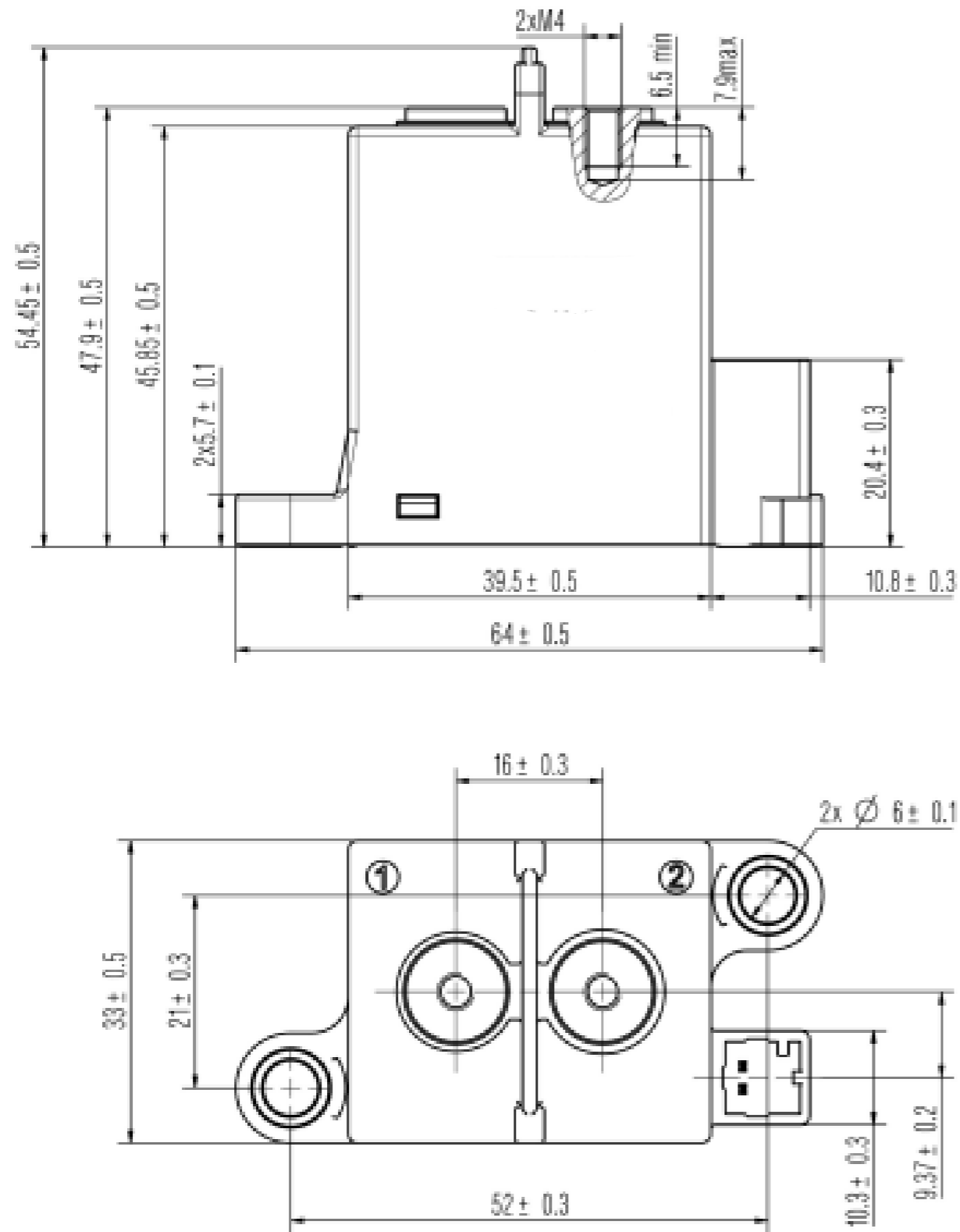
The load and coil are non-polar

YCC8DC series high-voltage DC contactor

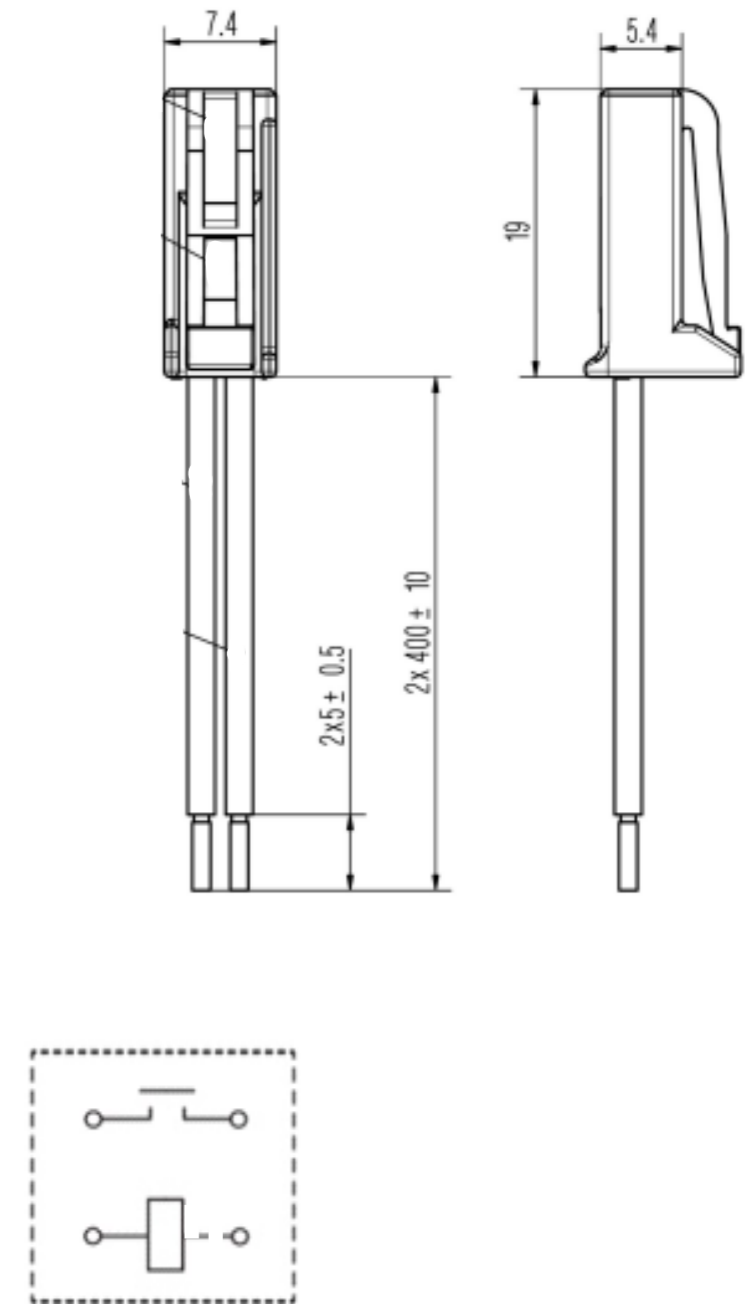
YCC8DC-20~40 Product appearance, installation, and wiring diagram



YCC8DC-60~100 Product appearance, installation, and wiring diagram



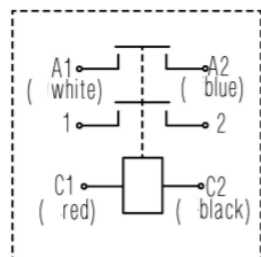
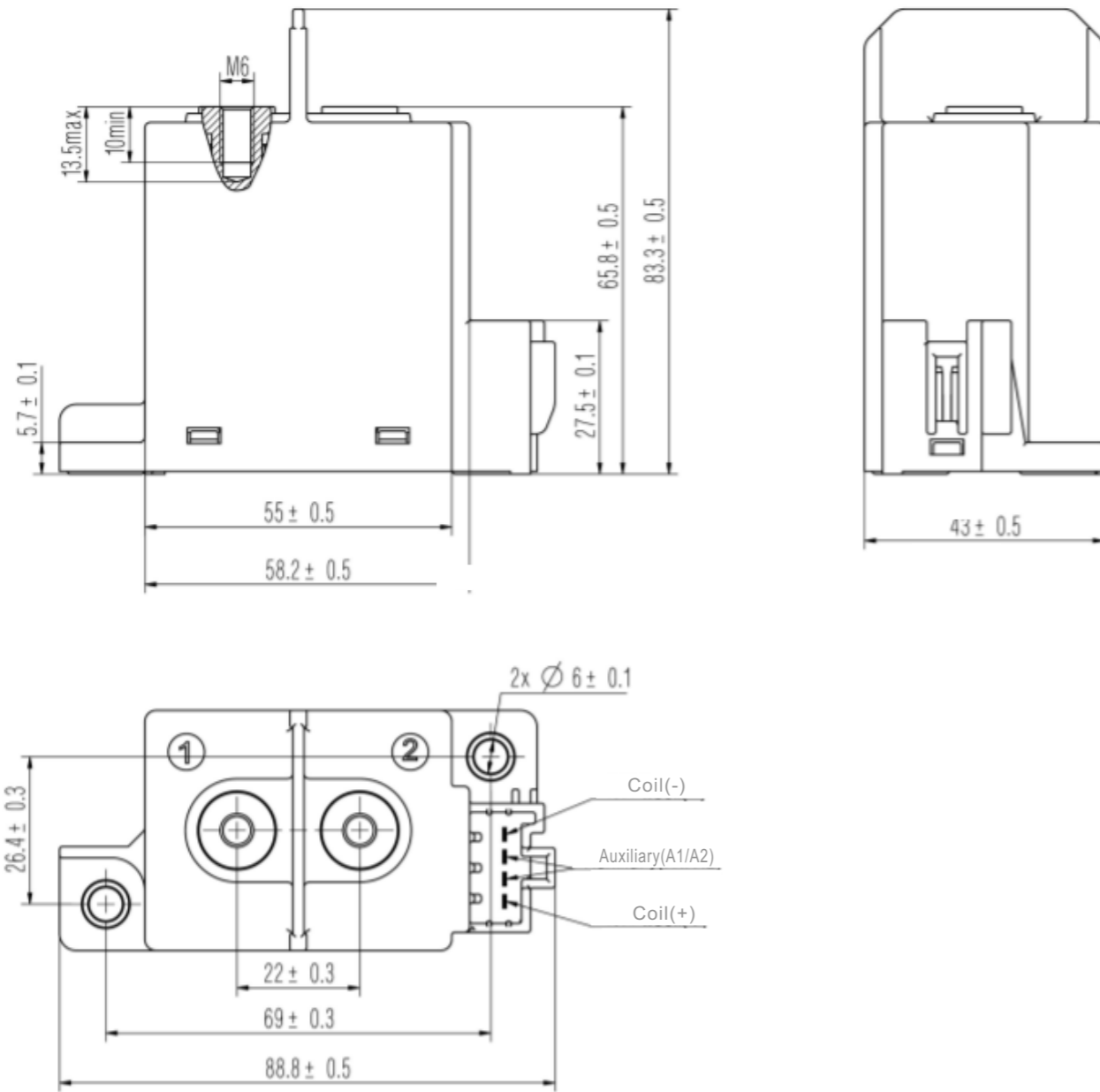
YCC8DC-60~100 Product appearance, installation, and wiring diagram



Note: No polarity on the load and coil

YCC8DC series high-voltage DC contactor

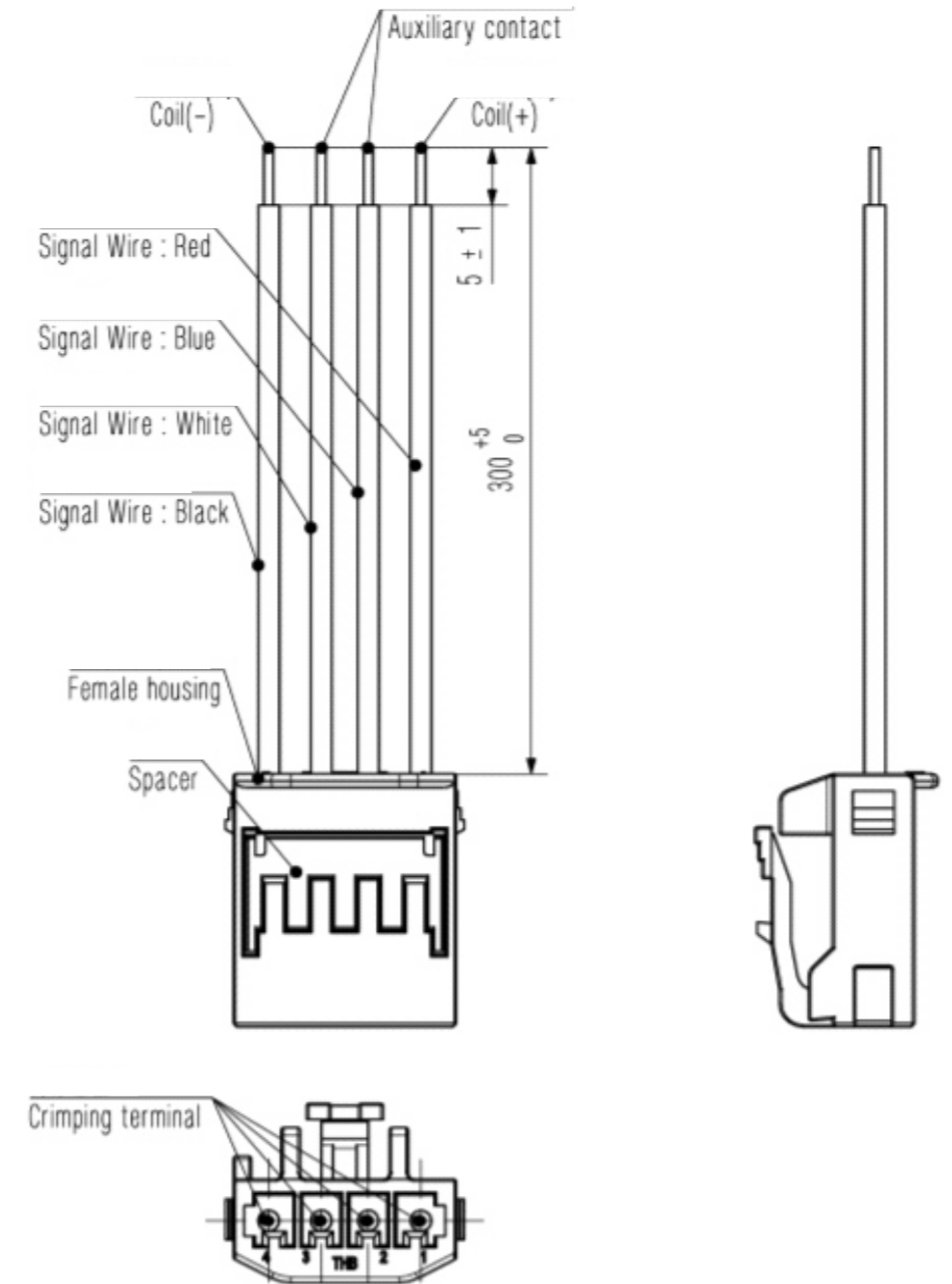
YCC8DC-150~300 Product appearance, installation, and wiring diagram



Explanation:
 1. 1 and 2 are load terminals, with no polarity in the load
 2. C1 and C2 are coil terminals with polarity, red "+" and black "-"
 3. A1 and A2 are auxiliary contacts, and the auxiliary contacts have no polarity

YCC8DC series high-voltage DC contactor

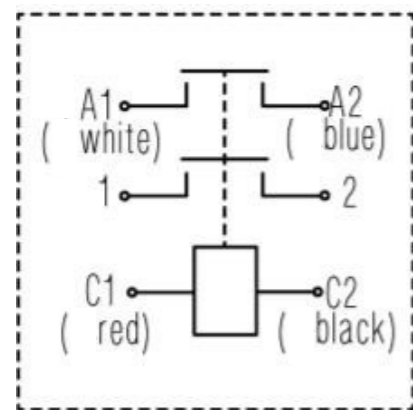
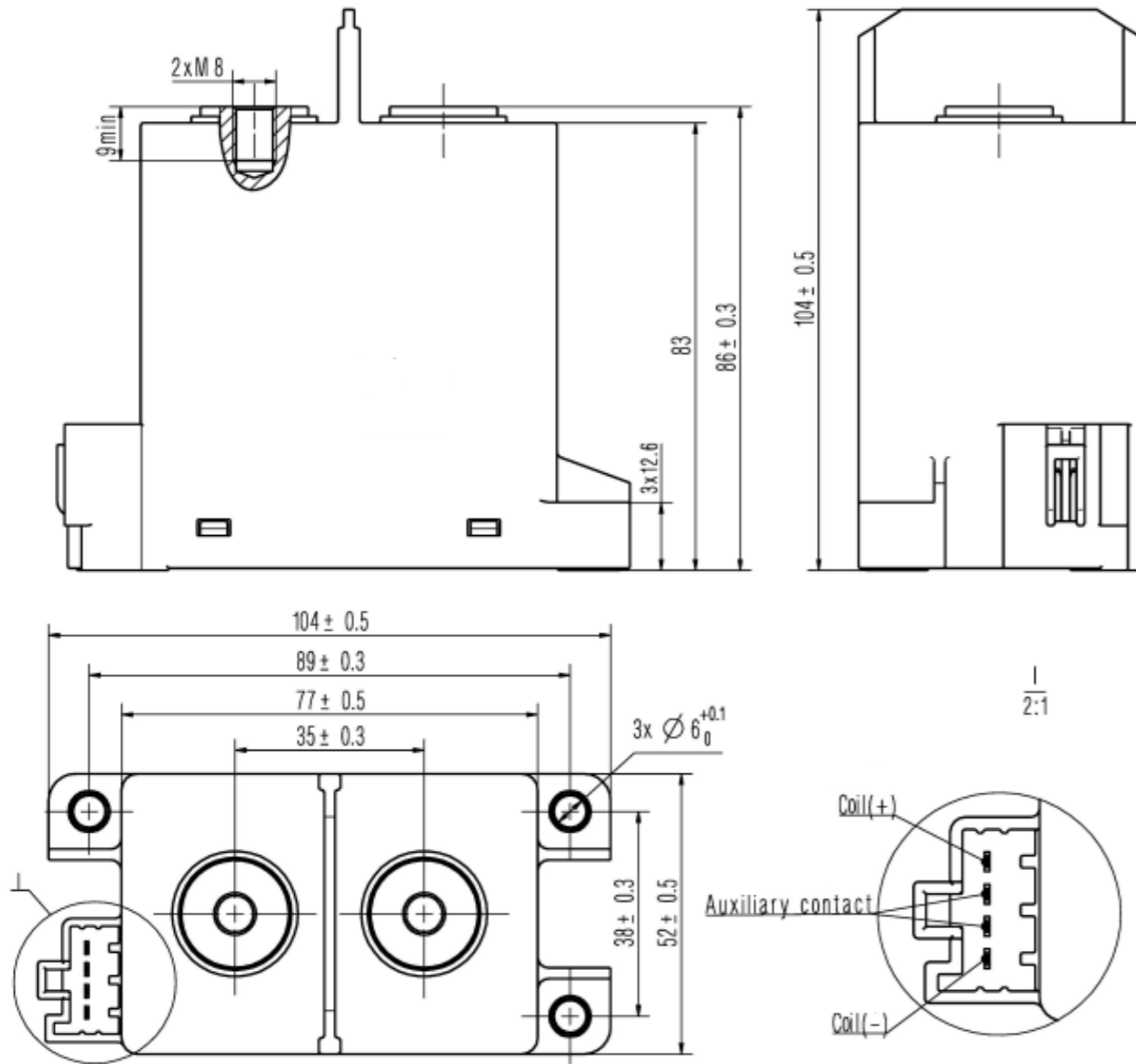
YCC8DC-150~300 Product appearance, installation, and wiring diagram



Note: connector are optional parts.

YCC8DC series high-voltage DC contactor

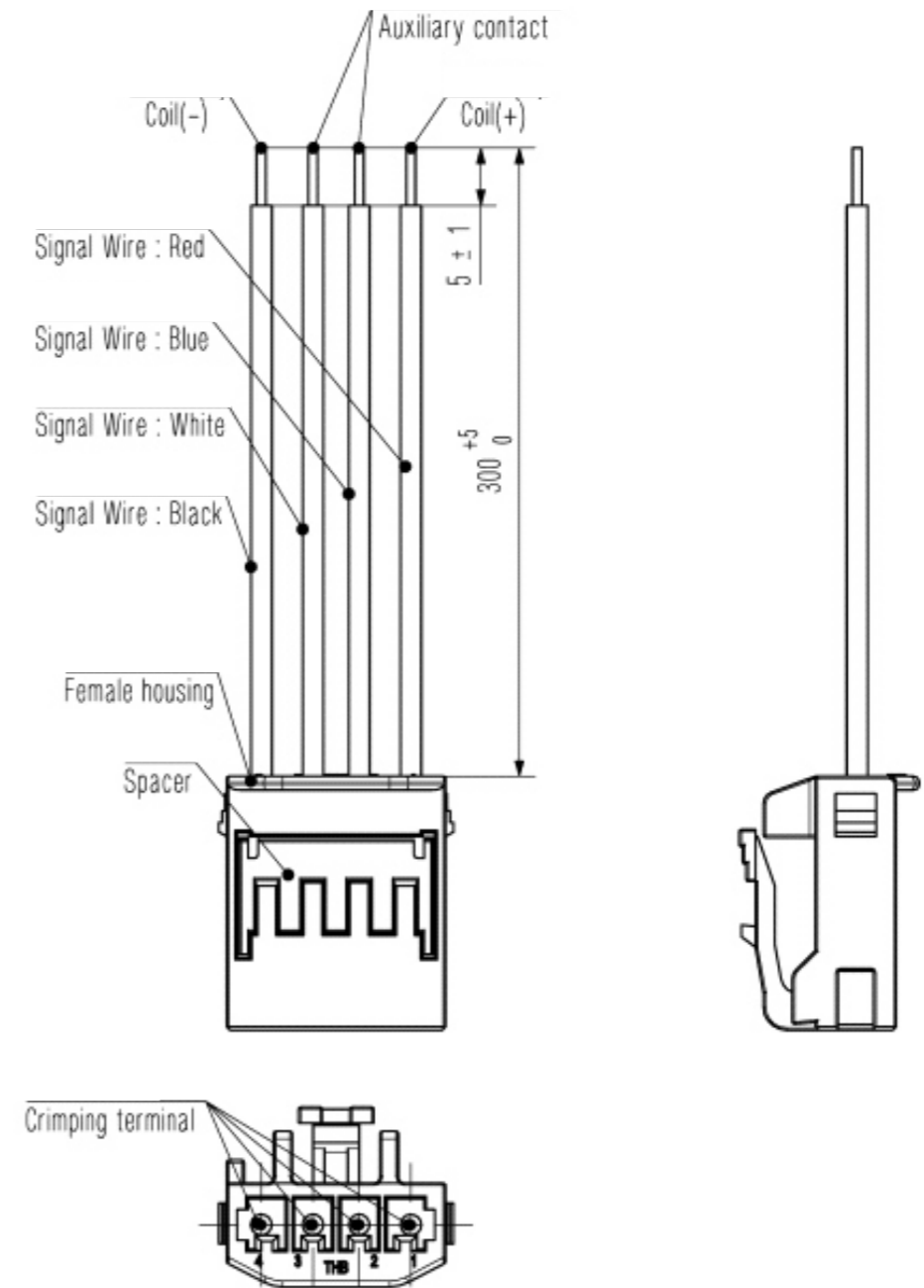
YCC8DC-400~600 Product appearance, installation, and wiring diagram



Explanation:
 1. 1 and 2 are load terminals, with no polarity in the load
 2. C1 and C2 are coil terminals with polarity, red "+" and black "-"
 3. A1 and A2 are auxiliary contacts, and the auxiliary contacts have no polarity

YCC8DC series high-voltage DC contactor

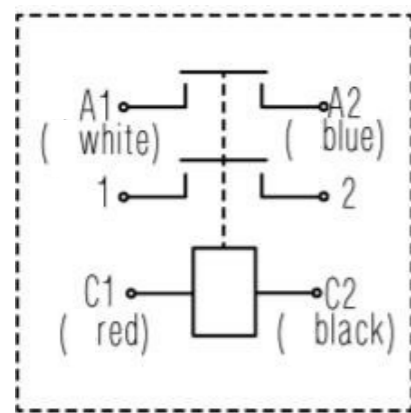
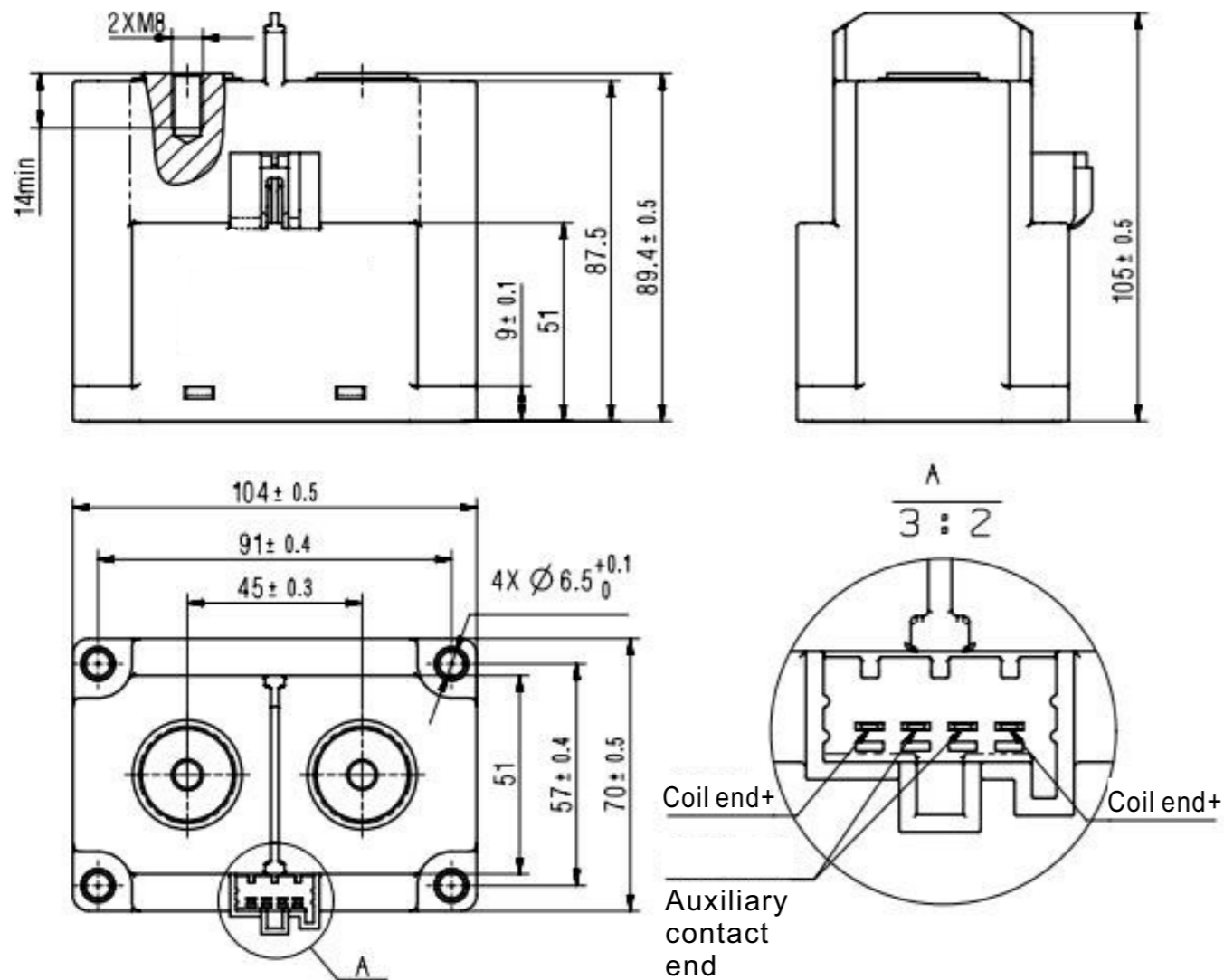
YCC8DC-400~600 Product appearance, installation, and wiring diagram



Note: connector are optional parts.

YCC8DC series high-voltage DC contactor

YCC8DC-800~1000 Product appearance, installation, and wiring diagram

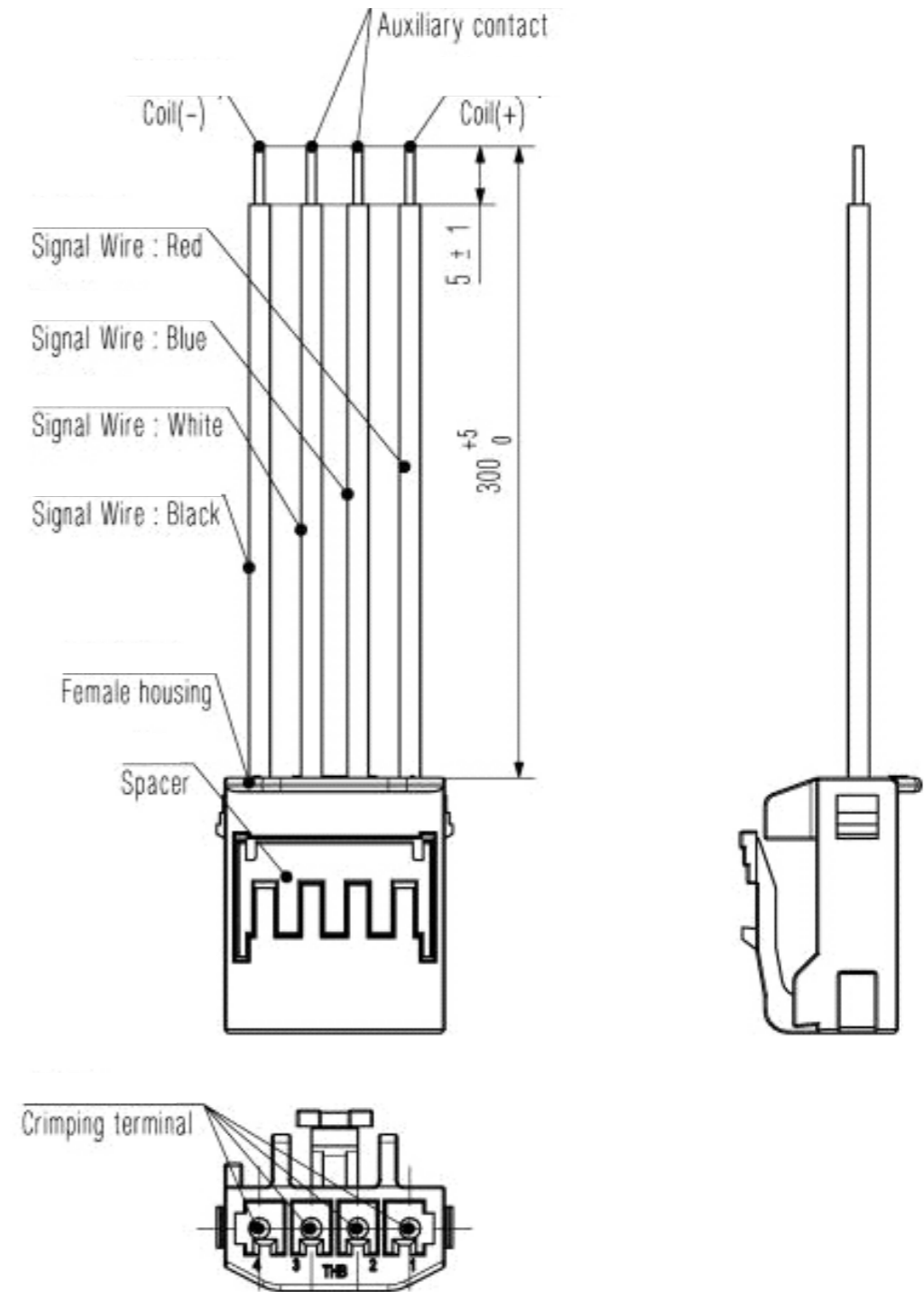


Explanation:

1. 1 and 2 are load terminals, with no polarity in the load
2. C1 and C2 are coil terminals with polarity, red "+" and black "-"
3. A1 and A2 are auxiliary contacts, and the auxiliary contacts have no polarity

YCC8DC series high-voltage DC contactor

YCC8DC-800~1000 Product appearance, installation, and wiring diagram



Note: connector are optional parts.