# ZCPR Series

## MOTOR START POTENTIAL RELAY


ZCPRA6AM6

### FEATURES

- 50A switching capability
- SPST-NC configurations
- .250” quick connect termination
- ISO 9001 certified
- Variety of mounting positions
- UL, CUR SA11095
- Non-position sensitive design*
- UL LZGH2/8 Certified for use with A2L refrigerants

### GENERAL DATA

| | |
|---|---|
| **Life Expectancy**<br>**Mechanical**<br>**Electrical** | Minimum operations<br>$7.5 \times 10^5$<br>$5 \times 10^5$ at 16A 400VAC<br>$2 \times 10^5$ at 35A 400VAC (break only)<br>$1 \times 10^5$ at 50A 400VAC (break only) |
| **Dimensions (mm)** | 51.2 x 46.6 x 36.5 |
| **Construction** | Unsealed |
| **Weight** | approx. 110 grams |
| **Ambient Operating Temp.** | -20°C to 40°C |

### COIL

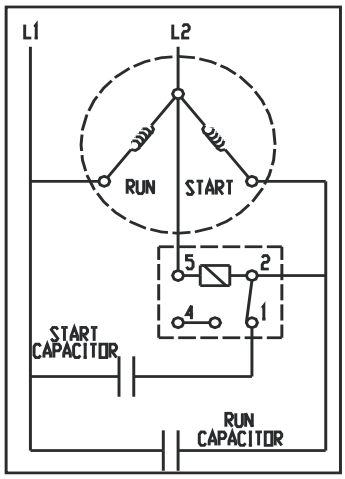
| | |
|---|---|
| **Coil Consumption** | 5VA |
| **Coil Voltage** | See table A & B |
| **Coil Resistance** | See table A & B |
| **Insulation System** | Class B (130°C) |

### CONTACTS

| | |
|---|---|
| **Arrangement** | SPST-NC |
| **Ratings** | 16A (make and break), 400 VAC, cos ϕ = 0.7 to 0.8<br>35A (break only), 400 VAC cos ϕ = 0.7 to 0.8<br>50A (break only), 400 VAC cos ϕ = 0.7 to 0.8 |
| **Material** | Silver cadmium oxide |
| **Resistance** | < 50 milliohms at 1A 24VDC |

*Except in position #3

### WIRING DIAGRAM



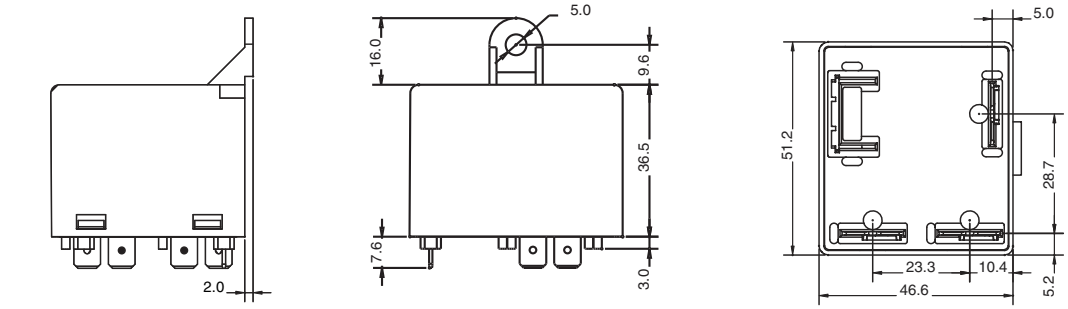
# ZCPR Series

## MECHANICAL DATA

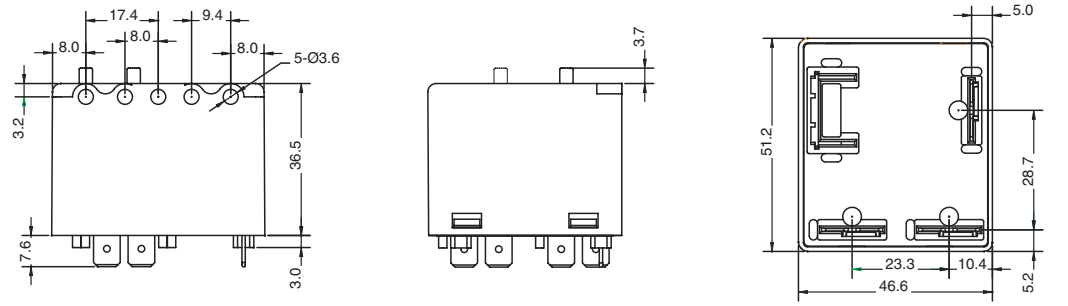
**TAB MOUNT ZCPRZ6AM6 Shown**

Outline Dimensions

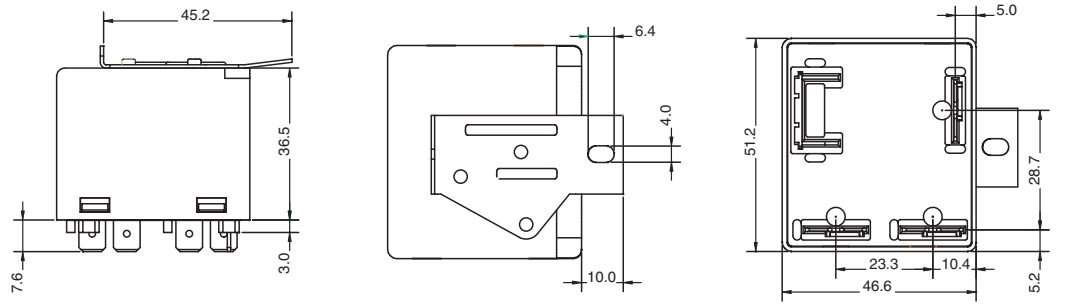
PLASTIC MOUNT (Unit: mm)



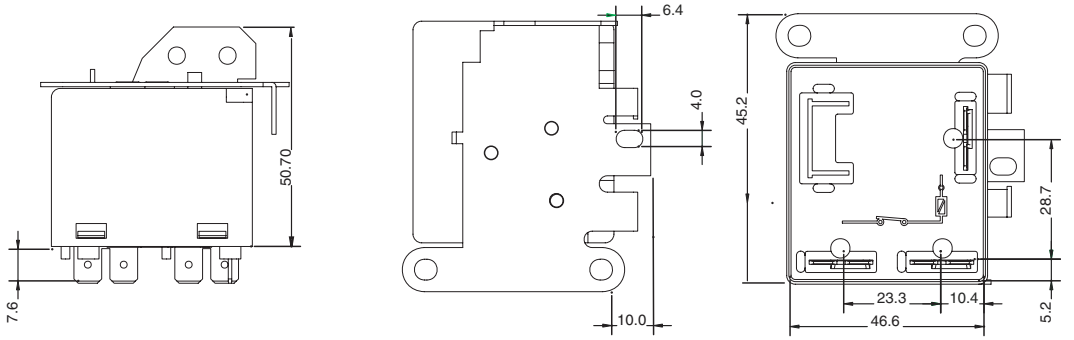

PANEL MOUNT (Unit: mm)




METAL TAB MOUNT ( Unit: mm)




UNIVERSAL BRACKET MOUNT ( Unit: mm)



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## MOTOR START POTENTIAL RELAY

### PART NUMBERING SYSTEM

**ZCPR D 6AM 6 – XXX**

- Basic Series Designation
- Mounting Type/Terminal Configuration
- Coil Type/P.U. & D.O. - See Table A & B
- Mounting Position - See Below
- Optional Customer Assign (XXX)

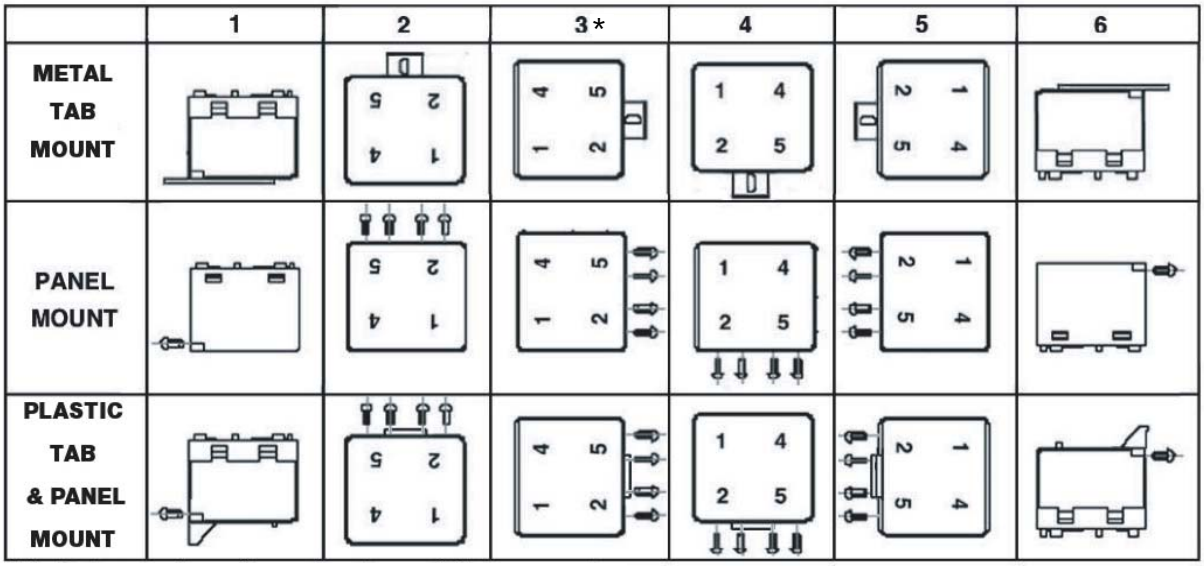
Part number ordering information.

### MOUNTING TYPE/TERMINAL CONFIGURATION

| | |
|---|---|
| B | Plastic Tab and Panel Mount, 5 dual QD (2 on #4) |
| D | Plastic Tab and Panel Mount, 3 dual QD (#1, 2, and 5) |
| M | Panel Mount, 5 dual QD (2 on #4) |
| P | Panel Mount, 3 dual QD (#1, 2, and 5) |
| U | Universal Metal Bracket Mount, 5 dual QD (2 on #4) |
| X | Metal Tab Mount, 5 dual QD (2 on #4) |
| Z | Metal Tab Mount, 3 dual QD (#1, 2, and 5) |

*Universal Metal Bracket Mount not available in position 3

### MOUNTING POSITION




Note: Custom mouting positions available upon request.

* Position sensitive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9/16/2024

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# ZCPR Series

## MOTOR START POTENTIAL RELAY

### TABLE A - OPERATING CHARACTERISTICS AT 50 Hz

| Coil number | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vmax at 40° C (V) | | 299 | | 338 | | 378 | | 356 | | 452 | | 151 | | 530 | | 228 | |
| Resistance ±10% at 25°C (Ω) | | 5600 | | 7500 | | 10700 | | 10000 | | 13800 | | 1500 | | 19500 | | 3900 | |
| | H.P.U. | P.U. | D.O. | P.U. | D.O. | P.U. | D.O. | P.U. | D.O. | P.U. | D.O. | P.U. | D.O. | P.U. | D.O. | P.U. | D.O. |
| A | 120-130 | | | | | | | | | | | 111-124 | 20-45 | | | 111-124 | 35-77 |
| B | 130-140 | | | | | | | | | | | 120-134 | 20-45 | | | 120-134 | 35-77 |
| C | 150-160 | 140-153 | 40-90 | | | | | | | | | 130-144 | 20-45 | | | 130-144 | 35-77 |
| D | 160-170 | 150-163 | 40-90 | 150-163 | 40-90 | | | | | | | 140-153 | 20-45 | | | 140-153 | 35-77 |
| E | 170-180 | 162-175 | 40-90 | 162-175 | 40-90 | | | | | | | | | | | 149-163 | 35-77 |
| F | 180-190 | 171-184 | 40-90 | 171-184 | 40-90 | | | 180-195 | 40-105 | | | | | | | 157-172 | 35-77 |
| G | 190-200 | 180-193 | 40-90 | 180-195 | 40-105 | 180-195 | 40-105 | 189-205 | 40-105 | | | | | | | 168-182 | 35-77 |
| H | 200-220 | 186-215 | 40-90 | 190-215 | 40-105 | 195-224 | 50-110 | 186-214 | 60-133 | | | | | | | 178-192 | 35-77 |
| I | 220-240 | 205-234 | 40-105 | 208-239 | 50-110 | 204-233 | 50-110 | 204-233 | 60-133 | | | | | | | 183-213 | 35-77 |
| L | 240-260 | 224-252 | 40-105 | 224-252 | 50-110 | 223-259 | 50-110 | 223-252 | 60-133 | 223-252 | 60-130 | | | | | 203-231 | 35-77 |
| M | 260-280 | 243-271 | 40-105 | 239-270 | 50-110 | 242-272 | 50-110 | 242-272 | 60-133 | 239-268 | 60-135 | | | 239-268 | 75-170 | | |
| N | 280-300 | | | 260-289 | 50-110 | 262-290 | 60-121 | 262-290 | 60-133 | 258-287 | 60-135 | | | 258-287 | 75-170 | | |
| O | 300-320 | | | | | 280-310 | 60-121 | 280-310 | 60-133 | 277-305 | 60-135 | | | 277-305 | 75-170 | | |
| P | 320-340 | | | | | 300-328 | 60-121 | 300-328 | 60-154 | 295-324 | 60-135 | | | 295-324 | 75-170 | | |
| Q | 340-360 | | | | | 318-347 | 60-121 | | | 314-342 | 60-135 | | | 314-342 | 75-180 | | |
| R | 350-370 | | | | | | | | | | | | | 323-352 | 75-180 | | |
| S | 360-380 | | | | | | | | | | | | | 332-361 | 75-180 | | |

H.P.U. = Approximate pick up at 90° C, P.U. and D.O. values at 25° C.

### TABLE B - OPERATING CHARACTERISTICS AT 60 Hz

| Coil number | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vmax at 40° C (V) | | 332 | | 375 | | 420 | | 395 | | 502 | | 168 | | 588 | | 253 | |
| Resistance ±10% at 25°C (Ω) | | 5600 | | 7500 | | 10700 | | 10000 | | 13800 | | 1500 | | 19500 | | 3900 | |
| | H.P.U. | P.U. | D.O. | P.U. | D.O. | P.U. | D.O. | P.U. | D.O. | P.U. | D.O. | P.U. | D.O. | P.U. | D.O. | P.U. | D.O. |
| AA | 120-130 | | | | | | | | | | | 111-124 | 20-45 | | | 111-124 | 35-77 |
| AB | 130-140 | | | | | | | | | | | 120-134 | 20-45 | | | 120-134 | 35-77 |
| AC | 150-160 | | | | | | | | | | | 130-144 | 20-45 | | | 130-144 | 35-77 |
| AD | 160-170 | 150-163 | 40-90 | | | | | | | | | 140-153 | 20-45 | | | 140-153 | 35-77 |
| AE | 170-180 | 162-175 | 40-90 | | | | | | | | | 149-163 | 20-45 | | | 149-163 | 35-77 |
| AF | 180-190 | 171-184 | 40-90 | | | | | 180-195 | 40-105 | | | | | | | 157-172 | 35-77 |
| AG | 190-200 | 180-193 | 40-90 | 180-195 | 40-105 | | | 189-205 | 40-105 | | | | | | | 168-182 | 35-77 |
| AH | 200-220 | 186-215 | 40-90 | 190-215 | 40-105 | 195-224 | 60-121 | 186-214 | 60-130 | | | | | | | 178-192 | 35-77 |
| AI | 220-240 | 205-234 | 40-90 | 208-239 | 50-110 | 204-233 | 60-121 | 204-233 | 60-130 | | | | | | | 183-213 | 35-77 |
| AL | 240-260 | 224-252 | 40-105 | 224-252 | 50-110 | 223-259 | 60-121 | 223-252 | 60-130 | | | | | | | 203-231 | 35-77 |
| AM | 260-280 | 243-271 | 40-105 | 239-270 | 50-110 | 242-272 | 60-121 | 242-272 | 60-140 | 239-268 | 60-135 | | | | | 221-250 | 35-77 |
| AN | 280-300 | | | 260-289 | 50-110 | 262-290 | 60-121 | 262-290 | 60-140 | 258-287 | 60-135 | | | 258-287 | 75-170 | | |
| AO | 300-320 | | | | | 280-310 | 60-121 | 280-310 | 60-140 | 277-305 | 60-135 | | | 277-305 | 75-170 | | |
| AP | 320-340 | | | | | 300-328 | 60-121 | 300-328 | 60-140 | 295-324 | 60-135 | | | 295-324 | 75-170 | | |
| AQ | 340-360 | | | | | 318-347 | 60-121 | | | 314-342 | 60-135 | | | 314-342 | 75-180 | | |
| AR | 350-370 | | | | | | | | | | | | | 323-352 | 75-180 | | |
| AS | 360-380 | | | | | | | | | | | | | 332-361 | 75-180 | | |

H.P.U. = Approximate pick up at 90° C, P.U. and D.O. values at 25° C.

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