

# ZCPR Series

## MOTOR START POTENTIAL RELAY

### 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\*



ZCPRA6AM6

### GENERAL DATA

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

### COIL

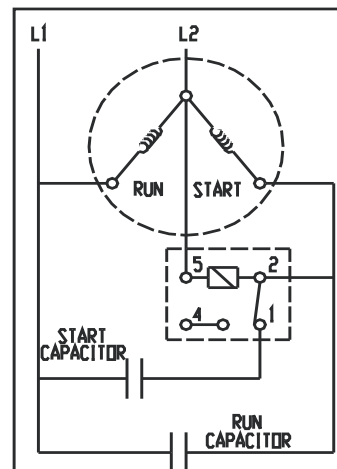
<b>Coil Consumption</b>	5VA
<b>Coil Voltage</b>	See table A & B
<b>Coil Resistance</b>	See table A & B
<b>Insulation System</b>	Class B (130°C)

### CONTACTS

<b>Arrangement</b>	SPST-NC
<b>Ratings</b>	16A (make and break), 400 VAC, cos $\phi$ = 0.7 to 0.8 35A (break only), 400 VAC cos $\phi$ = 0.7 to 0.8 50A (break only), 400 VAC cos $\phi$ = 0.7 to 0.8
<b>Material</b>	Silver cadmium oxide
<b>Resistance</b>	< 50 milliohms at 1A 24VDC

\*Except in position #3

### WIRING DIAGRAM



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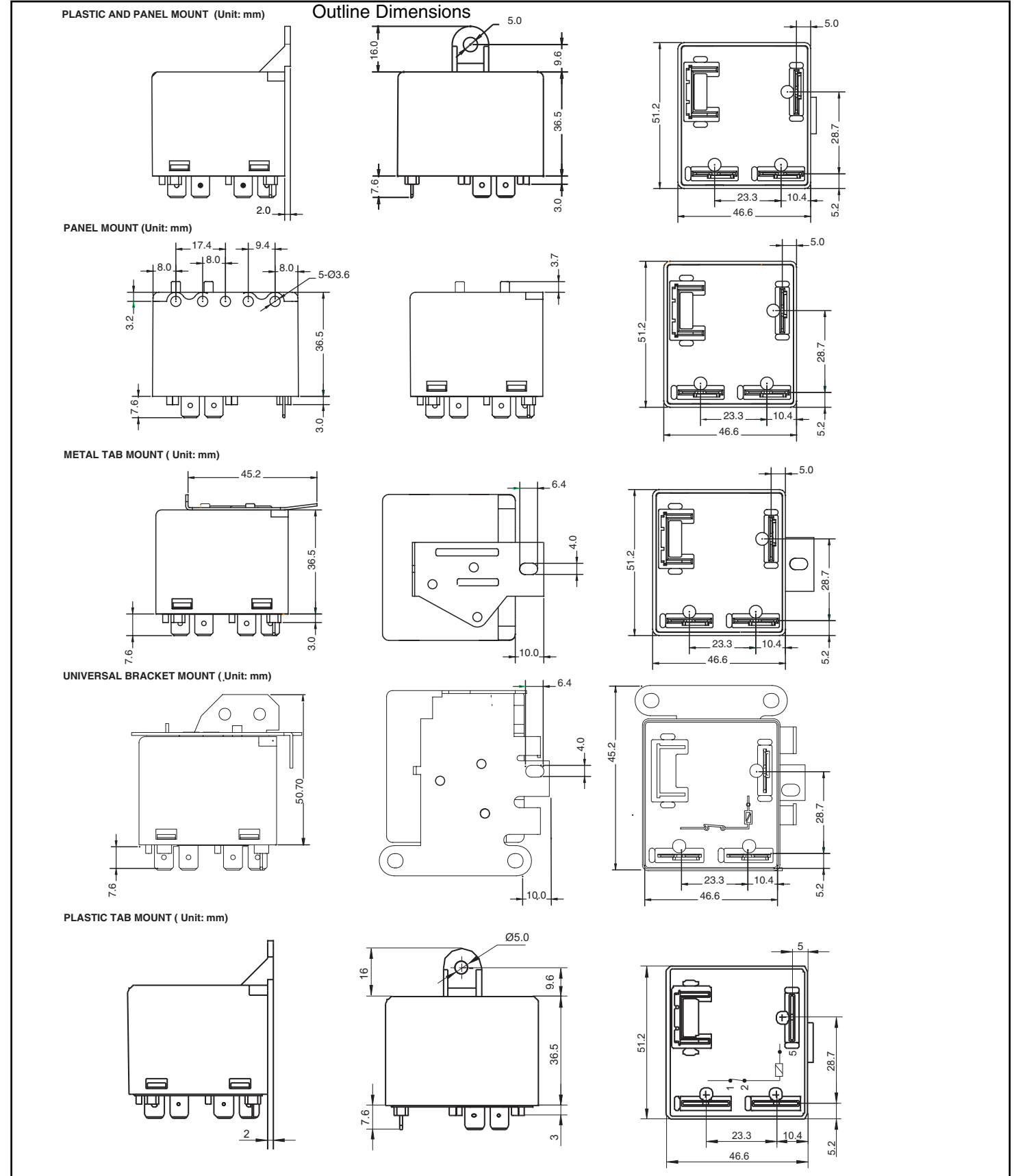
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## MECHANICAL DATA

TAB MOUNT ZCPRZ6AM6 Shown



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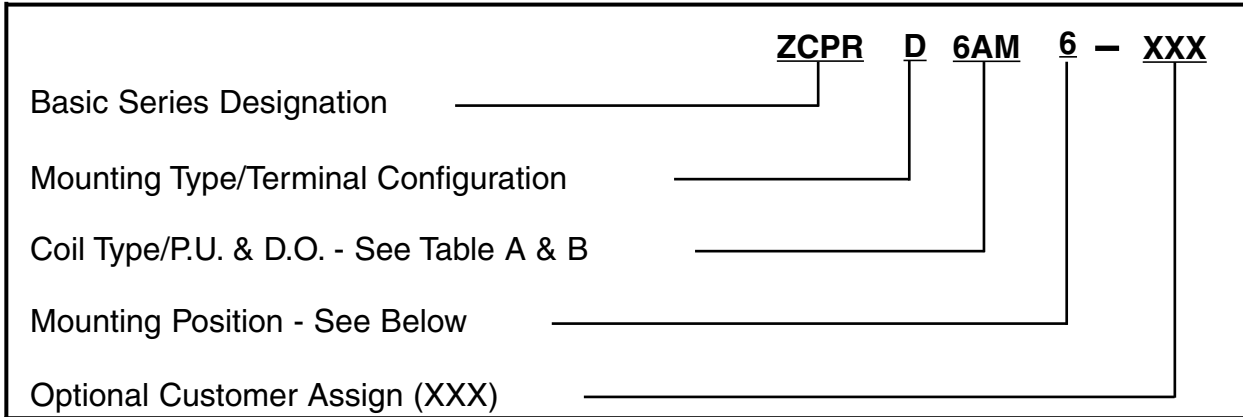
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### PART NUMBERING SYSTEM



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)
K	Plastic Tab Mount, 3 dual QD (#1, 2, and 5)

\*Universal Metal Bracket Mount not available in position 3

### MOUNTING POSITION

	1	2	3*	4	5	6
<b>METAL TAB MOUNT</b>						
<b>PANEL MOUNT</b>						
<b>PLASTIC TAB &amp; PANEL MOUNT</b>						
<b>PLASTIC TAB MOUNT</b>						

Note: Custom mounting positions available upon request.

\* Position sensitive

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## MOTOR START POTENTIAL RELAY

**TABLE A - OPERATING CHARACTERISTICS AT 50 Hz**

Coil number	2			3		4		5		6		7		8		9	
V <sub>max</sub> 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	
V <sub>max</sub> 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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