

RVA Motor start Potential Relay



RVA potential relay is designed to start single-phase motors which employ both start and run capacitor (CSR and CSIR configurations) for high starting torque.

The most frequent applications include air conditioning, commercial refrigeration, heat pump, etc.

The coil is energised by the potential of the start winding. When such voltage is raised up to the pick-up value, the contact will open and disconnect the start capacitor.

The relay will remain energised until the start winding voltage is removed or decreases to less than the drop-out value.

GENERAL CHARACTERISTICS

Coils	Class "B" (130 °C) insulation, see table for characteristics	
Maximum Contact Rating	RVA Standard	16A (break and make), 400V, cos ϕ 0.85, 500.000 operations
		35A break, 10A make, 400V, cos ϕ 0.85, 200.000 operations
	RVA High-Capacity	50A break, 15A make, 400V, cos ϕ 0.85, 100.000 operations
Operation	See table for operating characteristics (Dependent to mounting position)	
	Specify operating position	
	For Normal pollution conditions (According to EN60730)	
Terminal Configuration	Quick-Connect 6.3 x 0.8 mm or screw M3.5 (See table)	
Approvals	UL E51436	
	CUL E51436	
	ENEC CA02.03532	
	CQC	
	Approved for use with flammable refrigerant according to EN60079-15:2010	

CODE EXPLANATION

	RVA	(H)	4	M	3	D
Basic Model						
High-Capacity Version						
Coil Type						
Operating Characteristic (Pick-up and Drop-out)						
Operating Position						
Terminal Configuration						

OPERATING CHARACTERISTICS AT 50Hz

Coil Number		2		3		4		5		6		7		8		9	
Vmax at 40°C (V)		299		338		378		356		452		151		530		228	
Resistance 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	132-148	40-90									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°

P.U. and D.O. values at 25°

If a 50Hz model is used at 60Hz, its 60Hz PU will be about 13% higher.

OPERATING CHARACTERISTICS AT 60Hz

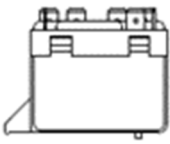
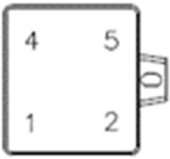
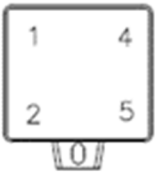
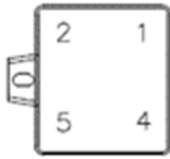
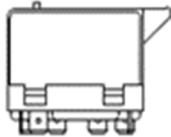
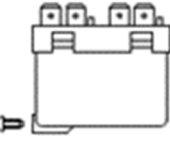
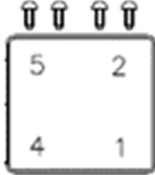
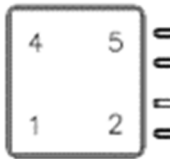
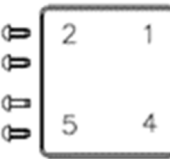
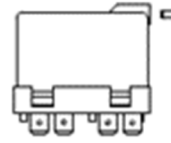
Coil Number		2		3		4		5		6		7		8		9	
Vmax at 40°C (V)		332		375		420		395		502		168		588		253	
Resistance at 25°C (Ω)		5600		7500		10700		10000		13800		1500		19500		3900	
H.P.U.		P.U.	D.O.	P.U.	D.O.	P.U.	D.O.	P.U.	D.O.	P.U.	D.O.	P.U.	D.O.	P.U.	D.O.	P.U.	D.O.
AA	120-130											111-124	20-45			111-124	35-77
AB	130-140	132-148	40-90									120-134	20-45			120-134	35-77
AC	150-160	140-150	40-90									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	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	180-195	60-121	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	40-105	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	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					231-250	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°

P.U. and D.O. values at 25°

If a 60Hz model is used at 50Hz, its 50Hz PU will be about 13% lower.

OPERATING POSITION

POSITION	0	3	K	6	X	Y
TAB MOUNT						
PANEL MOUNT						

Devices calibrated in specified mounting position.

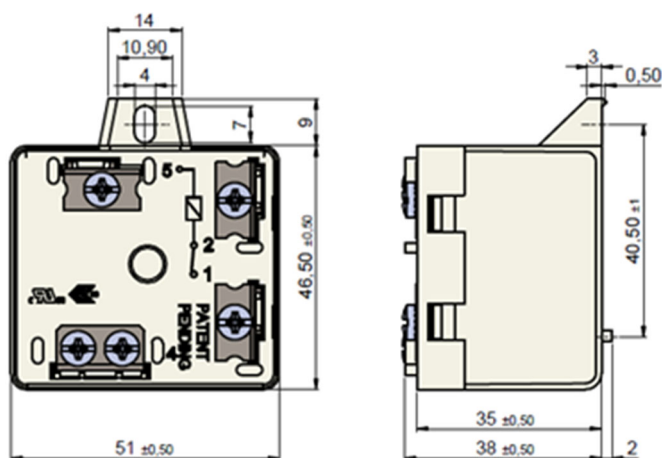
Pick-up voltage may vary somewhat if mounted in different position than specified.

TERMINALS CONFIGURATIONS

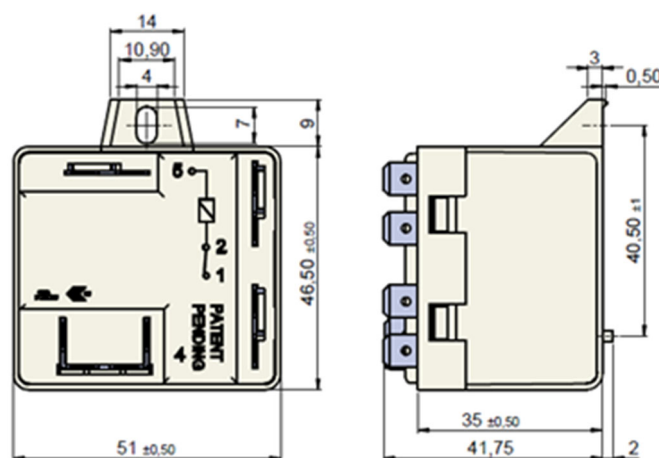
	3 Twin Quick-connect (#1,2,5)	5 Twin Quick-connect (2 on #4)	3 Screws (#1,2,5)	5 Screws (2 screws on #4)
TAB MOUNT	L	D	H	C
PANEL MOUNT	Z	R	U	P

DIMENSIONS (All dimensions $\pm 0.25\text{mm}$)

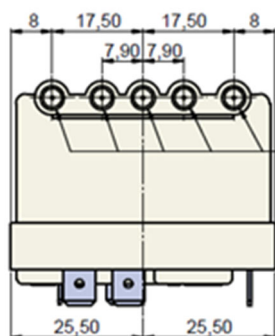
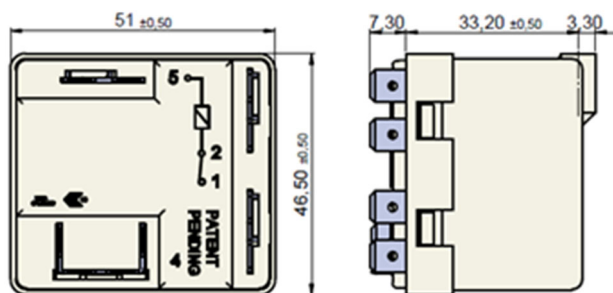
TAB MOUNT (Screw Terminal)



TAB MOUNT (Quick-connect Terminal)

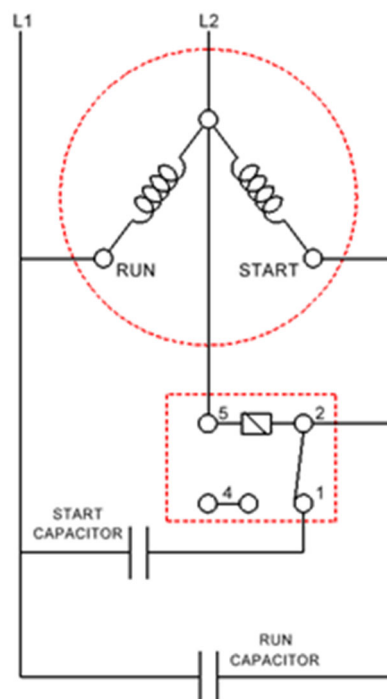


PANEL MOUNT (Quick-connect Terminal)



When engaging the plastic mould recess, use two flat head, self tapping screws, size 4,2mm, 9.5mm long (UNI-EN-ISO 1481 for slotted screw, UNI-EN-ISO 7049 for screws with a cross recess).

WIRING



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