

# InstallationSheet

### 3 Phase RHP - Hybrid Solid State Contactors



#### 3 Phase Contactor AC Input PENDING

40-50 Amp 280/600 VAC

- Combined SSR and EMR advantages
- Lifetime >2 million operations @ full load
- No heat sink required
- Input status LED indicator
- Wire, lug or quick connect termination
- DP contactor footprint
- CE compliant & UL/cUL recognized
- 100k-cycle UL508 endurance rating

4000 VAC

2500 VAC

Three Normally Open

-20°C to 75°C

-40°C to 100°C

16.6 mS @ 60 Hz / 20 mS @ 50 Hz

32 mS @ 60 Hz / 40 mS @ 50 Hz

30 operations per min

> 2 Million operations

540 grs (1.19 lb)



#### 3 Phase Contactor DC Input PENDIN

40-50 Amp 120/240 VAC

- Combined SSR and EMR advantages
- Lifetime >2 million operations @ full load
- No heat sink required
- DC logic compatible input
- Input status LED indicator
- Wire, lug or quick connect termination
- DP contactor footprint
- CE compliant & UL/cUL recognized
- 100k-cycle UL508 endurance rating

#### CONTROL SPECIFICATIONS<sup>10</sup>

Control Voltage Suffix	E	F	G
Coil Voltage Range	20 - 26 VAC, 50/60 Hz	100 - 130 VAC, 50/60 Hz	208 - 240 VAC, 50/60 Hz
Min. Turn-On Voltage	20 VAC	100 VAC	208 VAC
Min. Turn-Off Voltage	12 VAC	24 VAC	48 VAC
Coil Power Consumption, Inrush	56 VA @ 24 VAC	56 VA @ 120 VAC	56 VA @ 220 VAC
Coil Power Consumption, Sealed	6.6 VA @ 24 VAC	6.6 VA @ 120 VAC	6.6 VA @ 220 VAC
Coil Terminals	10 in lb (1.13 Nm)	10 in lb (1.13 Nm)	10 in lb (1.13 Nm)

#### OUTDUT CDECIFICATIONS

OUTPUT SPECIFICATIONS		
Voltage suffix	28	60
Operating Voltage (50/60Hz)	24 - 280 VAC	48 - 600 VAC
Maximum Off-State Leakage Current per ch	nannel 3 0.05 mA @ 240 VAC	0.06 mA @ 480 VAC
Load Current suffix	_ 40	50
Maximum Load Current per Phase @ 40°C	40 A Resistive	50 A Resistive
Power terminals / wire range	Dual quick connect and Binder head screws / AWG#14 - AWG#8	Dual quick connect and B lugs / AWG#14 - AWG#6
Screw torque requirements	18 in lbs (2.1 Nm)	25 in lbs (2.9 Nm)
GENERAL SPECIFICATIONS <sup>®</sup>		

Input to Output Dielectric Isolation. Input/Output to Ground Dielectric Isolation. Contacts (Double Break ) 3 Ambient Operating Temperature Range 4 Ambient Storage Temperature Range Max Turn-On Time Max. Turn-Off Time

Maximum Number of Operations per Minute Lifetime @ Rated Load Current, 40°C ambient temp, 30 operations/min, Rated Vcontrol Weight (typical)

- ① Specificationts @ 25°C unless otherwise noted.
- ② See Derating Curves for additional operational conditions.
- The RHP includes a Solid-State Relay. Therefore, the output is never completely open.
- The RHP includes an overtemperature protection for the Solid-State Module.

#### CONTROL SPECIFICATIONS<sup>®</sup>

Control Voltage Suffix	D5	D12	D24
Control Voltage Range	4.5 - 5.5 VDC	10 - 15 VDC	22 - 27 VDC
Max. Reverse Voltage	-5.5 VDC	-15.5 VDC	-27.5 VDC
Min. Turn-On Voltage	4.5 VDC	9.5 VDC	9.5 VDC
Min. Turn-Off Voltage	1 VDC	2 VDC	2 VDC
Input Current	12mA @ 5 VDC	12mA @ 12 VDC	12mA @ 24 VDC
Input Connector	5.31 in lb (0.6 Nm)	5.31 in lb (0.6 Nm)	5.31 in lb (0.6 Nm)

#### OUTPUT SPECIFICATIONS<sup>®</sup>

/oltage suffix	12	24
Operating Voltage (50/60Hz)	100 - 120 VAC	208 - 240 VAC
Naximum Off-State Leakage Current per channel 3	0.05 mA @ 120 VAC	0.06 mA @ 240 VAC

Load Current suffix 40 Maximum Load Current per Phase @ 40°C @ 40 A Resistive Power terminals / wire range

Dual quick connect and Binder head screws / AWG#14 - AWG#8 lugs / AWG#14 - AWG#6 18 in lbs (2.1 Nm)

50 A Resistive Dual quick connect and Box 25 in lbs (2.9 Nm)

50

Screw torque requirements

0 М

#### GENERAL SPECIFICATIONS <sup>10</sup>

Input to Output Dielectric Isolation Input/Output to Ground Dielectric Isolation Contacts (Double Break)3

Ambient Operating Temperature Range 4 Ambient Storage Temperature Range Max. Turn-On Time

Max. Turn-Off Time

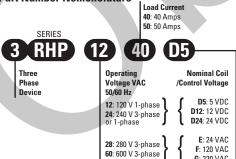
Maximum Number of Operations per Minute Lifetime @ Rated Load Current, 40°C ambient temp, 30 operations/min, Rated Vcontrol Weight (typical)

2500 VAC Three Normally Open -20°C to 75°C -40°C to 100°C 16.6 mS @ 60 Hz / 20 mS @ 50 Hz 32 mS @ 60 Hz / 40 mS @ 50 Hz 30 operations per min > 2 Million operations 540 grs (1.19 lb)

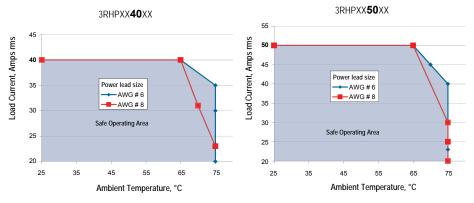
4000 VAC

- ① Specificationts @ 25°C unless otherwise noted.
- See Derating Curves for additional operational conditions.
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#### **Part Number Nomenclature**



#### **Derating Curves**

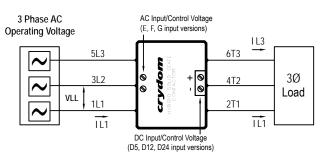




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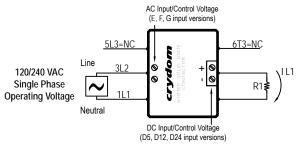
### 3 Phase RHP - Hybrid Solid State Contactors

## Typical Electrical Connection for 3 Phase Applications (For output voltage options 24, 28, 60)

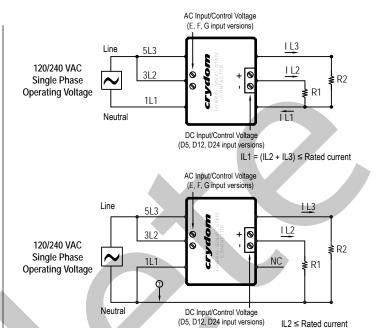


DO NOT apply any AC voltage to contactor coil connections, for DC versions only.

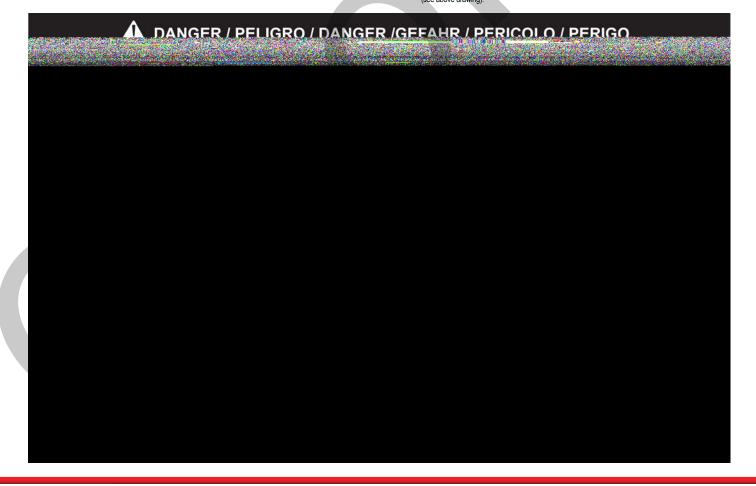
## **Optional Electrical Connections for Single Phase Applications** (For output voltage options 12, 24, 28, 60)



IL1 ≤ Rated current



- Match VLL to voltage suffixes 28 & 60 for options E, F & G and 12 & 24 for options DX.
- O The single phase supply voltage must be wired to terminal 1L1 and 3L2 for proper single phase operation.
  O In applications switching two single phase loads (R1 and R2) where the combined load current exceeds the contactor's rating (40 or 50 Amps) the return/neutral lead must not be wired through the contactor (see above drawing).



IL3 ≤ Rated current

IL2 + IL3 > Rated current