



KILOVAC KHR500 HIGH-VOLTAGE 600 AMP CONTACTORS

HANDLE HIGH INRUSH CURRENTS UP TO 4000 AMPS, IN A SMALL, LIGHTWEIGHT HERMETICALLY SEALED CONTACTOR FOR HARSH AND EXPLOSIVE ENVIRONMENTS

KHR500 CONTACTORS

Small, Lightweight, and Hermetically Sealed

CAPABLE

- 600 A carry
- 3300 A break at 400 Vdc
- 4000 A make current
- Bidirectional load switching

HERMETICALLY SEALED

- Safe for application in harsh and explosive environments
- Not position sensitive
- Rugged, robust design

EFFICIENT

- Smaller and up to 64% lighter than our popular EV500 BUBBA contactors
- Integrated dual-coil electronic “cut throat” economizer
- Switches voltages from 28 to 1000 Vdc

APPLICATIONS

- Aerospace
- Ground vehicles
- Marine
- Solar
- Automotive
- Energy storage systems

TE Connectivity’s (TE) KILOVAC KHR500 “BUBBA II” feature smaller size and lighter weight than our popular EV500 “BUBBA” high-voltage contactors. Capable of handling inrush currents as high as 4000 A, the contactors are hermetically sealed for use in hazardous or explosive environments.

TE Connectivity’s (TE) KILOVAC KHR500 contactors feature smaller size and lighter weight than our popular EV500 high-voltage contactors. Capable of handling inrush currents as high as 4000 A, the contactors are hermetically sealed for use in hazardous or explosive environments.

Configured as a single-pole, single-throw device, the contactors can handle voltages from 28 to 1000 Vdc and continuous 600 A currents.

Because it is not polarity sensitive, the contactor allows bidirectional load switching. An integrated coil economizer reduces the power required to hold the contacts closed to 320 mA at 24 Vdc.

A single-pole, double-throw auxiliary switch supports 3 A @ 125 Vrms or 1 A @ 30 Vdc, and low-level signals down to 5 V/10 mA.

MECHANICAL/ENVIRONMENTAL

- **Contact Arrangement:**
Power Contacts: SPST (1 Form X)
Auxiliary Switches: SPDT (1 Form C)
- **Shock:** (11 ms 1/2 sine, (operating): 25 g (Z axis)/35 g (X, Y axes) peak
- **Sine Vibration** (20 g peak): 55 to 2000 Hz
- **Random Vibration** (13.3 G_{rms}):
@ 15 Hz: .002 g^2/Hz
@ 100 Hz: .002 g^2/Hz
@ 450 Hz: .12 g^2/Hz
@ 900 Hz: .12 g^2/Hz
@ 2000 Hz: .083 g^2/Hz
- **Operating Temperature Range:** -55 to +125°C
- **Weight:** 0.56 kg (1.2 lb.)
- **Mechanical Life:** 100,000 cycles, min.
- **Hermetically Sealed for Operation in Harsh/Explosive Environments**

ELECTRICAL

- **Main Contact Arrangement:** SPST (1 Form X)
- **Auxiliary Contact Arrangement:** SPDT (1 For C)
- **Voltage Rating:**
Main Contact: 28 to 1000 Vdc
Auxiliary Contacts: (3 A @ 125 Vrms or 1 A @ 30 Vdc)
- **Current Rating:**
Main Contacts, Continuous: 600 A
- **Contact Resistance:**
Main Contacts: 0.3 mΩ max @ 600 A
Auxiliary Contacts: 150 mΩ @ 1 A
- **Hot Switching Performance @ 400 Vdc:**
200 A Make/Break: 4000 cycles
600 A Make/Break: 10 cycles
3000 A Make/Break: 3 cycles
4000 A Make or Pulse through Closed Contacts
(1 ms risetime, 10 ms pulse duration): 10 cycles
- **Dielectric Withstand Voltage:** 1 mA max @ 2800 Vrms
- **Insulation Resistance @ 500 Vdc:**
100 MΩ initial, 50 MΩ end of life

COIL DATA

- 24/28 Vdc models at 20°C
Consult TE for 12 Vdc model or other voltages
- **Coil Voltage:** 24 Vdc nom./32 Vdc max.
 - **Pick Up:** 13 Vdc
 - **Dropout Voltage (max.):** 8 Vdc
 - **Coil Resistance:** 3.2 Ω/85 Ω Pickup/Hold
 - **Inrush Current (max @ 24 Vdc):** 4.5 A
 - **Inrush Time (max.):** 100 ms
 - **Timing:**
Operate Time: 25 ms typ.
Operate Bounce: 5 ms max.
Release Time: 15 ms max.
Simultaneity (Aux/Main): 5 ms max.



KHR500 K S A N L

Series

Contact Form

- A** Form X, SPST-NO, Double Make
- K** Form X, SPST-NO, Double Make with 1 SPDT Auxiliary Contact

Coil Voltage

- S** 24/28 Vdc, Electric Cut-Throat Economizer
- V** 12 Vdc, Electric Cut-Throat Economizer

Coil Leads

- A** 15" Coil/Auxiliary Leads (No Connector)

Coil/Auxiliary Connector

- N** None

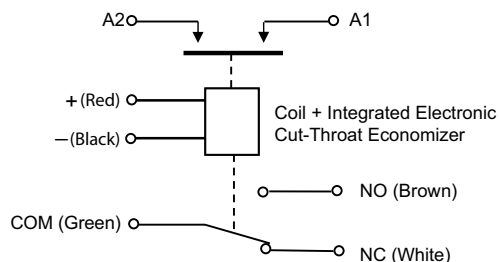
Mounting

- L** Bottom Mount, No. 10 Hole, 5/16-24 Female Terminal Main Power Connection

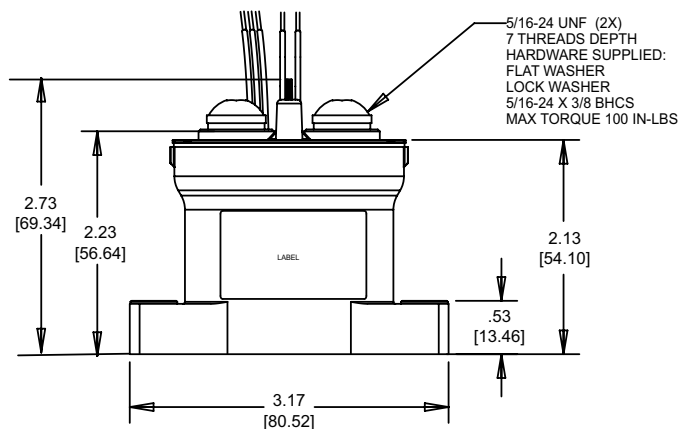
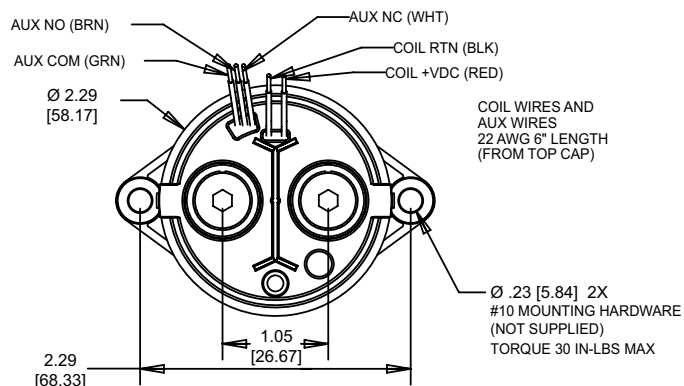
Part Numbers

	Part No.	
	24/28 VDC	12 VDC
No Aux Contact	KHR500ASANL	KHR500AVANL
Aux Contact	KHR500KSANL	KHR500KVANL

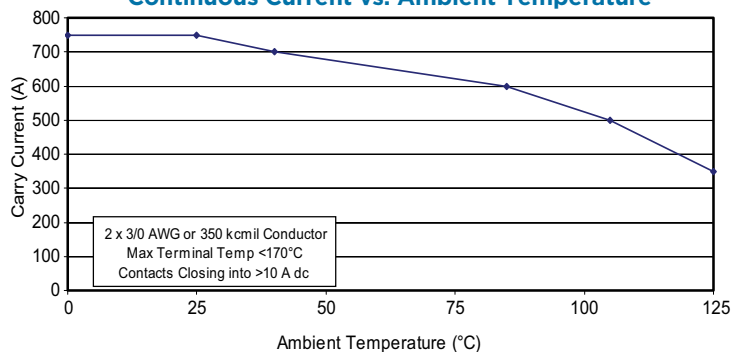
Schematic



Product Dimensions



Continuous Current vs. Ambient Temperature



TE Components . . . TE Technology . . . TE Know-how . . .

AMP | Agastat | CII | Hartman | Kilovac | Microdot | Nanonics | Polamco | Raychem | Rochester | DEUTSCH
SEACON Phoenix | L.L. Rowe | Phoenix Optix | SEACON

Get your product to market faster with a smarter, better solution.

For More Information

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1-1773857-1 ADM/RRD 1.5M 08/2015

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Consult TE for the latest dimensions and design specifications.