



**GEMSTAR-XT™**  
EMERGENCY OFF

## GEMSTAR XT EMO AND AUX INTERFACE V1.2



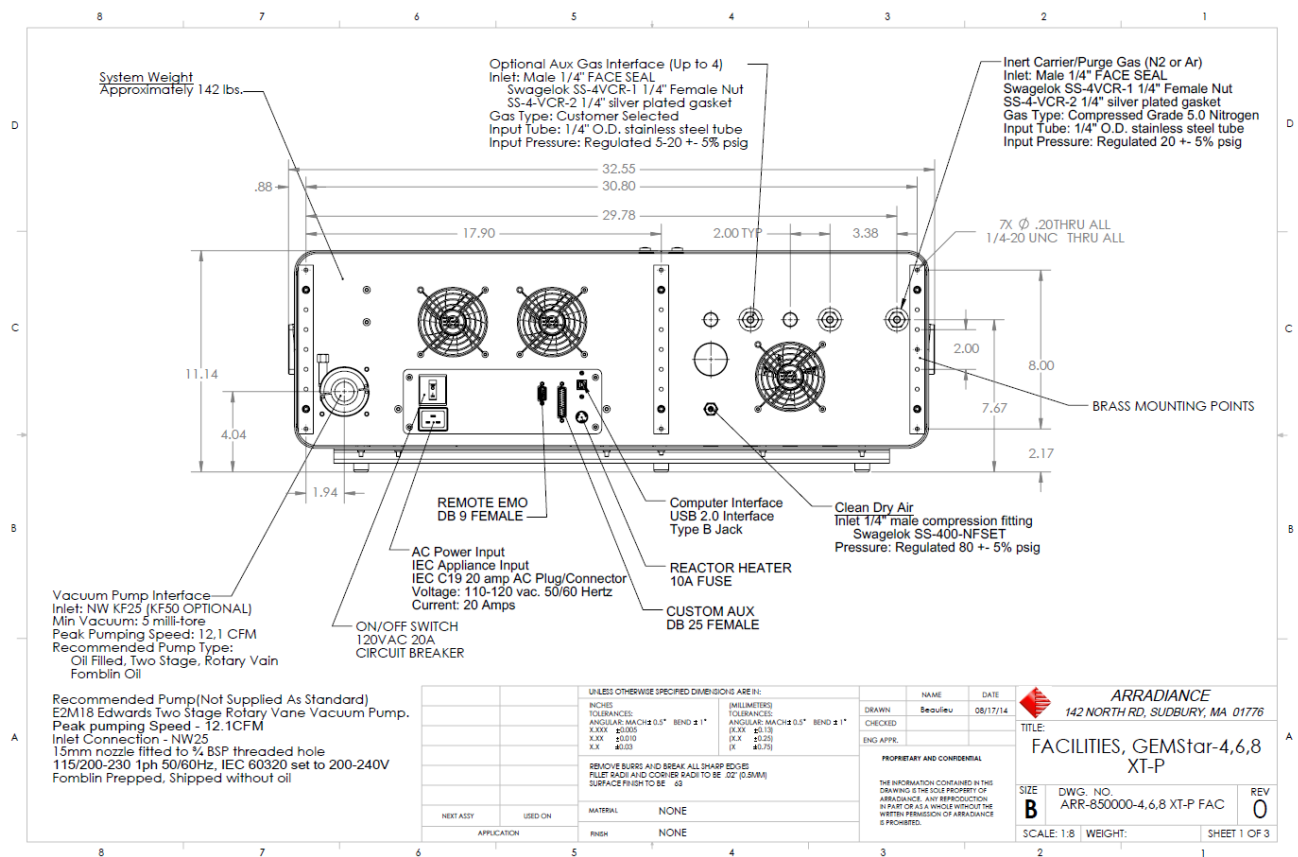
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## Emergency Off DB 9 Female (EMO)

All GEMStar XT systems include a connection allowing attachment of an Emergency off Switch. Optionally Arradiance can provide a pre-wired switch/cable/connector allowing this to be located in the most convenient location in your facility using the standard 9 pin DB connector located on the back the system. As delivered, a DB connector is in place closing this circuit.

For GEMStar XT Thermal ALD systems, if opened an internal relay in the GEMStar CTRL removes A/C power to all system heaters and 24V to all normally closed ALD and vacuum isolation valves.

In addition for GEMStar XT-P PEALD Systems, plasma power and power for plasma gas Mass Flow Controllers are also removed.

GEMStar SW will recognize this event and log/notify user.

### Gemstar XT Emergency Off Example Circuit



Remote EMO DB 9 Female" Gemstar-XT Connector:

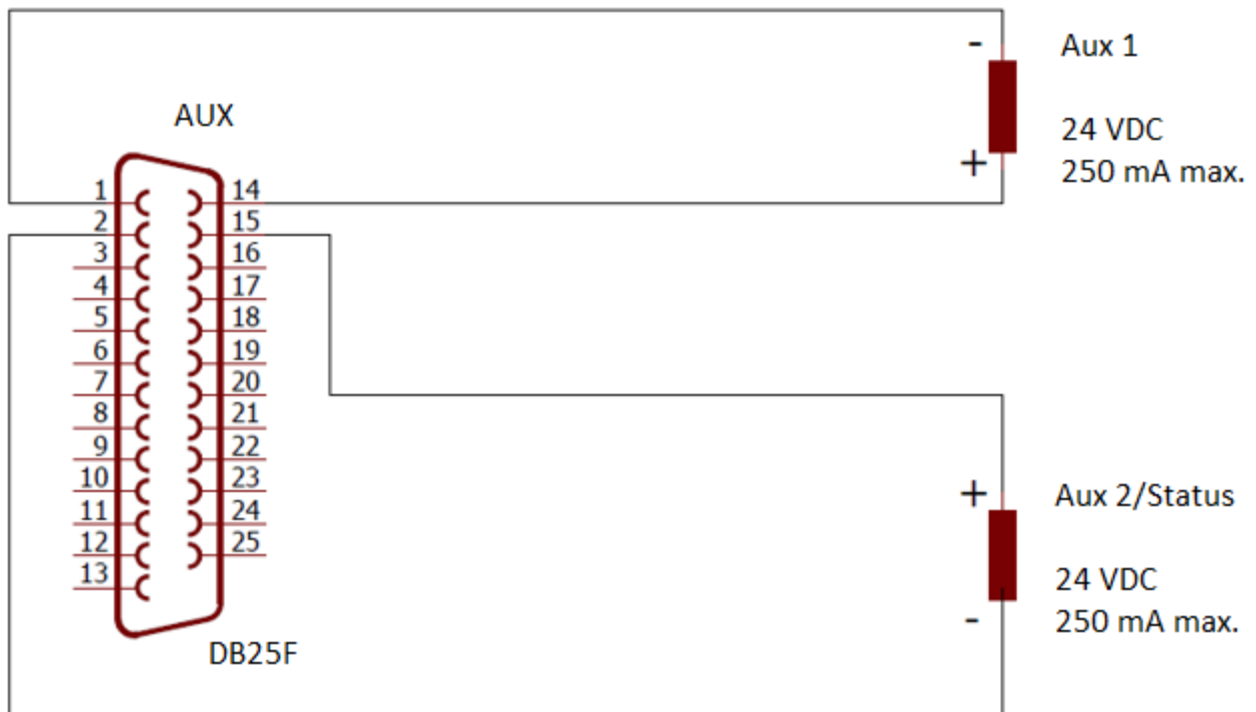
Pin Number	Signal Name
Pin 9	+24_Hi
Pin 8	+24_Lo

Gemstar XT requires a "Normally Closed" "dry contact" switch between P9.8 and P9.9 to enable equipment operation. Maximum open circuit voltage is 24 VDC, and maximum short circuit current is 250 mA

## Custom Aux DB 25 Female (AUX)

All GEMStar XT systems include a connection allowing auxiliary item attachment. Note: this is typically used for PEALD systems and pin locations except those listed below may change. However, the following are offered and can be script/job controlled as standard.

### Gemstar XT Status/Aux. Example Circuit



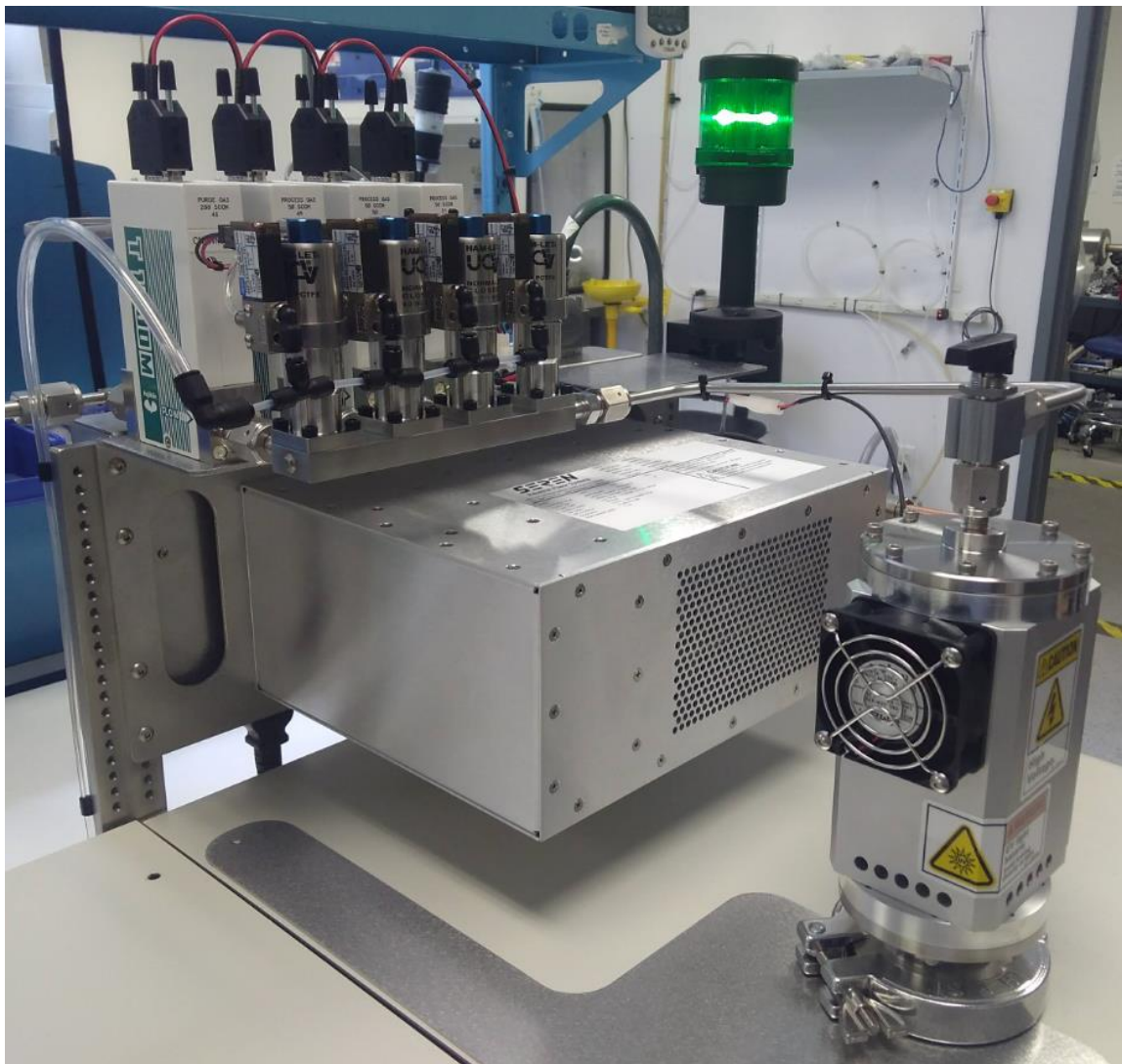
"Custom Aux DB 25 Female" Gemstar-XT Connector:

Pin Number	Signal Name
Pin 14	+24 VDC
Pin 1	Aux_1
Pin 15	+24 VDC
Pin 2	Aux_2/Status

The Gemstar XT "Custom Aux DB 25 Female" Connector provides two +24 VDC control circuits for interfacing with peripheral equipment. Functionality available software v2.1.24 and later. Custom software logic for control of these lines is required. Contact [Marketing@Arradance.com](mailto:Marketing@Arradance.com) for requests.

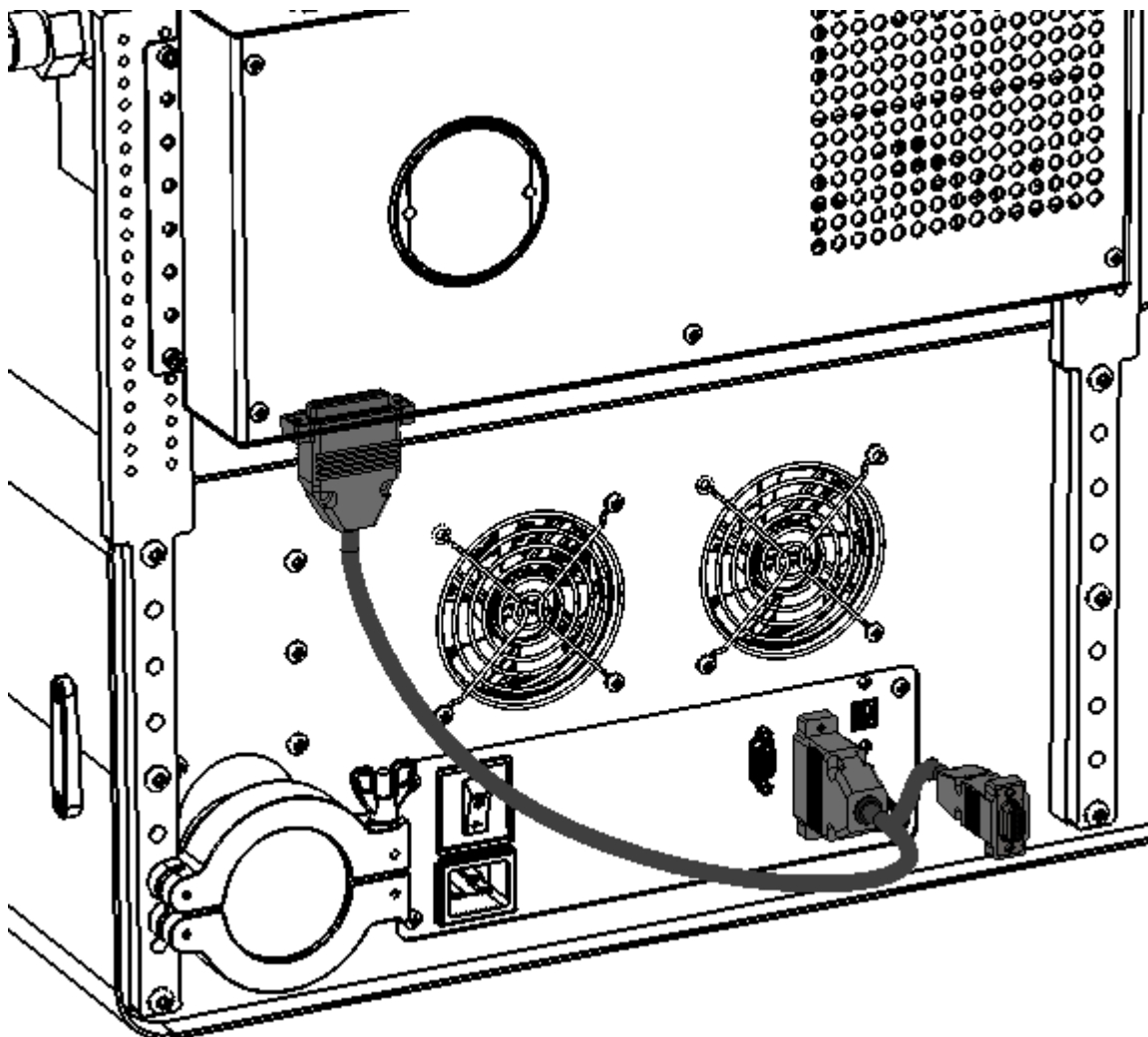
All GEMStar XT systems support a 24V "Status" signal which may be added to the Auxiliary Interface in lieu of the "Aux 2" signal. The status signal is programmed to be ON if the system is operating under normal conditions and OFF if any event is detected that could compromise operation (error, warning, power off, etc.).

Optionally, Arradiance can provide pre-wired status warning lights to be installed in the most convenient location in your facility. These lights will display the status of all connected systems and are available in many types and configurations.



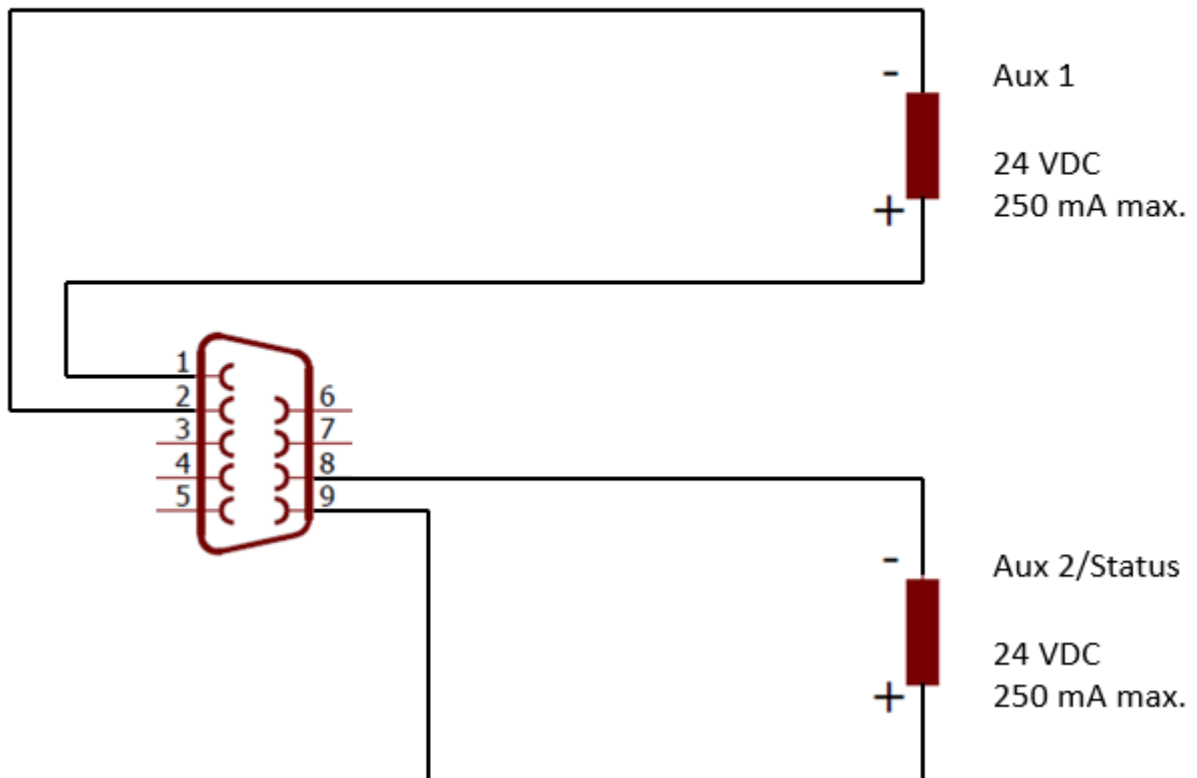
Arradiance can also provide solenoids, valves, actuators, and other devices responsive to system status. Functionality available software v2.1.26 and later. Contact [Marketing@Arradiance.com](mailto:Marketing@Arradiance.com) for requests.

If the DB25 female auxiliary connection is in use (PEALD systems), Arradiance can provide custom cabling to allow an additional DB9 female connection to serve as the Gemstar XT auxiliary interface. This should be installed as shown below.



All pin locations except those listed below may change on the DB9 female connection. However, the following are offered and can be script/job controlled as standard.

### GEMStar XT-DP Status/Aux. Example Circuit (DB9)



"Custom Status/Aux DB 9 Female" Gemstar-XT Connector:

Pin Number	Signal Name
Pin 1	+24 VDC
Pin 2	Aux_1
Pin 9	+24 VDC
Pin 8	Aux_2/Status

The Gemstar XT " Custom Status/Aux DB 9 Female" Connector provides two +24 VDC control circuits for interfacing with peripheral equipment. Custom software logic for control of these lines is required. Contact [Marketing@Arradience.com](mailto:Marketing@Arradience.com) for requests.