

Application Note 103

Status Driver Output

- Capable of switching external loads up to 28Vdc @ 1.0 Amp. (Sinks current to ground)
- An open-drain power MOSFET is used as an electronic switch and is referenced to Status Ground (Chassis Ground)
- Output state is jumper programmable with one of four selections on SH402
- Can drive a wide variety of loads: indicators, relays, logic circuits (with a pull-up resistor)

The Status Driver Output feature requires a user-supplied dc power source (+30Vdc max) and a load, which will be switched on or off by the status output circuit. The dc power source output must be floating (isolated) with respect to line potential. The negative output of the power source is always connected to J20 pin 13, which is chassis (earth) ground. The positive output of the power source is connected to one side of a user-supplied load (positive side of a polarity sensitive load). The status output will sink load current to ground (dc power source negative) up to a maximum of 1A dc when it is activated. The status output connection on J20 pin 5 connects to the other side (negative side of a polarity sensitive load) of the user-supplied load as shown in the figure on the following page. The load can be a TTL, CMOS-compatible output (resistor pulled up to +Vdc), a relay output (e.g., electromechanical, latching, solid state, etc.) to control a process, an audible or visual device (e.g., buzzer, bell, lamp etc.) for warning purposes, etc. The jumper options shown below, are user selectable on the Enhanced Driver Board (Dukane Part #110-2586 /#110-2611).

HEADER SH402 USER SELECTABLE STATUS OUTPUT OPTIONS

JUMPER BLOCK NOT INSTALLED ON SH402 - STATUS OUTPUT DISABLED

JU402 - OUTPUT IS NORMALLY OFF - ACTIVATES WHEN ULTRASOUND IS ACTIVE

JU403 - OUTPUT IS NORMALLY ON - DEACTIVATES WHEN ULTRASOUND IS ACTIVE

JU404 - OUTPUT IS NORMALLY OFF - ACTIVATES IF AN OVERLOAD FAULT OCCURS

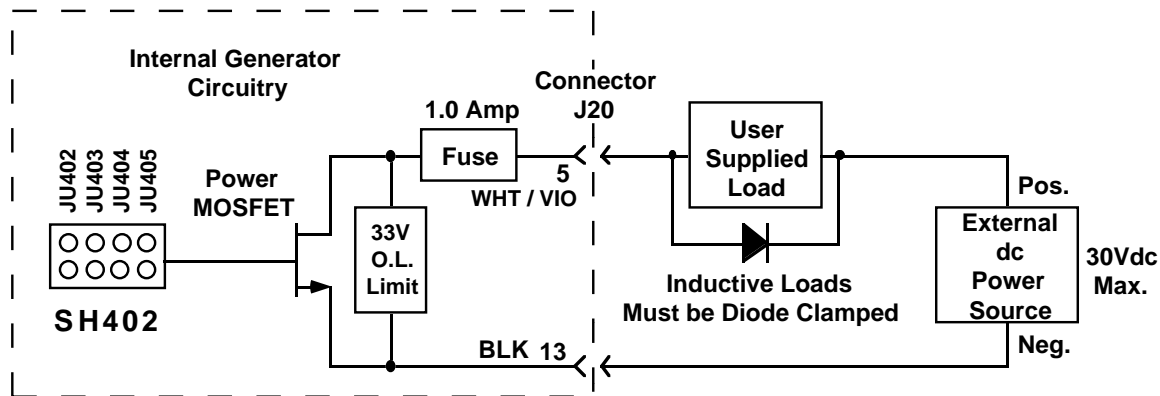
JU405 - OUTPUT IS NORMALLY ON - DEACTIVATES IF AN OVERLOAD FAULT OCCURS

Jumpers JU402 and JU403 will provide status for ultrasound activity while jumpers JU404 and JU405 provide overload status. Both normally OFF and normally ON choices are available. A normally ON output is also able to indicate that power to the generator has been interrupted (e.g., power outage, generator turned off, circuit breaker overload, etc.).

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Status Driver Output Connection Diagram

Note: Inductive loads such as relay coils must be diode clamped as shown.
JU404 is installed at the factory as the standard status driver output jumper.