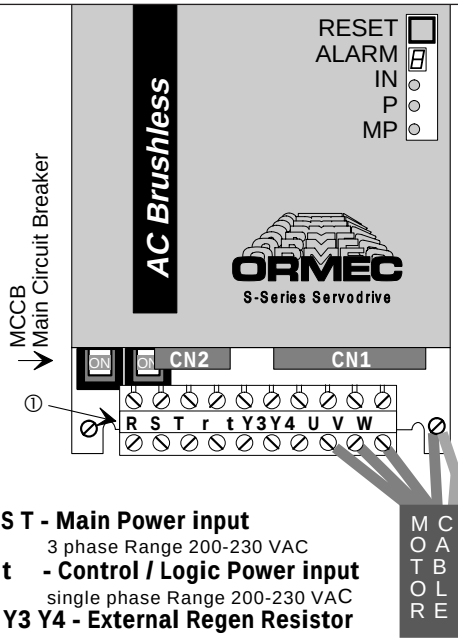
ORMEC S-Series AC Servodrive Reference

Three Phase Power Distribution

The internal DC logic power supply of SAC-S series servodrives is powered and connected at terminals "r" and "t". For proper operation, the factory AC power source for "r" must derive from the same 230VAC phase which supplies the main power at terminal "R". This applies to "t" and "T", they must both derive from their own AC power phase. "R", "r" and L1 (on the Generation III controller) must be connected to one incoming line. Likewise, "T", "t" and L2 must be connected to a second incoming line. The third incoming line is connected to "S" only. (*See note below) This wiring arrangement is shown in the Generation III controller manual (GN3-40e appendix B1) and the SAC-S Series Servodrive manual (SAC-S01d appendix A1).

Failure to comply with the above can prevent the drive from enabling, or make the motor unable to run at maximum speed, and may cause permanent damage to the drive.



BLUE Reset Button
Alarm Status Display

IN - Torque Command Indicator
LED 100% ON when DRV.CMD signal > 60 mV.
Flickers below 60 m Volts.

P - Internal DC Control Power
LED ON when OK.

MP - Internal Main Bus Power
LED ON when OK.

CN1 - To ORMEC DSP

CN2 - To Motor Encoder

Frame Ground
SILVER & GREEN

R S T - Main Power input
3 phase Range 200-230 VAC

r t - Control / Logic Power input
single phase Range 200-230 VAC

②**Y3 Y4 - External Regen Resistor**

MOTOR CABLE

U - RED
V - WHITE
W - BLACK

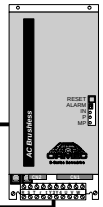
Speed Monitor	on terminal 3 pin 3 (TM3-3) Bi-directional, (A-SERIES) 2.0v/kRPM, (B&C-SERIES) 4.0v/kRPM
Signal Ground	use ZERO VOLT - **0V** pin
Torque Monitor	on terminal 3 pin 4 (TM3-4) Bi-directional, 2.0v/100%rated torque,

***** On many delta connected factory power systems, a center tap on one of the phases is connected to ground. This results in a line-to-ground voltage of 120VAC on two of the lines and 212VAC on the third. This 212VAC line, sometimes referred to as a "stinger", must be connected to terminal S on the drive.

Connection of the stinger to R, T, r, t, L1 or L2 may cause catastrophic drive failure.

① **Physical locations of terminals are different on SAC-S45H**
② **External Resistor Option required on SAC-S45H**

ORMEC S-Series Alarm Code Quick Reference



For more detail,
refer to " Maintenance and Troubleshooting" section in the S-Series Manual .

ALARM	Status	Description
0.	Normal Operation	Servodrive is enabled and operating normally.
-.	Servo Disabled	Base current is interrupted in the output circuitry.
1.	Overcurrent	Excess current in the main circuit (1.2 times the instantaneous max. current or more).
2.	Main Circuit Breaker Tripped	Main circuit breaker (MCCB) is tripped.
3.	Regeneration Problem	Regeneration circuit not operating properly, or excess regeneration.
4.	Over Voltage	Excessive DC voltage in the bus power supply (approximately 420 vdc or more).
5.	Overspeed	Actual Motor speed is 20% over Maximum speed.
6.	Low Voltage	Low DC voltage in the bus power supply after Power ON.
7.	Overload	Overload condition of the motor and servodrive.
A.	Heat Sink Overheat	Overheat of the heat sink (approximately 85°C or more).
b.	A/D Error	Component problem on the printed circuit board of the servodrive.
H.	Overrun Prevention	Alarm occurs only during acceleration with Motor Speed>120% of max. speed, and Motor Torque>120% rated torque,
F.	Open Phase	Any phase open in the three-phase Main Power supply.
	CPU Error	Any error in the servodrive's microprocessor CPU, or lack of Control Power.
E.	Optical Encoder Signal Error	The pole-sensor signals (PU, PV, PW) are out of phase.
E.		The pole-sensor signals are either all high logic level, or all low logic level.

Rev S-a