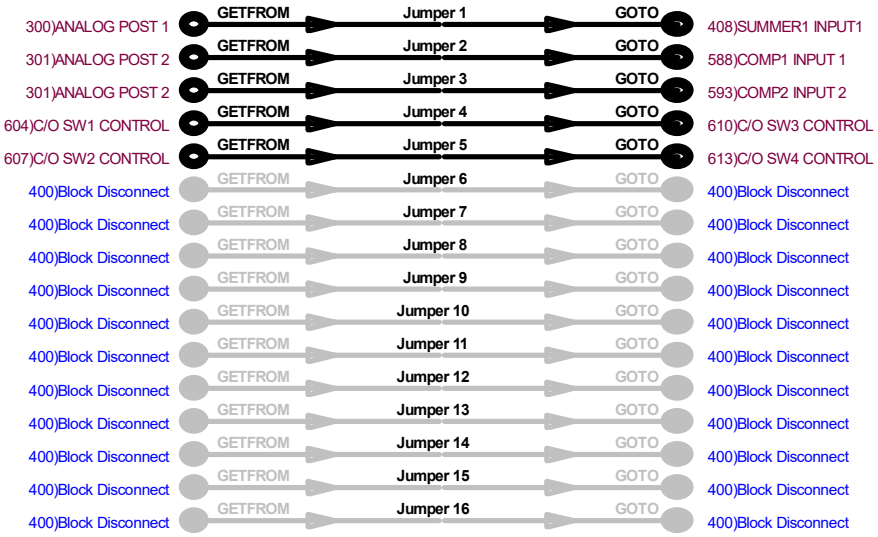JUMPER CONNECTIONS