This control drawing describes the intrinsically safe equipment and associated apparatus that together form an intrinsically safe system.

8601 consoles are identified by form number series 8601. A 8601 console cannot be connected in parallel with another 8601 or any other associated apparatus. 8601 consoles must be installed in indoor non-hazardous areas.

Inputs:
- Maximum external contact closure circuit ratings: 120 VAC, 30 RMS, 5 A
- Fuse ratings: 5 A, 250 Vac Type T (Sko-Bto)
- Power panel: 12 VDC, 5 A

Outputs:
- Maximum relay contact ratings: 120/240 Vac, 5 A 30 VDC, 5 A
- Fuse ratings: 5 A, 250 Vac Type T (Sko-Bto)

I/O Area:
- Power connector: +5 VDC, 4A MAX, +24 VDC 2A MAX

Conduit entry:
- DC power source
- Circuit breaker panel
- UL area

Integrally safe wiring and conduit entry

Bottom side view shown without all optional communication ports.
WARNINGS

SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY.

IT IS INTENDED THAT THE 8601 CONSOLE IS CONTINUOUSLY POWERED.

WIRING NOTES

INTRINSICALLY SAFE (I.S.) WIRING MUST BE INSTALLED IN ACCORDANCE WITH ARTICLE 504-20 OF THE NEC (NATIONAL ELECTRICAL CODE), ANSI/WFPA 70 OR OTHER APPLICABLE LOCAL CODES. ALL OTHER WIRING MUST BE INSTALLED ACCORDING TO LOCAL CODES.

THE MAXIMUM CABLE LENGTH ALLOWED, USED TO CONNECT ANY INTRINSICALLY SAFE DEVICE TO THE 8601 CONSOLE IS LIMITED TO A TOTAL OF 24,000 FEET.

EACH CABLE (OR WIRING), USED TO CONNECT INTRINSICALLY SAFE DEVICES TO THE 8601 CONSOLE, MUST BE RATED 100 PF/FOOT OR LESS CAPACITANCE PER FOOT AND MUST BE RATED 0.2 uH/FOOT OR LESS INDUCTANCE PER FOOT.

I.S. GROUNDING POINTS MUST BE CONNECTED TO A SUITABLE GROUND ELECTRODE THROUGH LESS THAN ONE OHM DC RESISTANCE TO THE EARTH GROUND BUS AT THE DISTRIBUTION PANEL IN ACCORDANCE WITH THE NEC/CEC OR OTHER LOCAL CODES.

CABLES (OR WIRING) USED TO CONNECT SEPARATE I.S. DEVICES TO THE ASSOCIATED APPARATUS MUST HAVE SUITABLE INSULATION AS REQUIRED BY ARTICLE 504.30(B) OF THE NEC.

ASSOCIATED APPARATUS MUST BE INSTALLED IN ACCORDANCE WITH THIS CONTROL DRAWING AND ARTICLE 504 OF THE NEC OR SECTION 18 OF THE CEC.

THE MAXIMUM SAFE AREA VOLTAGE (Uma) OF THIS EQUIPMENT IS 2500 V RMS OR DC PERIPHERAL EQUIPMENT CONNECTED TO THE 8601 CONSOLE MUST NOT USE OR GENERATE MORE THAN 2500 RMS OR DC WITH RESPECT TO EARTH GROUND.

INSIDE THE I/O AREA OF THE 8601 CONSOLE ARE WIRING TERMINALS FOR THE CONNECTION OF EQUIPMENT INSTALLED IN NON-HAZARDOUS LOCATIONS.

THE ELECTRONICS LOCATED IN THE BARRIER CIRCUIT OF THE I.S. AREA FORMS AN INTRINSICALLY SAFE ENERGY LIMITED SYSTEM. PROBE AND SENSORS CONNECTED TO THE OUTPUT TERMINALS OF THE I.S. AREA ARE CONSIDERED INTRINSICALLY SAFE APPARATUS AND ARE APPROVED FOR USE IN CLS 1, DM 1, GROUP D OR CLASS 1 ZONE 0 HAZARDOUS (CLASSIFIED) LOCATIONS.

SURGE PROTECTION

SURGE PROTECTION COMPONENTS MUST BE GAS TUBE TYPE, UL RECOGNIZED, CATEGORY CODE, VOLTAGE RATING OF AT LEAST 10X 24/220V OR GREATER. WHEN INSTALLED AT THE MAIN ENTRY.

CONNECT THE SURGE PROTECTOR IN ACCORDANCE WITH NFPA 780, CLAUSE 4.18, 3.2.

CONTACT THE LOCAL AUTHORITY HAVING JURISDICTION PRIOR TO INSTALLING ANY SURGE PROTECTION DEVICE. SOME INSTALLATIONS MAY REQUIRE A 6 FEET STANDING DETAIL BETWEEN SURGE PROTECTOR AND ALL THRUACCESS POINTS. REFERENCE NFPA 70.

THE SURGE PROTECTION DEVICE MUST BE A SINGLE APPARATUS ONLY (NFPA 70, CLAUSE 504/2) SUITABLE TO THE AUTHORITY HAVING JURISDICTION.

WARNING: IN INSTALLATION AND USE OF THIS PRODUCT, COMPLY WITH ALL ELECTRICAL CODES. IN ADDITION, TURN OFF POWER AND TAPE OTHER DEVICES PRIOR TO THE MAIN INSTALLATION. SERVICE LINES PRIOR TO PREVENT ELECTRICAL HARM. ELECTRIC SHOCK AND EXPOSURE HAZARDS.

WARNING: DISCONNECT ALL POWER BEFORE MAKING ANY CONNECTIONS TO PREVENT SHOCK, SERIOUS HARM, EXPLOSION. ELECTRICAL SHOCK, CONSULT HARM HAZARDS AND EXPOSURE HAZARDS.

VeDeer-Root

CONTR LEVEL

UL/ceUL 8601

SCALE 1/400-018 C REL

D 551940-018 C REL