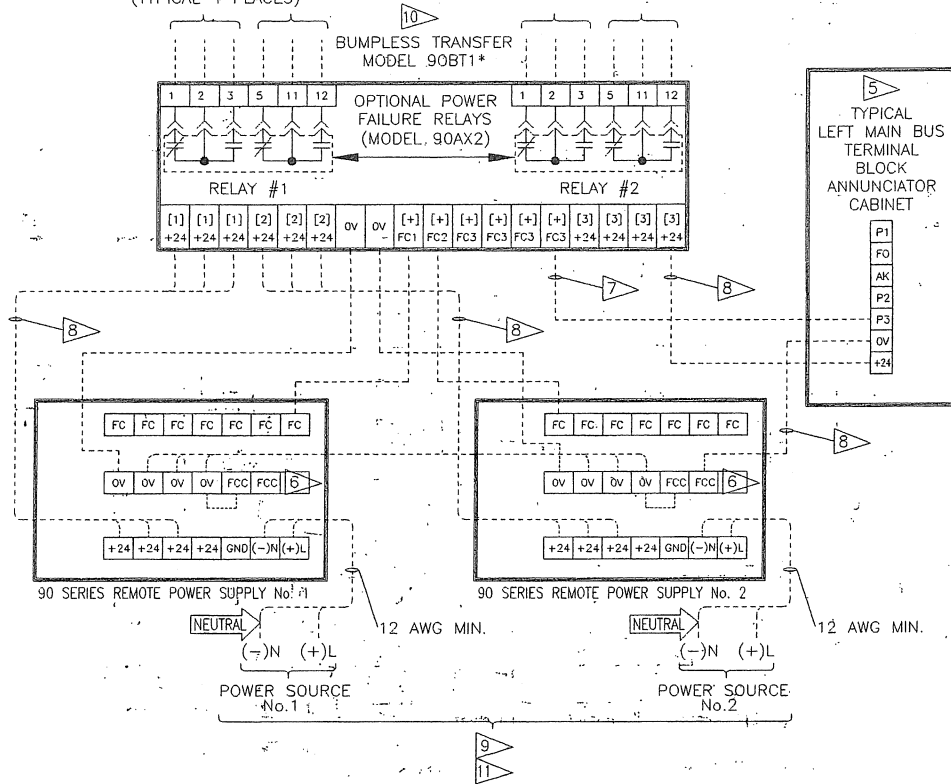
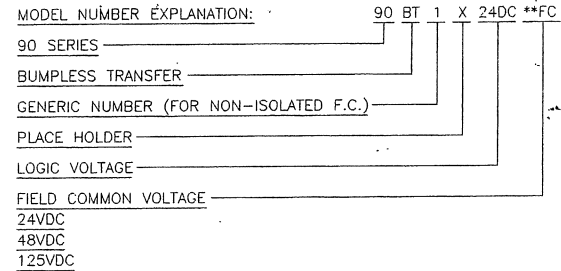


FORM "C" CONTACT FOR CUSTOMER USE (TYPICAL 4 PLACES)



- NOTES:
- MODEL 90BT1\* IS EQUIPPED WITH 2 RELAYS SOCKETS, MOUNTED AND WIRED AS SHOWN. MODEL 90AX2 POWER FAILURE MONITOR RELAYS MUST BE SPECIFIED ON PURCHASE ORDER IF REQUIRED.
  - ALL CONTACTS SHOWN IN THE DE-ENERGIZED MODE. RELAY IS ENERGIZED IN NORMAL. IF LOGIC VOLTAGE (+24) OR FIELD CONTACT VOLTAGE (FC) FAILS, RELAY WILL DE-ENERGIZE.
  - ISOLATED FC VOLTAGE IS NOT AVAILABLE WITH THE 90BT1\*. IF ISOLATED FC VOLTAGE IS REQUIRED, SEE DRAWING 90400-BT2\*-1.
  - (2) FORM "C" CONTACT PER RELAY RATED AT 5 AMP RESISTIVE AT 28VDC OR 120V AC AND 1 AMP AT 125V DC.
  - REFER TO APPLICABLE SYSTEM WIRING DIAGRAM FOR TERMINAL ARRANGEMENT AND ADDITIONAL WIRING.
  - THIS TERMINAL IS "SENSE" WHEN AC POWER SUPPLIES ARE USED. IT IS UNUSED ON DC SUPPLIES.
  - WIRING SHOWN IS FOR "T" INPUT TYPE SEQUENCE CARDS. REFER TO APPLICABLE INPUT DIAGRAM FOR "FC" TERMINATION OF OTHER INPUT TYPES.
  - EACH "OV" AND "+24" CUSTOMER POWER INPUT TERMINAL MUST BE INDIVIDUALLY WIRED TO THE POWER SUPPLY "OV," OR 90BT1\* "+24" OUTPUT TERMINALS. IF THERE ARE INSUFFICIENT "OV" AND "+24" POWER SUPPLY TERMINALS FOR THE WIRES REQUIRED, CHASSIS MAY BE GROUPED, PROVIDED THE LOAD PER WIRE PAIR DOES NOT EXCEED 182 WATTS. RUNS UNDER 20 FEET MAY USE 16 GAUGE WIRE. RUNS BETWEEN 20 AND 40 FEET MUST USE 14 GAUGE WIRE. RUNS OVER 40 FEET ARE NOT RECOMMENDED. THESE LOAD PARAMETERS ALSO APPLY TO "OV" AND "+24" WIRING BETWEEN UNITS.
  - IF BOTH SUPPLIES ARE NOT THE SAME CAPACITY, THE 90BT1\* OUTPUT CAPACITY IS THE LOWER OF THE TWO POWER SUPPLY CAPACITIES.
  - 90BT1\* POWER HANDLING CAPACITY, NOT TO EXCEED 500 WATTS.
  - PRIMARY & BACKUP SUPPLIES MUST BOTH BE THE SAME INPUT TYPE (AC OR DC). IF AC SUPPLIES ARE USED: POWER SOURCE #1 & #2 MUST EITHER BE IN PHASE OR 180° OUT OF PHASE. THEY MUST NOT BE CONNECTED TO SEPARATE PHASE OF A 3 PHASE SYSTEM.



| REV | ECN NO.  | BY  | APPD | DATE     | MATERIAL:                    |
|-----|----------|-----|------|----------|------------------------------|
| 00  | 6780-29  | ARF | JWK  | 06/11/82 | FINISH:                      |
| 01  | 8300-58  | RCV | PG   | 11/16/82 | USED ON/REF. DWG             |
| 02  | 9190-59  | JJ  | LWR  | 12/15/85 | 90BT*                        |
| 03  | 9300-67  | JJ  | PG   | 11/10/86 | 90800-BT1-1                  |
| 04  | 10089-04 | SK  | JT   | 05/27/89 | 77110-8                      |
| 05  | 10089-11 | SK  | JT   | 02/12/90 |                              |
| 06  | 10594    | SK  | PG   | 11/27/90 |                              |
| 07  | 11872    | SK  | PG   | 6/15/01  | 90400-BT1_-1-07-01.dwg ©1982 |

TOL. UNLESS SPECIFIED

INCHES  
 .X = 0.15  
 .XX = 0.10  
 .XXX = 0.05

MILLIMETERS  
 X.0 = 1.0  
 0.X = 0.4  
 0.XX = 0.1

ANGLES ±0°30'

SCALE INCH

NONE (MM)

**AMETEK**

**PANALARM** 1725 WESTERN DRIVE, WEST CHICAGO, ILL. 60185, U.S.A.  
 PHONE: 1-630-231-5900 FAX: 1-630-231-4502

DWN BY ARF / SK  
 APPD/DATE JWK 06/11/82

THIRD ANGLE PROJECTION

WIRING DIAGRAM, SERIES 90, INTERCONNECTION FOR MODEL 90BT1\* BUMPLESS TRANSFER (NON-ISOLATED F.C. VOLTAGE) WITH OPTIONAL POWER FAILURE MONITOR RELAYS

SHEET 1 OF 1 DWG. NO. 90400-BT1\*-1 -C-