



**KILLARK**<sup>®</sup>

**HUBBELL ELECTRICAL PRODUCTS**  
A Division of HUBBELL INCORPORATED (Delaware)  
3940 Martin Luther King Drive  
St. Louis, Missouri 63113 USA

## INSTALLATION, OPERATION & MAINTENANCE DATA SHEET

### TYPE SWB CONTROL STATIONS and CONTROL PANELS

FOR USE IN CLASS I, DIV. 1 & 2, GROUPS C & D

CLASS I, ZONES 1 & 2, GROUPS IIB, IIA

CLASS II, DIV. 1 & 2, GROUPS E, F & G, CLASS III

**CAUTION:** Before installing, make sure you are compliant with area classifications, failure to do so may result in bodily injury, death and property damage. Do not attempt installation until you are familiar with the following procedures. Installation must comply with the applicable Electrical Code.

Make sure that the circuit is De-energized before starting installation or maintenance.

Verify that the installation is grounded. Failure to ground will create electrical shock hazards, which can cause serious injury and or death.

**Important:** Please read these instructions carefully before installing or maintaining this equipment. Good electrical practices should be followed at all times and this data should be used as a guide only.

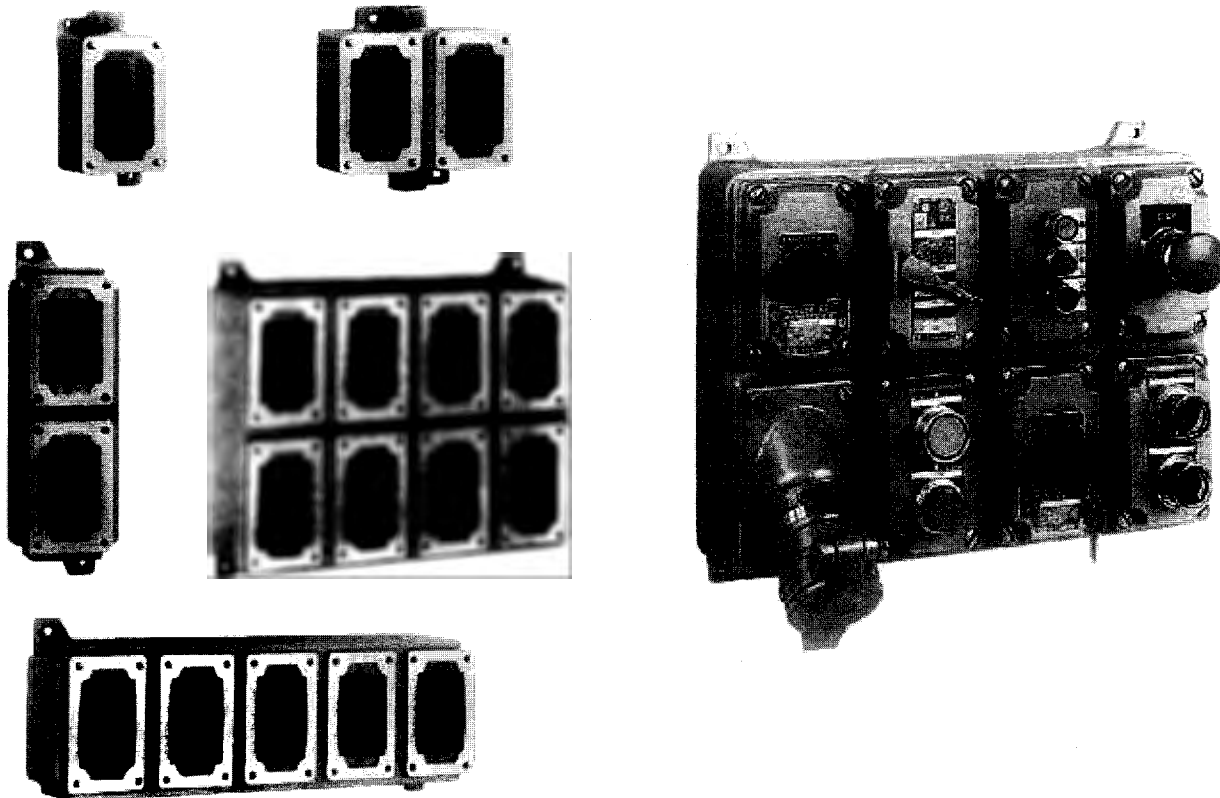
FOR USE WITH SWB SINGLE AND MULTIPLE GANG BACK BOXES; SWB-1, -2, -3, -4, -5, -6,, -7, -8, -9, -10, -11, -12, -17, -18, -19, -20, -21, -31, -32, -34, -35, -36, -37, -38, -42, -45, -48 & -49.

#### COVER ASSEMBLIES (ONE REQUIRED PER GANG)

- A) SNAP SWITCHES SERIES XS
- B) PUSHBUTTONS SERIES XCS
- C) SELECTOR SWITCHES SERIES XCS
- D) PILOT LIGHTS SERIES XCS
- E) MANUAL MOTOR STARTERS SERIES XSD
- F) RECEPTACLE SERIES KRS-20, KRS-303, KRS-304
- G) BLANK COVER SERIES X-10

#### ENSEMBLES DE COUVERCLE (UN PAR SECTION)

- A) COMMUTATEURS A RESSORT SERIES XS
- B) BOUTONS-POUSOIRS SERIES XCS
- C) COMMUTATEURS SELECTEURS SERIES XCS
- D) LAMPES TMOINS SERIES XCS
- E) DEMARREURS MANUEL DE MOTEUR SERIES XSD
- F) PRISEDE COURANT SERIES KRS-20, KRS-303, KRS-304
- G) PLAQUE COUVERCLE SERIES X-10



## GENERAL INSTALLATION PROCEDURE

MOUNT THE BACK BOX BY MEANS OF MOUNTING LUGS, INSTALL CONDUIT NIPPLE AND SEALING FITTINGS ONE EACH TO BE INSTALLED ON EACH CONDUIT ENTRANCE OR EXIT TO THE ENCLOSURE BACK BOX IN CLASS I AND CLASS II AREAS (REFERENCE: ARTICLE 500 NEC) THREAD CONDUIT INTO SEALING FITTING (NOTE: FOR CLASS I AREAS THE CONDUIT SHOULD ENGAGE [5] FULL THREADS.

THE CONDUIT THREADS SHOULD BE LUBRICATED WITH A NON-ELECTRICAL INSULATING LUBRICANT OR PIPE JOINT COMPOUND THAT WILL NOT PROMOTE CORROSION OR CHEMICALLY ATTACK ALUMINUM.

AFTER CONDUIT SYSTEM HAS BEEN PROPERLY INSTALLED, PULL THE WIRES AND MAKE ELECTRICAL CONNECTIONS AS REQUIRED. THE ELECTRICAL CIRCUITS AND GROUND CONTINUITY SHOULD BE CHECKED WITH AN INSTRUMENT APPROVED FOR THE AREA. NOTICE: CONNECT ONLY COPPER WIRE TO THIS DEVICE.

ALL CONDUITS ENTERING OR LEAVING THE ENCLOSURE MUST BE SEALED WITHIN 18" OF THE ENCLOSURE WITH LISTED SEALING FITTINGS SUCH AS KILLARK "EY" OR "EYS" SEALING FITTINGS.

CAUTION MUST BE TAKEN DURING INSTALLATION TO BE SURE THAT THE GROUND FLANGE FLAME JOINTS OF THE COVER AND BOX ARE NOT SCRATCHED, NICKED OR DAMAGED. BEFORE ASSEMBLY OF THE COVER TO THE BOX, THE MATING GROUND SURFACES OF BOTH THE BOX

## METHODE GENERALE D'INSTALLATION

MONTER LE BOITIER AU MOYEN DES OREILLES DE FIXATION FOURNIES. INSTALLER LE RACCORD ET LE RACCORD D'ETANCHEITE, UN DE CHAQUE SORTE A VISSER SUR CHAQUE ENTREE OU SORTIE DE TUBE VERS L'ENCEINTE, DANS LES ENDROITS DE CLASS I ET CLASSE II (REFERENCE: ARTICLE 500 DU CEN). (NOTE: POUR LES ENDROITS DE CLASSE I, LE TUBE DOIT ENGAGER 5 FILETS COMPLETS).

LES FILETS DU TUBE DOIVENT ETRE LUBRIFIES AVEC UN LUBRIFIANT ISOLANT NON-ELECTRIQUE, OU MASTIC POUR JOINTS DE TUYAUX QUI N'ENCOURAGERA PAS LA CORROSION, NI N'ATTAQUERA CHIMIQUEMENT L'ALUMINIUM.

APRES QUE LE SYSTEME DU TUBES AURA ETE INSTALLE CONVENABLEMENT, TIRER LES FILS ET FAITES LES RACCORDS REQUIS. IL FAUT CONTROLLER LES CIRCUITS ELECTRIQUES ET L'UNIFORMITE DE LA MISE A LA TERRE AU MOYEN D'UN APPAREIL APPROUVE POUR L'ENDROIT. NOTE: RACCORDER SEULEMENT DES FILS EN CUIVRE A CE DISPOSITIF.

TOUS LES TUBES ENTRANT DANS L'ENCEINTE OU EN SORTANT DOIVENT ETRE FERME A 18" DE L'ENCEINTE AVEC DES RACCORDS. D'ETANCHEITE REPERTORIES TELS QUE LES RACCORDS KILLARK "EY" OU "EYS".

IL FAUT VEILLER PENDANT L'INSTALLATION A CE QUE LES JOINTS A COLLET DU COUVERCLE ET DU BOITIER NE SOIENT NI ERAFLES, NI ENTAILLES, NI ENDOMMAGES. AVANT D'ASSEMBLER LE COUVERCLE SUR LE BOITIER,

AND COVER SHOULD BE WIPED CLEAN TO ASSURE THAT THE GROUND FLANGE JOINT WILL BE FREE OF ALL FOREIGN PARTICLES SUCH AS LINT, DUST OR DIRT.

AFTER TIGHTLY BOLTING THE COVER ASSEMBLY/ASSEMBLIES TO THE ENCLOSURE ALL BOX TO COVER FLAME JOINTS SHOULD BE CHECKED WITH A 0.0015" THICK FEELER GAUGE SUCH THAT THE GAUGE WILL NOT ENTER THE FLAME PATH MORE THAN 1/8" AT ANY POINT.

## MAINTENANCE:

ALL MOVING SHAFTS SHOULD BE LUBRICATED OCCASIONALLY TO PREVENT BINDING. ONLY USE A LUBRICANT WHICH IS SUITABLE FOR USE WITH ALUMINUM OR STAINLESS STEEL SUCH AS KILLARK "LUBG" (GENERAL PURPOSE) OR "LUBT" (HIGH TEMPERATURE) LUBRICANTS. IF DEVICES ARE TO BE INSTALLED IN CORROSIVE AREAS WHICH WILL ATTACK ALUMINUM ALLOYS CONTAINING LESS THAN 0.4% COPPER (BOXES AND COVERS) AND 303 STAINLESS STEEL (MOSTLY SHAFTS), THE DEVICE SHOULD BE SUITABLY PROTECTED FROM THE CORROSIVE MATERIAL.

## CAUTION

TO PREVENT IGNITION OF HAZARDOUS ATMOSPHERES, DISCONNECT FROM THE SUPPLY CIRCUITS BEFORE OPENING THE ENCLOSURE; KEEP TIGHTLY CLOSED WHILE CIRCUITS ARE ENERGIZED.

IL FOUT ESSUYER LES SURFACES DE MISE A LA TERRE CORRESPONDANTES POUR ETRE SUR QUE LE JOINT SERA EXEMPT DE TOUTE PARTICULE ETRANGERE, TELLE QUE POUSSIERE, SALETE OU CHARPIE.

APRES AVOIR BIEN BOULONNE LES ENSEMBLES DES COUVERCLES SUR L'ENCEINTE, IL FAUT VERIFIER TOUS LES JOINTS ENTRE LE BOITIER ET LE COUVERCLE AVEC UN CALIBRE D'EPAISSEUR DE 0.0015" (DE SORTE QUE LE CALIBRE NE PENETRERA PAS DANS LE JOINT DE PLUS DE 1/8" A N'IMPORTE QUEL POINT).

## ENTRETIEN

TOUS LES ARBES MOBILES DOIVENT ETRE LUBRIFIES A L'OCCASION POUR EMPECHER TOUT COINCAGE. EMPLOYER SEULEMENT UN LUBRIFIANT CONVENANT A L'ALUMINIUM OU L'ACIER INOXYDABLE, TEL QUE KILLARK "LUBG" (TOUT USAGE) OU "LUBT" (HAUTES TEMPERATURES). GARDER TOUS LES COLLETS PROPRES ET EXEMPTS D'ERAFLURES.

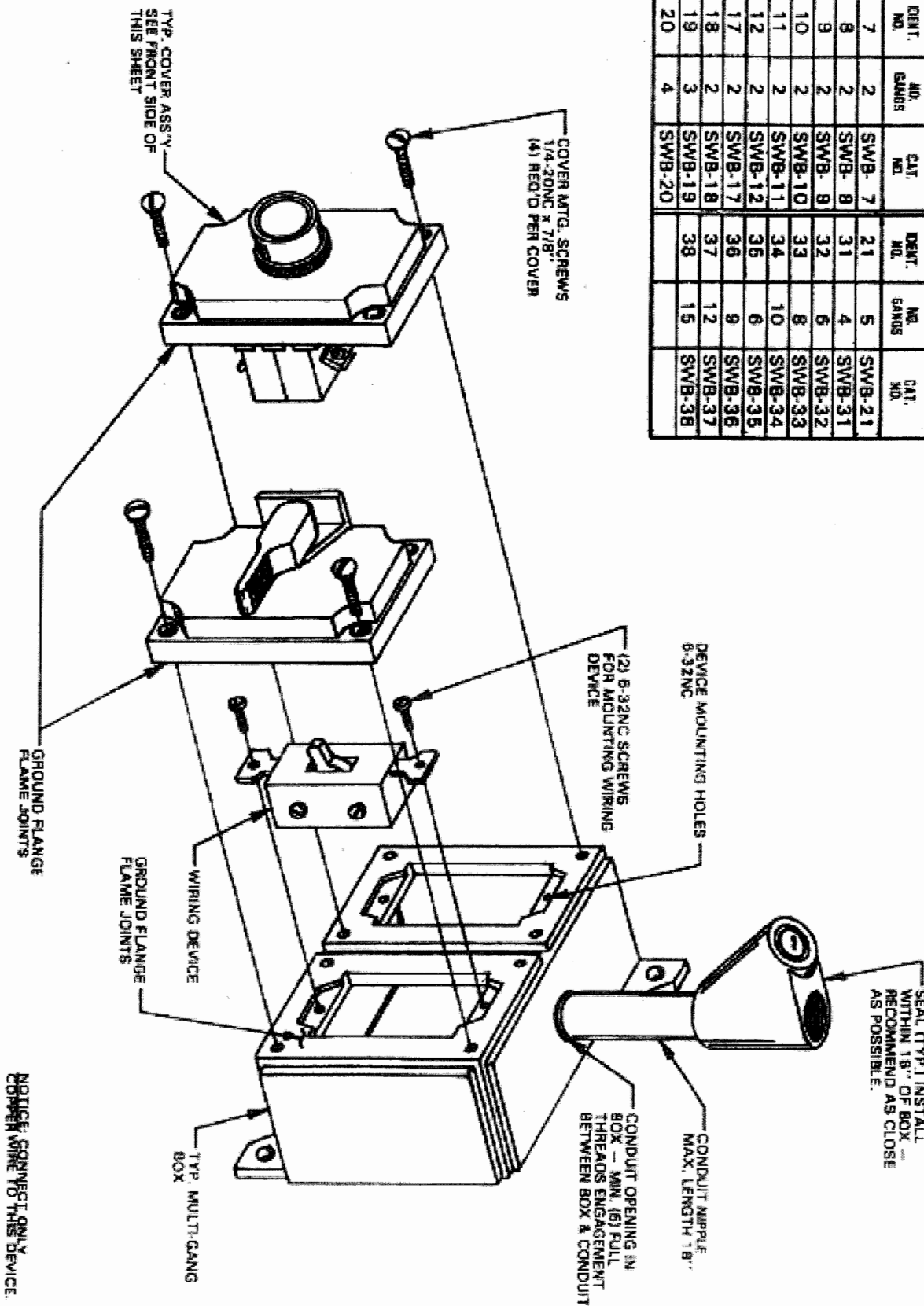
SI LES DISPOSITIFS DOIVENT ETRE INSTALLES DANS DES ENDROITS CORROSIFS QUI ATTAQUERONT LES ALLIAGES D'ALUMINIUM CONTENANT MOINS DE 0.4% DE CUIVRE (BOITERS ET COUVERCLES) ET DE L'ACIER INOXYDABLE 303 (LA PLUPART DES ARBRES), IL FAUT PROTEGER LE DISPOSITIF CONVENABLEMENT CONTRE LE MATERIAU CORROSIF.

## MISE EN GARDE

POUR EMPECHER TOUTE INFLAMMATION DES ATMOSPHERES DANGEREUSES, DEBRANCHER DES CIRCUITS D'ALIMENTATION AVANT D'OUVRIR L'ENCEINTE. GARDER BIEN FERME TANT QUE LES CIRCUITS SONT SOUS TENSION.

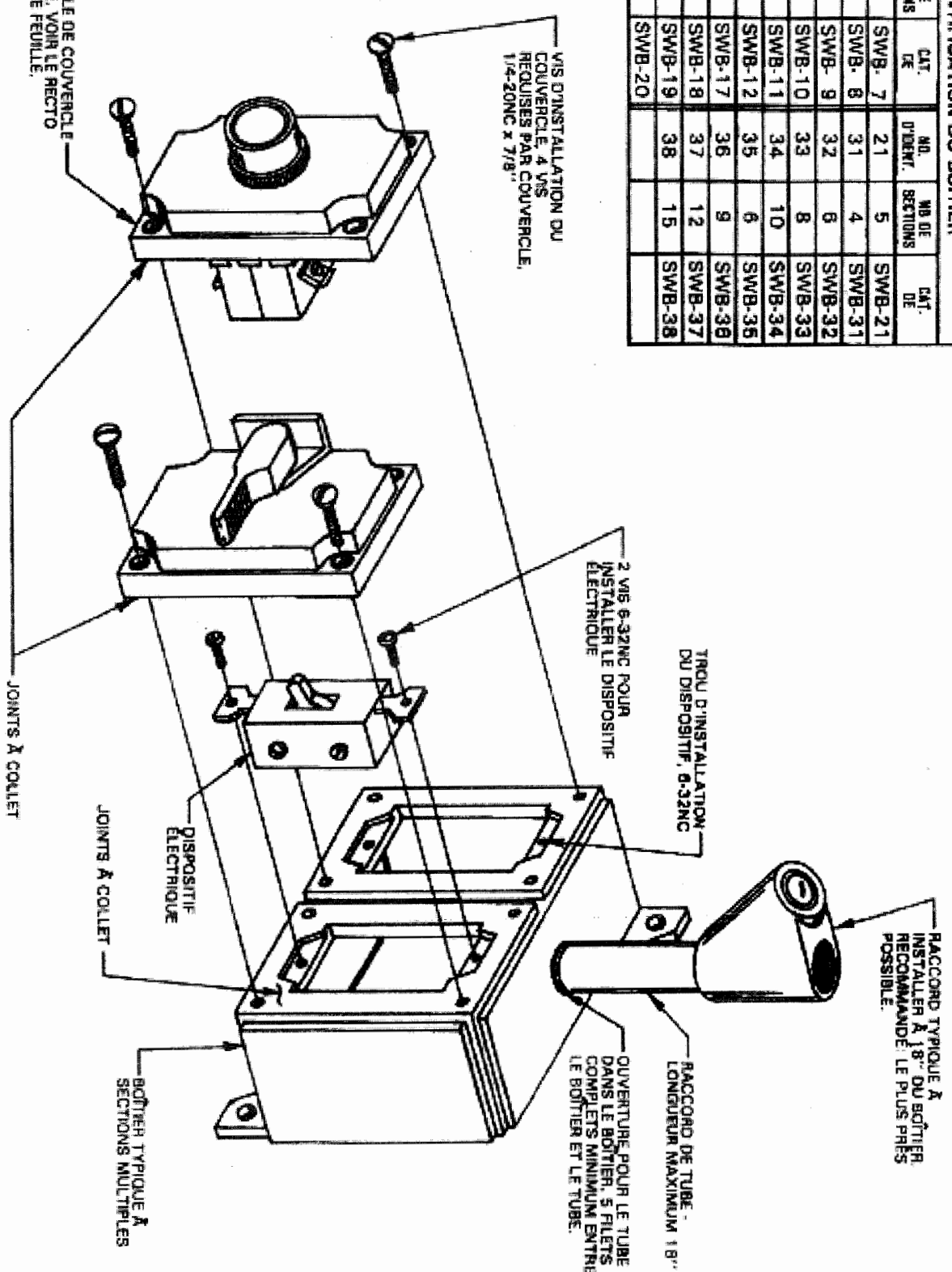
**BOX IDENTIFICATION**

IDENT. NO.	NO. GANDS	CAT. NO.	IDENT. NO.	NO. GANDS	CAT. NO.
7	2	SWB-7	21	5	SWB-21
8	2	SWB-8	31	4	SWB-31
9	2	SWB-9	32	6	SWB-32
10	2	SWB-10	33	8	SWB-33
11	2	SWB-11	34	10	SWB-34
12	2	SWB-12	36	6	SWB-36
17	2	SWB-17	36	9	SWB-36
18	2	SWB-18	37	12	SWB-37
19	3	SWB-19	38	15	SWB-38
20	4	SWB-20			



**IDENTIFICATION DU BÔTIER**

NO. D'IDENT.	NB DE SECTIONS	CAT. DE	NO. D'IDENT.	NB DE SECTIONS	CAT. DE
7	2	SWB-7	21	5	SWB-21
8	2	SWB-8	31	4	SWB-31
9	2	SWB-9	32	6	SWB-32
10	2	SWB-10	33	8	SWB-33
11	2	SWB-11	34	10	SWB-34
12	2	SWB-12	35	6	SWB-35
17	2	SWB-17	36	9	SWB-36
18	2	SWB-18	37	12	SWB-37
19	3	SWB-19	38	15	SWB-38
20	4	SWB-20			



**NOTE:** RACCORDER SEULEMENT DES FILS EN CUIVRE À CE DISPOSITIF.