

PARTS LIST

**VARIABLE AREA FLOWMETERS
10A2235A-1 Rev. 3**

**RATOSIGHT™ FLOW RATE INDICATORS
WITH VIBRATION-PROOF RATOALARM™**



PN23779A

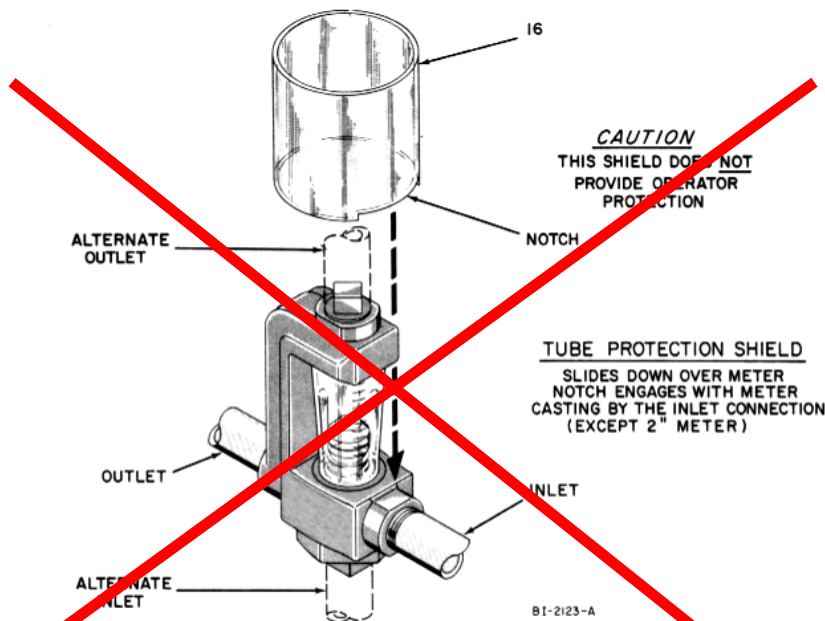
FLOWMETER BODIES

KEY	QTY	PART DESCRIPTION	TUBE SIZE, CONNECTION SIZE & PN			
			1/2" TUBE 1/2" NPT CONNECTION	1" TUBE 1" NPT CONNECTION	1 1/2" TUBE 1 1/2" NPT CONNECTION	2" TUBE 2" NPT CONNECTION
1	1	FITTING, Inlet	364D064B11	632A142B11	632A143B11	376C098B11
2	1	PLUG	112A043U05	112A043U06	112A043U07	112A043U08
3	1	*"O" RING	101A926U01	101A803U01	101A810U01	101A814U01
4	1	*"O" RING	101A923U01	101A802U01	101A809U01	101A812U01
5	1	*"O" RING	101A710U01	101A918U01	101A931U01	101A933U01
6	1	PLUG, End	-	-	302C031B11	302C039B11
7	1	SPACER	-	-	375A089B11	625A086B11
8	1	*FLOAT, Meter	See Note 1	See Note 1	See Note 1	See Note 1
9	1	*TUBE, Meter	See Note 1	See Note 1	See Note 1	See Note 1
10	1	RING, Outlet Adapter	376C032B11	376C034B11	376C036B11	604A343U01
11	2	*"O" RING	101A714U01	101A925U01	101A939U01	101A945U01
12	1	*GASKET, Inlet Tube Rest	333C515U03	333C515U06	333C515U02	333C257Q20
13	1	*GASKET, Outlet Tube Rest	333C515U05	333C515U07	333N234Q20	333C258Q20
14	1	BODY	322A035B50	322A036B50	322A037B50	322A148B50
15	1	NAMETAG, Identification (Blank)	338B461A30	338B461A30	338B461A30	338B461A30
16	1	*PROTECTOR, Tube (Optional)	351D057U01	351D057U02	351D057U03	351D057U04

* INDICATES RECOMMENDED SPARE PARTS

REF.: 614B101

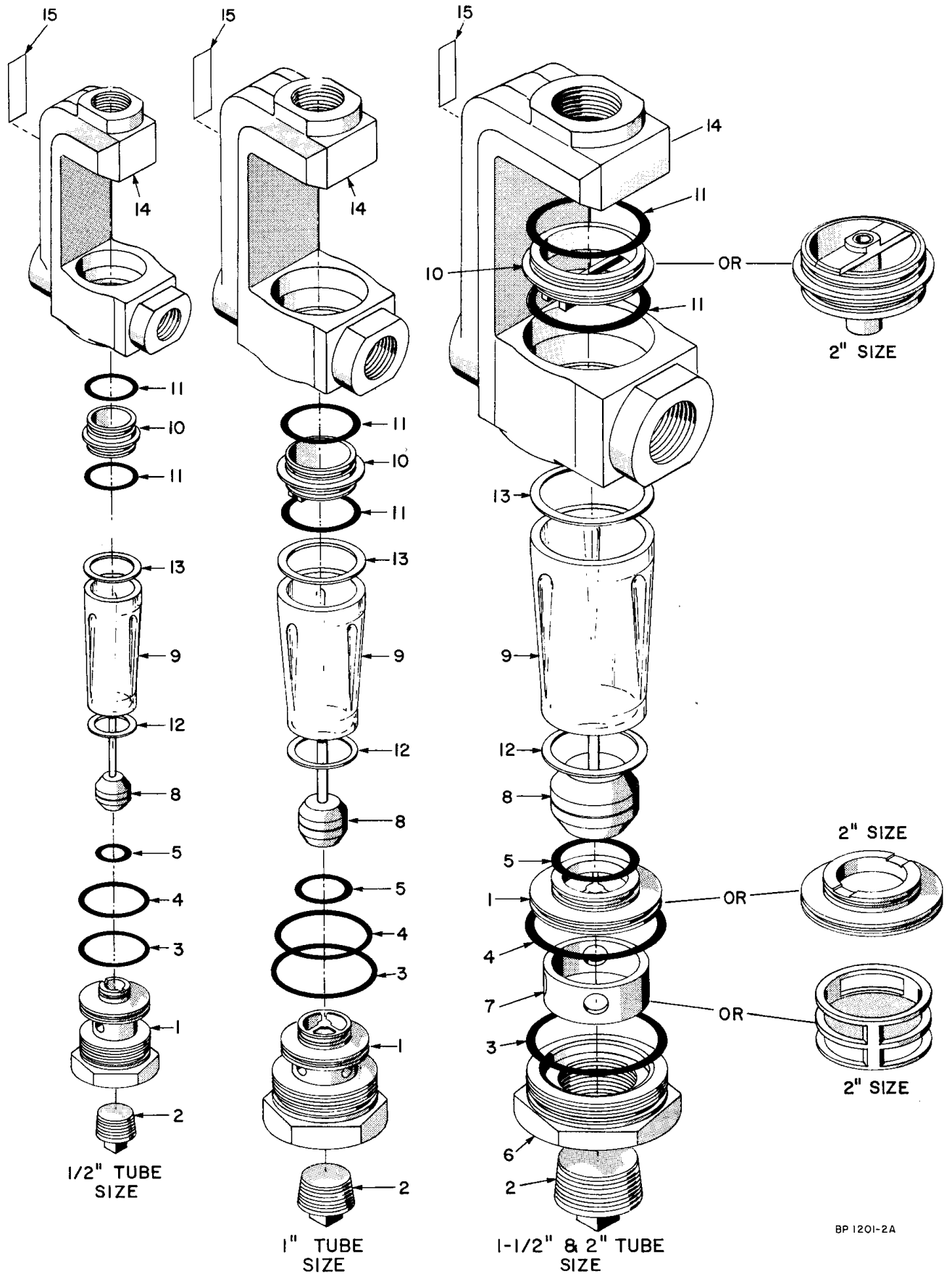
NOTE 1. Referenced items may be ordered only by specifying the complete ABB Inc. serial number.



IMPORTANT

When ordering spare parts, please refer to the ABB serial & model number referenced on the instrument data tag.

PARTS LIST



BP 1201-2A

PARTS LIST

VIBRATION-PROOF RATOLARM

MODEL 10A2235A-OA

KEY	QUANTITY	PART DESCRIPTION	PART NUMBER
1	1	BRACKET - See Table A Below	-
2	1	COVER - See Table A Below	-
3	1	TUBE, Extension - See Table A Below	-
4	1	*GASKET - See Table A Below	-
5	1	PLATE, Base	354D003A51
6	1	SCREW, Set: #6-32 x 1/4"	019H004S31
7	1	*GASKET, Base Plate	333E029Q10
8	A/R	*SWITCH, Alarm - See Table B On Page 8	-
9	A/R	SCREW, Thumb	090L001U01
10	1	NUT, Hex Jam: 3/8 - 24	081E203T10
11	1	LOCKWASHER: 3/8"	085D616T10
12	1	NUT, Bracket	397D015T30
14	1	NUT, Cover	397B009A12
15	1	*GASKET, End Cap	333C272P30
16	1	CAP, End	397G001T60
17	1	*GASKET	333C116Q10
19	A/R	SCREW, Fillister Head: #6-32 x 1/2"	004H008T10
20	A/R	TERMINAL BOARD 5 Terminal Connector 8 Terminal Connector (3-3/8" Mtg. Dimension) 8 Terminal Connector (3-15/16" Mtg. Dimension)	171F105U01 171F008U01 171F108U01
21	A/R	MARKER STRIP Marking: 1-2-3-4-5 Marking: L2-L1-1-2-3 Marking: 6-5-4-3-2-1-L1-L2 Marking: L2-L1-1-2-3-4-5-6	358D590F62 358D584F62 358D586F62 358D055F62
22	A/R	GROMMET	104B011U01
23	A/R	SCREW, Pan Head: #6-32 x 5/16"	006H005T10
24	A/R	LOCKWASHER: #6	085D006S31
25	A/R	RELAY BASE & HARNESS ASSEMBLY SPDT; 1st Or 2nd Relay DPDT; 1st Relay - Mounted As Shown DPDT; 2nd Relay - Mounted Above Relay Shown	612A121U01 612A530U01 612A530U02
26	A/R	*RELAY - See Table C On Page 8	-
27	2	SCREW, Fillister Head: #6-32 x 15/16"	004H108T10
28	4	SCREW, Fillister Head: #6-32 x 1/2"	004H008T10
29	2	LOCKWASHER: #6	085D006S31
30	1	SPACER, Terminal Board	375B147U01
31	1	SPACER, Terminal Board	375B148U01
32	1	MARKER STRIP	358D526U01
33	1	TERMINAL BOARD (14 Terminal Connector)	171F114U01

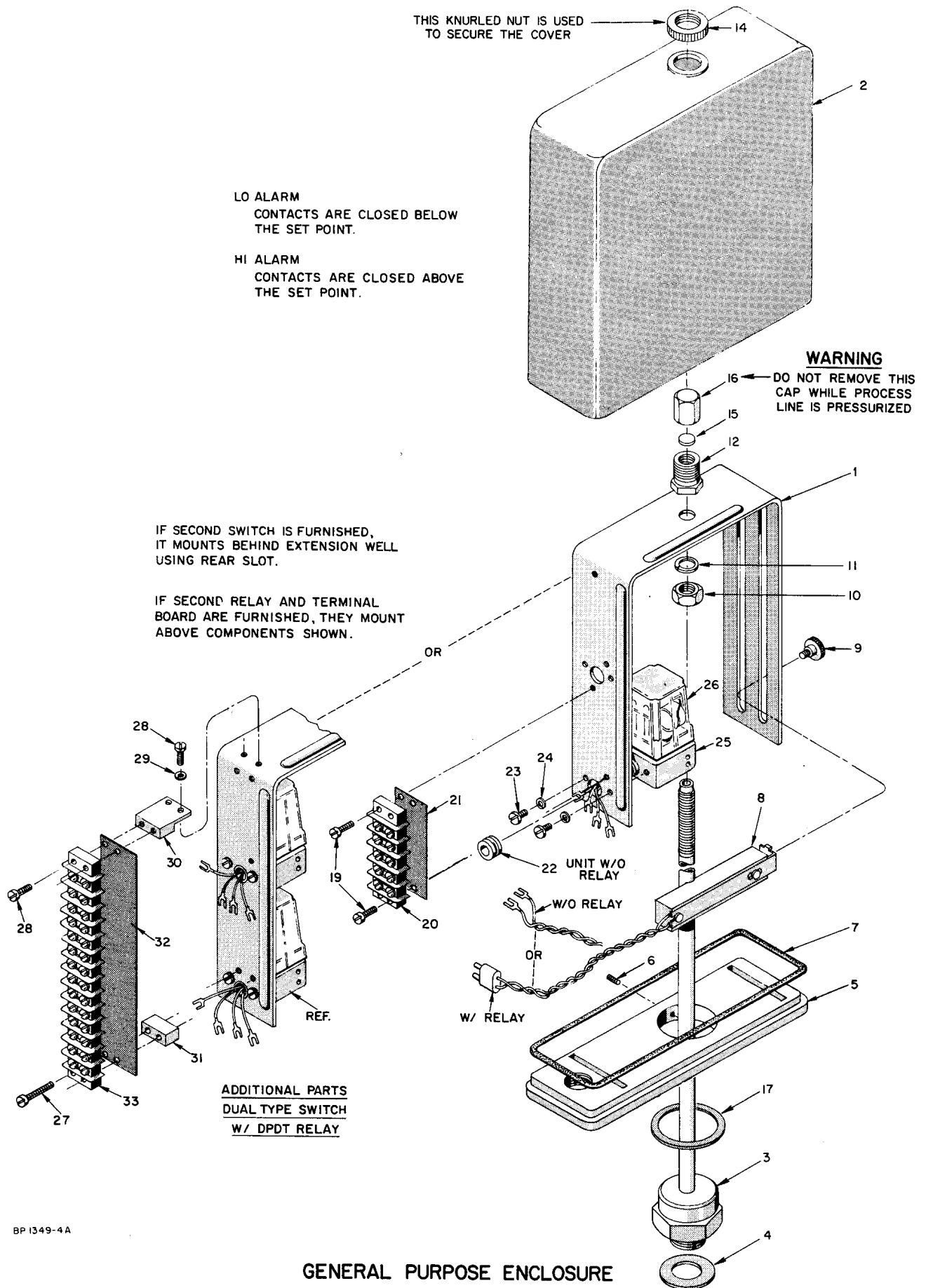
* INDICATES RECOMMENDED SPARE PARTS
A/R INDICATES AS REQUIRED

REF.: 800A365 thru 800A368
800A478 thru 800A481
800A568 thru 800A571

TABLE A

KEY	APPLICATION	TUBE SIZE, CONNECTION SIZE & PN			
		1/2" TUBE 1/2" NPT CONNECTION	1" TUBE 1" NPT CONNECTION	1 1/2" TUBE 1 1/2" NPT CONNECTION	2" TUBE 2" NPT CONNECTION
1	SPDT Relay(s)	-	-	-	-
	Single Alarm	353B017A15	353B017A15	353B018A15	353B018A15
	Dual Alarm	353B018A15	353B018A15	353B018A15	353B018A15
	DPDT Relay(s)	-	-	-	-
	Single Alarm	353B017A15	353B017A15	353B914U01	353B914U01
	Dual Alarm	353B967U01	353B967U01	353B967U01	353B967U01
Without Relays	Single Alarm	353B017A15	353B017A15	353B018A15	353B018A15
	Dual Alarm	353B018A15	353B018A15	353B018A15	353B018A15
2	Single Alarm	641A126A50	641A126A50	641A124A50	641A124A50
	Dual Alarm	641A124A50	641A124A50	641A124A50	641A124A50
3	Single Alarm	628A167U01	628A168U01	628A171U01	628A352U01
	Dual Alarm	628A169U01	628A170U01	628A171U01	628A352U01
4	-	333N118Q20	333N116Q20	333N224Q20	333N242Q20

PARTS LIST



BP 1349-4A

GENERAL PURPOSE ENCLOSURE

PARTS LIST

DISCONTINUED

NOV., 1984

LIMITED SPARE PARTS
AVAILABLE**VIBRATION-PROOF RATOLARM**

KEY	QUANTITY	PART DESCRIPTION	PART NUMBER
	1	BRACKET: For Use With SPDT With 1 Or 2 Alarms DPDT With 1 Alarm DPDT With 2 Alarms No Relay With 1 Or 2 Alarms	- 353B018A15 353B914U01 353B967U01 353B018A15
2	1	ENCLOSURE, Explosion-Proof	641A128A17
3	1	TUBE, Extension: For Use With 1/2" Tube Size; 1/2" NPT Connection 1" Tube Size; 1" NPT Connection 1-1/2" Tube Size; 1-1/2" NPT Connection 2" Tube Size; 2" NPT Connection	- 628A172U01 628A173U01 628A174U01 628A359U01
4	1	GASKET: For Use With 1/2" Tube Size; 1/2" NPT Connection 1" Tube Size; 1" NPT Connection 1-1/2" Tube Size; 1-1/2" NPT Connection 2" Tube Size; 2" NPT Connection	- 333N118Q20 333N116Q20 333N224Q20 333N242Q20
5	A/R	*SWITCH, Alarm-See Table B On Page 8	-
6	A/R	SCREW, Thumb	090L001U01
7	1	NUT, Hex Jam: 3/8-24	081E203T10
8	1	LOCKWASHER: 3/8"	085D616T10
9	1	NUT, Bracket	397D016T30
10	1	*GASKET, End Cap	333C272P30
11	1	CAP, End	397G001T60
12	A/R	SCREW, Fillister Head: #6-32 x 1/2"	004H008T10
13	A/R	TERMINAL BOARD 5 Terminal Connector 8 Terminal Connector	- 171F105U01 171F108U01
14	A/R	MARKER STRIP Marking: 5-4-3-2-1 Marking: 3-2-1-L1-L2 Marking: L2-L1-1-2-3-4-5-6	- 358D591F62 358D585F62 358D583F62
15	A/R	BRACKET 5 Terminal Connector 8 Terminal Connector	- 353B016S11 353B969U01
16	A/R	SCREW, Fillister Head: #6-32 x 3/16"	004H003T10
17	A/R	LOCKWASHER: #6	085D006S31
18	A/R	GROMMET	104B011U01
19	A/R	SCREW, Pan Head: #6-32 x 5/16"	006H005T10
20	A/R	RELAY BASE & HARNESS ASSEMBLY SPDT; 1st Or 2nd Relay DPDT; 1st Relay-Mounted As Shown DPDT; 2nd Relay-Mounted Above Relay Shown	- 612A121U01 612A530U01 612A530U02
21	A/R	*RELAY - See Table C On Page 8	-
22	4	SCREW, Fillister Head: #6-32 x 1/2"	004H008T10
23	1	BRACKET	353B968U01
24	1	BRACKET	353B970U01
25	4	SCREW, Fillister Head: #6-32 x 3/16"	004H003T10
26	4	LOCKWASHER: #6	085D006S31
27	1	MARKER STRIP	358D528U01
28	1	TERMINAL BOARD (14 Terminal Connector)	171F114U01

* INDICATES RECOMMENDED SPARE PARTS
A/R INDICATES AS REQUIREDREF.: 800A365 thru 800A368
800A478 thru 800A481
800A568 thru 800A571

PARTS LIST

WARNING
DE-ENERGIZE CIRCUITS BEFORE
REMOVING THIS COVER

WARNING
DO NOT REMOVE THIS CAP WHILE
PROCESS LINE IS PRESSURIZED

DISCONTINUED

NOV 1984

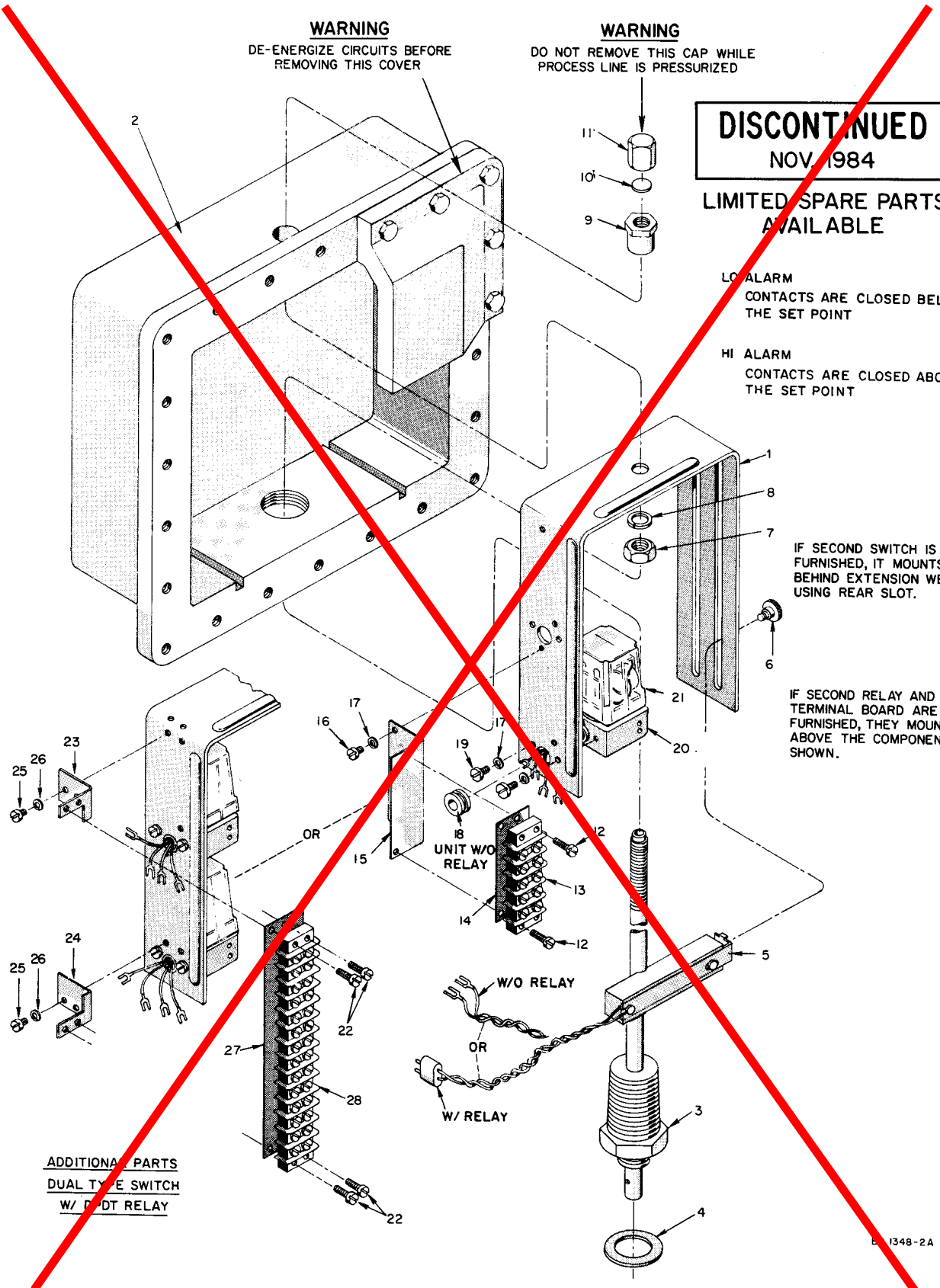
LIMITED SPARE PARTS
AVAILABLE

LO ALARM
CONTACTS ARE CLOSED BELOW
THE SET POINT

HI ALARM
CONTACTS ARE CLOSED ABOVE
THE SET POINT

IF SECOND SWITCH IS
FURNISHED, IT MOUNTS
BEHIND EXTENSION WELL
USING REAR SLOT.

IF SECOND RELAY AND
TERMINAL BOARD ARE
FURNISHED, THEY MOUNT
ABOVE THE COMPONENTS
SHOWN.



ADDITIONAL PARTS
DUAL TYPE SWITCH
W/ P/DT RELAY

E 1348-2A

**TABLE B
ALARM SWITCH**

TYPE OF ALARM	APPLICATION	PART NUMBER
HI Alarm LO Alarm	For Use With Relay(s)	674A103U01 674A104U01
HI Alarm LO Alarm	For Use Without Relays	674A110U01 674A111U01

**TABLE C
RELAY (SPDT or DPDT)**

POWER	PART NUMBER	
	DUST PROOF	HERMETICALLY SEALED
115 V ac 50-60 Hz 230 V ac 50-60 Hz	163B018U01 163B019U01	163B020U01 163B021U01
24 V dc 48 V dc 115 V dc 230 V dc	163B054U01 163B058U01 163B052U01 See Note 1	163B057U01 163B056U01 163B055U01 See Note 1

NOTE 1. Referenced items may be ordered only by specifying the complete ABB Inc. serial number.

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