

520E

INDUSTRIAL EMERGENCY REPORTING SYSTEM

EQUIPMENT DESIGN REQUIREMENTS

COMMON SYSTEMS

1. GENERAL

work, equipment, and circuits to be used in the manufacture and installation of the 520E system.

SCOPE

1.01 This specification, together with the supplementary information listed herein, covers the design requirements for the frame-

1.02 This specification is reissued to incorporate the addition of the following new features: communication and guard reporting, guard key reporting, and guard tour.

SUBDIVISIONS OF EQUIPMENT AND DETAILED INDEX

WECo J drawings should be ordered by referring to the prefix and base number and requesting the current dash (—) number.

EQUIPMENT CODE	RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWINGS	CKT PER UNIT	MTG PLT PER UNIT*	LOCATION
J99251A	AT&TCo Std	Selective Station and/or Supervisory Device Line Frame	J99251A-( )	SD-98053-01 SD-98054-01 SD-98074-01 SD-98075-01			
J99251B	AT&TCo Std	Selective Station and Auxiliary Line Unit	J99251B-( )	SD-98054-01 SD-98074-01	10	11	Selective Station and/or Supervisory Device Line Frame
J99251C	AT&TCo Std	Supervisory Device and Auxiliary Line Unit	J99251C-( )	SD-98054-01 SD-98075-01	30	11	Selective Station and/or Supervisory Device Line Frame
J99251D	AT&TCo Std	Selective Station Line Unit	J99251D-( )	SD-98074-01	1	1	Selective Station and Auxiliary Line Unit
J99251E	AT&TCo Std	Selective Station Line Auxiliary Unit	J99251E-( )	SD-98054-01 SD-98074-01	1	1	Selective Station and Auxiliary Unit

\* Mounting plates are 23 inches long and 2 inches wide except as noted otherwise.

EQUIPMENT CODE	RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWINGS	CKT PER UNIT	MTG PLT PER UNIT*	LOCATION
J99251F	AT&TCo Std	Supervisory Device Line Unit	J99251F-( )	SD-98075-01	3	1	Supervisory Device and Auxiliary Line Unit
J99251G	AT&TCo Std	Supervisory Device Line Auxiliary Unit	J99251G-( )	SD-98054-01	1	1	Supervisory Device and Auxiliary Line Unit
J99251H	AT&TCo Std	Selective Station and/or Supervisory Device Line Frame Alarm Unit	J99251H-( )	SD-98053-01 SD-98054-01	2	1	Selective Station and/or Supervisory Device Line Frame
J99251J	AT&TCo Std	Selective Station and/or Supervisory Device Line Frame Fuse Panel	J99251J-( )	SD-98053-01			Selective Station and/or Supervisory Device Line Frame
J99251K	AT&TCo Std	Selective Station Line Identifier Connector Unit	J99251K-( )	SD-98076-01	1	1	Call Recorder and Identifier Connector Frames
J99251L	AT&TCo Std	Selective Station and/or Supervisory Device Line Frame Fuse Panel	J99251L-( )	SD-98053-01			Selective Station and/or Supervisory Device Line Frame
J99251M	AT&TCo Std	Guard Tour Seizure Unit	J99251M-( )	SD-5E054-01	60	6	Guard Tour Frame
J99251N	AT&TCo Std	Guard Tour Control Unit	J99251N-( )	SD-5E054-01	10	3	Guard Tour Frame
J99251P	AT&TCo Std	Guard Tour Frame	J99251P-( )	SD-5E054-01 SD-98053-01 SD-98054-01			
J99251R	AT&TCo Std	Guard Tour Lamp Equipment	J99251R-( )	SD-5E054-01	20		Switchboard
J99251S	AT&TCo Std	Fuse Panel Equipment	J99251S-( )	SD-5E054-01			Guard Tour Frame

\* Mounting plates are 23 inches long and 2 inches wide except as noted otherwise.

**Circuit Schematic Index**

CIRCUIT DRAWING	J99251 EQUIP. CODE
SD-98053-01	A, H, J, L, P
SD-98054-01	A, B, C, E, G, H, P
SD-98074-01	A, B, D, E
SD-98075-01	A, C, F
SD-98076-01	K
SD-5E054-01	M, N, P, R, S

**2. SUPPLEMENTARY INFORMATION**

- 800-600-000 — List of General Equipment Requirement Sections
- 801-000-000 — Equipment Design and General Equipment Requirements and Engineering Information — Common Systems
- 809-000-000 — PBX Systems Index
- J99284 (809-703-150) — General Information Specification

**3. EQUIPMENT**

**J99251A (AT&TCo Std) — Selective Station and/or Supervisory Device Line Frame**

Equipment — J99251A-( )

**List 1** — Framework, assembly, and wiring for one line frame arranged to mount selective station line unit J99251B, L1 and/or communication and guard reporting line unit J99251B, L2. Will also mount supervisory device line units J99251C.

	WIRE	EQUIP	SEE NOTES
Selective Station Line Ckt, SD-98074-01:			
Fig. 5	6	0	A
Fig. 8	30	0	A
Supervisory Device Line Ckt, SD-98075-01, Fig. 1	90	0	A
Alarm Ckt, SD-98053-01:			
Fig. 2	1	0	B
Fig. 4	1	0	
Fig. 5	2	0	
Fig. 6	22	0	C,D
Flash and Wink Ckt, SD-98054-01:			
Fig. 6 With H Option	1	1	
Fig. 7	2	0	

	WIRE	EQUIP	SEE NOTES
Fig. 10	3	0	A
Fig. 16	2	0	A

**List 2** — Framework, assembly, and wiring for one line frame arranged to mount selective station line unit J99251B, L1 and/or communication and guard reporting line unit J99251B, L2. Will also mount guard key reporting line units J99251B, L3.

	WIRE	EQUIP	SEE NOTES
Selective Station Line Ckt, SD-98074-01:			
Fig. 5	6	0	A
Fig. 8	30	0	A
Fig. 10 With W Option	40	0	A
Alarm Ckt, SD-98053-01:			
Fig. 2	1	0	B
Fig. 4	1	0	
Fig. 5	2	0	
Fig. 6	22	0	C,D
Flash and Wink Ckt, SD-98054-01:			
Fig. 6 With H Option	1	0	
Fig. 7	2	0	
Fig. 10	3	0	A
Fig. 16	2	0	A

**Notes**

- A. Frame local cable shall include selective station line and supervisory device line circuits wired universally as well as the flash and wink circuit, SD-98054-01, Fig. 10 and 16.
- B. Frame local cable shall include wiring per SD-98053-01, S and T options.
- C. Frame local cable shall include wiring for RLS0, 1, and 2 fuses to the first, second, and third line group, respectively, and RLS3 fuse wiring to all line groups. Connect RLS3 fuse wiring at first equipped supervisory device and auxiliary line unit.
- D. Wire line fuses prefixed by 0-, 1-, and 2-digits to the first, second, and third line group, respectively.

**J99251B (AT&TCo Std) — Selective Station and Auxiliary Line Unit**

Equipment — J99251B-( )

**List 1** — Mounting bars and loose wiring for one unit serving one switchboard answering position for ten selective station line circuits.

	WIRE	EQUIP	SEE NOTES
Selective Station Line Ckt, SD-98074-01:			
Fig. 1	10	0	A
Fig. 5	2	0	A
Fig. 6	10	0	A
Flash and Wink Ckt, SD-98054-01, Fig. 10	1	0	

**List 2** — Mounting bars and loose wiring for one unit serving one switchboard answering position for ten communication and guard reporting line circuits.

	WIRE	EQUIP	SEE NOTES
Selective Station Line Ckt, SD-98074-01,			
Fig. 8	10	0	A
Flash and Wink Ckt, SD-98054-01	1	0	

**List 3** — Mounting bars and loose wiring for one unit serving one switchboard answering position for ten guard key reporting line circuits.

	WIRE	EQUIP	SEE NOTES
Selective Station Line Ckt, SD-98074-01,			
Fig. 10 With W Option	10	0	

**Note**

A. Provide unit loose wiring only for circuits equipped.

**J99251C (AT&TCo Std) — Supervisory Device and Auxiliary Line Unit**

Equipment — J99251C-( )

**List 1** — Assembly and loose wiring for one supervisory device and auxiliary line unit for 30 circuits (see Note A).

**Note**

A. The job engineer shall order J99251F, List 1 or 2 supervisory device line units (do not mix lists 1 and 2) and J99251G, Lists 1 and 2 supervisory device line auxiliary unit as required.

**J99251D (AT&TCo Std) — Selective Station Line Unit**

Equipment — J99251D-( )

**List 1** — Assembly, wiring, and equipment for one selective station line unit in accordance with SD-98074-01, Fig. 1 (one circuit). (See Note A.)

**List 2** — Wiring and equipment required in addition to list 1 when an additional jack, key, and lamp appearance is required in accordance with SD-98074-01, Fig. 6 (see Note A).

**List 3** — Wiring and equipment required in addition to list 1 when line identification record is to be obtained by key operation only in accordance with SD-98074-01, Y and V options (see Note B).

**List 4** — Assembly, wiring, and equipment for one communication and guard reporting line circuit SD-98074-01, Fig. 8.

**List 5** — Assembly, wiring, and equipment for two guard key reporting line circuits SD-98074-01, Fig. 10.

**List 6** — Wiring and equipment required in addition to list 4 when line identification record with key operation only is required, Y and V options per SD-98074-01.

**Notes**

A. Provide wiring per Z option when list 2 is not required.

B. Provide wiring per SD-98074-01, X option, when list 3 is not specified.

**J99251E (AT&TCo Std) — Selective Station Line Auxiliary Unit**

Equipment — J99251E-( )

**List 1** — Assembly, wiring, and equipment for one selective station line auxiliary unit for ten selective station lines in accordance with SD-98054-01, Fig. 10, with ZB option (one circuit), and SD-98074-01, Fig. 5 (one circuit).

**List 2** — Wiring and equipment required in addition to list 1 when an additional jack, key, and lamp appearance is required for the associated selective station lines in accordance with SD-98074-01, Fig. 5 (one circuit).

**List 3** — Assembly, wiring, and equipment for one communications and guard reporting line auxiliary unit, SD-98054-01, Fig. 10, with ZP option.

**J99251F (AT&TCo Std) — Supervisory Device Line Unit**

Equipment — J99251F-( )

**List 1** — Assembly, wiring, and equipment for one supervisory device line unit, three odd or even circuits (normally closed contacts), SD-98075-01, Fig. 1.

**List 2** — Assembly, wiring, and equipment for one supervisory device line unit, three odd or even circuits (normally open contacts), SD-98075-01, Fig. 3.

**J99251G (AT&TCo Std) — Supervisory Device Line Auxiliary Unit**

Equipment — J99251G-( )

**List 1** — Assembly, wiring, and equipment for one supervisory device line auxiliary unit in accordance with SD-98054-01, Fig. 18 (six circuits).

**List 2** — Wiring and equipment required in addition to list 1 for first, third, fifth, etc equipped supervisory device auxiliary units, only in accordance with SD-98054-01, Fig. 16 (two circuits).

**J99251H (AT&TCo Std) — Selective Station and/or Supervisory Device Line Frame Alarm Unit**

Equipment — J99251H-( )

**List 2** — Assembly, wiring, and equipment for one alarm unit sufficient for guard tour frame, necessary but not sufficient for frame with selective station lines and/or supervisory device lines, SD-98053-01, Fig. 2.

**List 3** — Wiring and equipment per SD-98053-01, Fig. 5 and 28, and SD-98054-01, Fig. 7, required in addition to list 2 when alarm unit is for frame with selective station lines and/or supervisory device line circuits, unless list 4 is specified.

**List 4** — Wiring and equipment per SD-98053-01, Fig. 5 and 28, and SD-98054-01, Fig. 7, with ZR option, required in addition to list 2 when alarm unit is for frame with selective station lines and/or supervisory device line circuits (for frames equipped with supervisory device line units per J99251F, List 2).

**J99251J (AT&TCo Std) — Selective Station and/or Supervisory Device Line Frame Fuse Panel**

Equipment — J99251J-( )

**List 1** — Assembly, wiring, and equipment for one selective station and/or supervisory device line frame fuse panel (26-fuse capacity) in accordance with SD-98053-01, Fig. 4 and Fig. 6.

**J99251K (AT&TCo Std) — Selective Station Line Identifier Connector Unit**

Equipment — J99251K-( )

**List 1** — Assembly, wiring, and equipment for one selective station line identifier connector unit in accordance with SD-98076-01, Fig. 1 (one circuit).

**Note**

A. Wiring per SD-98076-01, V, W, X, Y, and Z options, shall be applied on the terminal strip in accordance with other information.

**J99251L (AT&TCo Std) — Selective Station and/or Supervisory Device Line Frame Fuse Panel (Major and Minor Alarms)**

Equipment — J99251L-( )

**List 1** — Assembly, wiring, and equipment for one selective station and/or supervisory device frame fuse panel with provision for major and minor alarms, SD-98053-01, Fig. 1.

**J99251M (AT&TCo Std) — Guard Tour Seizure Unit**

Equipment — J99251M-( )

**List 1** — Assembly, wiring, and equipment for 60 guard tour seizure relays, SD-5E054-01, Fig. 1.

**List 2** — Equipment required in addition to list 1 for audible alarm cutoff relay, SD-5E054-01, Fig. 8.

**J99251N (AT&TCo Std) — Guard Tour Control Unit**

Equipment — J99251N-( )

**List 1** — Assembly, wiring, and equipment for one guard tour control circuit arranged for 4 or 9 additional circuits, SD-5E054-01, Fig. 2.

**List 2** — Wiring and equipment for one additional guard tour control circuit required in addition to list 1 for second, third, fourth, or fifth circuit on unit and in addition to list 3 for seventh, eighth, ninth, or tenth circuit on unit (maximum eight list 2 per unit) SD-5E054-01, Fig. 2.

**List 3** — Assembly, wiring, and equipment required in addition to list 1 for the sixth guard tour control circuit, SD-5E054-01, Fig. 2.

**J99251P (AT&TCo Std) — Guard Tour Frame**

Equipment — J99251P-( )

**List 1** — Framework, assembly, wiring, and equipment for one guard tour frame SD-98054-01, Fig. 6.

**J99251R (AT&TCo Std) — Guard Tour Lamp Equipment**

Equipment — J99251R-( )

**List 1** — Assembly, wiring, and equipment for 20 guard tour control lamp circuits arranged for left panel installation, SD-5E054-01, Fig. 6.

**List 2** — Assembly, wiring, and equipment for 20 guard tour control lamp circuits arranged for right panel installation, SD-5E054-01, Fig. 6.

**List 3** — Switchboard cable required in addition to list 1 or 2 when a 6-panel 520A switchboard is equipped with terminal strips (one list 3 for each list 1 or 2).

**List 4** — Switchboard cable required in addition to list 1 or 2 when a 2-panel 520B switchboard is equipped with terminal strips (one list 4 for each list 1 or 2).

**J99251S (AT&TCo Std) — Fuse Panel Equipment**

Equipment — J99251S-( )

**List 1** — Assembly, wiring, and equipment for one guard tour frame fuse panel.

**4. GENERAL NOTES****Equipment**

**4.01** The selective station lines require a key and lamp unit per J99244B for a single or primary answering position and a key and lamp unit per J99244AR for the secondary answering position. A jack and lamp unit per J99244C is

required in both positions. The supervisory device lines require a key and lamp unit per J99244B in the primary answering position.

#### Wiring

**4.02** No. 22 gauge type BU wire shall be used for all local cable wiring in the switchboard and No. 24 gauge type BU wire for the frame local cable wiring. No. 24 gauge type BG wire (type SW1 wiring) shall be used for all surface wiring on all relay units. No. 24 gauge type BG wire shall be used for all surface wiring on fuse panels.

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#### List of A&M Only and Mfr Disc. Equipment

The following equipment has been replaced as indicated. Where A&M Only items appear, the issue numbers shown are those of the issue in which the rating was first applied.

EQUIPMENT	RATING	DETAILS LAST SHOWN IN ISSUE	REPLACING EQUIPMENT
J99251C	Mfr	2	—
L2	Disc.		
J99251H	Mfr	2	—
L2	Disc.		