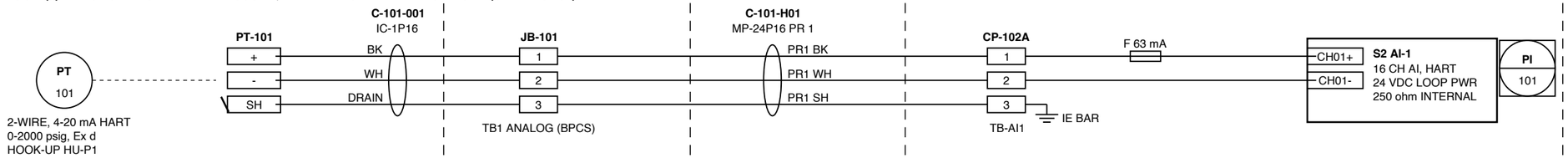
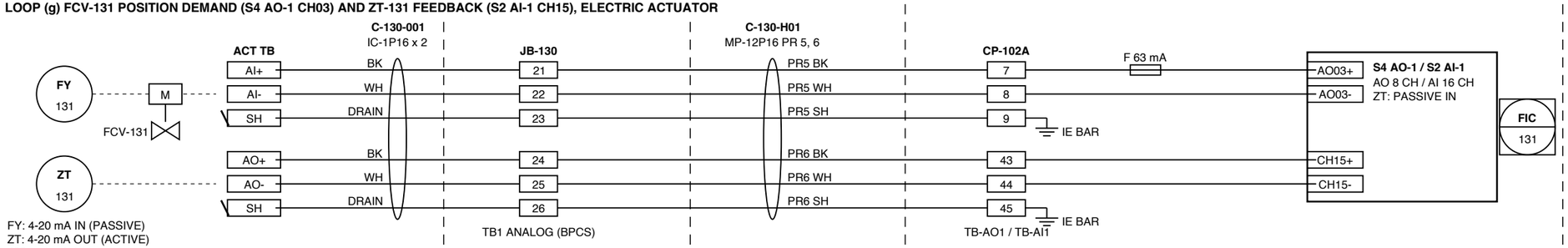
FIELD	FIELD JUNCTION BOX	HOMERUN	CONTROL BUILDING B-102 (PANEL)	POINT DATA

LOOP (a) PT-101 STATION INLET PRESSURE, 2-WIRE 4-20 mA HART TO RTU AI (S2 AI-1 CH01)



POINT: PT-101 (AI)
RANGE 0-2000 psig = 4-20 mA
ALARMS: PAH 1180, PAL 880,
PALL 600 psig, ROC 50 psi/min
P&ID PRO-DWG-101
DS INS-DS-001
LOOP R MAX (24 V): 600 ohm

LOOP (g) FCV-131 POSITION DEMAND (S4 AO-1 CH03) AND ZT-131 FEEDBACK (S2 AI-1 CH15), ELECTRIC ACTUATOR



POINTS: FCV-131 (AO), ZT-131 (AI)
AO 0-100 % = 4-20 mA
ZT 0-100 % = 4-20 mA
DEVIATION IZT-AOI > 5 % 30 s:
AUTO SWITCHOVER TO FCV-132
FAIL AS-IS ON LOSS OF SIGNAL
(ACTUATOR SET TO HOLD)
P&ID PRO-DWG-107, DS-008
FIELD CABLE: 1 PAIR PER SIGNAL

LEGEND

CP-102A RTU CARD MAP (ALL POINTS; SPARE CHANNELS NOT LISTED; DI-3 (S7) AND DO-2 (S9) INSTALLED SPARE)

SLOT	CARD	CH	POINT
S2	AI-1	01	PT-101
S2	AI-1	02	TT-101
S2	AI-1	03	PT-102A
S2	AI-1	04	PDIT-103
S2	AI-1	05	LT-104
S2	AI-1	06	ZT-104
S2	AI-1	07	AT-142
S2	AI-1	08	AT-143
S2	AI-1	09	AT-144
S2	AI-1	10	TT-151
S2	AI-1	11	ZT-152
S2	AI-1	12	TT-156
S2	AI-1	13	FT-163
S2	AI-1	14	PT-164
S2	AI-1	15	ZT-131
S2	AI-1	16	ZT-132
S3	AI-2	01	PT-134
S3	AI-2	02	TT-135
S3	AI-2	03	PT-172
S3	AI-2	04	TT-173
S3	AI-2	05	LT-191
S3	AI-2	06	TT-208A
S3	AI-2	07	EI-210A
S4	AO-1	01	LCV-104
S4	AO-1	02	TCV-152

SLOT	CARD	CH	POINT
S4	AO-1	03	FCV-131
S4	AO-1	04	FCV-132
S4	AO-1	05	PT-172R
S4	AO-1	06	FQI-110R
S5	DI-1	01	XA-101
S5	DI-1	02	XS-102
S5	DI-1	03	XA-104
S5	DI-1	04	HS-104R
S5	DI-1	05	XA-106
S5	DI-1	06	ZSO-103C
S5	DI-1	07	ZSO-111
S5	DI-1	08	ZSC-111
S5	DI-1	09	XA-111
S5	DI-1	10	HS-111R
S5	DI-1	11	ZSO-112
S5	DI-1	12	ZSC-112
S5	DI-1	13	XA-112
S5	DI-1	14	HS-112R
S5	DI-1	15	ZSO-121
S5	DI-1	16	ZSC-121
S5	DI-1	17	XA-121
S5	DI-1	18	HS-121R
S5	DI-1	19	ZSO-122
S5	DI-1	20	ZSC-122
S5	DI-1	21	XA-122

SLOT	CARD	CH	POINT
S5	DI-1	22	HS-122R
S5	DI-1	23	ZSO-115
S5	DI-1	24	ZSC-115
S5	DI-1	25	XA-115
S5	DI-1	26	HS-115R
S5	DI-1	27	XA-110
S5	DI-1	28	XA-141
S5	DI-1	29	XA-142
S5	DI-1	30	XA-143
S5	DI-1	31	XA-144
S5	DI-1	32	XA-146
S6	DI-2	01	PSL-141L
S6	DI-2	02	XA-152
S6	DI-2	03	HS-152R
S6	DI-2	04	XA-150
S6	DI-2	05	XL-150
S6	DI-2	06	ZSO-158C
S6	DI-2	07	ZSC-158C
S6	DI-2	08	XA-165
S6	DI-2	09	TSH-161B
S6	DI-2	10	XA-161
S6	DI-2	11	XA-131
S6	DI-2	12	HS-131R
S6	DI-2	13	XA-132
S6	DI-2	14	HS-132R

SLOT	CARD	CH	POINT
S6	DI-2	15	ZSO-131A
S6	DI-2	16	ZSO-131B
S6	DI-2	17	ZSO-132A
S6	DI-2	18	ZSO-132B
S6	DI-2	19	XA-102
S6	DI-2	20	XA-103
S6	DI-2	21	XS-209A
S6	DI-2	22	XS-209B
S6	DI-2	23	XA-209C
S6	DI-2	24	XS-209D
S6	DI-2	25	XA-210
S6	DI-2	26	XA-210B
S6	DI-2	27	ZS-211A
S6	DI-2	28	ZS-211B
S6	DI-2	29	ZS-211C
S6	DI-2	30	ZS-211D
S6	DI-2	31	ZS-211E
S6	DI-2	32	ZS-211F
S7	DI-3	01	XS-WIL5
S8	DO-1	01	HY-111O
S8	DO-1	02	HY-111C
S8	DO-1	03	HY-112O
S8	DO-1	04	HY-112C
S8	DO-1	05	HY-121O
S8	DO-1	06	HY-121C

SLOT	CARD	CH	POINT
S8	DO-1	07	HY-122O
S8	DO-1	08	HY-122C
S8	DO-1	09	HY-115O
S8	DO-1	10	HY-115C
S8	DO-1	11	HS-150P
S8	DO-1	12	TY-156
S8	DO-1	13	XY-103Q
S8	DO-1	14	XS-WIL3
S8	DO-1	15	XS-WIL4
S10	PI-1	01	FQ-163
S11	SER-1	01	BMS-150S
S11	SER-1	02	RTU-WIL

NOTES / REFERENCES

1. CABLE NOS: C-<JB>-NNN FIELD, C-<JB>-HNN HOMERUN, C-200-NNN DIRECT. FINAL NOS PER LST-002.
2. SHIELD GROUNDED AT PANEL IE BAR ONLY; FIELD END CUT AND TAPED (/); OWN TERMINAL IN JB.
3. SIS TERMINALS AND CABLES YELLOW, SEGREGATED FROM BPCS (IEC 61511-1 CL. 11.2).
4. CARD/CH PER CARD MAP ON SHEETS 1 AND 2. HOMERUN = USED PAIRS + 20 %, NEXT STD SIZE.
5. WIRE COLOURS: PAIR BK(+)/WH(-); TRIAD BK/WH/RD; MULTICORES NUMBERED; DRAIN SLEEVED.
6. TYPICALS: OTHER LOOPS OF THE SAME TYPE FOLLOW THESE SHEETS WITH TAGS PER LST-002.

REF: INS-LST-002 I/O LIST
REF: INS-DWG-005 PANEL LAYOUT

REVISIONS

REV	DATE	DESCRIPTION	BY	CHK	APP
A	2026-09-29	ISSUED FOR REVIEW (IFR)			

PRELIMINARY - ISSUED FOR REVIEW - NOT FOR CONSTRUCTION

ENGINEER OF RECORD SEAL

NOT SEALED
PRELIMINARY

PE NO. _____

PROJECT

120 MMSCFD RECEIPT INTO
COUNTY,

DISCIPLINE: INSTRUMENTATION
SCALE: NTS

TYPICAL LOOP DIAGRAMS

AI 2-WIRE (PT-101), AO + FEEDBACK (FCV-131)

DRAWN: ____ CHECKED: ____ APPROVED: ____

DWG NO.

INS-DWG-002

SHEET 1 OF 5 REV A