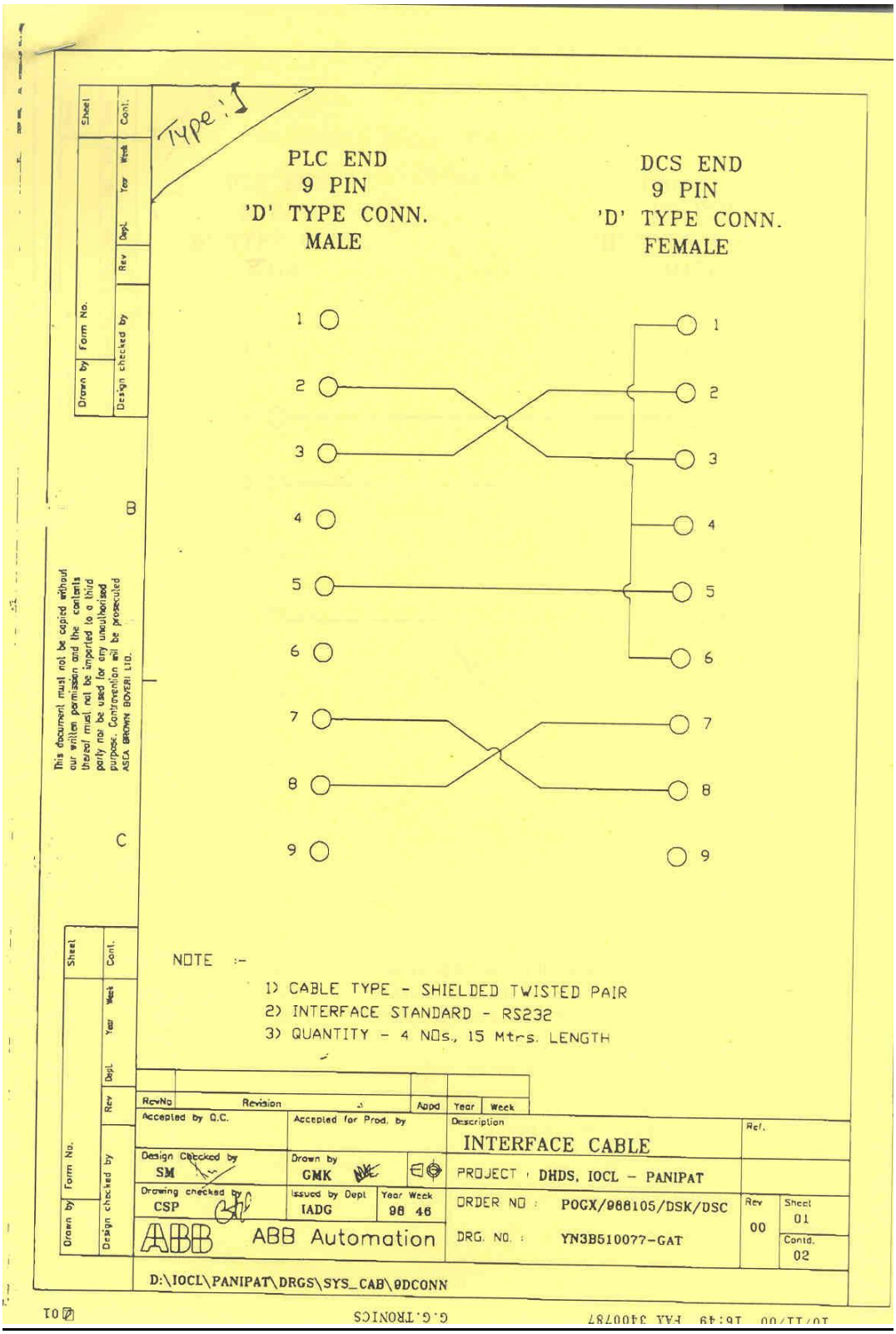
ABB- AUGUST PLC

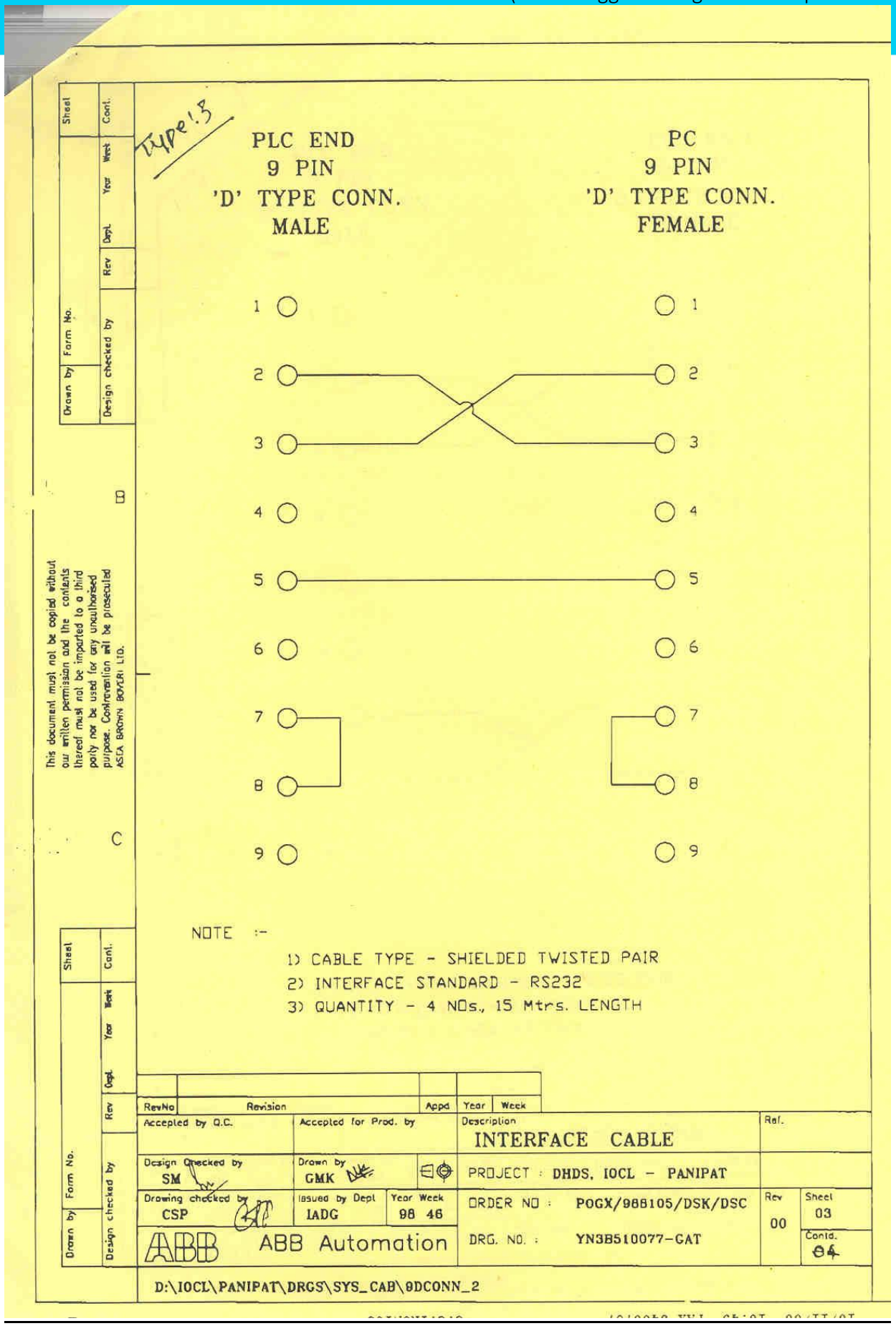
Printer Cable & Milestone Converter Configuration

Sr. No.	Version History	Created/Modified Date	Prepared By	Approved By	Remarks
1	V0.1	19.03.2020	Rajnikant K.	Ms. Bijal Desai	

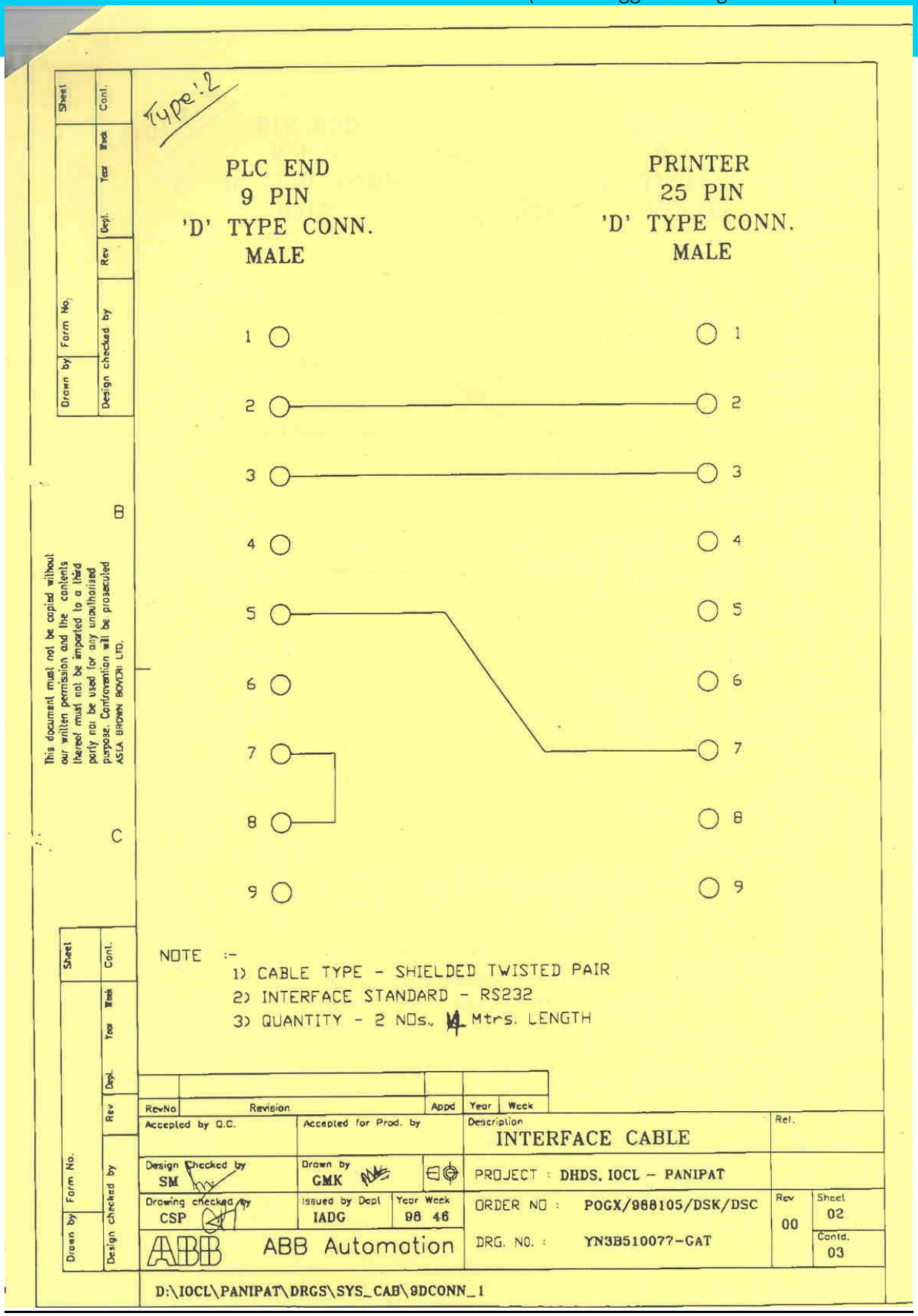
- August PLC to AC450 Modbus cable detail



- August PLC to PC cable detail



- August_PLC to PRINTER cable detail



- RS232C-Line Driver

MODEL: LD-12A, LD-14A, LD1214A

TEST PROCEDURE

1 Connect one Line Driver to a terminal using proper compatible cable on Input RS232 port.

2 Local Loop-Back Test: Put the rear panel slide switch to "NOR" Position. Plug in a loop connector (D25 Female connector) with its pins shorted in following manner on Line Driver O/P port (LD O/P).

Pin 3 shorted to Pin 6,
Pin 4 shorted to Pin 5,
Pin 9 shorted to Pin 11,
Pin 10 shorted to Pin 12,

Switch on the Line Driver and Terminal and transmit characters from terminal. If everything is normal, echo-back character is received on the terminal. Otherwise the unit is faulty. If it is OK, go to the next step.

3 Connect another Line Driver at remote end through Line Driver cable making sure of proper connections between two Line Drivers as shown in TABLE V.

4 **Remote Loop–Back Test :**
Switch on the remote Line Driver also. Put the switch on rear panel of remote Line Driver to "Loop" position. Now transmit characters from Terminal at Local Line Driver. If both the Line Drivers along with cable connecting two Line Drivers are OK echo-back characters also will appear on the Terminal Screen.

5 Put the switch on rear panel of Remote Line Driver back to "NOR" position and connect it to remote device using appropriate RS232 cable. Check data communication between the two devices.

TABLE I: Unit RS 232 Port – D25 Female Connector

Pin No.	Signal Name	In / Out
2	Rx	Input
3	Tx	Output
6* ^	DTR	Output
7	Signal Ground	-
20*^	DSR	Input
4^	CTS	Input
5^	RTS	Output

*Used for Synchronous Models LD-14A
^ Used for Synchronous Model LD-1214A

TABLE II: Line driver output port - LD 12A/14A/1214A D25 male connector

Line Driver O/P Port	Signal Name
3	-Rx
4	+Rx
5	+Tx
6	-Tx
9*^	-DTR
10*^	+DTR
11*^	-DSR
12*^	+DSR
20^	Frame Ground
15^	-CTS
16^	+CTS
17^	+RTS
18^	-RTS

(1.) * = Used for LD-14A
(2.) ^ = Used for LD-1214A

TABLE III: RS 232 Cable – LD-12A, LD-14A,LD-1214A
Using DTR-DSR & RTS-CTS handshaking

Computer End			Line Driver RS232 Port	
Pin No. (D-25)	Pin No. (D-9)	Signal	Pin No. (D-25) Male	Signal
2	3	TX	2	RX
3	2	RX	3	TX
6*	6	DSR	6	DTR
7	5	GND	7	Sig. Gnd.
20*	4	DTR	20	DSR
4*^	7	RTS	4	CTS
5*^	8	CTS	5	RTS

*Used for Synchronous Models LD-14A
^Used for Synchronous Model LD-1214A

TABLE IV: RS 232 cable LD-12A, LD-14A
using RTS & CTS handshaking

Computer End				Line Driver RS232 Port	
Pin No. (D-25)	Pin No. (D-9)	Signal		Pin No. (D-25) Male	Signal
2	3	TX		2	RX
3	2	RX		3	TX
4	7	RTS	*	20	DSR
7	5	GND		7	Sig Gnd.
5	8	CTS	*	6	DTR
6	6	DSR			
20	4	DTR			

*Used these signals for Model: LD-14A
Above connections is for standard PC COM port verify connections for other

LONG DISTANCE CABLE LAYING

Long distance cable between two line drivers must be twisted pair shielded cable. The pair should be used for each signal type+ and – Signal. This gives high common mode noise rejection. While laying the cable, care should be taken not to lay this cable parallel to power line cables. The cable resistance should not be more than 90 ohms/1000 meters. The cable should be run through conduit pipe for physical protection.

Table V: Line Driver Cable

Line Driver 1	Line Driver 2
-Rx	-Tx
+Rx	+Tx
+Tx	+Rx
-Tx	-Rx
-DTR*	-DSR
+DTR*	+DSR
-DSR*	-DTR
+DSR*	+DTR
-CTS^	-RTS
+CTS^	+RTS
+RTS^	+CTS
-RTS^	-CTS

(1.) * = Used for LD-14A
(2.) ^ = Used for LD-1214A

END