TBS09 SDI-12 TO MODBUS CONVERTER FOR PCB REV B

PAGE 1 TITLE PAGE

PAGE 2 BLOCK DIAGRAM

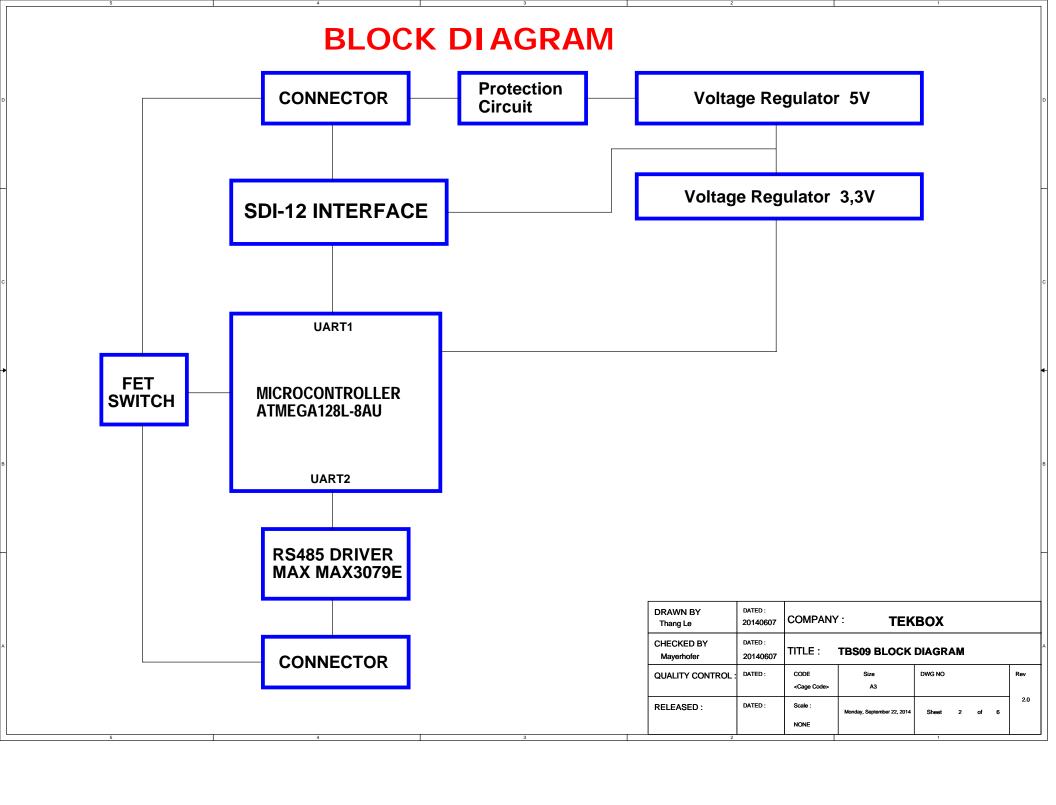
PAGE 3 MICROCONTROLLER

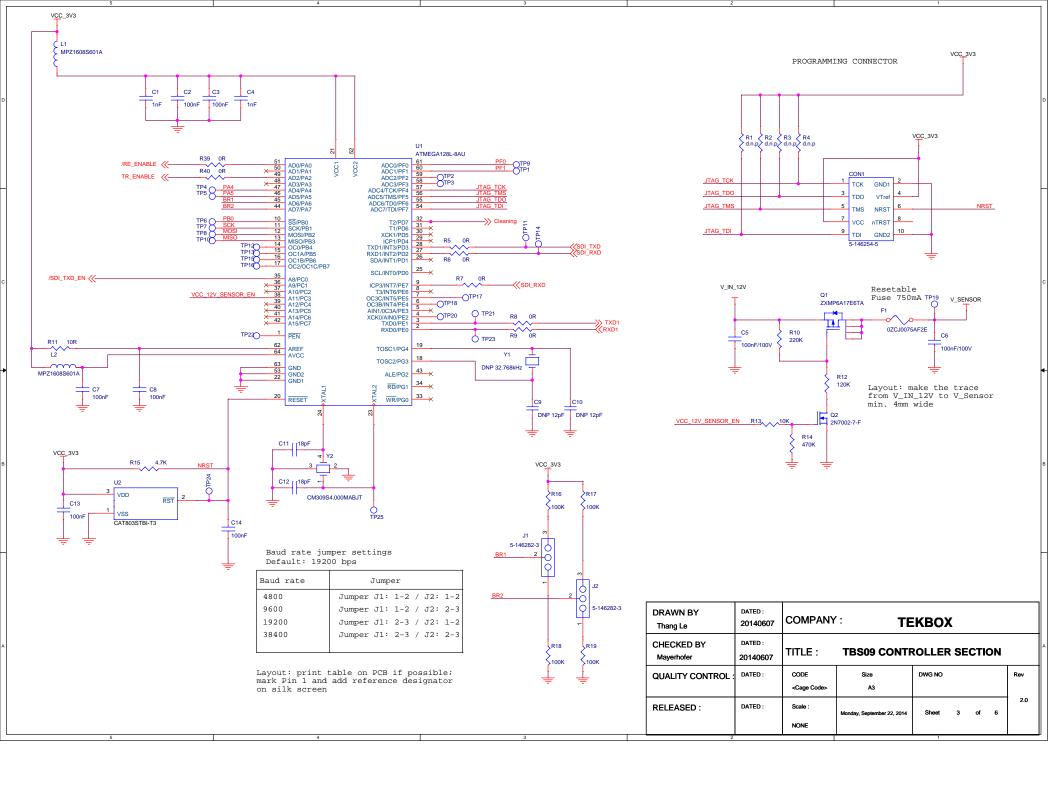
PAGE 4 POWER / SDI INTERFACE

PAGE 5 RS485 INTERFACE

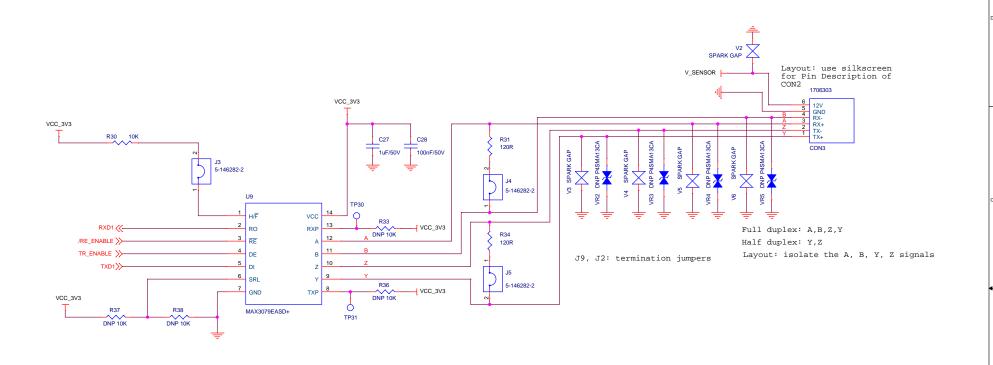
PAGE 6 REVISION HISTORY

DRAWN BY Thang Le	DATED: 20140607	COMPANY	: TEKB	ох				
CHECKED BY Mayerhofer	DATED: 20140607	TITLE :	TITLE: TBS09 TITLE PAGE					
QUALITY CONTROL :	DATED:	CODE <cage code=""></cage>	Size A3	DWG NO				Rev
RELEASED:	DATED:	Scale :	Monday, September 22, 2014	Sheet	1	of	6	2.0





POWER SECTION LDO₅V SDI-12 Power LDO 3.3V VCC_3V3 VCC_5V V_IN_12V V_12V_SENSOR V_12V TP26 TP27 F2 0 TP28 VIN_1 VOUT GND 1206L012WR VOUT B350A-13-F C15 C16 C17 C20 1uF C18 C19 C21 MCP1703T-5002E/MB MCP1703T-3302E/MB 10uF/50V 1uF/50V 0.1uF SMBJ17A 10uF 0.1uF 10uF 0.1uF Reverse voltage & overvoltage protection VCC_5V VCC_5V VCC_5V VCC_3V3 UART: IDLE=LOW V_IN_12V C23 R20 C24 0.1uF 330K 330K /SDI_TXD_EN >> ΑШ 1A 🗘 1Y **SDI INTERFACE** GND /Y nOE VCC SDI_TXD >> A D1 R22 R24 R23 R25 SDI-12 POWER SDI-12 DATA GND VCC 74LVC2G07GW GND ∇Y 3 GND 5 SHIELD 6 REL_A REL_B 510R 220R C25 0.1uF D2 C26 R26 NC7WZ14P6X PDZ7.5B,115 200K 3.3nF V_IN_12V R43 DNP 0R VCC_5V SDI_RXD <<-R42 RL1 R29 2.2R 180K D3 Q3 BC847CMTF 1N4148WX-TP G5T-1A DC5 C29 = 10uF C30 10uF DATED: DRAWN BY COMPANY: **TEKBOX** 20140607 Thang Le DATED: CHECKED BY TITLE: **TBS09 SDI-12 IF SECTION** 20140607 Mayerhofer DWG NO Rev QUALITY CONTROL: DATED: CODE <Cage Code> 2.0 DATED: RELEASED: Scale: Monday, September 22, 2014 NONE



Layout: use silkscreen for reference designator of J2, J8, J9

Layout: use silkscreen for PCB Text: TBS09 SDI-12 / MODBUS INTERFACE TEKBOX

Default jumper setting: full dupplex

FULL DUPLEX:	HALF DUPLEX:					
- Jumper J8 open	- Jumper J8 closed					

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QUALITY CONTROL:	DATED :	CODE <cage code=""></cage>	Size A3	DWG NO				Rev
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Revision	Changes	Reason	Page No	Date
1.0	INITIAL REVISION	CREATION		20140607
2.0	CON2 modified to 6 positions Relay circuit for cleaning output added	Requirement to add a cleaning signal for the sensors	4	20140919

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