Ford Ranger battery box connections:

IAA C1945	AC in type 1/2	CHG C1993 (Wago)	CHARGER C1991	TIM C4998	TIM C4999	Bat. box C1939	Cable color	Description	NEW controller	Simp BMS	SSR	LEM current	Precharge pos.	Pos. contactor	Neg. contactor	Precharge AUX	AUX relay	Charger contactor
							RD	High amp PWR (hot all time)	A1,C1									12V
							DB	GND	A2,C2							GND	GND	
							TN	Precharge POS cont. (Z/GND)	A3,C10				GND IN					
							DG	POS cont. (Z/GND)	A4,C9					GND IN				
							GY	POS cont. FBCK (Z/12V)	A5					FBCK OUT				
							DB/LG	Precharge AUX relay. (Z/12V)	A6	J4-4 OUT2						12V IN		
							GY/YE	AUX relay. (Z/12V)	A7,C8	J4-12 OUT1							12V IN	
							WH/RD	Precharge CHG cont. (Z/GND)	A8									
							WH	Charge cont. (Z/GND)	A9,D3									GND IN
								NC	A10									
							WH	USB D-	B1									
							LG	USB D+	B2									
							RD	USB Vcc (5V)	B3									
							BK	USB GND	B4									
						64	554 (YE/BK)	High amp PWR (hot all time)	C1,A1		12V, SIG IN		12V	12V. FBCK IN				
						36	570 (BK/WH)	Ground	C2,A2									
						18	190 (WH/OG)	Power (hot all time)	C3	J4-8 IN								
						37	570 (BK/WH)	Ground	C4	J4-16 IN								
97 DIOD1						25	295 (LB/PK)	Power (hot run and start)	C5	J5-1 IN1								
				35 IN		24	3997 (DG)	EPO to TIM (Z/GND)	C6									
42 OUT						16	3998 (GY)	AUX relay control (Z/12V)	C7									
26 IN						17	3999 (DB/LG)	AUX relay status	C8,A7									
				8 OUT		23	3986 (DG)	POS cont. (Z/GND)	C9,A4									
				18 OUT		22	3991 (TN)	Precharge POS cont. (Z/GND)	C10,A3									
10 MOD	Green LED	B1 12V (1)				38	3826 (WH)	12V PWR CHG	D1	J5-6 IN3	12V OUT							
		NC (2)				28	3990 (LB/RD)	Spare	D2									
	Green LED	A6 OUT1 (3)				63	3401 (DB/LG)	Charge cont. (Z/GND)	D3, A9									
		NC (4)				61	3002 (OG/LB)	Spare	D4									
		NC (6)				60	3008 (VT)	Spare	D5									
		NC (8)				49	3992 (BN/YE)	Spare	D6									
97 DIOD2	Red LED	A3 IN1 (7)				56	3009 (OG/RD)	CHG enable (IAA RUN/START)	D7	J4-13 OUT3								
		B5 CP (5)				14	4009 (LB/RD)	Pilot chg. (interrupt OUT)	D8, D9									
	CP					20	3984 (RD)	Pilot inlet (interrupt IN)	D9, D8									
	REED sw.			3 IN		54	3404 (YE)	Charge door sw. (Z/GND)	D10		GND IN							
91 IN						19	3006 (VT/LG)	EPO (to IAA, BCM, PTC)	E1									
						47	974 (OG)	INERTIA sw.	E2									
								NC	E3									
						45	787 (PK/BK)	Power (hot all time)	E4									
28						59	914 (TN/OG)	J1850 bus plus	F1									
27						58	915 (PK/LB)	J1850 bus minus	F2									
				15		40	3501 (DB)	DTR TR2 (Mod CAN-bus L)	F3, I3	J5-9								
				5		52	3503 (YE)	DTR TR4 (Mod CAN-bus H)	F4, I4	J5-4								
						53	787 (PK/BK)	Power (hot all time)	G1									
						25	295 (LB/PK)	Power (hot run and start)	G2									
								NC	G3									
			1 NC			62	3993 (YE/RD)	Charger ready	G4									
			2 NC			55	3800 (LG/BK)	Charger fault input	G5									
			3 NC			50	3985 (PK)	Charger enable	G6									
			4 NC			57	3827 (GY/WH)	Charger charging	G7									
								NC	G8									
								NC	G9									
								NC	G10									
							GY	BMB RX bat. 14	H1	J1-3								
							LB/YE	BMB TX bat. 1	H2	J1-4								
							LG	BMB GND	H3	J1-1								
							RD	BMB 5V	H4	J1-2								
							BK (shield)	LEM GND	I1,D2			GND						
97							RD	LEM 12V	I2,G2			12V						
							BK	LEM CAN-L	I3 ,F3			CAN-L						
							WH	LEM CAN-H	I4, F4			CAN-H						
							VT/WH	NEG cont. GND	J1,A2						GND. FBCK IN			
							VT/OG	NEG cont. Z/12V	J2	J4-5 OUT4					12V IN			
							VT	NEG cont. FBCK Z/GND	J3						FBCK OUT			
								NC	J4									
							RD/?	Spare (9) "CHG Wago"										
	PP	B11 PP (10)					LG/BK	Proximity										
		B12 MOD					40 LB/WH (LB)	Power "lighter" (hot all time)										
		B7 GND					BK (YE)	Charger GND "lighter"										
	Red LED						BK	Reed switch GND										
97								12V PWR to CAN display.										