

Connector

J1 Channel Signal			Remarks	master M	slave S	Input type
J1-G3	SS_1	MPU 1 signal (+)				
J1-F3		MPU 1 signal (-)		Y	Y	
J1-F2		shield				
J1-G1	SS_2	MPU 2 signal (+)				
J1-F1		MPU 2 signal (-)				
J1-F2		shield	optional			MPU
J1-E3	DI_1	MAT pwm signal, connector sensor pin C	CAT Sensor 131-0784			
J1-D2		MAT supply (Supply-) connector sensor pin B				
J1-D1		MAT supply (Supply+) connector sensor pin A				
J1-F2		Shield		Y	Y	
J1-D2		MAP supply (Supply-) connector sensor pin B	CAT Sensor 3E-1854			
J1-D1		MAP supply (Supply+) connector sensor pin A				
J1-E2	DI_2	MAP pwm signal, connector sensor pin C				PWM inputs
J1-E1	DI_3	Reset		Y		
J1-D3	DI_4	Flexible DI*		Y		
J1-D2		Common		Y		
J1-C3	BI_5	Circuit breaker		Y		
J1-C2	BI_6	Flexible DI*		Y		
J1-C1	BI_7	Flexible DI*		Y		
J1-B1	BI_8	Fuel on		Y	Y	
J1-B2		Common		Y	Y	Discrete inputs
J1-K3	PWM_DO_1	Major alarm		Y	Y	
J1-J3	PWM_DO_2	Minor alarm		Y	Y	
J1-K1	PWM_DO_3	Speed switch 1 / MAT Alarm / Trim valve feedback		Y	Y	
J1-J1	PWM_DO_4	RUN Enable / Reset PISC & Trim valve		Y	Y	
J1-K2		Discrete output common		Y	Y	
J1-J2		Discrete output (+24Vdc)		Y	Y	Discrete outputs
J1-H3	ACT_1	Actuator output (+) to Throttle		Y	Y	
J1-G2		Actuator output (-) to Throttle				
J1-H1	ACT_2	Analog output 2 (+) to throttle (4-20mA)				
J1-H2		Analog output 2 (-) to Throttle (4-20mA)	spare			
J1-B3	AO_1	Analog output 3 (+) spare				
J1-A3		Analog output 3 (-) spare	Not used			
J1-A1	AO_2	Analog output 4 (+) spare				
J1-A2		Analog output 4 (-) spare	Not used			Analog outputs

*Flexible DI supports Gas Selection / Idle/Rated / Droop / Derate Active / Utility Breaker / Lower Speed / Raise Speed / Trim valve fdbk

Caterpillar pin layout 733 Gas engine control

p/n 8280-1124 / 8280-1131

Connector

J2 Channel Signal			Remarks	master M	slave S	Input type
J2-P2	AI_1	Measured Load (kW) (+) 4-20mA		Y		
J2-N3		Measured Load (kW) (-) 4-20mA				
J2-N2		Shield				
J2-N1	AI_2	MAP (+) 4-20 mA	MAP / Load ref / UEGO NGK / %CH4	Y	Y	
J2-M1		MAP (-) 4-20 mA				
J2-N2		Shield				
J2-L1	AI_3	Load Reference / NGK (+) 4-20mA	Load Reference / UEGO NGK / %CH4 / Speed bias / Lambda potmeter / ECT	Y	Y	
J2-M2		Load Reference / NGK (-) 4-20mA				
J2-L2		Shield				
J2-M3	AI_4	Speed bias / NGK (+) 4-20 mA	Load Reference / UEGO NGK / %CH4 / Speed bias / Lambda potmeter / ECT	Y		Analog inputs
J2-L3		Speed bias / NGK (-) 4-20 mA				
J2-L2		Shield				
J2-S3	CAN_1	CAN L Plant communications	CAN 1 CANopen (p/n 8280-1124) J1939 EasyGen (p/n 8280-1131)	Y		
J2-S1		CAN H Plant communications				
J2-T2		common				
J2-S2		Shield				
J2-R3	CAN_2	CAN L	CAN 2 Connect to other 733 for MAP balancing, Tandem application	Y	Y	
J2-P3		CAN H				
J2-R2		Shield				
J2-R1	CAN_3	CAN L Engine bus (J1939) for Tecjet etc..	CAN 3 J1939 on engine bus (TecJet,...)	Y	Y	CAN communications
J2-P1		CAN H Engine bus (J1939) for Tecjet etc..				
J2-R2		Shield				
J2-T3	COM_1	Tx	Service port for Toolkit HMI	Y	Y	RS-232
J2-T1		Rx				
J2-X2		Common				
J2-W2		Shield				
J2-X3	COM_2	+	Modbus port	Y	Y	RS-485
J2-W3		Termination (+)				
J2-X1		-				
J2-W1		Termination (-)				
J2-Y2		common				
J2-W2		Shield				
J2-Y3		+ 24Vdc		Y	Y	Power Supply
J2-Y1		- 24Vdc				

Prepared by: Erik Splint, 14-10-2010