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Analog Inputs

S	C	A	L	I/O Type	SIG_NAME	LEAD	DESCRIPTION	FUNCTION
27				analog input	I_A_ANA01	AWG24	universal input 0-5V - pull up switchable	pedal a (fixed)
2				analog input	I_A_ANA02	AWG24	universal input 0-5V - pull up switchable	throttle 1a (fixed)
21				analog input	I_A_ANA03	AWG24	universal input 0-5V - pull up switchable	throttle 2a (fixed)
29				analog input	I_A_ANA04	AWG24	universal input 0-5V - pull up switchable	tamb
3				analog input	I_A_ANA05	AWG24	universal input 0-5V - pull up switchable	tfuel
20				analog input	I_A_ANA06	AWG24	universal input 0-5V - pull up switchable	pbrake_f
47				analog input	I_A_ANA07	AWG24	universal input 0-5V - pull up switchable	pbrake_r
46				analog input	I_A_ANA08	AWG24	universal input 0-5V - pull up switchable	poil
12				analog input	I_A_ANA09	AWG24	universal input 0-5V - pull up switchable	pwat
28				analog input	I_A_ANA10	AWG24	universal input 0-5V - pull up switchable	pclutch
53				analog input	I_A_ANA11	AWG24	universal input 0-5V - pull up switchable	utint
38				analog input	I_A_ANA12	AWG24	universal input 0-5V - pull up switchable	pfuel
45				analog input	I_A_ANA13	AWG24	universal input 0-5V - pull up switchable	toil
37				analog input	I_A_ANA14	AWG24	universal input 0-5V - pull up switchable	tmot2
7				analog input	I_A_ANA15	AWG24	universal input 0-5V - pull up switchable	tmot
8				analog input	I_A_ANA16	AWG24	universal input 0-5V - pull up switchable	prail
13				analog input	I_A_ANA17	AWG24	universal input 0-5V - pull up switchable	pedal b (fixed)
6				analog input	I_A_ANA18	AWG24	universal input 0-5V - pull up switchable	throttle 1b (fixed)
14				analog input	I_A_ANA19	AWG24	universal input 0-5V - pull up switchable	throttle 2b (fixed)
1				analog input	I_A_ANA20	AWG24	universal input 0-5V - pull up switchable	prail2
19				analog input	I_A_ANA21	AWG24	universal input 0-5V - pull up switchable	toil2
	60			analog input	I_A_ANA22	AWG24	universal input 0-5V - pull up switchable	gear
	46			analog input	I_A_ANA23	AWG24	universal input 0-5V - pull up switchable	pcrank
	28			analog input	I_A_ANA24	AWG24	universal input 0-5V - pull up switchable	pgear
	54			analog input	I_A_ANA25	AWG24	universal input 0-5V - pull up switchable	pservo
	39			analog input	I_A_ANA26	AWG24	universal input 0-5V - pull up switchable	shiftupsw
	38			analog input	I_A_ANA27	AWG24	universal input 0-5V - pull up switchable	shiftdnsw
	47			analog input	I_A_ANA28	AWG24	universal input 0-5V - pull up switchable	sdam_fl
	61			analog input	I_A_ANA29	AWG24	universal input 0-5V - pull up switchable	sdam_fr
	55			analog input	I_A_ANA30	AWG24	universal input 0-5V - pull up switchable	sdam_rl
	48			analog input	I_A_ANA31	AWG24	universal input 0-5V - pull up switchable	sdam_rr
	62			analog input	I_A_ANA32	AWG24	universal input 0-5V - pull up switchable	steer
	53			analog input	I_A_ANA33	AWG24	universal input 0-5V - pull up switchable	p1
	45			analog input	I_A_ANA34	AWG24	universal input 0-5V - pull up switchable / Voltage devider switchable to 0-26V	tgear
	37			analog input	I_A_ANA35	AWG24	universal input 0-5V - pull up switchable / Voltage devider switchable to 0-26V	tservo
5				analog input	I_A_ANA36_PCYL	AWG24	fast analog input 0-5V - pull up switchable	cylinder pressure recognition 1
10				analog input	I_A_ANA37_PCYL	AWG24	fast analog input 0-5V - pull up switchable	cylinder pressure recognition 2
11				analog input	I_A_ANA38_PCYL	AWG24	fast analog input 0-5V - pull up switchable	cylinder pressure recognition 3
17				analog input	I_A_ANA39_PCYL	AWG24	fast analog input 0-5V - pull up switchable	cylinder pressure recognition 4
25				analog input	I_A_ANA40_PCYL	AWG24	fast analog input 0-5V - pull up switchable	cylinder pressure recognition 5
26				analog input	I_A_ANA41_PCYL	AWG24	fast analog input 0-5V - pull up switchable	cylinder pressure recognition 6
34				analog input	I_A_ANA42_PCYL	AWG24	fast analog input 0-5V - pull up switchable	cylinder pressure recognition 7
4				analog input	I_A_ANA43_PCYL	AWG24	fast analog input 0-5V - pull up switchable	cylinder pressure recognition 8
44				analog input	I_A_ANA44_FADC	AWG24	analog input 0-5V, pull up switch., time or angular synchronism measurement	up21
64				analog input	I_A_ANA45_FADC	AWG24	analog input 0-5V, pull up switch., time or angular synchronism measurement	up21_2
43				analog input	I_A_ANA46_FADC	AWG24	analog input 0-5V, pull up switch., time or angular synchronism measurement	up22
59				analog input	I_A_ANA47_FADC	AWG24	analog input 0-5V, pull up switch., time or angular synchronism measurement	up22_2
52				analog input	I_A_ANA48_FADC	AWG24	analog input 0-5V, pull up switch., time or angular synchronism measurement	reserve
36				analog input	I_A_ANA49_FADC	AWG24	analog input 0-5V, pull up switch., time or angular synchronism measurement	reserve
51				thermocouple	I_A_TEXH1P	twisted pair (AWG24)	Thermocouple 1 +	utexh
58					I_A_TEXH1N	shielded	Thermocouple 1 -	
65				thermocouple	I_A_TEXH2P	twisted pair (AWG24)	Thermocouple 2 +	utexh2
60					I_A_TEXH2N	shielded	Thermocouple 2 -	

Combined Analog / Digital Inputs

S	C	A	L	I/O Type	SIG_NAME	LEAD	DESCRIPTION	FUNCTION
	21			analog / dig input	I_AD_ANADIG01	AWG24	selectable universal input 0-5V / digital input 0-12V - pull up switchable	mapsw
	22			analog / dig input	I_AD_ANADIG02	AWG24	selectable universal input 0-5V / digital input 0-12V - pull up switchable	pitspeedsw
	29			analog / dig input	I_AD_ANADIG03	AWG24	selectable universal input 0-5V / digital input 0-12V - pull up switchable	launchsw
	30			analog / dig input	I_AD_ANADIG04	AWG24	selectable universal input 0-5V / digital input 0-12V - pull up switchable	tcsw
	31			analog / dig input	I_AD_ANADIG05	AWG24	selectable universal input 0-5V / digital input 0-12V - pull up switchable	wetsw
	40			analog / dig input	I_AD_ANADIG06	AWG24	selectable universal input 0-5V / digital input 0-12V - pull up switchable	chressw
	49			analog / dig input	I_AD_ANADIG07	AWG24	selectable universal input 0-5V / digital input 0-12V / SENT - pull up switchable	reserve
	56			analog / dig input	I_AD_ANADIG08	AWG24	selectable universal input 0-5V / digital input 0-12V / SENT - pull up switchable	reserve

Digital Inputs

S	C	A	L	I/O Type	SIG_NAME	LEAD	DESCRIPTION	FUNCTION
			43	digital input	I_F_DIG01P_HALL_IND	twisted pair (AWG24)	hall or inductive sensor selectable	CRANK_1+
			44		I_F_DIG01N_HALL_IND	shielded		CRANK_1-
			10	digital input	I_F_DIG02P_HALL_IND	twisted pair (AWG24)	hall or inductive sensor selectable	CRANK_2+
			19		I_F_DIG02N_HALL_IND	shielded		CRANK_2-
			37	digital input	I_F_DIG03_HALL	AWG24	hall sensor	CAM_1
			3	digital input	I_F_DIG04_HALL	AWG24	hall sensor	CAM_2
			11	digital input	I_F_DIG05_HALL_DF11	AWG24	hall or DF11 sensor selectable	speed1 / CAM3
			1	digital input	I_F_DIG06_HALL_DF11	AWG24	hall or DF11 sensor selectable	speed2 / CAM4
			2	digital input	I_F_DIG07_HALL_DF11	AWG24	hall or DF11 sensor selectable	speed3
			6	digital input	I_F_DIG08_HALL_DF11	AWG24	hall or DF11 sensor selectable	speed4
			47	digital input	I_F_DIG09P_HALL_IND	twisted pair (AWG24)	hall or inductive sensor circuit selectable	TURBO_1+
			46		I_F_DIG09N_HALL_IND	shielded		TURBO_1-
			8	digital input	I_F_DIG10P_HALL_IND	twisted pair (AWG24)	hall or inductive sensor circuit selectable	TURBO_2+
			7		I_F_DIG10N_HALL_IND	shielded		TURBO_2-
			21	digital input	I_S_LAPTRIG	AWG24	laptrigger input	LAPTRIGGER
			57	digital input	I_S_ENGRUN	AWG24	digital input, pull down	Engine Switch

Further Inputs

S	C	A	L	I/O Type	SIG_NAME	LEAD	DESCRIPTION	FUNCTION
61				knock sensor 1A	I_A_KS1A	AWG24, twisted pair (10), shielded	fast I/O / DIGITAL KNOCK CONTROL Core 1	knock_1A

54				knock sensor 1B	I_A_KS1B	AWG24, twisted pair (10), shielded	fast I/O / DIGITAL KNOCK CONTROL Core 1, in case of symm. use reference for sensor 1	knock_1B
62				knock sensor 2A	I_A_KS2A	AWG24, twisted pair (10), shielded	fast I/O / DIGITAL KNOCK CONTROL Core 2	knock_2A
55				knock sensor 2B	I_A_KS2B	AWG24, twisted pair (10), shielded	fast I/O / DIGITAL KNOCK CONTROL Core 2 in case of symm. use reference for sensor 2	knock_2B
66				knock GND	G_R_KS	xx	COMMON GND for knocksensors	
40				LAMBDA	I_A_LSU1UN	4 x AWG24		LAM_1_UN
39					I_A_LSU1VM			LAM_1_VM
31					I_A_LSU1IP			LAM_1_IP
32					I_A_LSU1IA			LAM_1_IA
30				LAMBDA	I_A_LSU2UN	4 x AWG24		LAM_2_UN
22					I_A_LSU2VM			LAM_2_VM
23					I_A_LSU2IP			LAM_2_IP
33					I_A_LSU2IA			LAM_2_IA

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S	C	A	L	I/O Type	SIG_NAME	LEAD	DESCRIPTION	FUNCTION
				Outputs				
		12		lowside switch 4A	O_S_LS01	AWG20		SHIFT_UP
		34		lowside switch 4A	O_S_LS02	AWG20		SHIFT_DN
		17		lowside switch 3A	O_S_LS03	AWG20		WGC_INC
		59		lowside switch 3A	O_S_LS04	AWG20		WGC_DEC
		6		lowside switch 3A	O_S_LS05	AWG20		CAMCTRL_IN
		51		lowside switch 3A	O_S_LS06	AWG20		CAMCTRL_IN2
		43		lowside switch 3A	O_S_LS07	AWG20		CAMCTRL_OUT
		65		lowside switch 3A	O_S_LS08	AWG20		CAMCTRL_OUT2
		19		lowside switch 2.2A or INJ1	O_S_LS09	AWG20	to be used as low side switch or high imp. Injectors, no freewheeling, runs only with engine speed	
		52		lowside switch 2.2A or INJ2	O_S_LS10	AWG20	to be used as low side switch or high imp. Injectors, no freewheeling, runs only with engine speed	
		18		lowside switch 2.2A or INJ3	O_S_LS11	AWG20	to be used as low side switch or high imp. Injectors, no freewheeling, runs only with engine speed	
		60		lowside switch 2.2A or INJ4	O_S_LS12	AWG20	to be used as low side switch or high imp. Injectors, no freewheeling, runs only with engine speed	
		10		lowside switch 2.2A or INJ5	O_S_LS13	AWG20	to be used as low side switch or high imp. Injectors, no freewheeling, runs only with engine speed	
		53		lowside switch 2.2A or INJ6	O_S_LS14	AWG20	to be used as low side switch or high imp. Injectors, no freewheeling, runs only with engine speed	
		27		lowside switch 2.2A or INJ7	O_S_LS15	AWG20	to be used as low side switch or high imp. Injectors, no freewheeling, runs only with engine speed	
		61		lowside switch 2.2A or INJ8	O_S_LS16	AWG20	to be used as low side switch or high imp. Injectors, no freewheeling, runs only with engine speed	
		5		lowside switch 2.2A or INJ9	O_S_LS17	AWG20	to be used as low side switch or high imp. injectors or control of external HDEV 9-12, no freewheeling, runs only with engine speed	
		44		lowside switch 2.2A or INJ10	O_S_LS18	AWG20	to be used as low side switch or high imp. injectors or control of external HDEV 9-12, no freewheeling, runs only with engine speed	
		25		lowside switch 2.2A or INJ11	O_S_LS19	AWG20	to be used as low side switch or high imp. injectors or control of external HDEV 9-12, no freewheeling, runs only with engine speed	
		45		lowside switch 2.2A or INJ12	O_S_LS20	AWG20	to be used as low side switch or high imp. injectors or control of external HDEV 9-12, no freewheeling, runs only with engine speed	
		11		lowside switch 2.2A	O_S_LS21	AWG20		MIL
		36		lowside switch 2.2A	O_S_LS22	AWG20		FUELPUMP
		35		lowside switch 2.2A	O_S_LS23	AWG20		WGC_INC2
		64		lowside switch 2.2A	O_S_LS24	AWG20		WGC_DEC2
		26		lowside switch 1A	O_S_LS25	AWG20		MAINRELAY
		4	14	lowside switch 1A	O_S_LS26	AWG20		STARTER
		4		lowside switch 3A	O_S_LSH1	AWG20	Lambda Heater Output	LAM_1_HEATER
		58		lowside switch 3A	O_S_LSH2	AWG20	Lambda Heater Output	LAM_2_HEATER
	26			MSV controller	O_P_MSV1P	AWG20		MSV_1P
	35			MSV controller	O_P_MSV1N	AWG20		MSV_1N
	18			MSV controller	O_P_MSV2P	AWG20		MSV_2P
	11			MSV controller	O_P_MSV2N	AWG20		MSV_2N
		66		H-Bridge 8.5A	O_S_HBR1P	AWG20	for EGAS	EGAS_1P
		62		H-Bridge 8.5A	O_S_HBR1N	AWG20	for EGAS	EGAS_1N
		63		H-Bridge 8.5A	O_S_HBR2P	AWG20	for EGAS	EGAS_2P
		57		H-Bridge 8.5A	O_S_HBR2N	AWG20	for EGAS	EGAS_2N
		2		H-Bridge 8.5A	O_S_HBR3P	AWG20		HBRIDGE_1P
		1		H-Bridge 8.5A	O_S_HBR3N	AWG20		HBRIDGE_1N
	34			High Pressure Injection	O_P_INJ1P	AWG20	High Pressure Injection +	INJ_1P
	25			High Pressure Injection	O_P_INJ1N	AWG20	High Pressure Injection -	INJ_1N
	58			High Pressure Injection	O_P_INJ2P	AWG20	High Pressure Injection +	INJ_2P
	59			High Pressure Injection	O_P_INJ2N	AWG20	High Pressure Injection -	INJ_2N
	52			High Pressure Injection	O_P_INJ3P	AWG20	High Pressure Injection +	INJ_3P
	44			High Pressure Injection	O_P_INJ3N	AWG20	High Pressure Injection -	INJ_3N
	5			High Pressure Injection	O_P_INJ4P	AWG20	High Pressure Injection +	INJ_4P
	4			High Pressure Injection	O_P_INJ4N	AWG20	High Pressure Injection -	INJ_4N
	10			High Pressure Injection	O_P_INJ5P	AWG20	High Pressure Injection +	INJ_5P
	17			High Pressure Injection	O_P_INJ5N	AWG20	High Pressure Injection -	INJ_5N
	51			High Pressure Injection	O_P_INJ6P	AWG20	High Pressure Injection +	INJ_6P
	43			High Pressure Injection	O_P_INJ6N	AWG20	High Pressure Injection -	INJ_6N
	6			High Pressure Injection	O_P_INJ7P	AWG20	High Pressure Injection +	INJ_7P
	27			High Pressure Injection	O_P_INJ7N	AWG20	High Pressure Injection -	INJ_7N
	2			High Pressure Injection	O_P_INJ8P	AWG20	High Pressure Injection +	INJ_8P
	1			High Pressure Injection	O_P_INJ8N	AWG20	High Pressure Injection -	INJ_8N
		50		Ignition	O_P_IGN01	AWG20/AWG24	selectable int. ignition power stage or ignition driver	IGN_1
		3		Ignition	O_P_IGN02	AWG20/AWG24	selectable int. ignition power stage or ignition driver	IGN_2
		33		Ignition	O_P_IGN03	AWG20/AWG24	selectable int. ignition power stage or ignition driver	IGN_3
		9		Ignition	O_P_IGN04	AWG20/AWG24	selectable int. ignition power stage or ignition driver	IGN_4
		24		Ignition	O_P_IGN05	AWG20/AWG24	selectable int. ignition power stage or ignition driver	IGN_5
		8		Ignition	O_P_IGN06	AWG20/AWG24	selectable int. ignition power stage or ignition driver	IGN_6
		42		Ignition	O_P_IGN07	AWG20/AWG24	selectable int. ignition power stage or ignition driver	IGN_7
		16		Ignition	O_P_IGN08	AWG20/AWG24	selectable int. ignition power stage or ignition driver	IGN_8
		7		Ignition	O_P_IGN09	AWG24	ignition driver cyl 9-12	IGN_9
		20		Ignition	O_P_IGN10	AWG24	ignition driver cyl 9-12	IGN_10
		13		Ignition	O_P_IGN11	AWG24	ignition driver cyl 9-12	IGN_11
		14		Ignition	O_P_IGN12	AWG24	ignition driver cyl 9-12	IGN_12
		46		MOOG Control	O_A_MOOG1P	AWG24	H-Bridge 12mA +	
		38		MOOG Control	O_A_MOOG1N	AWG24	H-Bridge 12mA -	
		54		MOOG Control	O_A_MOOG2P	AWG24	H-Bridge 12mA +	
		47		MOOG Control	O_A_MOOG2N	AWG24	H-Bridge 12mA -	
		39		MOOG Control	O_A_MOOG3P	AWG24	H-Bridge 12mA +	
		48		MOOG Control	O_A_MOOG3N	AWG24	H-Bridge 12mA -	
		40		MOOG Control	O_A_MOOG4P	AWG24	H-Bridge 12mA +	
		31		MOOG Control	O_A_MOOG4N	AWG24	H-Bridge 12mA -	
			29	DIAG_MUX	O_A_MUX1	AWG24 shielded	PushPull driver Diagnosis Multiplexer (KS1A, eng. speed, int. Signals)	MUXCTRL_CH1
			30	DIAG_MUX	O_A_MUX2	AWG24 shielded	PushPull driver Diagnosis Multiplexer (KS1B, cam speed, int. Signals)	MUXCTRL_CH2
			38	DIAG_MUX	O_A_MUX3	AWG24 shielded	PushPull driver Diagnosis Multiplexer (KS2A, cam speed, int. Signals)	MUXCTRL_CH3
			39	DIAG_MUX	O_A_MUX4	AWG24 shielded	PushPull driver Diagnosis Multiplexer (KS2B, cam speed, int. Signals)	MUXCTRL_CH4
			31	DIAG_MUX	O_A_MUX5	AWG24 shielded	PushPull driver Diagnosis Multiplexer (MF1, MF2, MF combined, cam speed, int. Signals)	MUXCTRL_CH5

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BOSCH

Communication

S	C	A	L	I/O Type	SIG_NAME	LEAD	DESCRIPTION	FUNCTION
			48	CAN Bus 1	BI_CAN1_H	CAN-Ltg	up to 1Mbit/s, switchable Terminator	CAN_1_H, use for Motronic, Powerbox, HPI and ABS control functions
			56		BI_CAN1_L			CAN_1_L
			62	CAN Bus 2	BI_CAN2_H	CAN-Ltg	up to 1Mbit/s, switchable Terminator	CAN_2_H, use for external ECU / gearbox control
			55		BI_CAN2_L			CAN_2_L
			12	CAN Bus 3	BI_CAN3_H	CAN-Ltg	up to 1Mbit/s, switchable Terminator	CAN_3_H, use for measurement purposes
			13		BI_CAN3_L			CAN_3_L
			66	Gigabit Ethernet	BI_GETH_D1+_TX+	Ethernet Ltg. (CAT6), shielded to G_C_COMSCR	1000 Mbit/s	GETH_0P (Application Interface)
			61		BI_GETH_D1-_TX-			GETH_0N (Application Interface)
			65		BI_GETH_D2+_RX+			GETH_1P (Application Interface)
			54		BI_GETH_D2-_RX-			GETH_1N (Application Interface)
			64		BI_GETH_D3+			GETH_2P (Application Interface)
			60		BI_GETH_D3-			GETH_2N (Application Interface)
			59		BI_GETH_D4+			GETH_3P (Application Interface)
			53		BI_GETH_D4-			GETH_3N (Application Interface)
			26	100 Mbit Ethernet	BI_ETH1_RX+	Ethernet Ltg. (CAT5), shielded to G_C_COMSCR	100 Mbit/s	ETH1RX+
			25		BI_ETH1_RX-			ETH1RX-
			18		BI_ETH1_TX+			ETH1TX+
			17		BI_ETH1_TX-			ETH1TX-
			35	100 Mbit Ethernet	BI_ETH2_RX+	Ethernet Ltg. (CAT5), shielded to G_C_COMSCR	100 Mbit/s	ETH2RX+
			34		BI_ETH2_RX-			ETH2RX-
			36		BI_ETH2_TX+			ETH2TX+
			27		BI_ETH2_TX-			ETH2TX-
			42	Realtime Network SERCOS	BI_RETH1_RX+	Ethernet Ltg. (CAT5), shielded to G_C_COMSCR	100MBit/s Ring Output 1	RETH1RX+
			41		BI_RETH1_RX-			RETH1RX-
			50		BI_RETH1_TX+			RETH1TX+
			49		BI_RETH1_TX-			RETH1TX-
			24		BI_RETH2_RX+	Ethernet Ltg. (CAT5), shielded to G_C_COMSCR	100MBit/s Ring Output 2	RETH2RX+
			23		BI_RETH2_RX-			RETH2RX-
			33		BI_RETH2_TX+			RETH2TX+
			32		BI_RETH2_TX-			RETH2TX-
			15	RS232	BI_RS232_RX	AWG24	Serial interface	RS232_RX
			16		BI_RS232_TX	AWG24		RS232_TX
			51	USB	BI_USB_DP	USB Ltg.	USB interface, supply 5V/500mA	USB_DP
			45		BI_USB_DN			USB_DN
			58		G_R_USBGND			USB_GND
			52		O_V_USB5V			USB_5V
			9	LIN Bus	BI_LIN	AWG24, shielded	LIN interface	LIN
			22	TIMEBASE	BI_TIMESYNC	AWG24	Timesync line between Bosch devices	SYNC

Supply

S	C	A	L	I/O Type	SIG_NAME	LEAD	DESCRIPTION	FUNCTION
			63	Supply In	V_UBAT	AWG20	ECU Processor Supply	
			5	Supply In	V_DYNPWR	AWG20	ECU Supply	
		28		Supply In	V_DYNPWR	AWG20	ECU Supply	
		30		Supply In	V_DYNPWR	AWG20	ECU Supply	
	13			Supply In	V_DYNPWR_BOOST	AWG20	ECU Booster Supply	
	15			Supply In	V_DYNPWR_BOOST	AWG20	ECU Booster Supply	
	32			Supply In	V_DYNPWR_BOOST	AWG20	ECU Booster Supply	
	33			Supply In	V_DYNPWR_BOOST	AWG20	ECU Booster Supply	
	36			Supply In	V_DYNPWR_BOOST	AWG20	ECU Booster Supply	
	41			Supply In	V_DYNPWR_BOOST	AWG20	ECU Booster Supply	
	42			Supply In	V_DYNPWR_BOOST	AWG20	ECU Booster Supply	
	50			Supply In	V_DYNPWR_BOOST	AWG20	ECU Booster Supply	
	64			Supply In	V_DYNPWR_BOOST	AWG20	ECU Booster Supply	
		4		Ground In	G_DYNGND	AWG20	DYN Ground	
3				Ground In	G_DYNGND	AWG20	DYN Ground	
		22		Ground In	G_DYNGND	AWG20	DYN Ground	
		29		Ground In	G_DYNGND	AWG20	DYN Ground	
		32		Ground In	G_DYNGND	AWG20	DYN Ground	
		56		Ground In	G_DYNGND	AWG20	DYN Ground	
	7			Ground In	G_DYNGND_BOOST	AWG20	ECU Booster Ground	
	8			Ground In	G_DYNGND_BOOST	AWG20	ECU Booster Ground	
	9			Ground In	G_DYNGND_BOOST	AWG20	ECU Booster Ground	
	12			Ground In	G_DYNGND_BOOST	AWG20	ECU Booster Ground	
	14			Ground In	G_DYNGND_BOOST	AWG20	ECU Booster Ground	
	16			Ground In	G_DYNGND_BOOST	AWG20	ECU Booster Ground	
	20			Ground In	G_DYNGND_BOOST	AWG20	ECU Booster Ground	
	23			Ground In	G_DYNGND_BOOST	AWG20	ECU Booster Ground	
	24			Ground In	G_DYNGND_BOOST	AWG20	ECU Booster Ground	
		15		Ground In	V_DYNGND_IGN	AWG20	ECU Ignition Ground	
		21		Ground In	V_DYNGND_IGN	AWG20	ECU Ignition Ground	
		23		Ground In	V_DYNGND_IGN	AWG20	ECU Ignition Ground	
		41		Ground In	V_DYNGND_IGN	AWG20	ECU Ignition Ground	
		49		Ground In	V_DYNGND_IGN	AWG20	ECU Ignition Ground	
		55		Ground In	V_DYNGND_IGN	AWG20	ECU Ignition Ground	
		20		Ground In	G_ECUGND	AWG20	ECU Ground	
		40		Ground Out	G_C_COMSCR	AWG24	connection for communication screen	
		28		Ground Out	G_C_USBSCR	AWG24	connection for USB screen	
35				Ground Out	G_C_SENSSCR	AWG24	connection for signal screens	
	19			Ground Out	G_C_SENSSCR	AWG24	connection for signal screens	
		37		Ground Out	G_C_ACTSCR	AWG24	connection for actuator screens	
42				Supply Out	O_V_SENS5_APS1	AWG24	sensor supply 5V, ca. 50mA, for aps a	
50				Supply Out	O_V_SENS5_APS2	AWG24	sensor supply 5V, ca. 50mA, for aps b	
56				Supply Out	O_V_SENS5_THR1	AWG24	sensor supply 5V, ca. 50mA, for throttle poti(s) a	
48				Supply Out	O_V_SENS5_THR2	AWG24	sensor supply 5V, ca. 50mA, for throttle poti(s) b	
24				Supply Out	O_V_SENS5_1	AWG24	sensor supply 5V, ca. 400mA	
9				Supply Out	O_V_SENS5_2	AWG24	sensor supply 5V, ca. 400mA	
	66			Supply Out	O_V_SENS5_3	AWG24	sensor supply 5V, ca. 400mA	
	63			Supply Out	O_V_SENS_BAT	AWG24	sensor supply ubat, ca. 250mA	
41				Ground Out	G_R_SENS5_APS1	AWG24	sensor ground for aps a	
49				Ground Out	G_R_SENS5_APS2	AWG24	sensor ground for aps b	
63				Ground Out	G_R_SENS5_THR1	AWG24	sensor ground for throttle poti(s) a	
57				Ground Out	G_R_SENS5_THR2	AWG24	sensor ground for throttle poti(s) b	
16				Ground Out	G_R_SENS5_1	AWG24	sensor ground	
15				Ground Out	G_R_SENS5_2	AWG24	sensor ground	
	65			Ground Out	G_R_SENS5_3	AWG24	sensor ground	
	57			Ground Out	G_R_SENS_BAT	AWG24	sensor ground	
18				Ground Out	G_R_PCYL	AWG24	sensor ground for cylinder pressure sensors	