

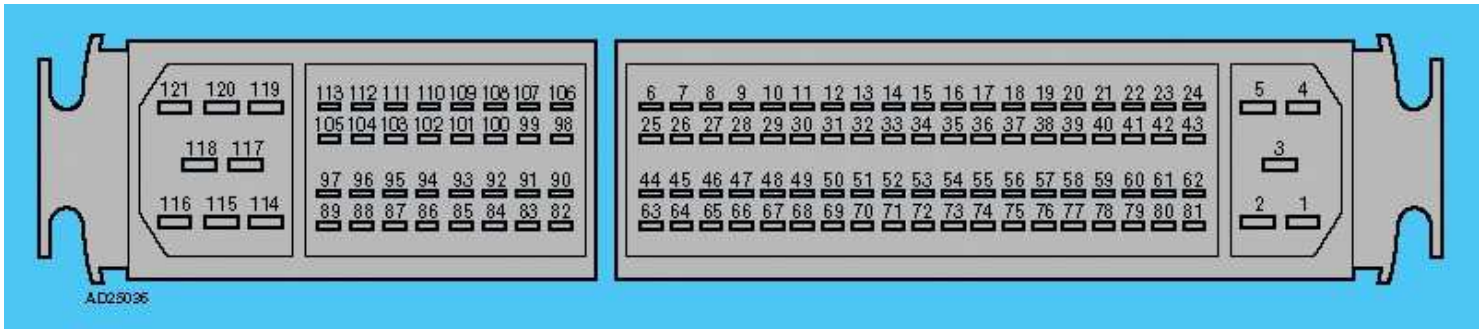
Telephone:  
 Fax:  
 VAT Registration No.:

Name: AUMPinout  
 Address:

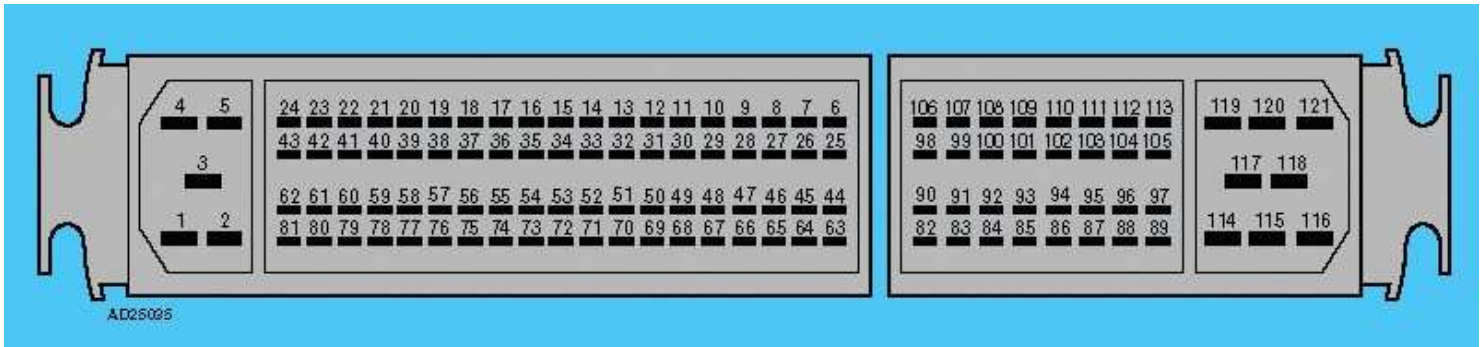
Manufacturer: Volkswagen  
 Model: Golf 4 GTi  
 Year: 2002  
 Registration:  
 Mileage:  
 Job number:  
 Date

Tel - Private:  
 Tel - Business:  
 Tel - Mobile

Terminal side



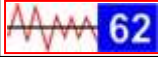
Wire side



Component/circuit description	ECM pin	Signal	Condition	Typical value	Oscilloscope setting (Suggested settings - Voltage/time per division)	Wave form
<a href="#">Accelerator pedal position (APP) sensor</a>	33		Ignition ON	0 V		
<a href="#">Accelerator pedal position (APP) sensor</a>	34		Ignition ON - accelerator pedal released	0,4 V		
<a href="#">Accelerator pedal position (APP) sensor</a>	34		Ignition ON - accelerator pedal depressed	2 V		
<a href="#">Accelerator pedal position (APP) sensor</a>	35		Ignition ON - accelerator pedal released	0,7 V		
<a href="#">Accelerator pedal position (APP) sensor</a>	35		Ignition ON - accelerator pedal depressed	4,1 V		

<a href="#">Accelerator pedal position (APP) sensor</a>	36		Ignition ON	0 V		
<a href="#">Accelerator pedal position (APP) sensor</a>	72		Ignition ON	5 V		
<a href="#">Accelerator pedal position (APP) sensor</a>	73		Ignition ON	5 V		
Air conditioning	40			Connected pin - no test data available or random digital signal		
Air conditioning	41			Connected pin - no test data available or random digital signal		
Air conditioning - some models	61			Connected pin - no test data available or random digital signal		
Alternator	28		Engine idling		5 V/50 ms	94
Battery	62		Ignition OFF	11-14 V		
<a href="#">Brake pedal position (BPP) switch 1</a>	56		Ignition ON - brake pedal released	0 V		
<a href="#">Brake pedal position (BPP) switch 1</a>	56		Ignition ON - brake pedal depressed	11-14 V		
<a href="#">Brake pedal position (BPP) switch 2</a>	55		Ignition ON - brake pedal released	11-14 V		
<a href="#">Brake pedal position (BPP) switch 2</a>	55		Ignition ON - brake pedal depressed	0 V		
Brake servo control module - AT	22			Connected pin - no test data available or random digital signal		
<a href="#">Camshaft position (CMP) actuator</a>	115		Ignition ON	11-14 V briefly then 0-1 V		
<a href="#">Camshaft position (CMP) actuator</a>	115		Engine idling	11-14 V		
<a href="#">Camshaft position (CMP) sensor</a>	86		Ignition ON	0 or 11-14 V		
<a href="#">Camshaft position (CMP) sensor</a>	86		Engine idling		5 V/20 ms	14
<a href="#">Camshaft position (CMP) sensor</a>	98		Ignition ON	5 V		
<a href="#">Camshaft position (CMP) sensor</a>	108		Ignition ON	0 V		
CAN data bus - high	60			Connected pin - no test data available or random digital signal		
CAN data bus - low	58			Connected pin - no test data available or random digital signal		
<a href="#">Clutch pedal position (CPP) switch</a>	39		Ignition ON - clutch pedal released	11-14 V		
<a href="#">Clutch pedal position (CPP) switch</a>	39		Ignition ON - clutch pedal depressed	0 V		
<a href="#">Crankshaft position (CKP) sensor</a>	82		Engine idling	3,1 V ac		
<a href="#">Crankshaft position (CKP) sensor</a>	82		Engine idling		2 V/2 ms	2
<a href="#">Crankshaft position (CKP) sensor</a>	90		Engine idling	3,1 V ac		
<a href="#">Crankshaft position (CKP) sensor</a>	90		Engine idling		2 V/2 ms	Reversed 2
<a href="#">Crankshaft position (CKP) sensor</a>	108		Ignition ON	0 V		

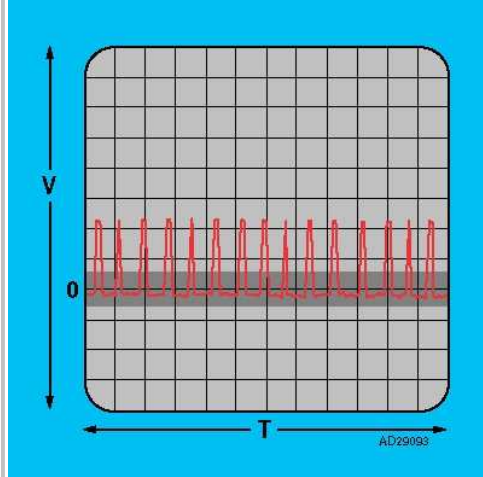
Cruise control master switch	38			Connected pin - no test data available or random digital signal		
Cruise control master switch	57			Connected pin - no test data available or random digital signal		
Cruise control selector switch	38			Connected pin - no test data available or random digital signal		
Cruise control selector switch	75			Connected pin - no test data available or random digital signal		
Cruise control selector switch	76			Connected pin - no test data available or random digital signal		
Earth	1		Ignition ON	0 V		
Earth	2		Ignition ON	0 V		
<a href="#">Engine control (EC) relay</a>	21		Ignition ON	0-1 V		
<a href="#">Engine control (EC) relay</a>	21		Engine idling	0-1 V		
<a href="#">Engine control (EC) relay</a>	121		Ignition ON	11-14 V		
<a href="#">Engine coolant temperature (ECT) sensor</a>	93		Ignition ON - coolant temp. 20°C	2,2 V		
<a href="#">Engine coolant temperature (ECT) sensor</a>	93		Ignition ON - coolant temp. 80°C	0,4 V		
<a href="#">Engine coolant temperature (ECT) sensor</a>	108		Ignition ON	0 V		
<a href="#">Evaporative emission (EVAP) canister purge valve</a>	64		Ignition ON	11-14 V briefly then 0-1 V		
<a href="#">Evaporative emission (EVAP) canister purge valve</a>	64		Engine running - engine hot - valve operating		10 V/5 ms	35
<a href="#">Fuel pump (FP) relay</a>	65		Ignition ON	0-1 V briefly then 11-14 V		
<a href="#">Fuel pump (FP) relay</a>	65		Engine idling	0-1 V		
<a href="#">Heated oxygen sensor (HO2S) 1</a>	51		Engine idling	2,5 V		
<a href="#">Heated oxygen sensor (HO2S) 1</a>	51 (70)		Engine idling	0,45 V		
<a href="#">Heated oxygen sensor (HO2S) 1</a>	52		Engine idling	2,34-2,55 V		
<a href="#">Heated oxygen sensor (HO2S) 1</a>	70		Engine idling	2,9 V		
<a href="#">Heated oxygen sensor (HO2S) 1</a>	70 (51)		Engine idling	0,45 V		
<a href="#">Heated oxygen sensor (HO2S) 1</a>	71		Engine idling	2,34-2,55 V		
<a href="#">Heated oxygen sensor (HO2S) 1 - heater control</a>	5				2 V/0,2 sec.	55
<a href="#">Heated oxygen sensor (HO2S) 2</a>	68		Ignition ON	0 V		
<a href="#">Heated oxygen sensor (HO2S) 2</a>	69		Engine idling - engine hot	0,6 V		
<a href="#">Heated oxygen sensor (HO2S) 2 - heater control</a>	63		Ignition ON	11-14 V briefly then 0-1 V		
<a href="#">Heated oxygen sensor (HO2S) 2</a>	63		Engine idling	0-1 V		
<a href="#">Ignition coil 1</a>	102		Ignition ON	0 V		
<a href="#">Ignition coil 1</a>	102		Engine idling		2 V/20 ms	62

<a href="#">Ignition coil 2</a>	95	⇒	Ignition ON	0 V		
<a href="#">Ignition coil 2</a>	95	⇒	Engine idling		2 V/20 ms	 62
<a href="#">Ignition coil 3</a>	103	⇒	Ignition ON	0 V		
<a href="#">Ignition coil 3</a>	103	⇒	Engine idling		2 V/20 ms	 62
<a href="#">Ignition coil 4</a>	94	⇒	Ignition ON	0 V		
<a href="#">Ignition coil 4</a>	94	⇒	Engine idling		2 V/20 ms	 62
Ignition switch	3	←	Ignition OFF	0 V		
Ignition switch	3	←	Ignition ON	11-14 V		
<a href="#">Injector 1</a>	96	⇒	Ignition ON	11-14 V briefly then 0-1 V		
<a href="#">Injector 1</a>	96	⇒	Engine idling	2,5 ms	10 V/2 ms	 35
<a href="#">Injector 2</a>	89	⇒	Ignition ON	11-14 V briefly then 0-1 V		
<a href="#">Injector 2</a>	89	⇒	Engine idling	2,5 ms	10 V/2 ms	 35
<a href="#">Injector 3</a>	97	⇒	Ignition ON	11-14 V briefly then 0-1 V		
<a href="#">Injector 3</a>	97	⇒	Engine idling	2,5 ms	10 V/2 ms	 35
<a href="#">Injector 4</a>	88	⇒	Ignition ON	11-14 V briefly then 0-1 V		
<a href="#">Injector 4</a>	88	⇒	Engine idling	2,5 ms	10 V/2 ms	 35
Instrumentation control module - diagnosis signal	43			Connected pin - no test data available or random digital signal		
Instrumentation control module - engine RPM signal	37	⇒	Engine idling	28 Hz		
Instrumentation control module - vehicle speed signal	54	←		Connected pin - no test data available or random digital signal		
<a href="#">Intake air temperature (IAT) sensor</a>	85	←	Ignition ON - air temp. 20°C	2,1 V		
<a href="#">Intake air temperature (IAT) sensor</a>	108	⇒	Ignition ON	0 V		
<a href="#">Knock sensor (KS) 1</a>	99	⇒	Engine idling	0 V		
<a href="#">Knock sensor (KS) 1</a>	106	←	Engine idling - accelerate briefly		50 mV/1 ms	 38
<a href="#">Knock sensor (KS) 1</a>	108	⇒	Ignition ON	0 V		
<a href="#">Knock sensor (KS) 2</a>	99	⇒	Engine idling	0 V		
<a href="#">Knock sensor (KS) 2</a>	107	←	Engine idling - accelerate briefly		50 mV/1 ms	 38
<a href="#">Knock sensor (KS) 2</a>	108	⇒	Ignition ON	0 V		
<a href="#">Mass air flow (MAF) sensor</a>	27	⇒	Ignition ON	0 V		
<a href="#">Mass air flow (MAF) sensor</a>	29	←	Engine idling	1,4 V		
<a href="#">Mass air flow (MAF) sensor</a>	53	⇒	Ignition ON	5 V		
<a href="#">Power steering pressure (PSP) switch</a>	49	←	Engine idling - steering wheel not turned	11-14 V		
<a href="#">Power steering pressure (PSP) switch</a>	49	←	Engine idling - steering wheel turned	0 V		

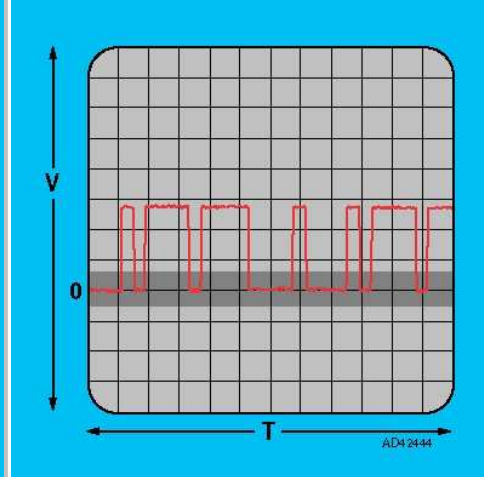
<a href="#">Power steering pressure (PSP) switch</a>	50		Ignition ON	0 V		
<a href="#">Secondary air injection (AIR) pump relay</a>	66		Ignition ON	11-14 V briefly then 0-1 V		
<a href="#">Secondary air injection (AIR) pump relay</a>	66		Engine running - pump OFF	11-14 V		
<a href="#">Secondary air injection (AIR) pump relay</a>	66		Engine running - pump ON	0-1 V		
<a href="#">Secondary air injection (AIR) solenoid</a>	9		Ignition ON	11-14 V briefly then 0-1 V		
<a href="#">Secondary air injection (AIR) solenoid</a>	9		Engine running - solenoid OFF	11-14 V		
<a href="#">Secondary air injection (AIR) solenoid</a>	9		Engine running - solenoid ON	0-1 V		
Spare cable	30			Connected pin - no test data available or random digital signal		
Spare cable	47			Connected pin - no test data available or random digital signal		
Spare cable	48			Connected pin - no test data available or random digital signal		
Spare cable	67			Connected pin - no test data available or random digital signal		
Spare cable	81			Connected pin - no test data available or random digital signal		
<a href="#">Throttle motor</a>	117		Ignition ON	11-14 V for 30 seconds then 3 V		
<a href="#">Throttle motor</a>	117		Ignition ON - accelerator pedal released		2 V/0,5 ms	
<a href="#">Throttle motor</a>	117		Ignition ON - accelerator pedal depressed		2 V/0,5 ms	
<a href="#">Throttle motor</a>	118		Ignition ON	11-14 V		
<a href="#">Throttle motor</a>	118		Engine idling	11-14 V		
<a href="#">Throttle motor position sensor</a>	83		Ignition ON	5 V		
<a href="#">Throttle motor position sensor</a>	84		Ignition ON - accelerator pedal released	4,3 V		
<a href="#">Throttle motor position sensor</a>	84		Ignition ON - accelerator pedal depressed	0,7 V		
<a href="#">Throttle motor position sensor</a>	91		Ignition ON	0 V		
<a href="#">Throttle motor position sensor</a>	92		Ignition ON - accelerator pedal released	0,7 V		
<a href="#">Throttle motor position sensor</a>	92		Ignition ON - accelerator pedal depressed	4,3 V		
<a href="#">Turbocharger (TC) bypass valve</a>	105		Ignition ON	11-14 V briefly then 0-1 V		
<a href="#">Turbocharger (TC) bypass valve</a>	105		Engine idling	11-14 V		
<a href="#">Turbocharger (TC) wastegate pressure sensor</a>	98		Ignition ON	5 V		

<a href="#">Turbocharger (TC) wastegate pressure sensor</a>	101	←	Ignition ON	1,9 V		
<a href="#">Turbocharger (TC) wastegate pressure sensor</a>	101	←	Engine idling	1,9 V		
<a href="#">Turbocharger (TC) wastegate pressure sensor</a>	108	↔	Ignition ON	0 V		
<a href="#">Turbocharger (TC) wastegate regulating valve</a>	104	↔→	Ignition ON	11-14 V briefly then 0-1 V		
<a href="#">Turbocharger (TC) wastegate regulating valve</a>	104	↔→	Engine idling	11-14 V		

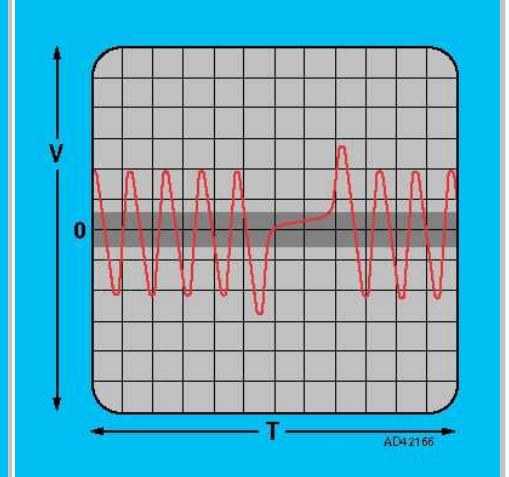
94. Digital, DC, frequency modulated



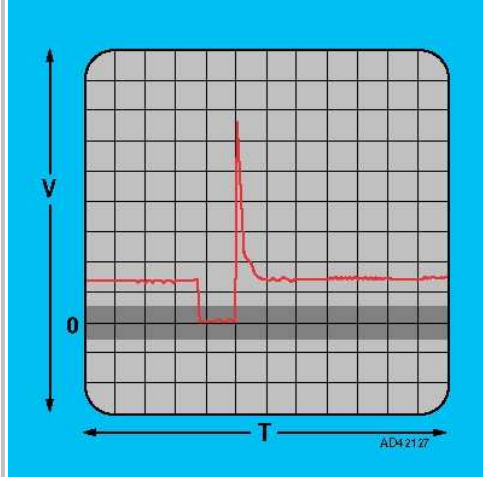
14. Digital, DC, frequency modulated



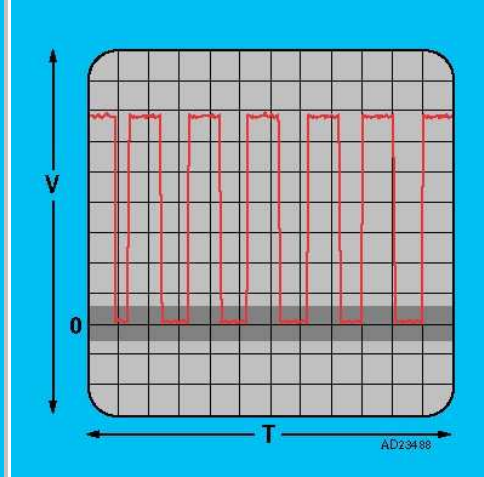
2. Analogue, AC, frequency modulated



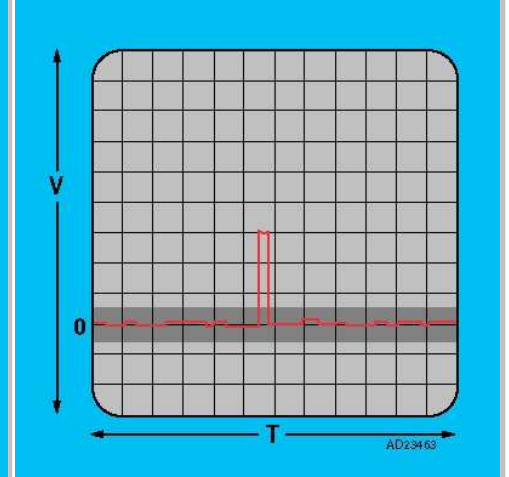
35. Digital, DC, pulse width modulated



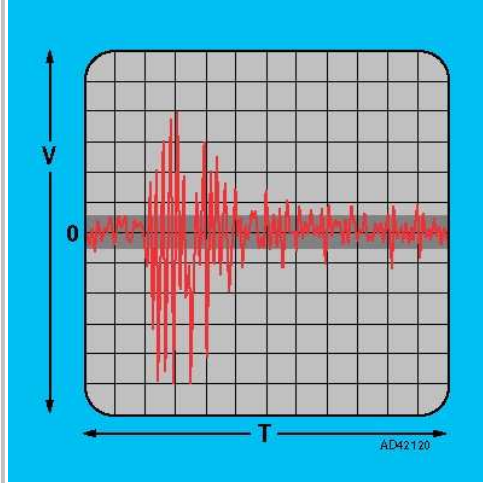
55. Digital, DC, frequency modulated



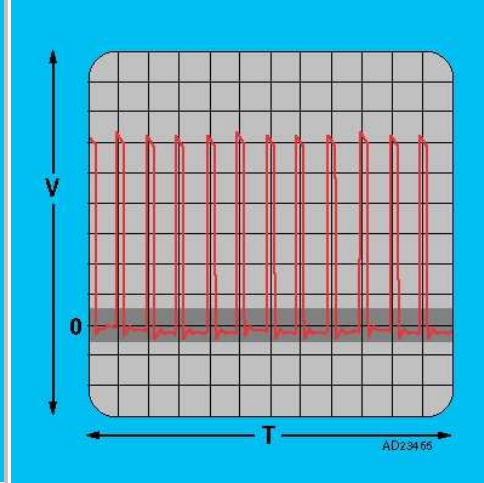
62. Digital, DC



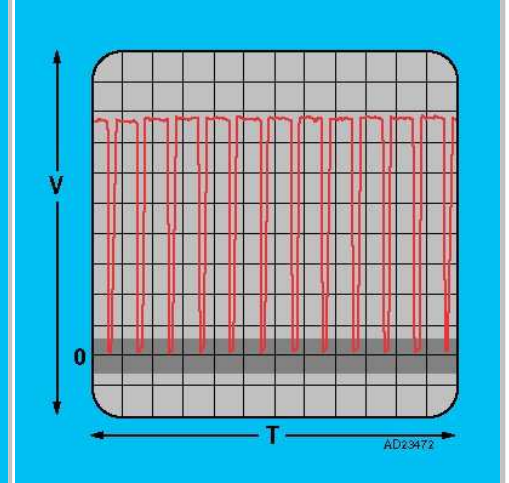
38. Analogue, AC








64. Digital, DC, frequency modulated



71. Digital, DC, pulse width modulated



	input/output signal
	input signal
	output signal
	ECM switched earth
	ECM earth circuit