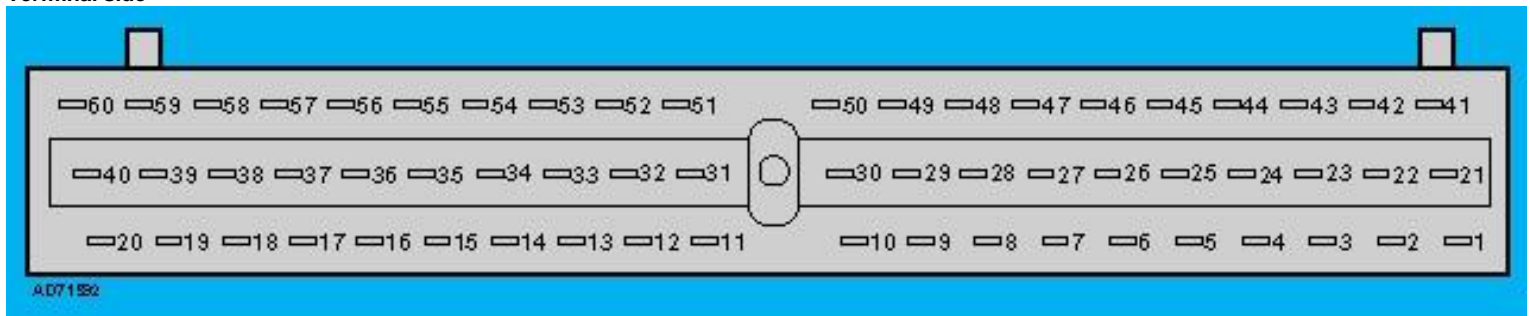


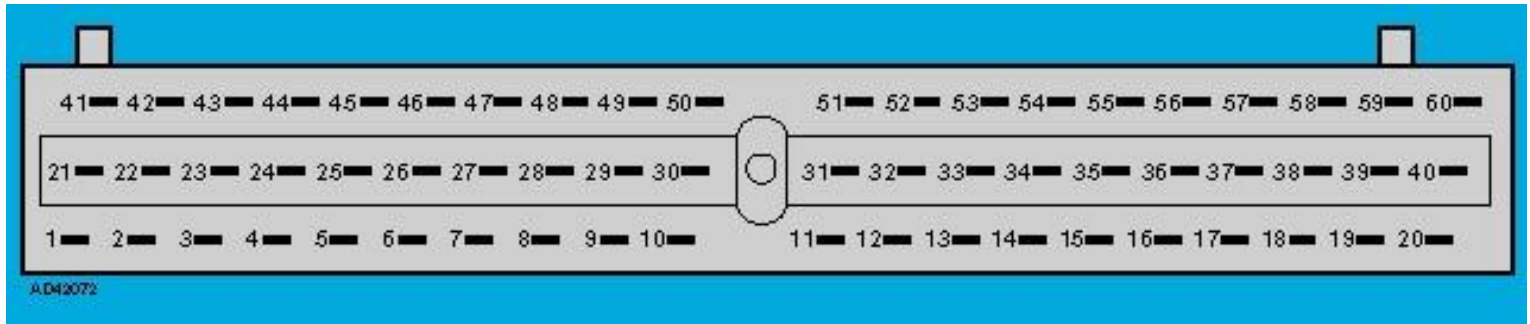
Telephone:
Fax:
VAT Registration No.:

Name:		Manufacturer:	Ford
Address:		Model:	
		Year:	1994
		Registration:	
Tel - Private:		Mileage:	
Tel - Business:		Job number:	

Terminal side



Wire side










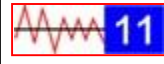












Component/circuit description	ECM pin	Signal	Condition	Typical value	Oscilloscope setting (Suggested settings - Voltage/time per division)	Wave form
AC compressor clutch relay - MT, with PATS	35		Engine idling - AC ON	11-14 V		

Manufacturer: Ford
Engine code: RKA
Tuned for: R-Cat

Model: Mondeo ('93) 1,8
Output: 85 (115) 5750
Year: 1993-96















© Autodata Limited 2004
10/9/2006
V5.373- **/Autodata**

AC compressor clutch relay	35		Engine idling - AC ON - accelerator pedal briefly fully depressed	0-1 V briefly		
AC compressor clutch relay - without PATS	54		Engine idling - AC ON	11-14 V		
AC compressor clutch relay	54		Engine idling - AC ON - accelerator pedal briefly fully depressed	0-1 V briefly		
Air conditioning	10		Engine idling - AC OFF	0 V		
Air conditioning	10		Engine idling - AC ON - AC compressor ON	11-14 V		
Air conditioning - AT, with PATS	12			Connected pin - no test data available or random digital signal		
Battery	1		Ignition OFF	11-14 V		
Brake pedal position (BPP) switch	2		Ignition ON - brake pedal released	0 V		
Brake pedal position (BPP) switch	2		Ignition ON - brake pedal depressed	11-14 V		
<u>Camshaft position (CMP) sensor</u>	24		Engine idling		5 V/20 ms	
<u>Camshaft position (CMP) sensor</u>	46		Engine idling	0 V		
<u>Crankshaft position (CKP) sensor - MT</u>	55		Engine idling	0 V		
<u>Crankshaft position (CKP) sensor</u>	56		Engine idling		2 V/1 ms	
Data link connector (DLC) 1 - 1993-94	17		Ignition OFF	0 V		
Data link connector (DLC) 1	17		Engine idling	11-14 V		
Data link connector (DLC) 1	48		Ignition OFF	0 V		
Data link connector (DLC) 1	48		Ignition ON	5 V		
Data link connector (DLC) 2	18		Ignition OFF	0 V		
Data link connector (DLC) 2	18		Ignition ON	5 V		
Data link connector (DLC) 2	19		Ignition OFF	0 V		
Data link connector (DLC) 2 - MT, with PATS 1996	49		Ignition OFF	0 V		
Data link connector (DLC) 3 - MT, with PATS 1995	49		Ignition OFF	0 V		

Manufacturer: Ford
Engine code: RKA
Tuned for: R-Cat

Model: Mondeo ('93) 1,8
Output: 85 (115) 5750
Year: 1993-96


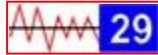
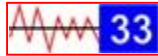


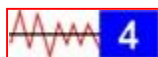
© Autodata Limited 2004
10/9/2006
V5.373- **/Autodata**

Digital multifunction display	34			Connected pin - no test data available or random digital signal		
Earth	20		Ignition ON	0 V		
Earth	40		Ignition ON	0 V		
Earth	60		Ignition ON	0 V		
Earth - MT	16		Ignition ON	0 V		
Earth - AT - through ignition control module (ICM)	16		Ignition ON	0 V		
<u>Engine control relay</u>	37		Ignition OFF	0 V		
<u>Engine control relay</u>	37		Ignition ON	11-14 V		
<u>Engine control relay</u>	57		Ignition OFF	0 V		
<u>Engine control relay</u>	57		Ignition ON	11-14 V		
Engine coolant blower motor relay 1	13			Connected pin - no test data available or random digital signal		
Engine coolant blower motor relay 2 - AC - AT, with PATS	15			Connected pin - no test data available or random digital signal		
Engine coolant blower motor relay 2 - AC - except AT, with PATS	31			Connected pin - no test data available or random digital signal		
<u>Engine coolant temperature (ECT) sensor</u>	7		Ignition ON - coolant temp. 0°C	3,8-3,9 V		
<u>Engine coolant temperature (ECT) sensor</u>	7		Ignition ON - coolant temp. 20°C	3-3,2 V		
<u>Engine coolant temperature (ECT) sensor</u>	7		Ignition ON - coolant temp. 80°C	0,6-0,9 V		
<u>Engine coolant temperature (ECT) sensor</u>	46		Ignition ON	0 V		
<u>Evaporative emission (EVAP) canister purge valve</u>	11 (37)		Engine idling - engine hot - valve not operating	0 V		
<u>Evaporative emission (EVAP) canister purge valve</u>	11 (37)		Engine under load - engine hot - valve operating	3-14 V		
<u>Evaporative emission (EVAP) canister purge valve</u>	11		Ignition ON	11-14 V		
<u>Evaporative emission (EVAP) canister purge valve</u>	11		Engine under load - engine hot - valve operating		10 V/50 ms	

Manufacturer: Ford
Engine code: RKA
Tuned for: R-Cat

Model: Mondeo ('93) 1,8
Output: 85 (115) 5750
Year: 1993-96

© Autodata Limited 2004
10/9/2006
V5.373- **/Autodata**

Exhaust gas recirculation (EGR) backpressure transducer	26	⇒	Ignition ON	5 V		
Exhaust gas recirculation (EGR) backpressure transducer	27	←	Engine idling	0,7 V		
Exhaust gas recirculation (EGR) backpressure transducer	27	←	Engine running	0,4-4 V - varies with pressure		
Exhaust gas recirculation (EGR) backpressure transducer	46	⇌	Ignition ON	0 V		
Exhaust gas recirculation (EGR) solenoid	33 (37)	⇌	Engine idling - engine hot	0 V		
Exhaust gas recirculation (EGR) solenoid	33 (37)	⇌	Accelerate briefly - engine hot	9-14 V		
Exhaust gas recirculation (EGR) solenoid	33	⇌	Ignition ON	11-14 V		
Fuel pump relay	8	←	Ignition ON	11-14 V briefly then 0 V		
Fuel pump relay	8	←	Engine cranking	9 V		
Fuel pump relay - AT, with PATS	58	⇌	Ignition ON	0-1 V briefly then 11-14 V		
Fuel pump relay	58	⇌	Engine cranking	0-1 V		
Fuel pump relay - MT, with PATS	53	⇌	Ignition ON	0-1 V briefly then 11-14 V		
Fuel pump relay	53	⇌	Engine cranking	0-1 V		
Fuel pump relay - without PATS	22	⇌	Ignition ON	0-1 V briefly then 11-14 V		
Fuel pump relay	22	⇌	Engine cranking	0-1 V		
Heated oxygen sensor (HO2S)	44	←	Engine idling - engine hot	0,1-0,9 V fluctuating	0,2 V/1 sec.	
Heated oxygen sensor (HO2S)	46	⇌	Engine idling - engine hot	0 V		
Idle air control (IAC) valve	21	⇌	Engine idling	9-11 V	2 V/5 ms	
Ignition coil - cylinders 1 & 4 - MT	58	⇌	Engine idling		5 V/1 ms	
Ignition coil - cylinders 2 & 3 - MT	59	⇌	Engine idling		5 V/1 ms	
Ignition control module (ICM) - AT	36	⇒	Engine idling		2 V/10 ms	
Ignition control module (ICM)	56	←	Engine idling		5 V/20 ms	

Manufacturer: Ford
Engine code: RKA
Tuned for: R-Cat

Model: Mondeo ('93) 1,8
Output: 85 (115) 5750
Year: 1993-96

© Autodata Limited 2004
10/9/2006
V5.373- **/Autodata**

Ignition control module (ICM)	4	←	Engine idling		2 V/10 ms	
Ignition switch - with PATS	45		Ignition OFF	0 V		
Ignition switch	45		Ignition ON	11-14 V		
<u>Injector 1</u> - AT, with PATS	51	⇨	Ignition ON	11-14 V		
<u>Injector 1</u>	51	⇨	Engine idling	3,2 ms	10 V/2 ms	
<u>Injector 1</u> - AT, without PATS	58	⇨	Ignition ON	11-14 V		
<u>Injector 1</u>	58	⇨	Engine idling	3,2 ms	10 V/2 ms	
<u>Injector 1</u> - MT, with PATS	15	⇨	Ignition ON	11-14 V		
<u>Injector 1</u>	15	⇨	Engine idling	3,2 ms	10 V/2 ms	
<u>Injector 1</u> - MT, without PATS	51	⇨	Ignition ON	11-14 V		
<u>Injector 1</u>	51	⇨	Engine idling	3,2 ms	10 V/2 ms	
<u>Injector 2</u> - AT, with PATS	52	⇨	Ignition ON	11-14 V		
<u>Injector 2</u>	52	⇨	Engine idling	3,2 ms	10 V/2 ms	
<u>Injector 2</u> - AT, without PATS	59	⇨	Ignition ON	11-14 V		
<u>Injector 2</u>	59	⇨	Engine idling	3,2 ms	10 V/2 ms	
<u>Injector 2</u> - MT, with PATS	12	⇨	Ignition ON	11-14 V		
<u>Injector 2</u>	12	⇨	Engine idling	3,2 ms	10 V/2 ms	
<u>Injector 2</u> - MT, without PATS	52	⇨	Ignition ON	11-14 V		
<u>Injector 2</u>	52	⇨	Engine idling	3,2 ms	10 V/2 ms	
<u>Injector 3</u> - AT, with PATS	42	⇨	Ignition ON	11-14 V		
<u>Injector 3</u>	42	⇨	Engine idling	3,2 ms	10 V/2 ms	
<u>Injector 3</u> - MT, with PATS	54	⇨	Ignition ON	11-14 V		
<u>Injector 3</u>	54	⇨	Engine idling	3,2 ms	10 V/2 ms	
<u>Injector 3</u> - without PATS	39	⇨	Ignition ON	11-14 V		

Manufacturer: Ford
Engine code: RKA
Tuned for: R-Cat

Model: Mondeo ('93) 1,8
Output: 85 (115) 5750
Year: 1993-96

© Autodata Limited 2004
10/9/2006
V5.373- ***/Autodata***

Injector 3	39		Engine idling	3,2 ms	10 V/2 ms	
Injector 4 - AT, with PATS	54		Ignition ON	11-14 V		
Injector 4	54		Engine idling	3,2 ms	10 V/2 ms	
Injector 4 - MT, with PATS	42		Ignition ON	11-14 V		
Injector 4	42		Engine idling	3,2 ms	10 V/2 ms	
Injector 4 - without PATS	35		Ignition ON	11-14 V		
Injector 4	35		Engine idling	3,2 ms	10 V/2 ms	
Instrument panel - some MT models, with PATS	39			Connected pin - no test data available or random digital signal		
Instrumentation control module - AT	41			Connected pin - no test data available or random digital signal		
Intake air temperature (IAT) sensor	46		Ignition ON	0 V		
Intake air temperature (IAT) sensor - signal	25		Ignition ON - air temp. 0°C	3,8-3,9 V		
Intake air temperature (IAT) sensor	25		Ignition ON - air temp. 20°C	3-3,2 V		
Intake air temperature (IAT) sensor	25		Ignition ON - air temp. 60°C	1,2-1,4 V		
Mass air flow (MAF) sensor	9		Ignition ON	0 V		
Mass air flow (MAF) sensor	50		Engine idling - engine hot	0,8 V		
Mass air flow (MAF) sensor	50		3000 rpm	1,7 V		
Octane coding plug - 1995-96	46		Ignition ON	0 V		
Octane coding plug - AT	29		Engine idling	0 V		
Octane coding plug - MT, with PATS	29		Engine idling	0 V		
Octane coding plug - MT, without PATS	42		Engine idling	0 V		
Passive anti-theft system (PATS) - MT	5			Connected pin - no test data available or random digital signal		

Manufacturer: Ford
Engine code: RKA
Tuned for: R-Cat

Model: Mondeo ('93) 1,8
Output: 85 (115) 5750
Year: 1993-96

© Autodata Limited 2004
10/9/2006
V5.373- **/Autodata**

Passive anti-theft system (PATS)	38			Connected pin - no test data available or random digital signal		
Passive anti-theft system (PATS)	41			Connected pin - no test data available or random digital signal		
Power steering pressure (PSP) switch	28	←	Engine idling - steering wheel not turned	0 V		
Power steering pressure (PSP) switch	28	←	Engine idling - steering wheel turned	9 V		
Power steering pressure (PSP) switch - 1995-96	46	←	Ignition ON	0 V		
<u>Pulsed secondary air injection (PAIR) solenoid</u>	14 (37)	⇨	Engine idling - engine cold	9-14 V		
<u>Pulsed secondary air injection (PAIR) solenoid</u>	14 (37)	⇨	Engine idling - engine hot	0 V		
<u>Pulsed secondary air injection (PAIR) solenoid</u>	14	⇨	Ignition ON	11-14 V		
Spare cable - 1995-96	17			Connected pin - no test data available or random digital signal		
Starter motor relay - MT, with PATS	32	⇨	Engine cranking	0-1 V		
Tachometer - MT	4	⇒		Connected pin - no test data available or random digital signal		
<u>Throttle position (TP) sensor</u>	26	⇒	Ignition ON	5 V		
<u>Throttle position (TP) sensor</u>	46	⇨	Ignition ON	0 V		
<u>Throttle position (TP) sensor</u>	47	←	Ignition ON - throttle closed	0,8-1,2 V		
<u>Throttle position (TP) sensor</u>	47	←	Ignition ON - throttle fully open	4,3-4,8 V		
Transmission fluid temperature sensor	46	⇨	Ignition ON	0 V		
Transmission fluid temperature sensor - with PATS	23	←		Connected pin - no test data available or random digital signal		
Transmission fluid temperature sensor - without PATS	49	←		Connected pin - no test data available or random digital signal		
Transmission mode selection switch - AT, with PATS	22	←	Engine idling - economy mode selected	11-14 V		

Manufacturer: Ford
Engine code: RKA
Tuned for: R-Cat

Model: Mondeo ('93) 1,8
Output: 85 (115) 5750
Year: 1993-96

© Autodata Limited 2004
10/9/2006
V5.373- ***/Autodata***

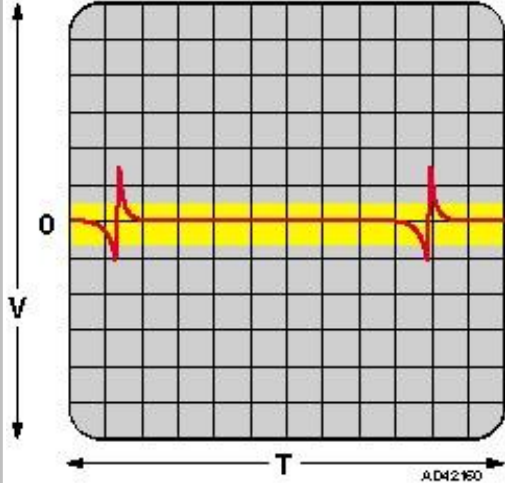
Transmission mode selection switch	22	←	Engine idling - sport mode selected	0 V		
Transmission mode selection switch - AT, without PATS	42	←	Engine idling - economy mode selected	11-14 V		
Transmission mode selection switch	42	←	Engine idling - sport mode selected	0 V		
Transmission range (TR) switch	30	←	Ignition ON - AT in P	4,5 V		
Transmission range (TR) switch	30	←	Ignition ON - AT in R	3,7 V		
Transmission range (TR) switch	30	←	Ignition ON - AT in N	2,9 V		
Transmission range (TR) switch	30	←	Ignition ON - AT in D	2,2 V		
Transmission range (TR) switch	30	←	Ignition ON - AT in 2	1,4 V		
Transmission range (TR) switch	30	←	Ignition ON - AT in 1	0,7 V		
Transmission range (TR) switch	46	↔	Ignition ON	0 V		
Transmission valve block - AT	38	↔		Connected pin - no test data available or random digital signal		
Transmission valve block	53	↔	Ignition ON	11-14 V		
Transmission valve block	55	→	Engine idling	8,5 V		
Transmission valve block - AT, with PATS	39	↔		Connected pin - no test data available or random digital signal		
Transmission valve block	59	↔		Connected pin - no test data available or random digital signal		
Transmission valve block - AT, without PATS	51	↔		Connected pin - no test data available or random digital signal		
Transmission valve block	52	↔		Connected pin - no test data available or random digital signal		
Transmission vehicle speed sensor - AT	5	←		Connected pin - no test data available or random digital signal		
Transmission vehicle speed sensor	46	↔	Vehicle moving	0 V		
<u>Vehicle speed sensor (VSS)</u>	3	←	Ignition ON - vehicle pushed	0 V or 11-14 V		
<u>Vehicle speed sensor (VSS)</u>	3	←	Vehicle moving		5 V/50 ms	

Manufacturer: Ford
Engine code: RKA
Tuned for: R-Cat

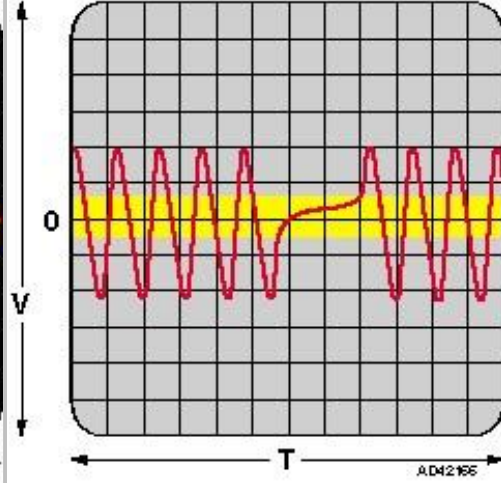
Model: Mondeo ('93) 1,8
Output: 85 (115) 5750
Year: 1993-96

© Autodata Limited 2004
10/9/2006
V5.373- **/Autodata**

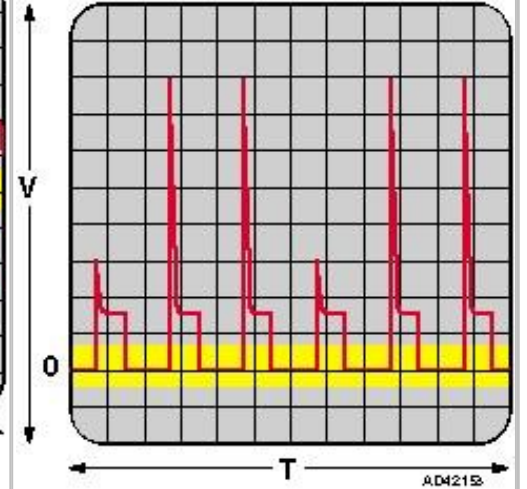
11. Analogue, AC, frequency modulated



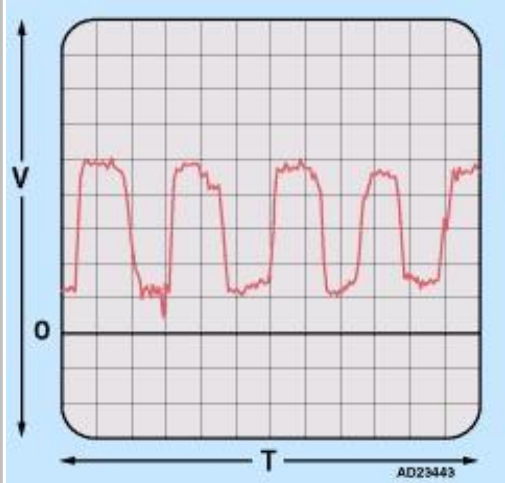
2. Analogue, AC, frequency modulated



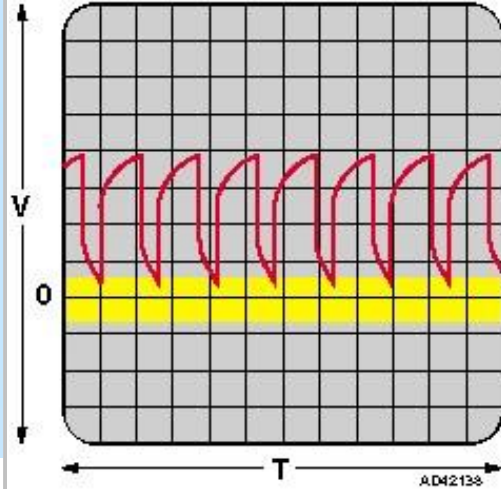
20. Digital, DC, pulse width modulated or digital, DC, frequency modulated



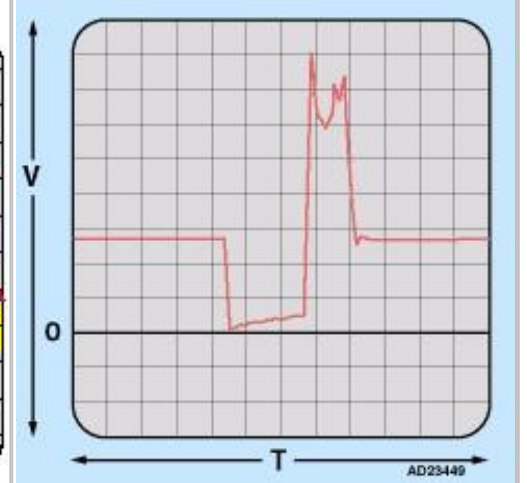
21. Analogue, DC



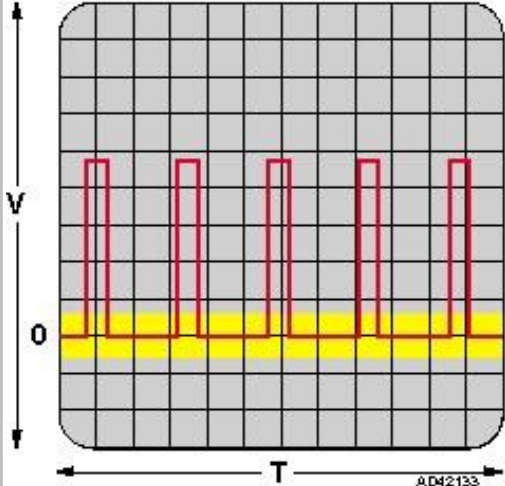
29. Digital, DC, pulse width modulated or digital, DC, frequency modulated



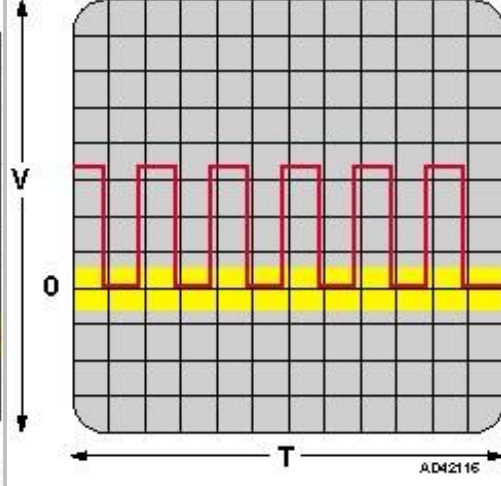
33. Digital, DC, frequency modulated



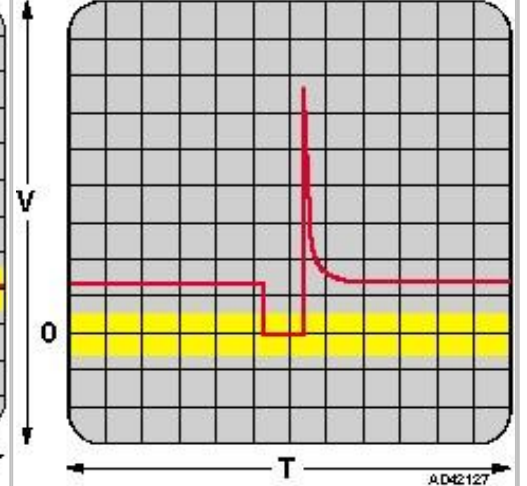
32. Digital, DC, frequency modulated



4. Digital, DC, frequency modulated



35. Digital, DC, pulse width modulated

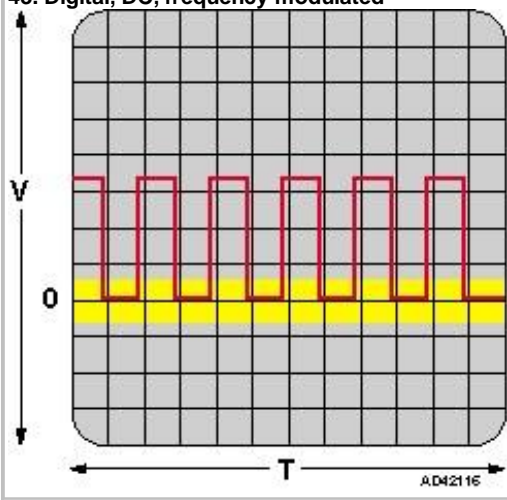


Manufacturer: Ford
Engine code: RKA
Tuned for: R-Cat

Model: Mondeo ('93) 1,8
Output: 85 (115) 5750
Year: 1993-96

© Autodata Limited 2004
10/9/2006
V5.373- **/Autodata**

43. Digital, DC, frequency modulated



Manufacturer: Ford
Engine code: RKA
Tuned for: R-Cat

Model: Mondeo ('93) 1,8
Output: 85 (115) 5750
Year: 1993-96

© Autodata Limited 2004
10/9/2006
V5.373- ***/Autodata***