

Алматы (7273)495-231
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922)49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89

Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (3522)50-90-47
Липецк (4742)52-20-81

Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Ноябрьск (3496)41-32-12
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37

Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Саранск (8342)22-96-24
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97

Тверь (4822)63-31-35
Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Улан-Удэ (3012)59-97-51
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Чебоксары (8352)28-53-07
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
Ярославль (4852)69-52-93

Россия +7(495)268-04-70

Казахстан +7(7172)727-132

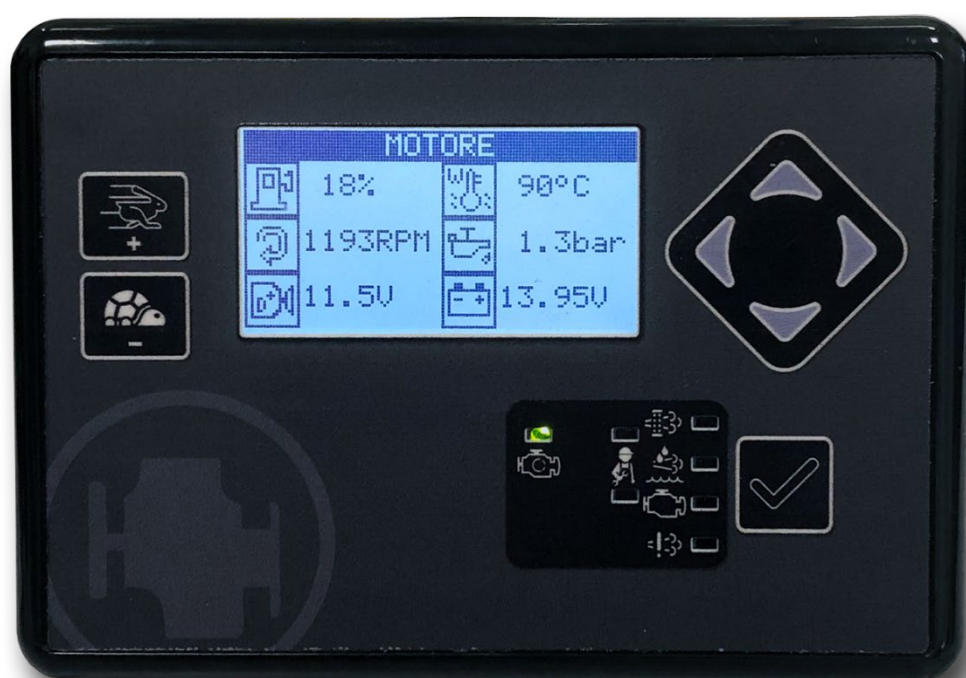
Киргизия +996(312)96-26-47

www.elkos.nt-rt.ru | | eow@nt-rt.ru

Технические характеристики на блоки управления и защиты дизельных двигателей, приборные панели СЕР-337, DIP-337, СЕР-090 компании **ELCOS**

DIP-337

Performs control and protection functions for a diesel engine. Connect the protection and control unit to an external starter key. Enables manual adjustment of the engine rpm and stopping if a fault occurs.



USER'S MANUAL

TECHNICAL SPECIFICATIONS

Power supply			
Suitable for batteries		12Vdc	24Vdc
Operating range		8–48Vdc	
Absorption with engine not running		280mA@12Vdc	175mA@24Vdc
Absorption with key in zero position		15mA@12Vdc	8mA@24Vdc
Voltage dip on battery power supply		From 10Vdc to 0Vdc for 15ms	
Digital inputs [30], [41], [42], [51], [52]			
Type of input		Negative	
Maximum current supplied		1mA	
Voltage threshold for low signal		≤ 0.7Vdc	
Voltage threshold for high signal		≥ 1.2Vdc	
Digital inputs [23], [24]			
Type of input		Positive	
Maximum input current		0.6mA@48Vdc	
Voltage threshold for low signal		≤ 1.8Vdc	
Voltage threshold for high signal		≥ 2.3Vdc	
Terminal input [65]			
AC voltage		5.5–65Vac	
Measurement range		50 to 1500Hz	
Pick-up input terminals [63-64]			
AC voltage		1.5–15Vac	
Measurement range		300 to 15000Hz	
Minimum pick-up impedance		>400ohm	
Digital outputs			
Type of output		Positive (battery voltage)	
[6], [19], [70]	Type	BATT+ [1]	
	Maximum load	0.25A	
[15]	Type	Power emergency input [4A]	
	Maximum load	0.25A	
[17]	Type	Power emergency input [4A]	
	Maximum load	1.5A	
Outputs K1, K2, K3			
Type of output		Clean contact with shared COM	
Maximum applicable voltage		48Vdc, 65Vac	
Maximum load		3 A (AC1)	
Engine instruments			
Oil pressure	0–360ohm	0.0 ÷ 9.0BAR	0–900kPa
Temperature	0–3000ohm	0–140 °C	0 to 284°F
Fuel level	0–360ohm	0–100%	
Accuracy (pressure gauge, thermometer, fuel level)		± 2%	
Lines of communication			
RS232 (no optoisolator)	Baud-rate	1200 ÷ 115200 bps	
	Parity	None/even	
RS485 (optoisolated)	Baud-rate	1200 ÷ 115200 bps	
	Parity	None/even	
USB 2.0 (Micro USB-B)	Interface	Not isolated. Maximum cable length 3 m.	
CAN Bus (no optoisolator)	Baud-rate	250kbps	
	Protocol	SAE J1939	
Environmental conditions			
Operating temperature		-20 to 60 °C	
Storage temperature		-20 to 60 °C	
Relative humidity		≤ 80%	
Protection class			
Back		IP 20	
Front		IP 54	
Container			
Weight		480g	
Dimensions (LxHxD)		157x109x74mm	
Perforations		137x88mm	
Material		PC/ABS V0	
Terminals			
Screw		M3	
Max. section		2.5mm²	
Installation			
Wall-mounted			
Nuts	Thread	M4	
	Tightening torque	1.0 ÷ 1.5 Nm	

INFORMATION FOR ORDERING

Type	Item Code
DIP-337	00026615

STANDARD ACCESSORIES

Type	Item Code
Connector kit MU DIP-337	40804438

ACCESSORIES AVAILABLE ON REQUEST

Type		Item Code
AST-015/00	Rod electrode, including accessories	40241012
E-25	Screw electrodes, including accessories	40190115
VAR-201 12V	Linear actuators	00571547
VAR-201 24V	Linear actuators	00571548
ZW-SMART	Programming software	00070212

CEP-337

Performs control and protection functions for a diesel engine. Enables starting and stopping by key.



INSTALLATION MANUAL

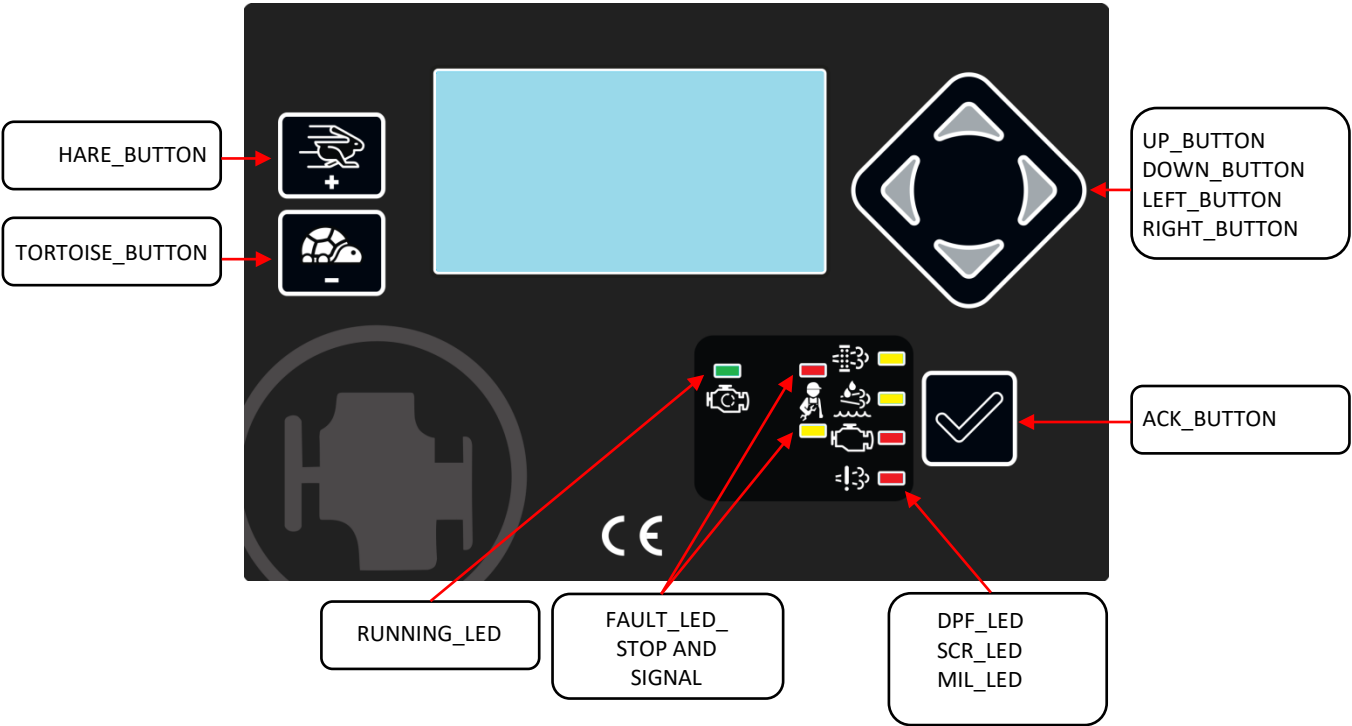
Complete with:

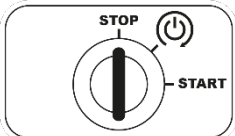
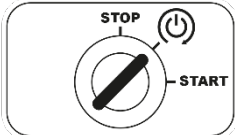
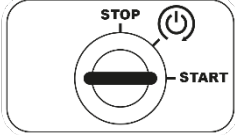
- Control unit for diesel engine type DIP-337.
- Starting Key.

On-board machine installation.

CHRONOLOGY OF MANUAL REVISIONS			
Date	Revision	Description	Page
30/08/2021	0.01	First release	
15/09/2021	0.02	Wiring Diagrams added	

INSTRUCTIONS IN BRIEF



STARTING KEY	
	- Rest - Manual stop - Fault reset
	- Control unit power supply - Led light test - Setting - Gloow plug activation
	Engine start up

- UP_, DOWN_, RIGHT_ and Used to browse display menus. They silence the alarm.
- LEFT_BUTTON.....
- HARE_, TORTOISE_BUTTON.....To accelerate and decelerate the engine. When the control unit is on, the buttons are always enabled, even when the engine is stopped.
- ACK_BUTTONConfirms the action.
- STOP_FAULT_LEDFlashing light points to the presence of a fault that causes a stop; steady light indicates a RED STOP fault active in the ECU.
- SIGNAL_FAULT_LED.....Signals the presence of a fault that does not cause a stop; steady light indicates an AMBER WARNING fault active in the ECU.
- RUNNING_LED.....Running engine detected by the control unit.
- SCR_LEDIndicates SCR system faults.
- DPF_LEDIndicates DPF system faults.
- MIL_LEDIndicates an engine derate due to a problem with the SCR or DPF.

TECHNICAL SPECIFICATIONS			
Power supply [RED], [GRAY]			
Suitable for batteries		12Vdc	24Vdc
Operating range		8 ÷ 48Vdc	
Absorption with engine not running		280mA@12Vdc	175mA@24Vdc
Absorption with key in zero position		15mA@12Vdc	8mA@24Vdc
Voltage dip on battery power supply		From 10Vdc to 0Vdc for 15ms	
Digital inputs [ORANGE], [LIGHT BLUE], [WHITE], [VIOLET], [ORANGE /BROWN]			
Type of input		Negative	
Maximum current supplied		1mA	
Voltage threshold for low signal		≤ 0,7Vdc	
Voltage threshold for high signal		≥ 1,2Vdc	
W Input[WHITE / RED]			
AC voltage		5,5 ÷ 65Vac	
Measurement range		50 ÷ 1500Hz	
A and B connector outputs			
Type of output		Positive (battery voltage) [RED]	
Maximum load	[BROWN], [RED /GREEN], [BROWN/BLUE]	0,25A	
	[BLACK]	30A not continuous	
	[YELLOW]	3A	
E connector outputs			
Type of output		Positive (battery voltage) [RED]	
Maximum load	[PINK]	3A	
	[GREEN], [YELLOW], [BROWN]	0,25A	
Engine instruments			
Oil pressure [WHITE /GREEN]	0 ÷ 360ohm	0,0 ÷ 9,0BAR	0 ÷ 900kPa
Temperature [WHITE /VIOLET]	0 ÷ 3000ohm	0 ÷ 140°C	0 ÷ 284°F
Fuel level [ORANGE/BLUE]	0 ÷ 360ohm	0 ÷ 100%	
Accuracy (pressure gauge, thermometer, fuel level)		±2%	
Environmental conditions			
Operating temperature		-20 ÷ 60°C	
Storage temperature		-20 ÷ 60°C	
Relative humidity		≤ 80%	
Protection class			
Back		IP 20	
Front		IP 54	
Container			
Weight		2300g	
Dimensions (LxHxD)		270x230x185mm	
Material		ABS V0	

INFORMATION FOR ORDERING		
Type		Item Code
CEP-337		00210545

STANDARD ACCESSORIES		
Type		Item Code
PRE-WIRED FEMALE CONNECTOR TYPE CEP-461		70804385
EMERGENCY BRIDGE CONNECTOR KIT		70804415
CEP-337 CONNECTOR KIT		40804377

ACCESSORIES AVAILABLE ON REQUEST		
Type		Item Code
AST-015/00	Rod electrode, including accessories	40241012
E-25	Screw electrodes, including accessories	40190115
VAR-201 12V	Linear actuators	00571547
VAR-201 24V	Linear actuators	00571548

CONTROL UNITS FOR ENGINE CONTROL AND PROTECTION TYPE CEP-090

INSTRUCTION AND USE MANUAL



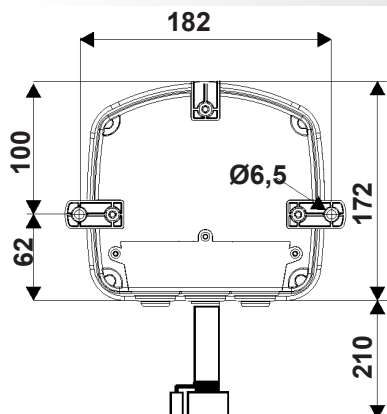
It is equipped with display to show the INSTRUMENTS:

- hour-meter
- fuel level indicator
- tachometer
- battery voltmeter

To be requested from the manufacturer

- Automatic supervision of faults with messages on the display
- Texts in 6 languages: Italian, English, French, German, Spanish and Portuguese
- Preheating glow plugs management

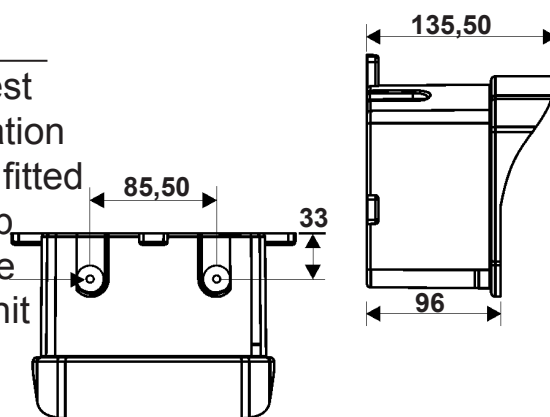
DIMENSIONS



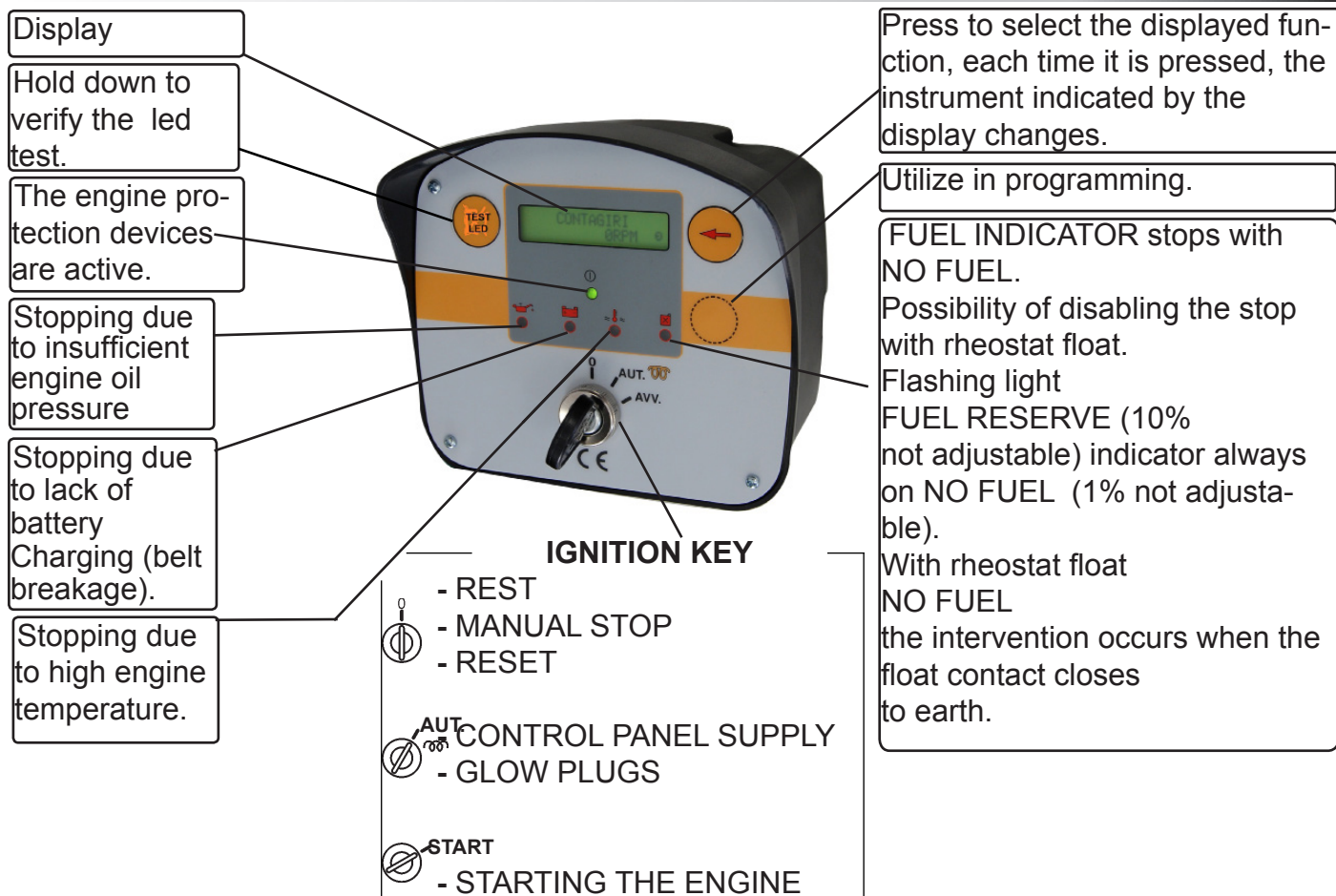
Fixing system

With two or three clamps

On request with vibration dampers fitted on the top part of the control unit



BRIEF INSTRUCTIONS



INSTRUMENTS

- **TACHOMETER** Displays the number of engine revs up to 8500 rpm.
- **TOTAL HOUR-METER** Displays five digits and a maximum reading of 59999 (hours and minutes).
- **FUEL LEVEL GAUGE** Displays the percentage of fuel present in the tank
- **BATTERY VOLTMETER** For voltages ranging between 9 and 38 Volt.

TECHNICAL DATA

Battery voltage supply	12 Vdc 24 Vdc
Voltage supply	8 ÷ 32V
Circuit loading with key at zero	2,5mA a 12V 2mA a 24V
Maximum Consumption	230 mA a 12V 180 mA a 24V
Tachometer	Max 4000 RPM precision ± 10 RPM
Instruments precision: battery voltmeter, fuel level	1%
Max. load of the output:	
• stopping (yellow)	3A
• general alarm (red/green)	3A
• preheating (blue/orange)	3A
• starting (black)	40A
Degree of protection:	
Box front	IP54
Rear	IP23
Connector	IP20
Temperature range	-20 ÷ +60°C
Weight	950 g

ORDERING DATA

Type CEP-090

cod. 00210721

ACCESSORIES KIT

Pre- wired female type CEP-090
kit rods CEP-CEM

cod. 70804336

cod. 40804362

ACCESSORIES ON REQUEST

SUPPORT FOR INSTALLATION ON BASE CRU-003

CODE 40493384

Алматы (7273)495-231
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922)49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89

Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (3522)50-90-47
Липецк (4742)52-20-81

Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Ноябрьск (3496)41-32-12
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37

Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Саранск (8342)22-96-24
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97

Тверь (4822)63-31-35
Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Улан-Удэ (3012)59-97-51
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Чебоксары (8352)28-53-07
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
Ярославль (4852)69-52-93

Россия +7(495)268-04-70

Казахстан +7(7172)727-132

Киргизия +996(312)96-26-47