ЭКРАН

ELECTRIC DRIVE WITH A STABLE SPEED OF 29EPSS

screen

Scientific and production

unification

" Screen "

factory

moskinap

electric drive

with a stable speed

29epss

Passport

29EPSS, 00. 000 PS

contents

1. PURPOSE OF THE ELECTRIC DRIVE

The electric drive with a stabilized speed of 29EPSS is pre-designated for actuating the mechanism of the Kinor 16SH and 16SH-M camera.

2. TECHNICAL SPECIFICATIONS

2.1. The technical characteristics of the electric drive must correspond to those specified in Table 1.

Table 1

Name	Norms	Note
1. Power source - rechargeable battery of 8 type batteries SPS-5 voltage, V	12+2.4 -1,2	
2. Turning speed, rpm	1500	
3. The range of change of the load torque on the output shaft, fuel	200-1000	
4. Stabilization of the speed of rotation of the output shaft, %, no more	±2	
5. The maximum current consumed from the power supply at a torque on the shaft of 500 Gsm, A, no more than	4, 5	
G. The sound level of the electric drive at idle is dB "A", no more	35	
7. The voltage applied to the illumination lamps, V	8-12	
8. The amplitude of the "start-kmpulsa" on load 1000 ohms, V	8-12	
9. The amplitude of the "pilot tone" signal, at a load of 150 ohms, In	1,5±0,2	
Coefficient of nonlinear distortion, % no more	15	
10. Working position of the electric drive	any	

Continuation of table 1

Name	Norms	Note
11. Operating position of the power supply	vertical	
12. Permissible angle of inclination of the power supply, deg., no more than	45	
13. Overall dimensions, mm, no more:		
electric drive	255x102x145	
of the power supply unit	226x136x74	
14. Weight, kg, no more:		
electric drive	2,5	
of the power supply unit	1,8	
15. Ambient operating temperature,		
With: electric drive	from minus 30 to +40	
power supply unit	from O to +40	
High relative humidity of the air at a temperature of +20 ± 5 °C, %, no more	95	
16. Maximum permissible values of the exposure temperature, °C:		
to the electric drive	from +50 to minus 40	
on the power supply unit	from +40 to minus 30	

3. THE COMPOSITION OF THE ELECTRIC DRIVE AND THE SCOPE OF DELIVERY

3. 1. The composition of the electric drive and the delivery package must correspond to the specified in Table 2.

Table 2

Designation	Name	Stake.	Overall dimensions, mm	Mass, Factory-number kg	Note
29EPSS 01 000	Electronic unit	1	131x98x70	0.8	are mounted and are delivered in a single unit
29EPSS,02.000	Electric motor unit-tel	1	255x102x94	1,7	
10EP-16APK,03,000	Block power supply (with dry-batteries and a capacity with an electric-cast)	1	155x85x50	0,5	
29EPSS00010	Power cable	1	1200	0,5	
29EPSS00 060	Cable cord-NY	1	3000	0,6	
71.K. 000	Pilot-tone cable	1	10 000	0,5	
29EPSS,08,000	Suitcase	1	367x271x272	5.5	
29EPSS.00.000PS	Passport	1 copy			
	Spare parts Kit: OCT16.0.535				
014-74 CMN-9-60-2	lightbulb	3			
OY0,480,003 TU	Fuse 5A Fork	5			
oY0,364.002 TU	RSH2N-1-6	1			
29EPSS,00,050	Socket	2			
29EPSS,00, 010	Power cable	1			

4. THE DEVICE AND THE PRINCIPLE OF OPERATION OF THE ELECTRIC DRIVE

4. 1. The electric drive (Fig. 1) consists of a motor unit 1 and an electronic unit 2, forming a single structure.

4. 2. The electric motor unit is a glass with a DC electric motor mounted in it. The output shaft of the engine is connected via a coupling to a gearbox having a gear ratio of 2: 1. There is a connector on the gearbox housing through which the signal "start. howl of illumination". The output shaft drives the mechanism of the film - shooting apparatus. A handle with a switch-on button 3 is attached to the gearbox housing , which has a lock in the switched-on state.

4. 3. The electronic unit consists of a board and a power tralzistor enclosed in a casing. All electrical elements of the circuit are mounted on the board. On the side wall of the electronic unit there is a pre- keeper 5, a connector 4 designed for connecting the "pilot-tone" cable, a connector 6 designed for connecting a power cable or an extension cable (Fig. 3). The indicator light 7 serves to monitor the discharge of the battery battery. The light bulb gorenje indicates a normal charge of the accumulator battery. When the battery is discharged below 10.3-10.8 V, the light bulb will not light.

4. 4. The power supply unit (Fig. 2) is a container, on the top cover of which there is a connector for connecting the power cable. A carrying strap is attached to the power supply. Eight SCS-5 batteries are installed in the con-tainer. The power supply is switched on by a toggle switch located next to the connector.

4. 5. The principle of operation of the electric drive can be considered according to the scheme shown in Fig. 4.

A feedback signal amplifier is assembled on the transistor T1 , which is removed from the tachogenerator M1, rigidly connected to the rotor of the electric drive motor.

The feedback voltage affects the current value of the transistor T2 and acts in antiphase with the reference voltage removed from the divider R8, R9, R10. Thus, the magnitude of the collector current T2, and, accordingly, the voltage at R11, depend on

the ratio of the true and set speed of the electric drive. This voltage, acting on the moshness amplifier assembled on the TZ, T4, T5, T6 granzistors, maintains the speed of rotation of the drive motor unchanged.

A time relay is assembled on the T7 transistors, which generates a "starting light" signal at the moment the electric drive is turned on and provides a "pilot tone" signal after the "starting light" signal is turned off.

The circuit of the battery discharge indication device is assembled on transistors T9, T10, T11 and the light bulb L1 .

When the supply voltage is below the permissible value, the L1 bulb goes out.

5. INDICATION OF SECURITY MEASURES

5.1. The power supply unit must be in a vertical position to exclude the possibility of leakage of the electrolyte , Deviation from the vertical position is allowed no more than 45 °.

5.2. When the electric drive is operating in the temperature range from O to minus 250C, the battery pack must be kept at a temperature not lower than 0 ° C.

5.3. Storage of batteries should be carried out in clean, well-ventilated rooms separately from the electric drive kit,

6. PREPARING THE ELECTRIC DRIVE FOR work and working procedure

6. 1. When preparing for work, check the strength of the cable connection and the fastening strength of the belt for carrying the unit power supply.

6. 2. If it is necessary to increase the distance between the camera and the power supply, instead of the power cable, connect the extension cable (Fig. 4), on which there is a trigger button for remote activation of the electric drive unit.

6. 3. Before connecting the cable to the electric drive, check the polarity on the SHZ connector (on pin 1-2 there should be a "-", on pin 3-4 there should be a "+").

Connect the power cable (or extension cable).

6. 4. Check the operation of the electric drive at idle by turning it on with the start button 3 or the button on the extension cable when working with the extension cord. Turn on the power supply with a toggle switch.

6. 5. Check the voltage indicator (light bulb L1) to see if the battery pack is lit. The light bulb should be a handful.

After that, you can install the electric drive on the ashnarat.

6. 6. When working, observe cyclicity:

with a 120m cassette: work - 10min, , pause - at least 2 min.

The total number of pickles is 2, then a break of at least 10 minutes. It is recommended to disconnect the power cable during the break.

6. 7. At the end of operation, disconnect the electric drive with the start button 3 (or the button on the extension cable) and disconnect the power cable.

6. 8. If necessary, the synchronous operation of the camera with magneto- background sound level is recorded on the main magnetic phonogram recorders "Nagra-1ST", "Nagra 4. 2". For PE- transmission start-momentum must signal connector W 4-3 in to give connector magnitofona Pilot (contacts 1-2, 1 - generic).

When working with other magnetosphones, the start- pulse should not be used.

To record a synchro signal on tape recorders, a signal is used

"Pilot tone" (connector W 4-2). Connection to domestic tape recorders and tape recorders "Reporter 5P", "Reporter 6P" (BNF) must be made according to the instructions for the operation of the existing upgrades. When working with the Nagra tape-recorder, the synchro signal is fed to the Pilot connector (contacts 1-4,1st).

7. Maintenance

7. 1. When putting the product into operation and during operation, the following documents should be followed-volume,

7. 2. During the operation, it is necessary to monitor the condition of the batteries and when the voltage is lowered, neither-the same permissible should be put on the batteries for charging.

7. 3. Batteries that have become unusable during operation must be handed over to the Moscow plant t secondary precious metals for the extraction of silver by address:

Moscow, E-318, Ibragimov str., 6-a.

8. CHARACTERISTIC MALFUNCTIONS AND METHODS OF THEIR ELIMINATION

8. 1. The list of characteristic malfunctions and methods of their elimination are given in Table 3

Table 3

Name of faults, external manifestation and additional signs	Probable cause	Method of elimination	Application
1. When the drive is switched on, a/ The output shaft is burnt out, it does not turn, protect- the light bulb is not lit.	a/Replace the fuse b/Broken contact in the power supply	b/Close the	
2. When the drive is turned on, the output shaft turns off, the lamp kidney does not burn	a/Discharged the battery b/Burned out the signal lamp L1	b/Replace lamp	
3. The starting light does not work or the "Pilot tone" or "Start pulse" signals are not sent to the external circuit	a/No commu- tov relay P1	a/Replace the contact relay P1	

8. 2. When eliminating defects, it is forbidden to install parts that do not correspond to the list of elements to the scheme instead of those that have failed (Table 3).

9. TRANSPORTATION AND STORAGE

9. 1. The electric drive must be adaptable to storage in the conditions of group "L" and transportation in the conditions of yah group "Zh2" according to GOST 15150-69.

9.2. When transporting by air , the electric drive must be located in heated, hermetized compartments.

9.3. During loading and transportation, it is necessary to protect the boxes from falling and bumps and observe the rules of transportation.

9.4. Yashiki must be fixed in vehicles so that during transportation the possibility of their displacement and impacts is excluded.

9.5. When transporting yashiki, it is necessary to protect them from moisture penetration and heating by direct sunlight, covering them with a tarpaulin.

9.6. Electric drives should be stored in boxes in the normal position on racks.

9.7. It is not allowed to store electric drives near heat sources, near windows that transmit direct rays, as well as storage together with acids, alkalis or chemically active gases and vapors that cause corrosion.

10. certificate of acceptance

Electric drive with stabilized speed 29 EPSS

factory number __820500 2_____соответствует meets the technical conditions of 29EPSS, O0. SOO TU and is recognized as suitable for operation.

OTH
M. P. No. 62)

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Head of the Department

The presence of precious metals and alloys contained in the product

Name-name and brand of precious metal and alloy	Where it includes		Weight, mg	
	name	designation	on the component part	in total
Gold	Zener diode semi-conductor	D818E CM3.362.0. 45 TU	0, 7186	2, 1558
Silver	Zener diode	Д818ЕСМ3.362.045 TU	0,0260	0, 0780
Gold	Zener diode	Д814Б СМ.362.012 TU	1,1019	1,1019
Silver	Battery	SIS-5 GOST 12616-67	41,000	328,000
Silver	El, engine	DPR-72Ф6-060РН.515.234 TU	44,966	44,966
SrMgNCr-99	Relersch.591003P2	RES-15 RCC.325.037 TU	28, 43	28, 43
Silver	Transistor	П210Б GOST 14875-75	29, 29	85, 85
Gold	Transistor	КТ807БГе3.365, 005 TU	0,1122	0, 1122
Gold	Transistor	КТ315Г ЖК3.365. 200 TU	1,2701	3, 8103
Gold	Transistor	КТ361Д ФЫ0.336, TU 201	1, 43	1, 43
Gold	Transistor	КТ203Б ШЫ0.336. 001 TU	13,0401	26,0802
Silver	Fork	РПММ1-20SH1 Ке0.364.000 TU	188,6	188, 6
Silver	Socket	РПММ1-20Г8Ке0.364.270 000 TU, 1		270, 1

The presence of precious metals and alloys contained in the product

Naim enova- name and brand of precious metal and alloy	Where come in t		Weight, mg	
	name	designation	on the component part	total
Silver	Fork	RSH2N-1-5 OY0.364.002 TU	26, 88	53, 76
Silver	Socket	RG1N-1-1 0YU0. 364, 002 TU	39, 47	118, 41
Silver	Microswitch MP7 OYO, 360, 007 TU		148, 1	148, 1
Platinum	Microswitch MP7 OYO, 360, 007 TU		37,032	37,032
Silver	Switch	P2T-1-1 0YU0.360.028 TU	1, 22	1, 22
Silver	Switch PDM1-1	0K0.360.009 TU	739	739
Silver	Socket	PC 10B AVO.364. 052 TU	151.73	151.73

11. Warranty obligations

The manufacturer guarantees the normal operation of the 29EPSS electric drive if the consumer complies with the operating rules established by this passport, The warranty period is set at 18 months, but no more than 150 hours of operating time from the date of commissioning.

The warranty period does not include the storage time of electric water in the warehouse, but no more than 6 months from the date of receipt electric drive by the consumer.

During the warranty period, the manufacturer is obliged to eliminate defects free of charge under the condition of proper operation of the electric drive,

12. information about complaints

12.1. Complaints may be submitted during the warranty period, subject to compliance with the rules of operation of the electric drive in accordance with this passport,

12. 2. Information about complaints is entered in Table 4

Table 4

Summary	Measures taken

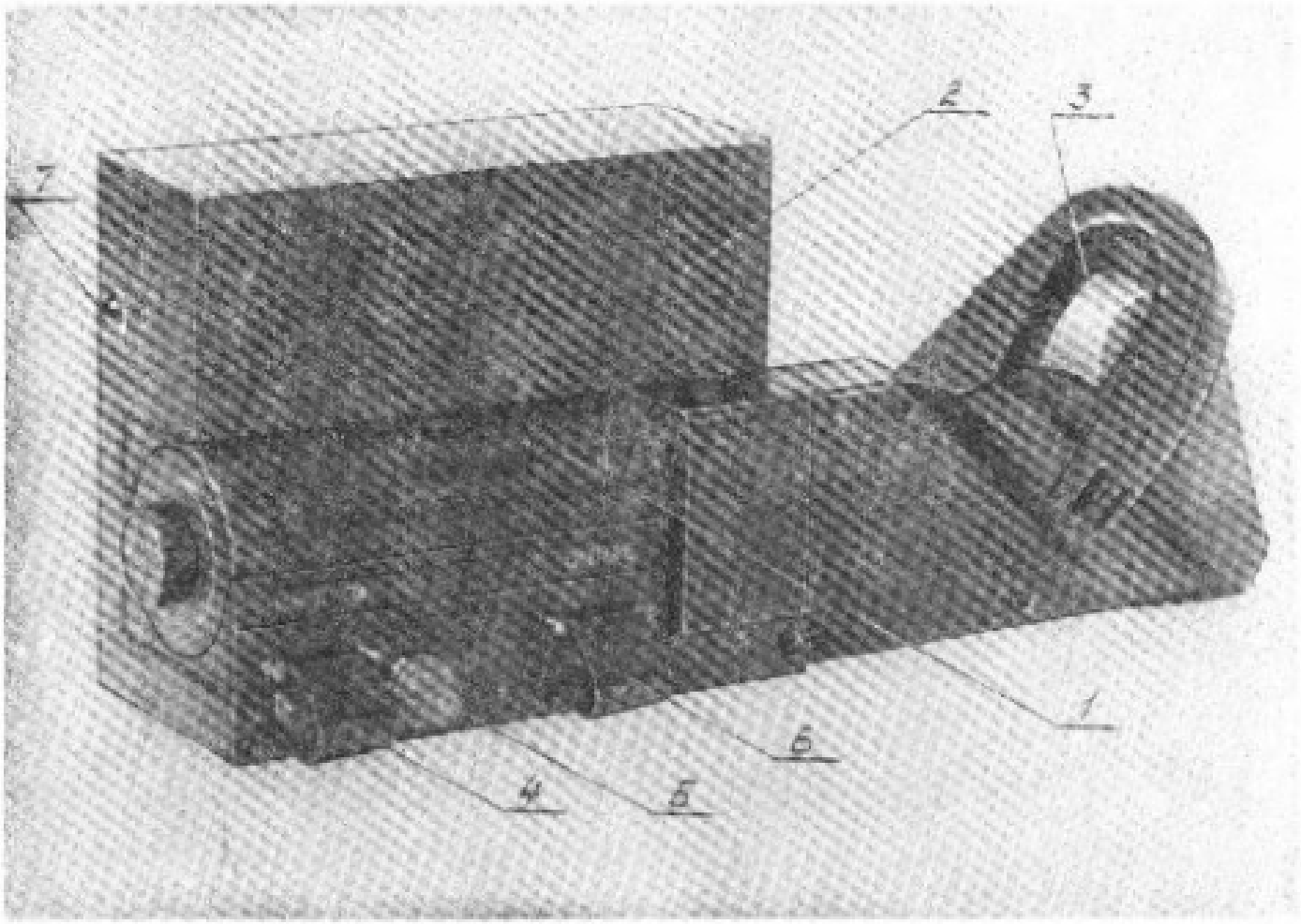


Fig. 1. Electric drive unit

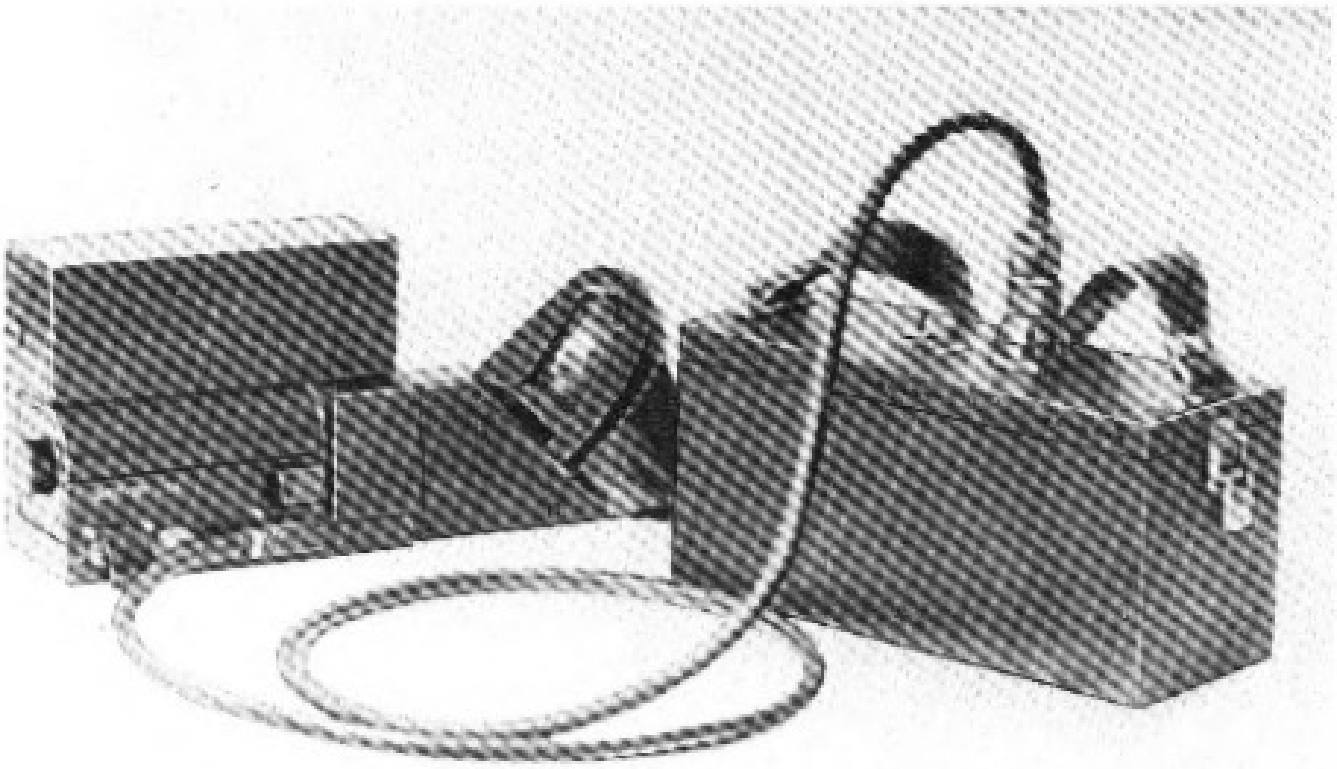


Fig. 2. Electric drive unit
with a power supply

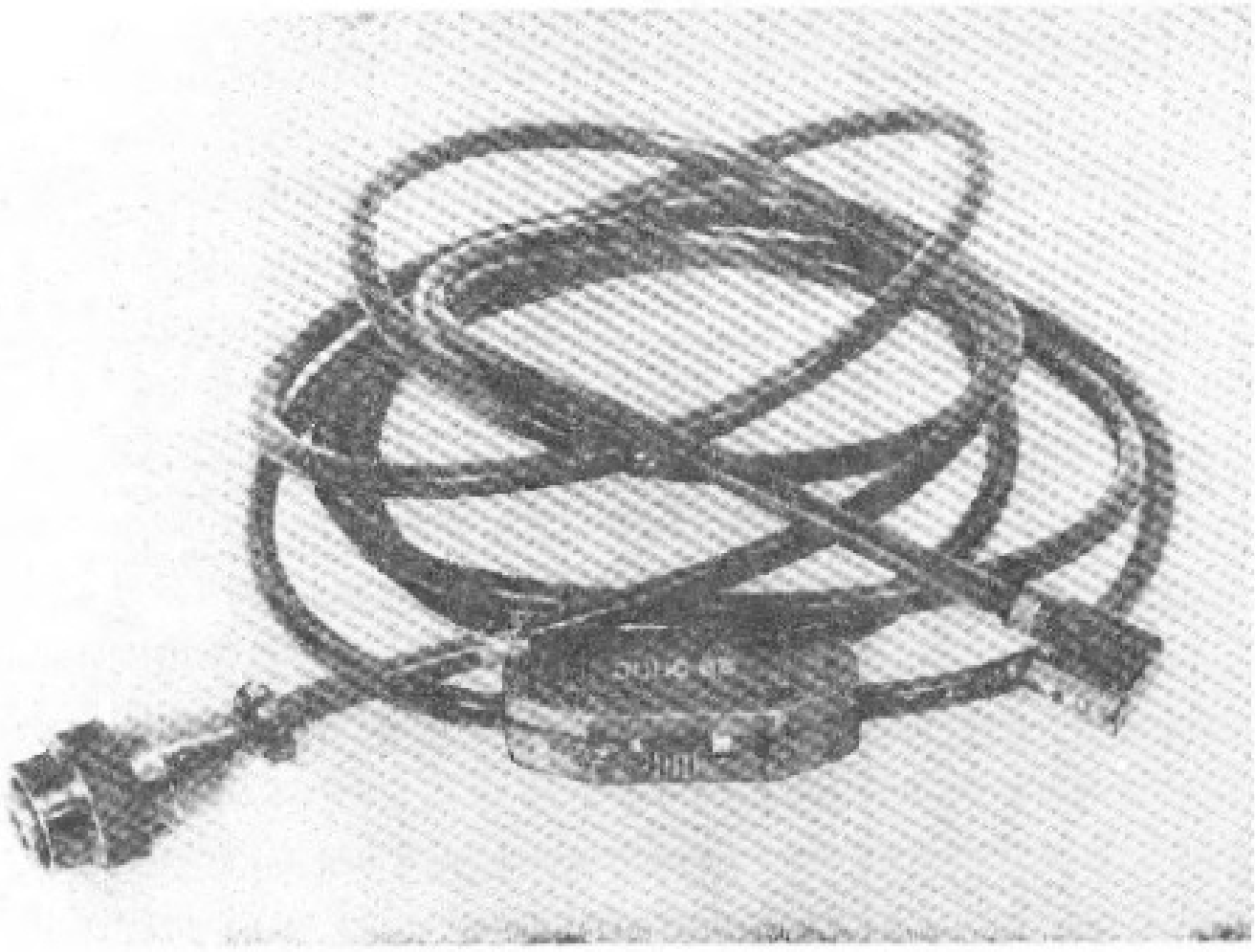
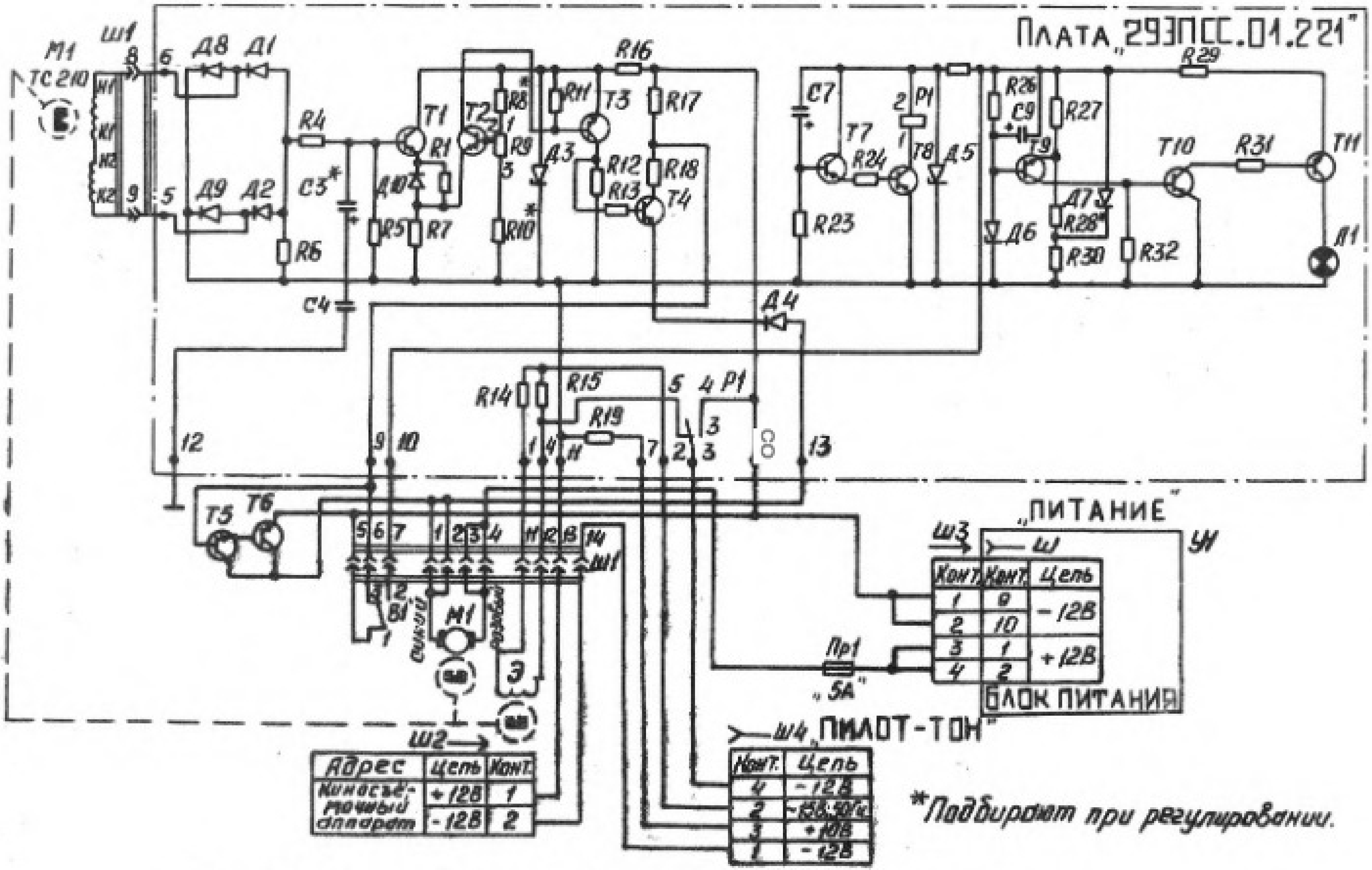


Fig. 3. Extension cable



*Подбирают при регулировании.

Рис. 4. Схема электрическая принципиальная.

list

elements to the diagram (fig. 4)

Table 5

Pos. The zone of identification	Name	Number, Note
	GOST 7113-77 RESISTORS	
P1	MLT-0.25-680 ohms 25%	1
R4	mLT"0.25-4.7 kOhm ±5%	1
R5	mIT-0.25-10 kOhm ±5%	1
R6	mIT-0.25-5.1 kOhm #5%	1
R7	MLT-0.25-3.3 kOhm - 5%	1
R8	mLT-0.25-4.7 kOhm - 5%	1 3.9. . 5.6 kOm
R9	Resistor SP5-2-1B1-680Om25% OZHO. 468. 506 TU	1
R10	MLT-0, 25-1, 3 kOhm - 5%	1 1.5. . 2.4 kOm
R11	MLT-0, 25-4,7 kom #5%	1
R12	MLT-0,25-8,2 kOhm # 5%	1
R13	MLT-0,25-4.7 kω -5%	1
R14	MLT-0,25-39 Ohms ±5%	1
R15	MLT-0, 5-62 Ohm 25%	1
R16	MLT-0, 25-180 Ohm 25%	1
R17	MLT-0, 25-2, 4 kOhm -5%	1
R18	MLT-1-270 Ohm 15%	1
R19	MLT-0, 25-150 Ohm -5%	1
R23	MLT-0, 25 -43 com - 5%	1
R24	MLT-0, 25-220 ohms #5%	1
R25	mLT-0, 25-150 ohms -5%	1

Continuation of table 5

Pos. The zone of identification	The name of va ni e	Number of	Notes
	R26 MLT-0, 25-510 Ohm - 5%	1	
	R27 MLT-0, 25-2 kOhm - 5%	1	
	R28 MLT-0, 25-8,2 kOhm - 5%	1	9.1.13 kOm
	R29 MLT-0, 25-150 Ohm -5%	1	
	R30 MLT-0, 25-150 Ohm - 5%	1	
	R31 MLT-0, 25-8, 2 kOhm - 5%	1	
	R32 MLT-0, 25-5, 6 kOhm -5%	1	
	capacitors		
	C3 K53-1- 6-10-10 % OZH0.464.023 TU	1	22 uf, 33 uf
	C4 KM-6-H90-1 mcf OZHO.460.061 TU	1	
	C7 K53 1- 6-10-10 % OZHO464.023 TU	1	
	C8 K53-1-15-4,7210% OZHO. 464. 023 TU	1	
	B1 Microswitch MP7 OKO, 360, 007 TU	1	
	D1, D2 Diode DEB GOST 14342-75	2	
	DZ Zener diode semiconductor D814B SEE 362. 012 TU	1	
	D4 Semiconductor diode CD202B UZHZ. 362. 036 TU	1	
	D5...D7 Semiconductor zener diode D818D SMZ, 362, 045 TU	3	
	D8, DE Diode DEB GOST 14342-75	2	
	D10 Semiconductor diode D223A GOST 14343-69	1	

Continuation of table 5

Pos. The zone of identification	Hiring	Number, Note
L1	Lamp SMN9-60-2 OST 16. 0, 535, 014-74	1
M1	Electric motor DPR-72-F6-06 with TS-210 U2 TU16.515. 190-76	1
PR1	Fuse VP1-1-5A OYO, 480. 0OZ TU	1
P1	Relay RES-15 RSCH.591.003 P12: RSO. 325. 037 TU	1
	transistors	
T1, T2	MP41A GOST 14948-73	2
TK	KTZ15G ZHKZ. 365. 20S TU	1
T4	MP41A GOST 14948-73	1
T5	KT807B Ge3, 365, 005 TU	1
T6	KT908B Ge3, 365, 012 TU	1
T7, T8	KT203B SHYO. 336. 001 TU	2
T9	CT361d fy0.336. 201 tU	1
T10, T11	KT315G LC3.365, 200 TU	2
Sh1	Fork RPMM1-20SH1 KeO, 364, 00O TU	1
	Socket RPMM1-20G1 Ke0. 364. 0O0 TU	1
Sh2	Connector 10EPS, 02. 160	1
SHZ	Fork RSH2N-1-5 0YU0.364.002TU	1
W4	Socket RG1N-1-1 OKO. 364. 002 TU	1
e	"Pilot-tone" 29 EPSS, 02. 130	1
U1	Power supply unit 10EP-16APK 03.000	1