

ПУ-main drive motor control switch

Contact No.	Contact terminal No.	Wire No. acc. to diagram	Operating duty		
			reverse running	stop	working travel
ПУ-2	1-2	4-5	—	—	×
ПУ-3	3-4	4-10	×	—	—
ПУ-1	5-6	4-17	—	×	—
ПУ-4	7-8	12-17	—	×	—

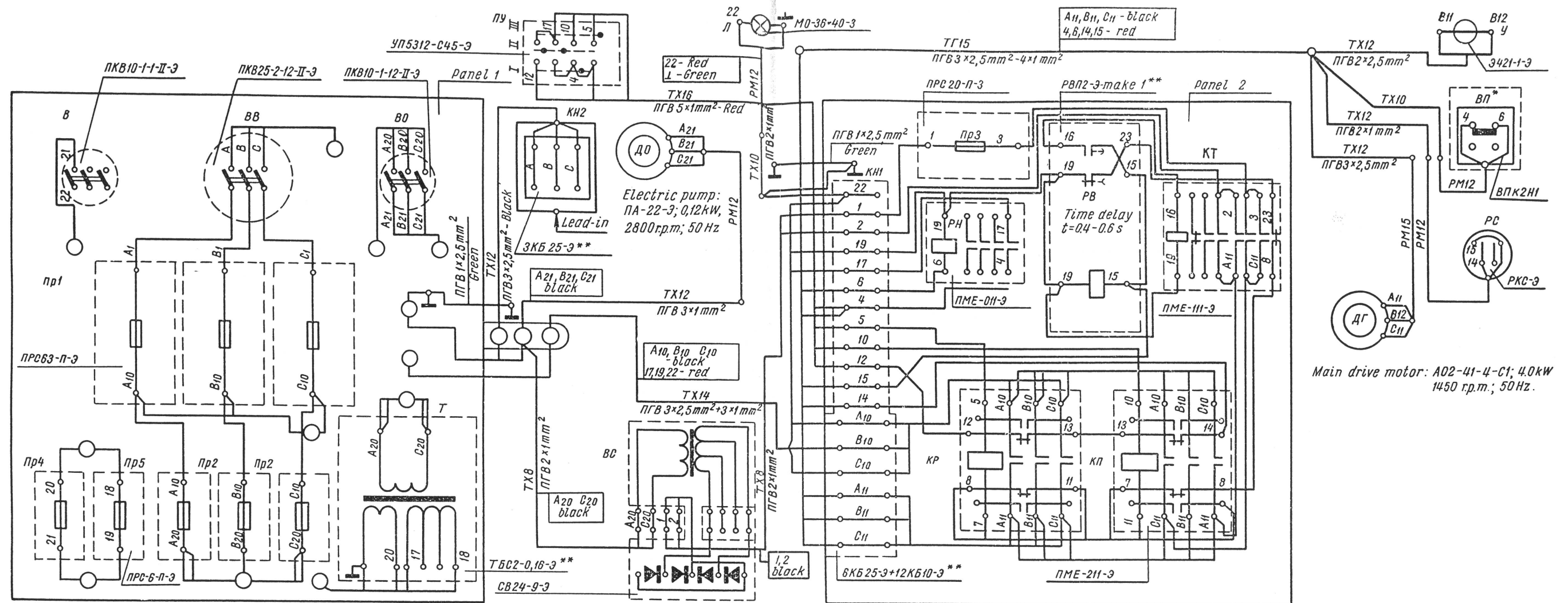
Purpose	Main drive (ДГ)	Cooling (ДО)
Type	Р02-41-4-С1 Р02-42-4-С1 *	ПА-22
Power, KW	4.0	0.12
Speed, r.p.m.	1450	2800
Model	М101	—

Designation	Name	Number of contacts		Type
		closed	open	
BB	Cut-in switch	3		ПКВ25-2-12-II
BO	Switch of electric pump for cutter cooling	3		ПКВ10-1-12-II
B	Lighting switch	1		ПКВ10-1-1-II
ПУ	Control switch			УН5312-045
np1	Fuse			ПРС-83-П
np3	Fuse			ПРС-20-П
np2, np4, np5	Fuse			ПРС-8-П
T	Step-down transformer			Т6С2-0.16 ***
BC	Selenium rectifier			СВ24-9
КР	Contactor of motor ДГ working travel	3	2	ПМЕ-2Н
КП	Contactor of motor ДГ reverse running	3	2	ПМЕ-2Н
КТ	Contactor of motor ДГ braking	2	1	ПМЕ-1Н
PH	Voltage relay	1		ПМЕ-011
PB	Relay switching on braking contactor КТ	1	1	РВН2 make 1
PC	Relay controlling motor ДГ speed	2		РКС
ВН	Limit switch			ВНК 211 **
У	Load indicator			Э421.1
Л	Lighting lamp			МО35-40 07 С-13

The machines with the 220V operating voltage are equipped with contactors КР, КП type ПА-311.

- \*) Only for tropicalized models.
- \*\*) Modification with a limit switch-for interlocking the chuck protecting device.
- \*\*\*) Transformer Т6С3-0.16, time relay РВН 2111 can also be installed.

Fig.1. Key Circuit Diagram



Connection of Magnetic Starters КР and КН in Lathes with 220V Operating Voltage

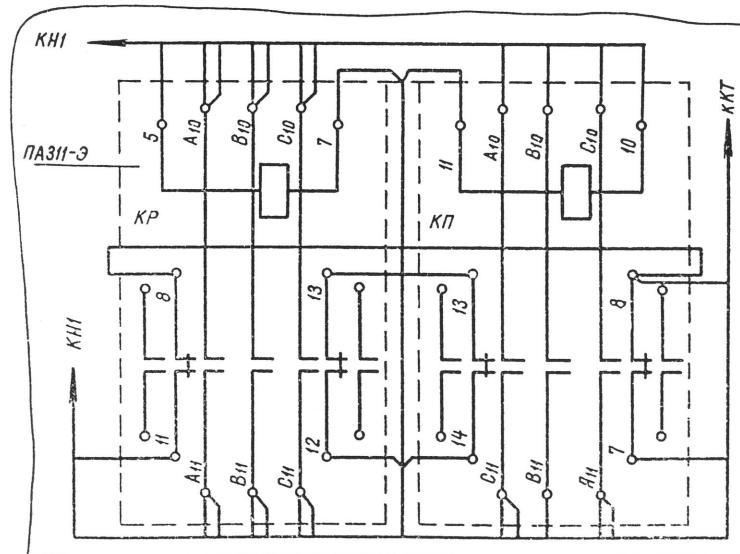
Fuse designation in the diagram	Fusible link rated currents, A	
	220V	380V
пр1	60	35
пр2	4	
пр3	20	
пр4	2	
пр5	1	

Connections on Panel 1

<i>Circuit designation</i>	<i>Apparatus designations in the diagram</i>	<i>Wire grade and cross-sectional area</i>	<i>Colour code of wire</i>
<i>A<sub>1</sub>, B<sub>1</sub>, C<sub>1</sub></i>	<i>ВВ - пр1</i>	<i>пв-2,5mm<sup>2</sup></i>	<i>black</i>
<i>A<sub>10</sub>, B<sub>10</sub>, C<sub>10</sub></i>	<i>пр1 - пр2</i>	<i>пв-1,0mm<sup>2</sup></i>	
<i>A<sub>20</sub>, B<sub>20</sub>, C<sub>20</sub></i>	<i>пр2 - В0</i>		
<i>A<sub>20</sub>, C<sub>20</sub></i>	<i>пр2 - Т</i>		
<i>18</i>	<i>пр5 - Т</i>		
<i>20</i>	<i>пр4 - Т</i>		<i>red</i>
<i>21</i>	<i>пр4 - В</i>		

Connections on Panel 2

Circuit designation	Apparatus designations in the diagram	Wiregrade and cross-sectional area	Colour code of wire
A <sub>10</sub> , B <sub>10</sub> , C <sub>10</sub>	КР-КН-КН1	ПВ-2,5mm²	black
A <sub>11</sub> , B <sub>11</sub> , C <sub>11</sub>	КР-КН-КН1		
A <sub>11</sub> , C <sub>11</sub>	КН-КТ		
1	пр3-КН1		
2	КТ-КН1	ПВ-1,0mm²	red
3	пр3-КТ		
4,6	РН-КН1		
5	КР-КН1		
7	КР-КН		
8	КР-КН-КТ		
10	КН-КН1		
11	КН-КР		
12	КР-КН1		
13	КР-КН		
14	КН-КН1		
15	РВ-КН1		
16	РВ-КТ		
17	РН-КН1		
19	КТ-РВ-РН-КН1		
23	КТ-РВ		



- \*) Modification with a limit switch - for interlocking the chuck protecting device.  
 \*\*) Transformer Т5С3-0,16, time relay ПВН211, and terminals series 3НП25 can also be used.

- The lathes with the 220V operating voltage are equipped with contactors КР, КН type ПА-311-3, which are connected as is shown in the diagram.
- At 60Hz frequency the speeds of the main drive and electric pump motors are 1750 r.p.m. and 3360 r.p.m., respectively.
- If the local lighting voltage is 24V, a lamp type С13 is used.

Fig. 2. Wiring Diagram