



Tilt sensor DU-180

DATASHEET

Date D
Serial number S

1 GENERAL PRODUCT INFORMATION

1.1 Tilt sensor ESCORT DU-180 is designed to measure the angular position of the tiltable parts of various machines and mechanisms (shovel bucket, lifting crane arm).

1.2 It is designed to work with monitoring systems. Ensures transmission of the exact tilt angle of the controlled mechanism to the monitoring program, and data output on the time curve.

1.3 DO NOT DISASSEMBLE THE SENSOR!

1.4 DO NOT EXCEED THE OPERATING CHARACTERISTICS SPECIFIED IN THE CERTIFICATE!

1.5 PREVENT MECHANICAL DAMAGE OF THE METER COMPONENTS, CONNECTING WIRES AND CABLES DURING INSTALLATION AND OPERATION.

2 SPECIFICATIONS

Parameter	Value / units
Measurement axes	3
Measuring range	0 ... 180°
Operating modes	digital, frequency, switch discrete outputs
Digital mode: - communications protocol - data communication rate	RS-485 19200 bps
Measurement error	±1°
Temperature nonlinearity, %/°C	±0.1
Power supply voltage	9 ... 36 V
Input current, up to	30 mA
Ingress protection rating in accordance with GOST 14254	IP69S
Operating conditions: - ambient temperature, °C - extreme ambient temperature, °C - air pressure, kPa	- 40 ... + 50 - 60 ... +85 84 ... 106.7
Dimensions, up to	75x27x865 mm
Sensor weight, up to	0.5 kg

3 SCOPE OF DELIVERY

NAME	NB R	SER. No.	NOTES
Sensor ESCORT DU-180	1		
Installation kit:	1		
Seal Siltech	1		
Sealing wire PP-N 0.8-600	1		
Seal FAST-150	1		
Self-tapping screw 4,8 x 50 with washer	4 1		
Self-tapping screw 5.5 x 51 with washer for sealing	1		
Fuse 1A	1		
Fuse block			
Connecting cable	1		
Manufacturer's Certificate	1		
Market container	1		

4 LIFE CYCLES, SERVICE AND SHELF LIFE, THE MANUFACTURER'S WARRANTY

4.1 Guaranteed service life is 36 months from the date of shipping from the factory.

4.2 Service life - 8 years.

4.3 The manufacturer guarantees compliance of the sensor with specification requirements, provided that the operation, transportation and storage conditions are observed by the Customer.

4.4 Products with defects caused by the Customer's fault due to failure to observe the operation, transportation and storage conditions are not covered by the warranty.

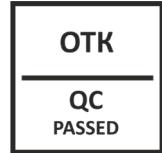
4.5 The manufacturer reserves the right to change product design and scope of delivery without prior notice.

5 ACCEPTANCE CERTIFICATE

Sensor ESCORT DU-180 serial number S is manufactured in accordance with the current technical documentation and qualified for operation.

6 PACKING CERTIFICATE

Sensor ESCORT DU-180 serial number S date Dis packed in accordance with the current technical documentation.



7 INSTALLATION CERTIFICATE

Sensor ESCORT DU-180 ser. No. S is installed on the equipment:

_____	_____		
name	identification number		
_____ / _____	_____ / _____		
signature	Full Name	_____	_____
		day, month, year	

remarks			

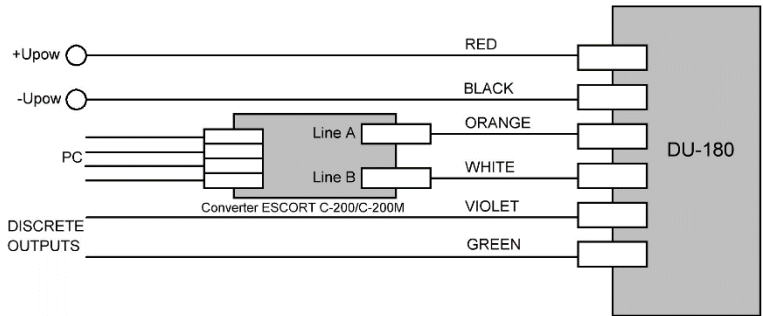
8 DISPOSAL

The instrument does not contain precious metals in the amounts to be recorded.

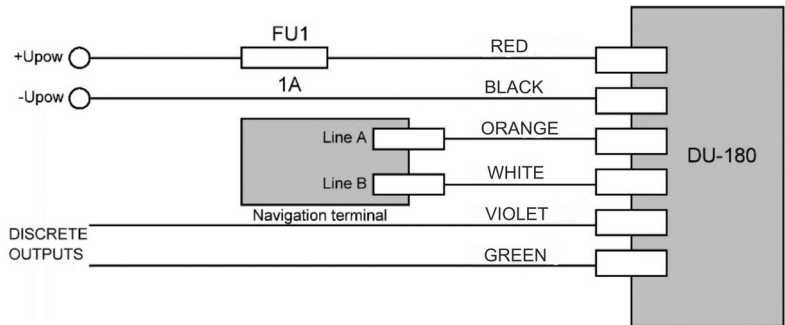
9 TRANSPORTATION AND STORAGE

The product is transported factory-packaged by enclosed transport. To be stored in dry rooms with humidity not more than 75% at a temperature of -20 to +30°C. Storage rooms should not contain current-conducting dust, aggressive substances and their vapors that cause corrosion of parts and destruction of electrical insulation of the sensors.

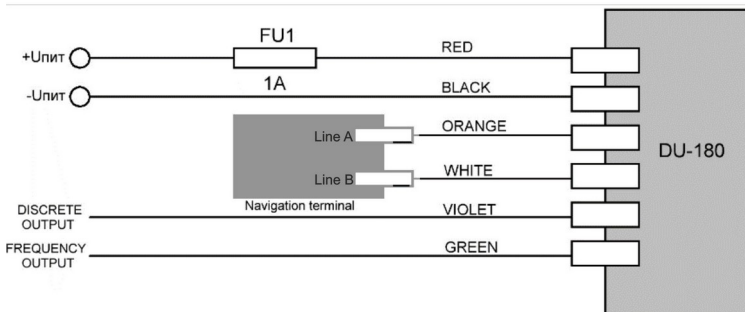
APPENDIX 1. Sensor connection diagram in programming



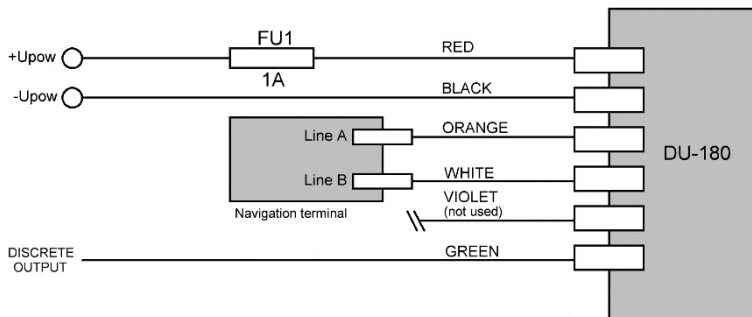
APPENDIX 2. Sensor connection diagram in mode 1 and mode 2



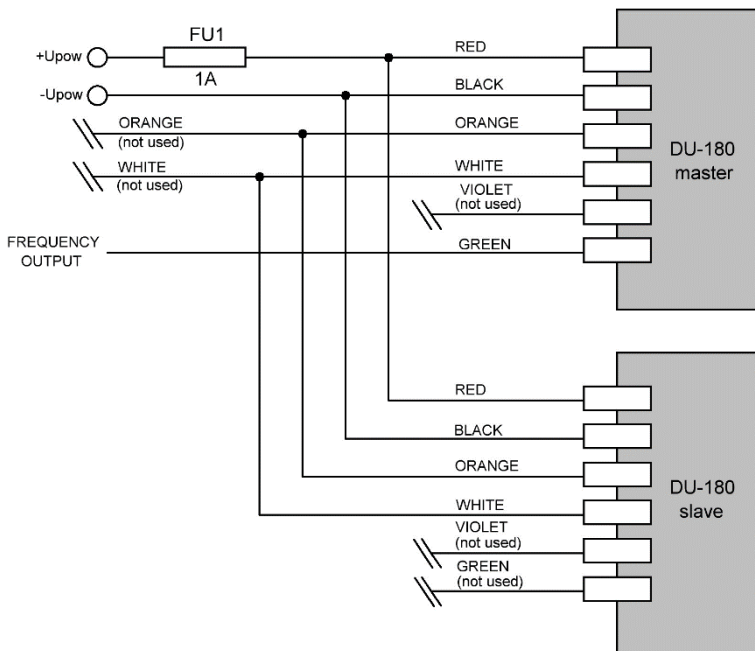
APPENDIX 3. Sensor connection diagram in mode 3



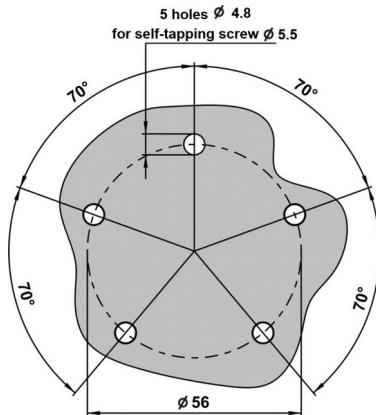
APPENDIX 4. Sensor connection diagram in mode "Blade" and "Bucket"



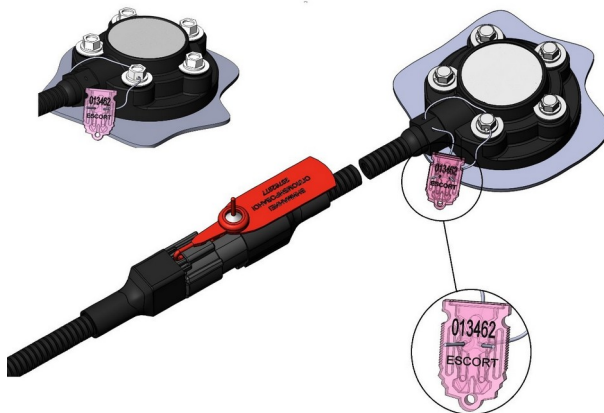
APPENDIX 5. Sensor connection diagram in differential mode



APPENDIX 6. Sensor installation dimensions



APPENDIX 7. Sensor head and cable connection sealing methods



For notes

