Conveyor Speed Monitoring

DS-77

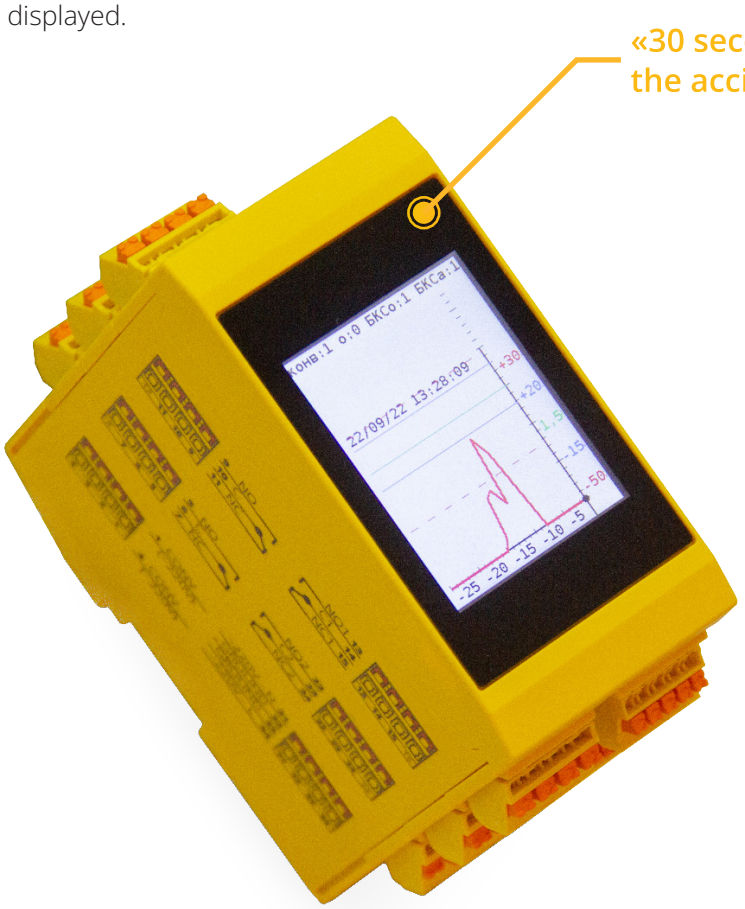
- 4-20 mA, 0-20 mA, 0-10 V — Speed measuring range 0.01...10 m/s
- Stored graph «30 seconds before the accident»
- Remote control (RS485, Ethernet)
- Event Data Recorder

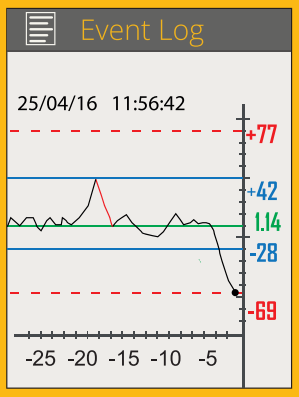
Conveyor speed monitoring

system DS-77 is designed to prevent and analyze possible emergency situations on the conveyor: determine slippage, transverse belt tearing, overload by the transported material, control the acceleration of the conveyor belt at the conveyor start.

Analysis of emergency situations

is performed according to the event data recorder and allows to reliably identify the reasons of emergency situations. The event recorder stores streaming information about the movement of the belt in non-volatile memory. In case of emergency conveyor stops, a graph of the speed change over the last 30 seconds before the stop is displayed.



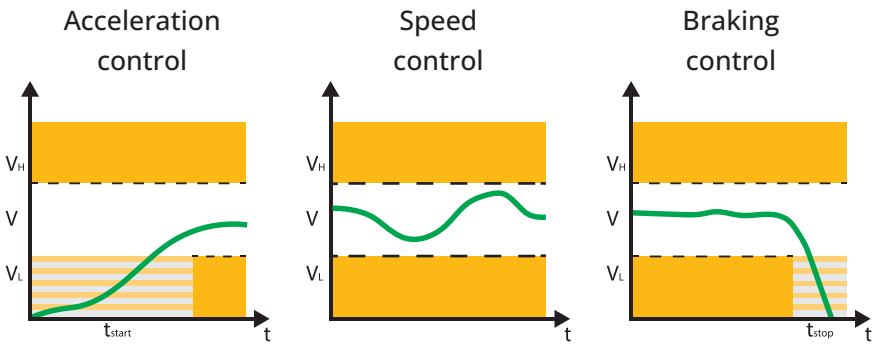


Algorithms

Four algorithms are implemented in the software including «Customer algorithm» which made upon customers request.

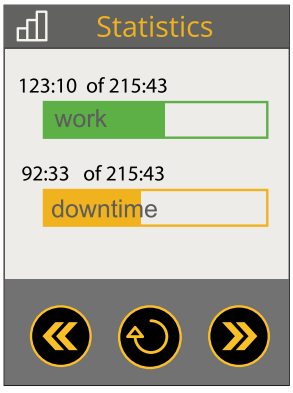
Remote control

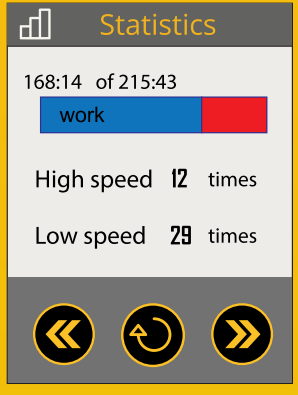
Full access to display and configure all parameters via ModBus RTU (RS485) and ModBus TCP (Ethernet) protocol.



Statistics

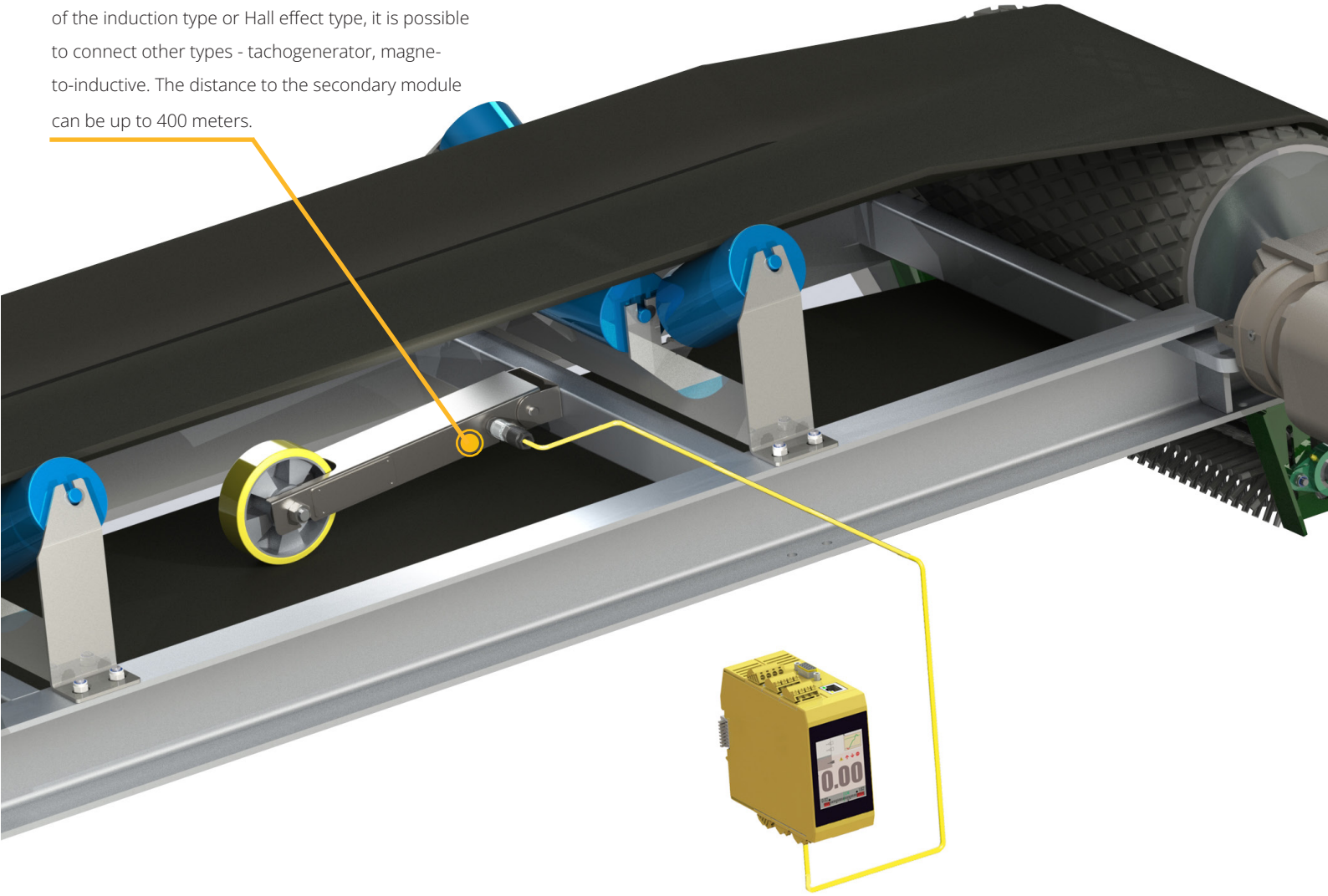
Keeps statistics of the conveyor and device operation time (for a specified period of time), records of emergency stops, analysis of line performance.





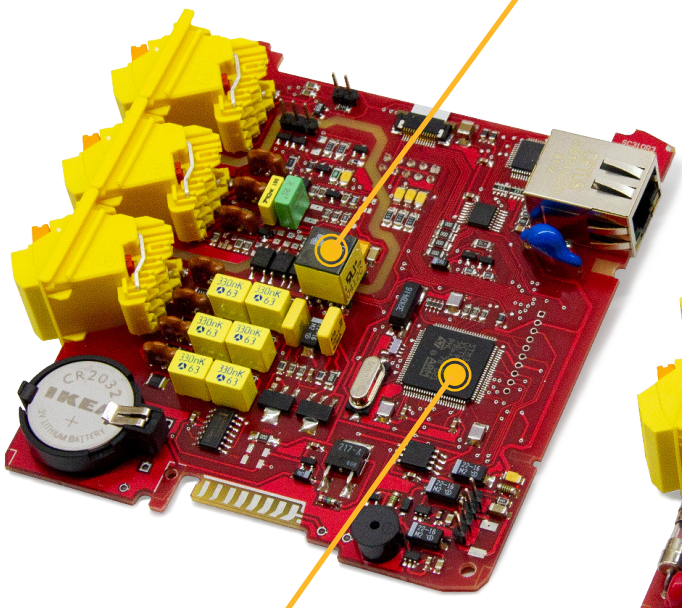
Speed sensor

of the induction type or Hall effect type, it is possible to connect other types - tachogenerator, magne-to-inductive. The distance to the secondary module can be up to 400 meters.



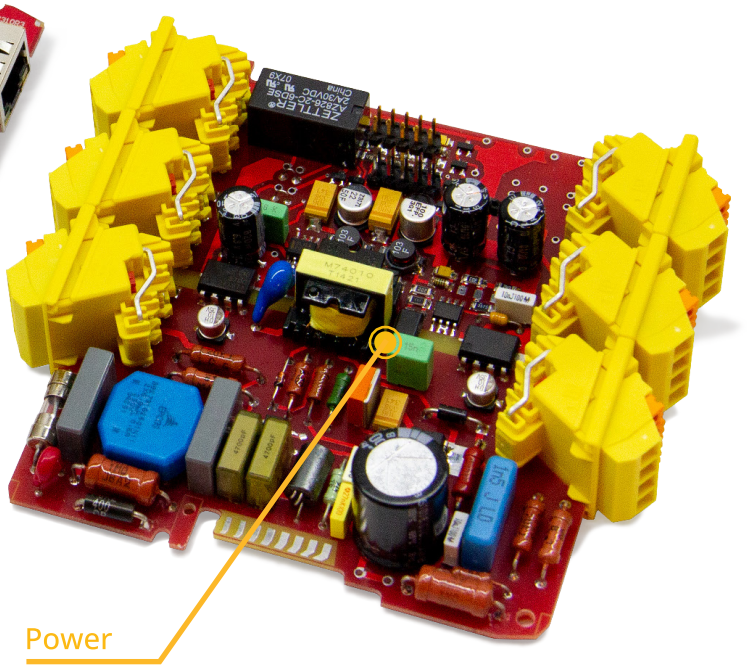
Galvanic insulation

of speed sensor is used to improve noise immunity of signal circuit, measurement accuracy.



Microcontroller

with a high-performance 32-bit ARM Cortex-M core, RISC architecture processes speed sensor data, implements the interface of the graphical touch LCD display and Modbus TCP / RTU network based on Ethernet and RS485 respectively.



Power

The pulse power source ensures galvanic isolation from the company's network voltage, protecting against global network voltage drops, losses on distant node wires, and electromagnetic interferences.

Technical data

Speed sensor

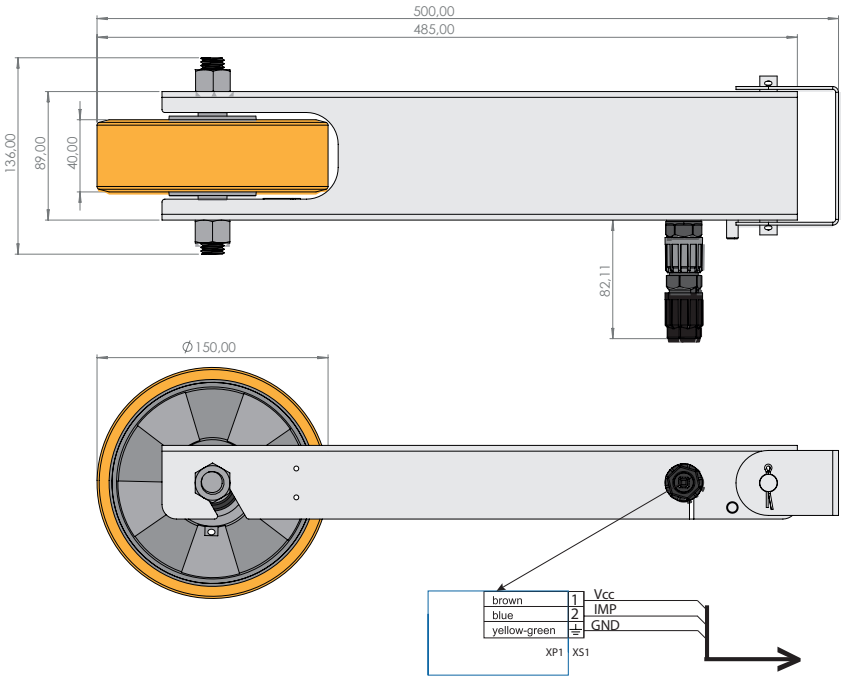
6D103 / 6D103H

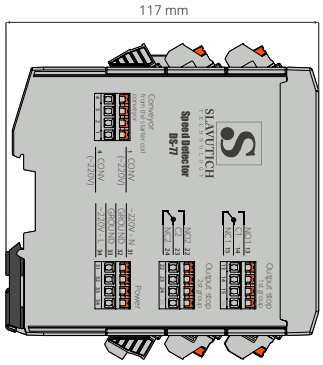
Supply Voltage	10-30 VDC
Temperature Rating	-40 ... +85 C°
Protection	IP67
Belt measured speed range	0.01 ... 10 m/s
Speed sensor output	PNP
Principle of operation	Hall effect / Inductive
Trailing arm	AISI 201 stainless steel
Sensor wheel	Polyurethane tread diam. 150mm
Weight	4,6 kg

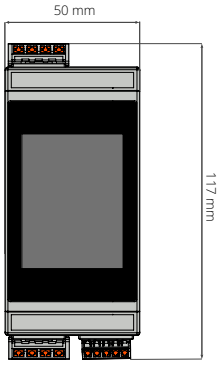
Speed Monitor

DS-77-IP30 / DS-77-IP30-24

Supply Voltage	24 VDC / 220VAC
Power Consumption (Max)	5 Watts
Temperature Rating	-20 ... +70 C°
Protection	IP30
Relay Contacts	3 x 1A @ 250 VAC
Power Terminals	14 AWG / 2,5mm²
Signal Terminals	16 AWG / 1,5mm²
Speed sensor input	NPN / PNP / AC
Misalignment sensors inputs	2
PLC Connectivity	Modbus RTU / TCP
Weight	0,4 kg







SLAVUTYCH TECHNOLOGY

Poland

Slavutych Technology Spółka z o.o.

30-552 Kraków, Wielicka str. 42/B3

+48 514 066 113

yurii@slavutich-technology.com

www.slavutich-technology.com