CONVEYOR BELT MONITORING

DATA SHEET

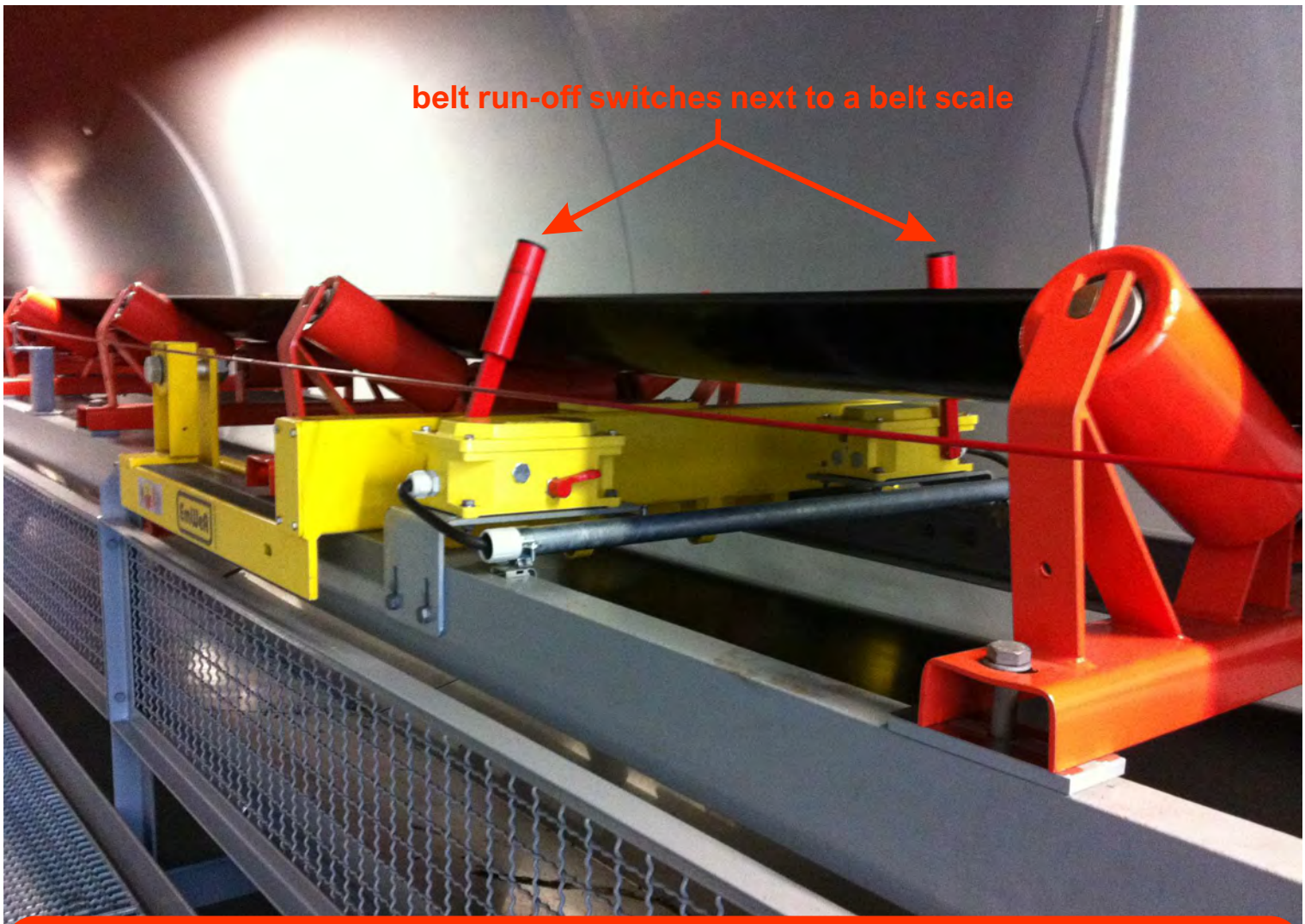
Conveyor Belt Monitoring Systems Thermo Ramsey PROLINE.

Safety pull cord switches, belt run-off switches, tripper position switches, under speed switches, and speed sensors.

Conveyor Belt Monitoring Systems

Thermo Ramsey PROLINE monitoring systems are particularly robust and guarantee a long service life in harsh industrial environments and in mining.

Choose from our extensive range of safety pull cord switches, belt run-off switches, tripper position switches, under speed switches, and speed sensors.



Safety pull cord switches PROLINE SPS-2E and SPS-4E

Particularly robust premium pull cord switch. Two or four switching elements are actuated by different cams on the shaft.

Technical specifications:

Housing variants:	die-cast aluminum, NEMA-4, yellow finish; die-cast aluminum, NEMA-4X, yellow finish; die-cast aluminum, NEMA-4X, nickel plated
Attachment parts:	steel, red finish; or stainless steel
Outputs:	two or four SPDT microswitches, 10 A 250 V AC
Operating temperature:	-40 ... +85 °C
Threaded holes:	M20 x 1.5 or 3/4-14 NPT
Lever orientation:	vertical, changeable in increments of 22.5°
Actuating force:	min. 3.63 kg (8 lb) up to max. 8.16 kg (18 lb)
Distance:	recommended switch spacing: 30 m and cable supports every 3 m; maximum spacing: 60 m on horizontal conveyors, or 45 m on inclined conveyors
Explosion protection:	none; cCSAus Class II, Division 1 & 2, Groups E, F, & G

Safety pull cord switch PROLINE 60-31G

Robust pull cord switch. Two switching elements are actuated by different cams on the shaft.

Technical specifications:

Housing:	die-cast aluminum, IP 65 NEMA-4, yellow finish
Attachment parts:	steel, red finish; or stainless steel 1.4404 AISI 316L
Outputs:	2NO + 2NC, 6 A 250 V AC resp. 10 A 24 V DC
Operating temperature:	-45 ... +85 °C
Threaded holes:	M20 x 1.5
Lever orientation:	changeable
Actuating angle:	18°
Abstand:	recommended switch spacing: 50 m
Explosionschutz:	none; ATEX22; ATEX21

Belt run-off switches PROLINE ROS-2E and ROS-4E

Particularly robust premium belt run-off switch. Two or four switching elements are actuated by different cams on the shaft.

Technical specifications:

Housing variants:	die-cast aluminum, NEMA-4, yellow finish; die-cast aluminum, NEMA-4X, yellow finish; die-cast aluminum, NEMA-4X, nickel plated
Attachment parts:	steel, red finish; or stainless steel
Outputs:	two or four SPDT microswitches, 10 A 250 V AC
Operating temperature:	-40 ... +85 °C
Threaded holes:	M20 x 1.5 or 3/4-14 NPT
Lever orientation:	vertical, changeable in increments of 22.5°
Actuating angle:	10° (alarm) and 20° (shut-down)
Belt speed:	max. 6.5 m/s
Explosion protection:	none; cCSAus Class II, Division 1 & 2, Groups E, F, & G

Belt run-off switch PROLINE 60-30G

Robust belt run-off switch. Two switching elements are actuated by different cams on the shaft.

Technical specifications:

Housing:	die-cast aluminum, IP 65 NEMA-4, yellow finish
Attachment parts:	steel, red finish; or stainless steel 1.4404 AISI 316L
Outputs:	2NO + 2NC, 6 A 250 V AC resp. 10 A 24 V DC
Operating temperature:	-45 ... +85 °C
Threaded holes:	M20 x 1.5
Lever orientation:	changeable
Actuating angle:	15° (alarm) and 30° (shut-down)
Belt speed:	max. 8 m/s
Explosion protection:	none; ATEX22; ATEX21

Tripper position switch PROLINE TPS-2D

Particularly robust premium tripper position switch. Two or four switching elements are actuated by different cams on the shaft.

Technical specifications:

Housing variants:	die-cast aluminum, NEMA-4, yellow finish; die-cast aluminum, NEMA-4X, yellow finish; die-cast aluminum, NEMA-4X, nickel plated
Attachment parts:	steel, red finish; or stainless steel
Outputs:	two SPDT microswitches, 10 A 250 V AC
Operating temperature:	-25 ... +80 °C
Threaded holes:	M20 x 1.5 or 3/4-14 NPT
Lever orientation:	vertical, changeable in increments of 22.5°
Actuating angle:	20°
Explosion protection:	none; cCSAus Class II, Division 1 & 2, Groups E, F, & G

Tripper position switch PROLINE 60-32G

Robust tripper position switch. Two switching elements are actuated by different cams on the shaft.

Technical specifications:

Housing:	die-cast aluminum, IP 65 NEMA-4, yellow finish
Attachment parts:	steel, red finish; or stainless steel 1.4404 AISI 316L
Outputs:	2NO + 2NC, 6 A 250 V AC resp. 10 A 24 V DC
Operating temperature:	-45 ... +85 °C
Threaded holes:	M20 x 1.5
Lever orientation:	changeable
Actuating angle:	18°
Explosion protection:	none; ATEX22; ATEX21

Under speed switch PROLINE 60-23P

Inductive, shaftless under speed switch. Detects and signals stop or high/low speed of conveyor belts.

Technical specifications:

Housing:	fiber-reinforced polyamide with 30% mineral
Protection:	IP 65
Power supply:	110 / 220 V AC ±10%, 5 VA
Outputs:	2 A 120 V DC, non-inductive
Operating temperature:	-25 ... +65 °C
Threaded hole:	M20 x 1.5
Switching distance:	10 mm
Measuring range:	60 ... 600 pulses / min (standard); 2 ... 20; 7.5 ... 75; 30 ... 30 pulses / min (optional)
Explosion protection:	none

Under speed switch PROLINE 60-23A

Shaft driven under speed switch. Detects and signals stop or high/low speed of conveyor belts.

Technical specifications:

Housing:	fiber-reinforced polyamide with 30% mineral
Protection::	IP 65
Power supply:	110 / 220 V AC ±10%, 5 VA
Outputs:	2 A 120 V DC, non-inductive
Operating temperature:	-25 ... +65 °C
Threaded hole:	M20 x 1.5
Measuring range:	15 ... 150 PPR (standard); 2 ... 20; 3 ... 30; 7.5 ... 75 PPR (optional)
Explosion protection:	none; ATEX 22

Under speed switch PROLINE 60-29A

Inductive, shaftless under speed switch. Detects and signals stop or high/low speed of conveyor belts.

Technical specifications:

Housing:	die-cast aluminum, yellow finish
Protection:	IP 67
Power supply:	110 / 220 V AC ±10%, 5 VA
Outputs:	2 A 120 V DC, non-inductive
Operating temperature:	-25 ... +65 °C
Threaded hole:	M20 x 1.5
Switching distance:	10 mm
Measuring range:	60 ... 600 pulses / min (standard); 2 ... 20; 7,5 ... 75; 30 ... 30 pulses / min (optional)
Explosion protection:	ATEX21 (II 2D Ex tb IIIC T90°C Db Ip68)

Speed sensors PROLINE 60-12C and 60-12EN

Shaft driven speed sensor, provides a signal proportional to the belt speed or rotation speed.

Technical specifications:

Housing:	fiber-reinforced polyamide with 30% mineral
Protection:	IP 65
Resolution:	50 PPR; 1000 PPR
Operating temperature:	-20 ... +65 °C
Threaded hole:	M20 x 1.5
Explosion protection:	none; ATEX 22

Speed sensor PROLINE 60-12P

Inductive, shaftless speed sensor, provides a signal proportional to the belt speed or rotation speed.

Technical specifications:

Housing:	fiber-reinforced polyamide with 30% mineral
Protection:	IP 65
Power supply:	110 / 220 V AC ±10%, 5 VA
Operating temperature:	-20 ... +65 °C
Threaded hole:	M20 x 1.5
Explosion protection:	none; ATEX 22

Speed sensors PROLINE 60-12F, 60-12ENC, 61-12N and 61-12C/CSA

Shaft driven speed sensor, provides a signal proportional to the belt speed or rotation speed.

Technical specifications:

Housing:	die-cast aluminum, yellow finish
Protection:	IP 67
Resolution:	50; 64; 200; 500 PPR
Operating temperature:	-25 ... +65 °C
Threaded hole:	M20 x 1.5
Explosion protection:	none; ATEX 22; CSA

Speed sensors PROLINE ZA-11 and ZA-11-LS

Speed sensor with underbelt measuring wheel, provides a signal proportional to the belt speed.

Technical specifications:

Material:	stainless steel 1.4301 AISI 304, PTFE
Protection:	IP 65
Belt speed:	0.3 ... 4 m/s; 0.2 ... 2.5 m/s
Operating temperature:	-25 ... +65 °C
Connecting cable:	ca. 2 m
Explosion protection:	none

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