

FEEDBACK DEVICES

Accurate monitoring of conveying data

Product Description

Application	<ul style="list-style-type: none"> ✓ For applications which require control and monitoring of speed, direction, and position of the drum motor belt or load ✓ Enables closed loop system control 	<ul style="list-style-type: none"> ✓ For i-series and D-series only
Characteristics	<ul style="list-style-type: none"> ✓ Cannot be combined with a brake or backstop option ✓ Supplies low to high resolution signals to an external control unit 	<ul style="list-style-type: none"> ✓ Incremental or absolute encoders ✓ Coupled to rotor shaft or embedded in the rotor bearing

Note: Not available for i-Series with dual voltage

Product Range

All resolutions and speeds given in the following product range are referring to the rotor shaft. The drum motor gear ratio must be considered to find the values related to the drum shell.

Encoder types	Asynchronous Drum Motors					Synchronous Drum Motors			Connection diagram references (see p 264)
	80i	113i	138i	165i	217i	80D	88D	113D	
SKF 32 incremental encoder *	32 pulses	✓	✓	✓					70
SKF 48 incremental encoder	48 pulses				✓	✓			70
RLS incremental encoder *	64 to 1,024 pulses	✓	✓	✓	✓	✓	✓	✓	71
LTN Resolver	2 poles resolver		✓				✓	✓	72
SKS36 Hiperface	single turn absolute hiperface high resolution						✓	✓	73

Note: *For 80i with encoder the drum motor will be supplied with 25 mm diameter shafts and one supply voltage. Other feedback devices and resolutions on request

SKF 32 or 48 incremental encoder

Power supply	$V_{dd} = 5$ to 24 V
Power consumption	max. 20 mA
Electrical interface	Open collector NPN
Output increments	A, B
Increments resolution	32 or 48 pulses / revolution
Necessary Pull-up resistor	270 to 1,500 Ω (see connection diagram section)
max. cable length	10 m

RLS incremental encoder

Power supply	$V_{dd} = 5 V \pm 5 \%$
Power consumption	35 mA
Electrical interface	RS422
Output increments	A, B, Z, /A, /B, /Z
Increments resolution	64; 512; 1,024 pulses / revolution 2,048 pulses / revolution (max speed 2,500 rotor rpm)
max. cable length	5 m

Note: Interroll recommends the use of an opto-coupler for the following reasons:

- To protect the encoder
- To enable connection to other levels such as PNP
- To get the maximum potential between high and low signal

LTN Resolver

Input voltage and current range	7 V
Input frequency range	5 kHz / 10 kHz
Input current	58 mA / 36 mA
Number of poles	2
Transformation ratio	0.5 % \pm -10 %
max. cable length	10 m

SKS36 hiperface (Sick/Stegman) *

Power supply	7 to 12 V (recommended 8 V)
Power consumption	max. 60 mA
Data transfer	Hiperface
Serial data	RS485
Single turn resolution	4,096 positions / revolution
Sine/cosine periods per revolution	128
max. cable length	10 m

Note: *For SKS36 hiperface (Sick/Stegman) Please contact your Interroll customer consultant.