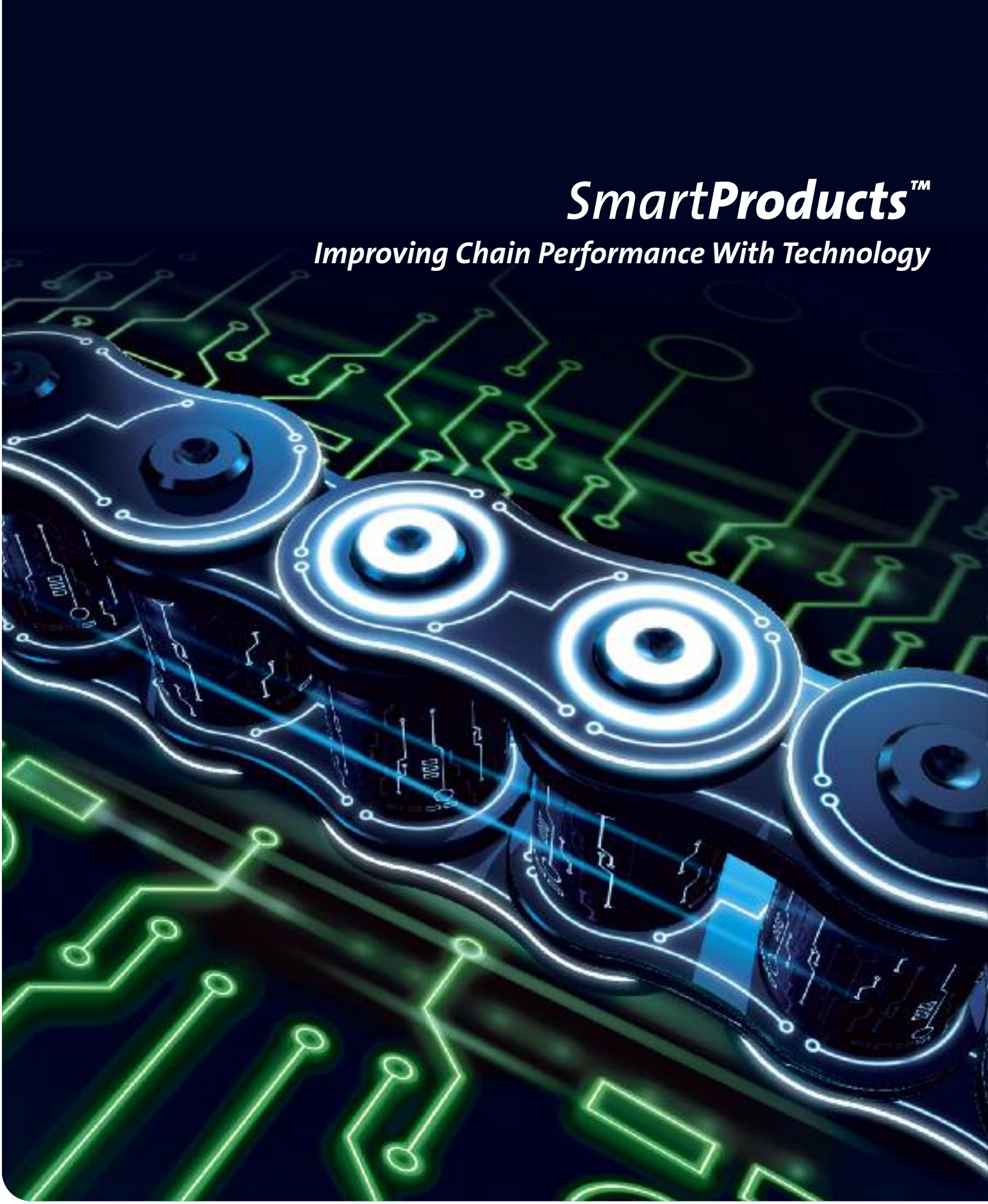
SmartProducts™

Improving Chain Performance With Technology



RENOLD

Superior Chain Technology

www.renold.com/smartproducts

Renold SmartProducts™

Unique diagnostic technology designed to deliver maximum performance

Renold SmartProducts give you a unique ability to know more than ever before about what is happening to your chain.

This technology, created by Renold, is helping engineers all over the world.

Address the two major challenges of load and wear with these innovative solutions available only from Renold.

Which technology is suitable for my application?

Is your problem caused by load?
Then yes, Smartlink™ is for you!

Is your problem caused by wear?
You need WearMonitor™.

***Renold** Smart**link**™*

Optimise your chain performance. Diagnose problems, evaluate high load hot spots and ensure the smooth running of your chain.

***Renold** Wear**Monitor**™*

Detects chain wear and elongation, allowing you to more effectively manage your service & inspection intervals and lubrication regime.

Smartlink™

The world's smallest data logger

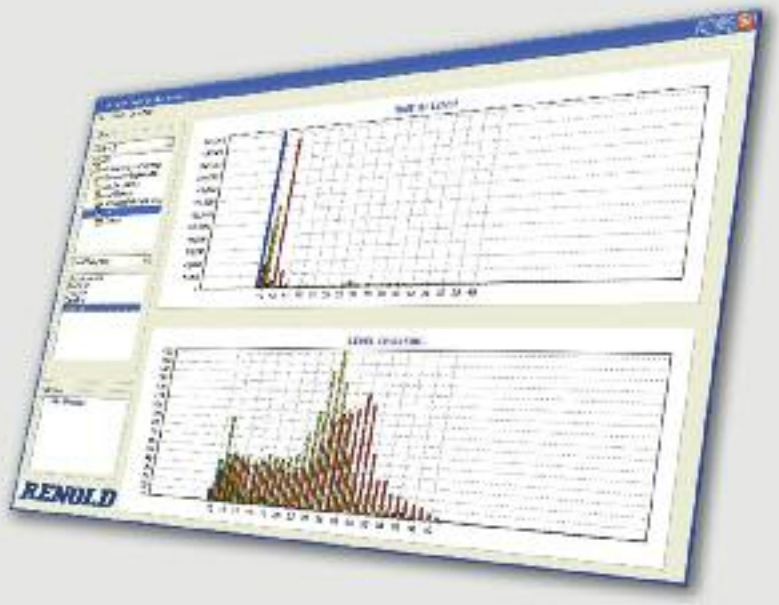
Smartlink: The world's smallest data logger, unique to Renold

By demonstrating actual system loads Smart**link**™ technology will help you to optimise your products at an early stage. When your new product is being used for field trials, make sure Smart**link**™ is present, detecting performance, giving you the full picture.

Smart**link**™ is even small enough to fit on 1" pitch roller chain. Light conveying applications such as those at chocolate manufacturers in the UK have benefited from trials that have given a better understanding of loads in the whole system.

Improvements to drive layout and optimum chain selection have all been made possible by the step change in understanding which has resulted.

- ***Ensure the smooth running of your chain drive***
- ***Understand loadings applied to the chain***
- ***Diagnose problems with alignment***
- ***Pin point potential causes of reduced chain life***
- ***Increase your production efficiency***



Level 1

Smartlink™ can help you in different ways. With a tiny microprocessor attached to the side plate, the unit can detect the stresses experienced by the chain as it travels through your machine.

Acting as an overload detector and controlled with a small infra-red remote control unit, the system can indicate when your chain exceeds a pre-determined load. This gives you the warning you need to inspect the system and ensure that it is safe to continue running the machine. Smartlink™ gives you the ability to reset the alarm condition using the remote control.

Level 2

To understand more about the working loads being applied to the chain drive there is a second level of diagnostics that Smartlink™ can provide using the same microprocessor unit on the chain but a higher level of sophistication in the remote handheld receiver. Using this receiver, more detailed information about the actual value of the load can be downloaded and transferred to a Windows-based PC. This data can be analysed to determine the exact location of the load peaks in the drive system.

Level 3

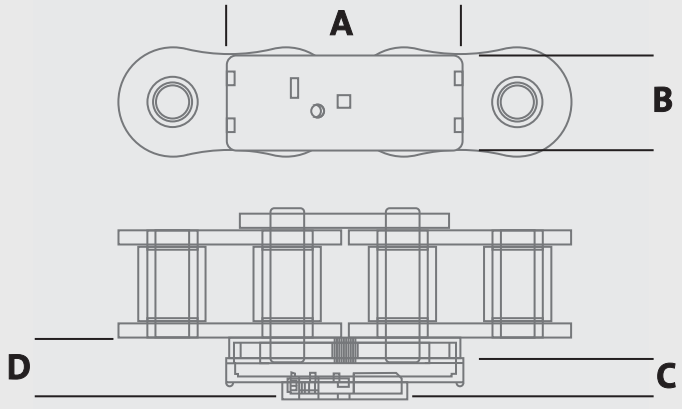
Renold also has a much more sophisticated microprocessor available but this unit needs expert support, normally requiring the service of a Renold engineer. This solution would be used in situations where there are unresolved issues or in safety critical applications where an exact prediction of fatigue life is important.

Renold can work in partnership with you to resolve these sorts of issues. Having already helped major companies around the world including manufacturers of earth moving equipment, agricultural machinery, materials handling at ports and leisure rides at theme parks, Renold Smartlink™ represents a groundbreaking opportunity to fully understand system loads which may be detrimental to the perfect performance of your product.

	LEVEL 1	LEVEL 2	LEVEL 3
Chain size	1", 1.25", 1.5" ANSI & BS		1" pitch and above
Sampling Rate	2Hz		4sec @ 4kHz / 1hr @ 1.3Hz
Recording Time	N/A	Days	4sec @ 4kHz / 1hr @ 1.3Hz
Resolution	Typically 1/40th to 1/3rd of the breaking load		Typically 1/200th of 1/3rd of the breaking load
Battery life	Approximately 1 year*		5-10 hours
IP Protection (ability to resist ingress of liquid/debris)	IP66		Depends on the installation
Type of information	Visual Alarm	Visual Alarm Time at Level Level Crossing	Waveform Data Time at Level Level Crossing Rainflow Counting
Temperature Range	0-60ºC**		

*Battery life depends on the time the unit remains switch on, amount of transmitted information and environment conditions.

**Please contact Renold if your application doesn't meet the temperature requirements.



Dimensions for the different units.

	A	B	C	D
Smartlink 16B	52.00	20.42	13.00	17.73
Smartlink 80	52.00	20.42	13.00	17.73
Smartlink 20B	63.37	25.78	13.30	18.86
Smartlink 100	63.37	25.78	13.30	18.86
Smartlink 24B	78.79	30.89	13.30	19.88
Smartlink 120	78.79	30.89	13.30	19.88

WearMonitor™

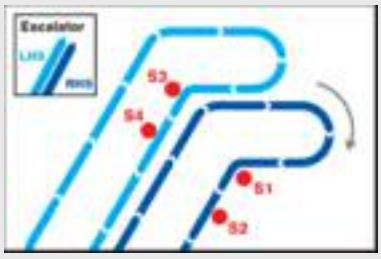
Finally... a device that can assess chain wear and elongation!

This unique technology, exclusive to Renold, uses zero-contact sensors to pinpoint frequent and regular predetermined locations on the chain.

By using these predetermined locations, Wear**Monitor**™ calculates the speed of the chain and based on the time it takes for these points to pass the sensors on each cycle, Wear**Monitor**™ can provide data on the current length of your chain.

Knowledge is power!

Revealing this information means you can more effectively manage your maintenance schedules, inspection intervals or lubrication regime.



Example web images

Monitor your chain online

Data from the Wear**Monitor**™ can be viewed on your own dedicated, secure webpage. Settings can be adjusted online to modify the analysis provided by the sensors. Wear**Monitor**™ can even operate in remote locations with GPRS coverage.

Tested extensively on escalator applications as well as heavy industries such as sugar and coal processing, Wear**Monitor**™ has even wider potential for chain drives using long lengths of chain, applications that require positional accuracy and environments where access to the chain for routine maintenance is not easy.

For more information or to contact your local sales team go to

www.renold.com

For other country distributors please consult www.renold.com.

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