

dynasafe™ system selection guide

B Mechanical force and load monitoring systems

Basic solution for compliance with Directive 2006/42/EC.

1

SELECTING A MECHANICAL SENSOR

MODEL	VERSION	LOCATION	CAPACITY PER FALL	WIRE ROPE DIAMETER	
HF 31/1	4	A2	On cable	200 to 3 200 daN	5 to 16 mm
HF 32/2	1	A or A2 or B	On cable	300 to 6 000 daN	17 to 26 mm
HF 32/3	1	A or A2 or B	On cable	1000 to 12 000 daN	24 to 36 mm
HF 05/X*	2	A and B	Dead end	50 to 3 200 daN	-
HF 05/Z*	2	B	Dead end	10 to 12 000 daN	-

X*: from 1 to 4 - Z*: 1 to 7

2

SELECTING A CONNECTION: WIRED ONLY

3

SELECTING FUNCTIONALITIES

FUNCTIONALITY	MODEL	VERSION	ADDITIONAL EQUIPMENT
Safety threshold management	All	A and A2	-
Threshold and dynamic effect management	All	B	HF 85 monitor

HF 31

HF 05

HF 85

Version A: 1 interrupt signal, up to 4A at 220 Vac, for direct control
Version A2: 2 interrupt signals, up to 4A at 220 Vac, for direct control
Version B: 1 interrupt signal, 25 mA at 12 Vdc, for indirect control and management of dynamic strain via HF 85

C Electronic force and load monitoring systems

Electronic management assistance solution. For compliance with Directive 2006/42/EC.

1

SELECTING A STRAIN GAUGE SENSOR

MODEL	LOCATION	CAPACITY PER FALL	WIRE ROPE DIAMETER	
HF 35	4	On cable	50 to 12 000 daN	5 to 36 mm
HF 10	5	Dead end	50 to 12 000 daN	-
HF 50	6	Load pin	-	-

Any strain gauge sensor*. Standard or specific, all capacities.

* Standard output: mV/V. Optional output: 0-10 V, 4-20 mA.

2

SELECTING A CONNECTION

TYPE OF CONNECTION	ADDITIONAL EQUIPMENT
Wired link	Module LLXt RS + Adjustment software
Wireless link	LLXt WL module + Adjustment software

Input: mV/V.

3

SELECTING FUNCTIONALITIES

FUNCTIONALITY	ADDITIONAL EQUIPMENT
Threshold (5) and dynamic effect management	DMU WL (Wireless dynasafe™ Monitoring Unit)
Overload + Cable slack + Summation	DMU RS (RS 485 dynasafe™ Monitoring Unit)
High visibility wired remote LED display	AL 63 or AL 128 Display
Remote LCD display	Remote LLX2 display
Data acquisition on PC (1-8 sensors)	DMU + dynafor™ Connection software
IT integration (1-32 sensors)	DMU + Communication Protocol

A wired connection is always preferred for applications where safety is critical.

HF 35

HF 10

HF 50

LLXt RS

LLXt WL

DMU WL

DMU RS

AL 63

LLX2 display

D Measurement of tensile strength of guide ropes

Easy solution without disassembly of the taut cable.

MODEL	TENSILE STRENGTH RANGE	WIRE ROPE DIAMETER	CABLE TYPE
HF 37/1/LPT	1 kN to 15 kN	5 to 13 mm	Single strand steel Multi-strand steel Synthetic Special
HF 37/2/LPT	2kN to 30 kN	8 to 18 mm	
HF 36/1/LPT	2 kN to 50 kN	5 to 13 mm	
HF 36/2/LPT	4 kN to 200 kN	9 to 28 mm	
HF 36/S/LPT	> 200 kN	> 28 mm	

HF 37/. / LPT

HF 36/. / LPT

dynaplug

E Measurement of resistance of anchor points

MODEL	STRENGTH RANGE
HF 44/1/LPT	15 kN
HF 44/2/LPT	25 kN
HF 44/3/LPT	50 kN

HF 44/. / LPT

dynaline

F Measurement of tensile strength of lifeline wire ropes

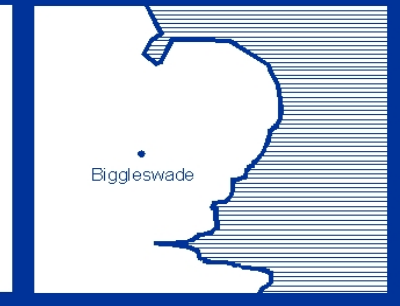
MODEL	STRENGTH	Ø OF WIRE ROPE
HF 45/1/LPT	600 daN	8 to 12 mm

HF 45/. / LPT

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MEASURE AND CONTROL - SELECTION GUIDE

dynafor™ - dynasafe™
dynarope - dynaplug - dynaline

dynafor™ dynamometer selection guide

A Measure and control of forces and loads in Industry

Solution for multiple applications. Adjustment certificate. Optional ISO 376.

SELECTION	1	2	3	4	5
MODEL	CAPACITY	PRECISION	REMOTE DISPLAY	PROTECTION RATING	FUNCTIONALITIES
handifor	20 / 50 / 100 200 kg	0.5 %	No	IP 40	Level 1 ■ Tare ■ Units ■ Peak load ■ Automatic Stop
LLZ2	1/ 3.2 / 6.3 12.5 / 20 t	0.3 %	No	IP 65	
LLX1	0.5 / 1 / 2 3.2 / 5 / 6.3 12.5 / 20 t	0.2 %	Yes, optional	IP 65	Level 2 ■ Level 1 functionalities + ■ Settable automatic stop ■ Filtering settable dynamic effects
LLX2	0.5 / 1 / 2 3.2 / 5 6.3 / 10 t	0.1 %	Yes	IP 66 IP 67 optional	Level 3 ■ Level 2 functionalities + ■ Functionalities listed below:
LLXh	15 / 25 / 50 100 / 250 t	0.2 %	Yes	IP 66 IP 67 optional	

DMU WL

AL 63

LLX2 display

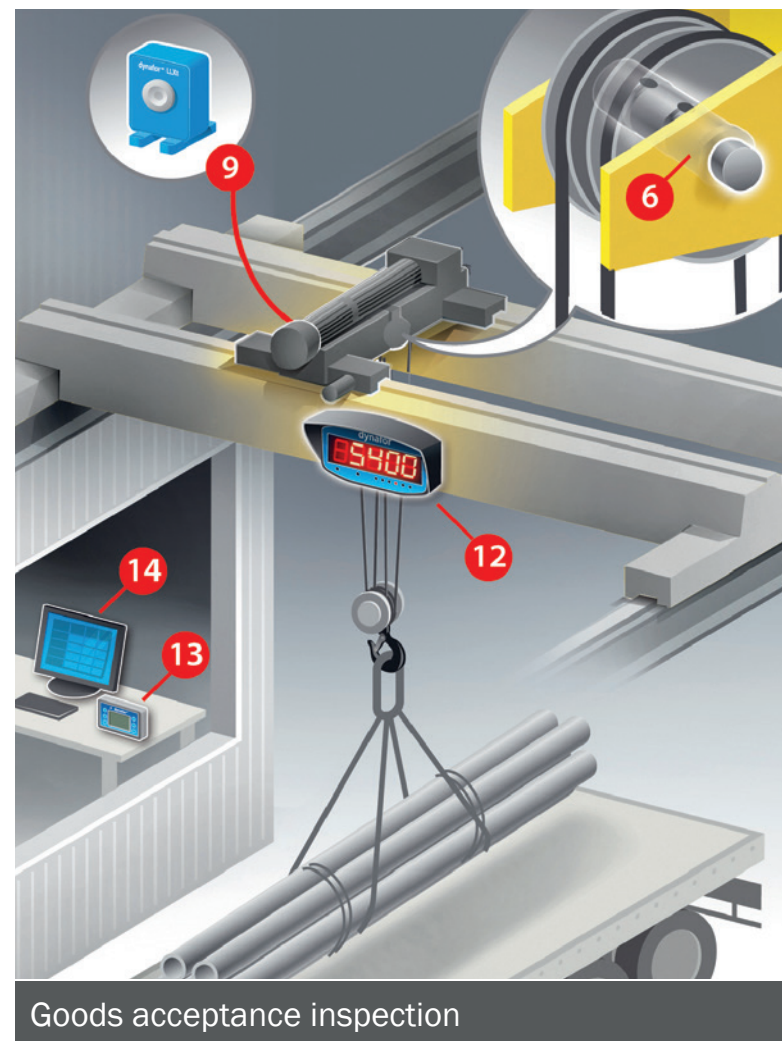
dynafor™ are only compatible with wireless connection DMU: DMU WL.

LEVEL 3 SPECIFIC FUNCTIONALITIES	
FUNCTIONALITY	ADDITIONAL EQUIPMENT
Backlight screen	-
Locking of setting menu	-
Multiple and settable alarms	-
Associations of multiple sensors/displays	Remote LLX2 display
Threshold (5) and dynamic effect management Overload + Cable slack + Summation	DMU WL (Wireless Dynasafe™ Monitoring Unit)
High visibility wired remote LED display	DMU WL + AL63 or AL128 display units
Data acquisition on PC (1-8 sensors)	dynafor™ Connection software
IT integration (1-32 sensors)	Communication Protocol

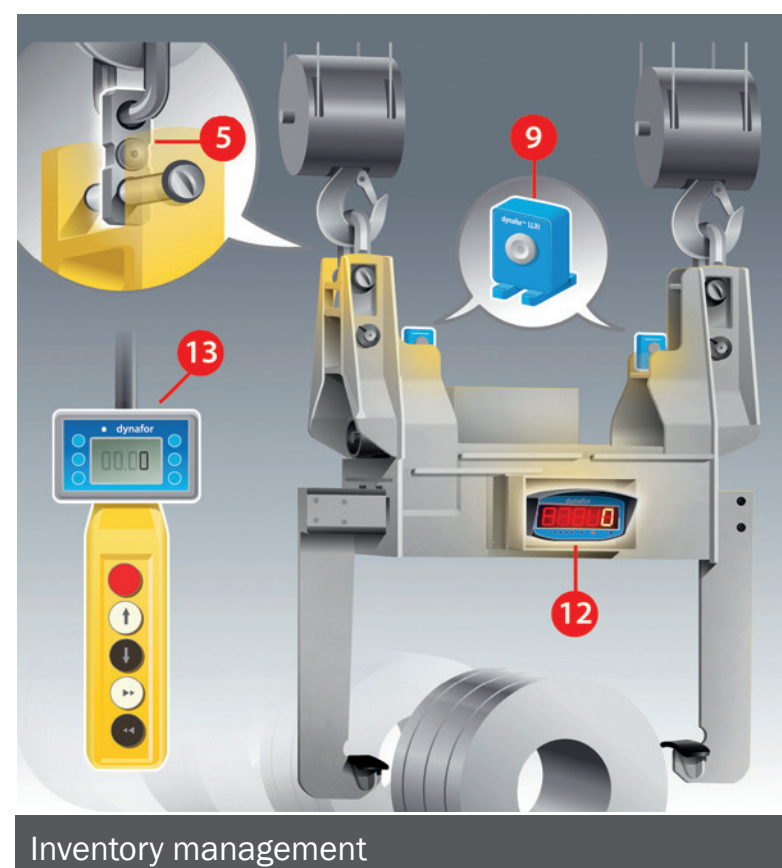
Detailed technical documentation: www.tractel.com

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Detailed technical documentation: www.tractel.com



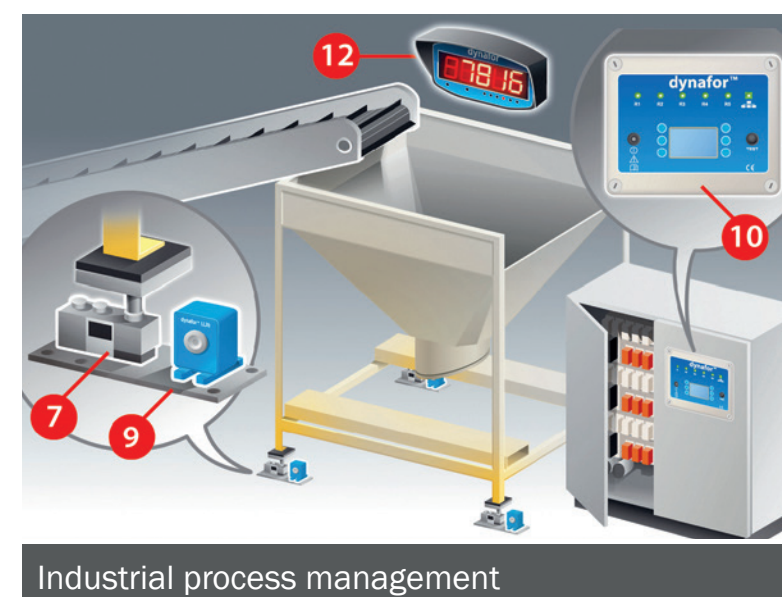
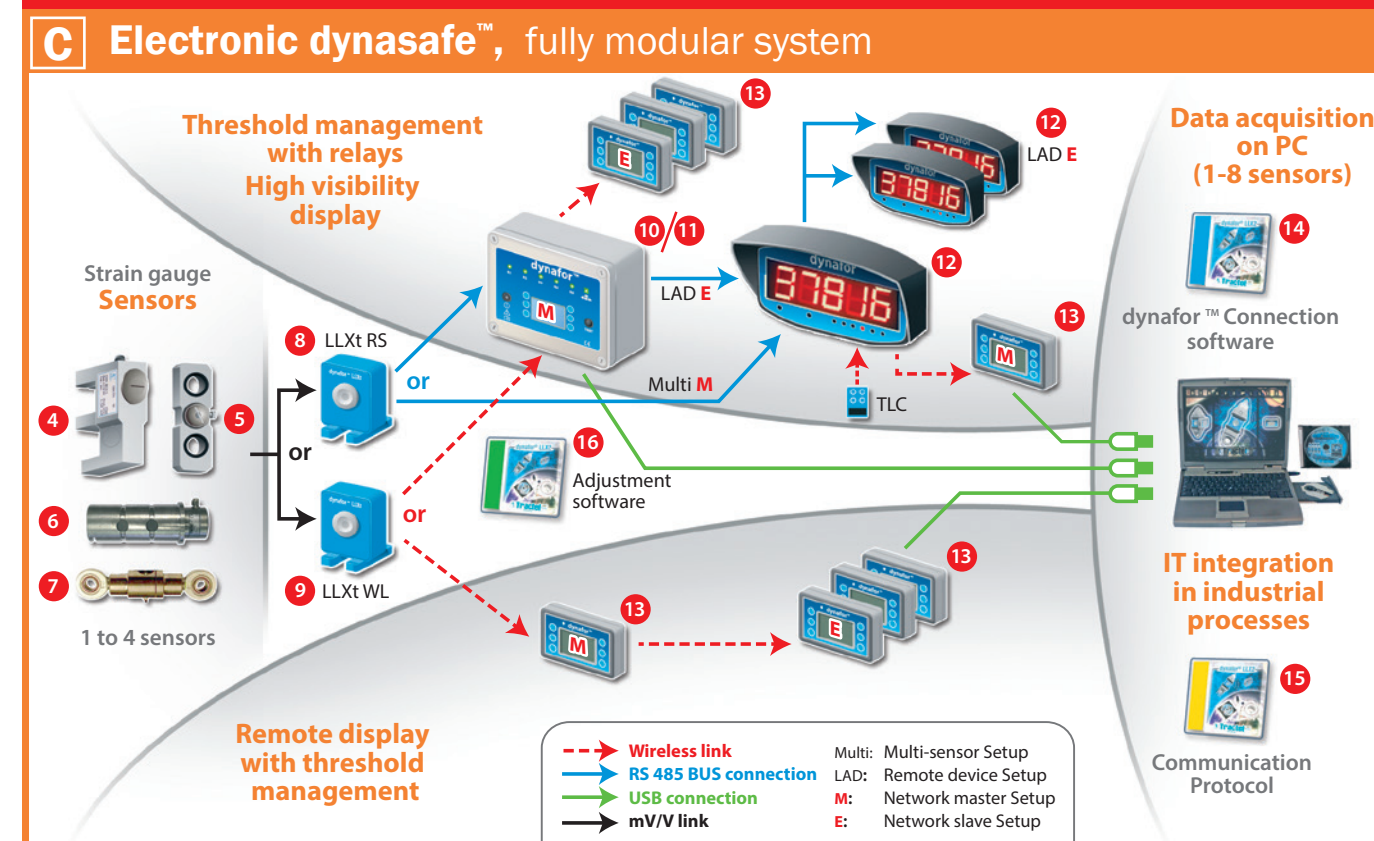
Goods acceptance inspection



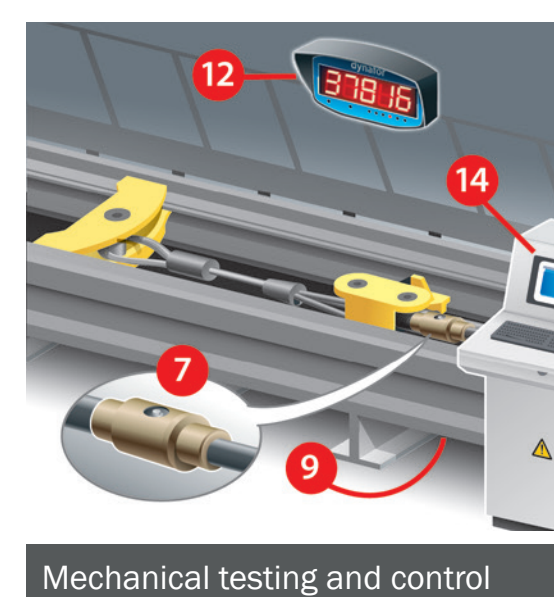
Inventory management



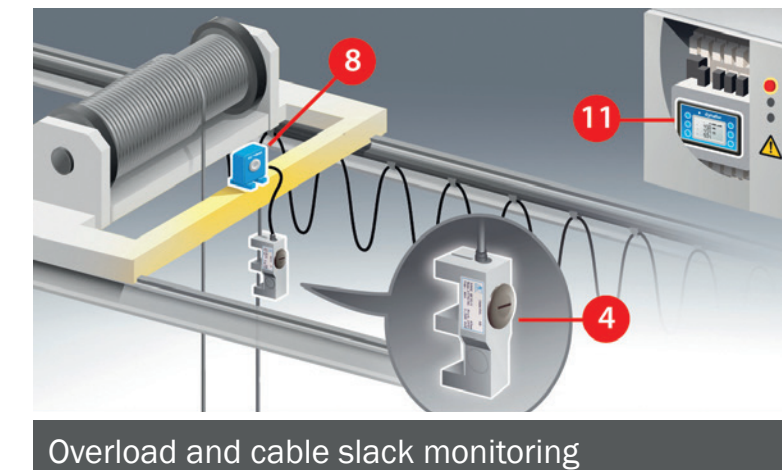
Protection against accidental overloads



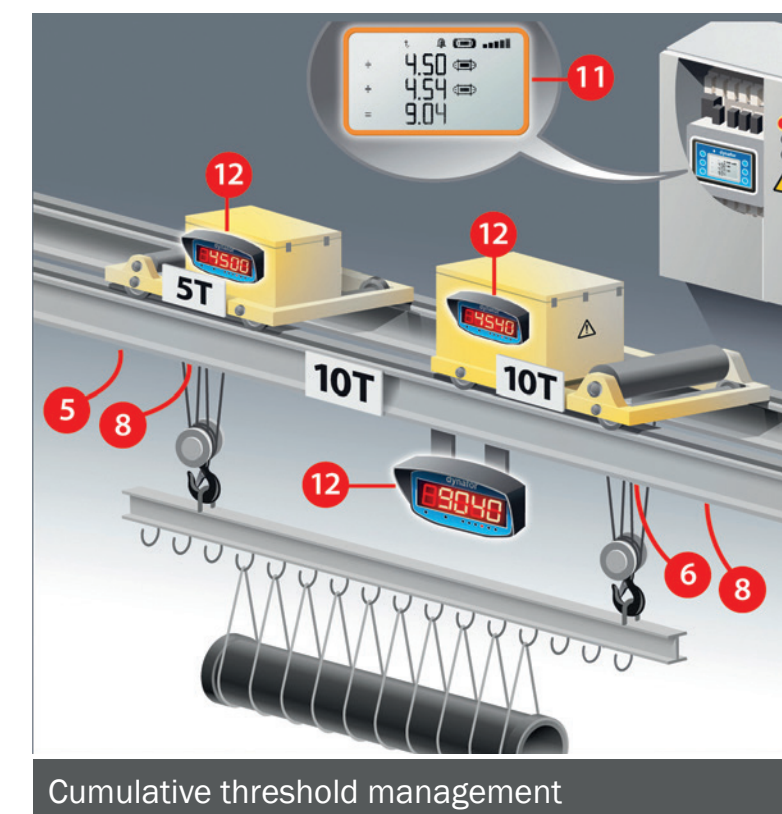
Industrial process management



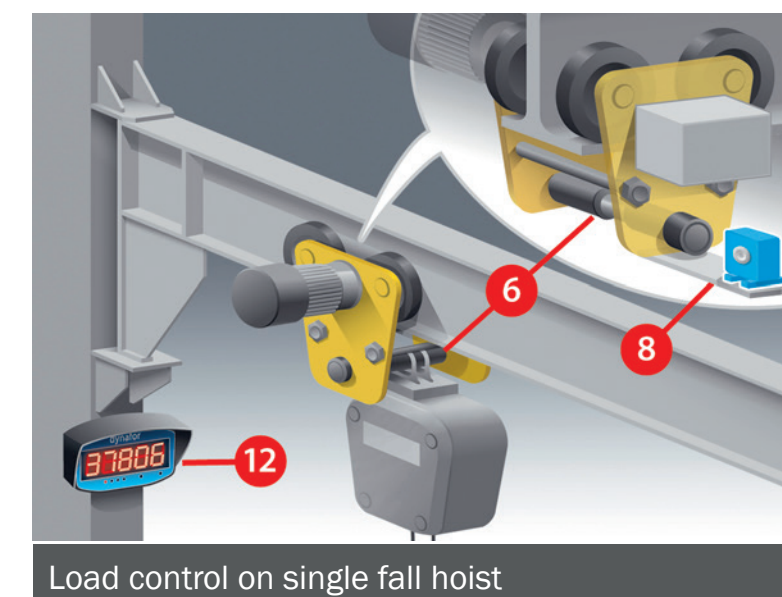
Mechanical testing and control



Overload and cable slack monitoring



Cumulative threshold management



Load control on single fall hoist



Goods input and output monitoring



Packaging before dispatch



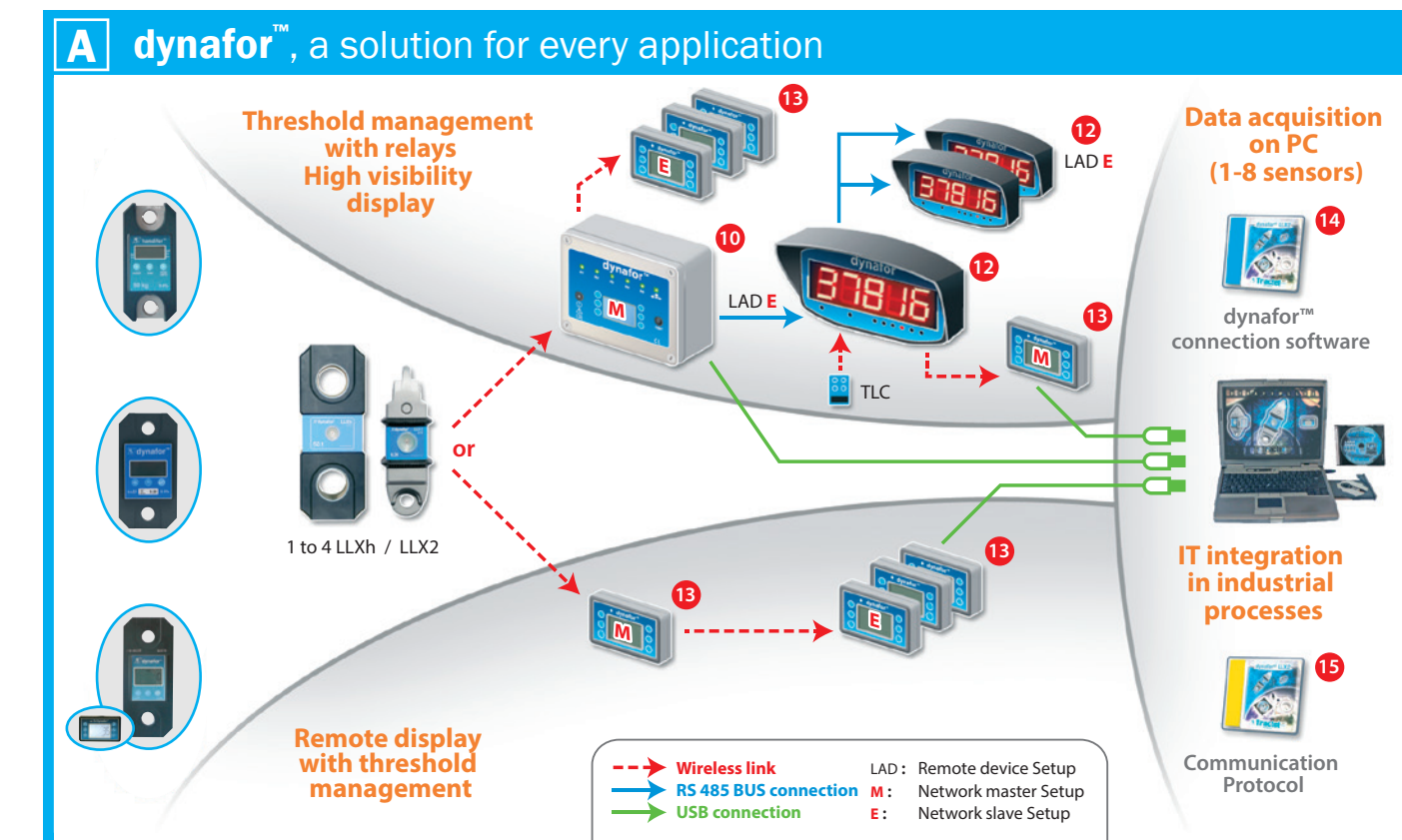
Construction applications



Monitoring of loads



Standard or specialised accessories



Weight inspection



Tension control



Hazardous industrial environments



Rescue