

PME500

– load and 3D movement monitor

SPECIFICATION SHEET



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Functions



LOAD



HEIGHT



ENVELOPE
MONITORING



SLEW



STABILITY



2D DIGGING

(When combined with PME
Machine Control)

Suitable for

- ▶ Excavator (multiple articulations possible)
- ▶ Mobile cranes (to EN13000:2010)
- ▶ Truck mounted cranes
- ▶ Agricultural machinery
- ▶ Special purpose machines

Note: System is not compliant to RIS1530 and is not recommended for Road-Rail (Hi Rail) excavators. For systems outside UK jurisdiction please refer to Prolec for advice

FUNCTIONALITY

PME500 is combined load moment indicator and machine envelope monitor designed to limit a machine's movement at overload or when moving within any plane (horizontal and vertical). This system checks the machine's movement relative to a pre-determined "safe" zone and warns of and/or controls the machine's movement when approaching any limit set. The system uses Prolec's proprietary "engine" so is independent of machine type allowing any lifting and articulating machinery to be monitored. The system will also provide full logging of operation and driver behaviour for later retrieval and play back plus stores up to a year's worth of data. When combined with suitable hydraulic controls the system will lock out movement into pre-defined unsafe situations.

Benefits

- ▶ Load control throughout the machines working envelope
- ▶ Fits any equipment with virtually no hardware change
- ▶ Full utilisation of capacity through the lifting and slewing range
- ▶ Easily upgraded to include guidance functions
- ▶ Options to monitor cab and depth as well as reach and slew
- ▶ Compatible with OEM designs and load charts

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Your safety, your profit, our commitment

PME500

– load and 3D movement monitor

Standard Features

- ▶ Real time lifting capacity displayed through the range
- ▶ Actual load on hook displayed during lift
- ▶ Real time machine position monitored giving immediate warning of approach to limit
- ▶ Audible and visual alarm at or near limits (load, slew and height)
- ▶ Full data logging of all actions including alarms and limit warnings
- ▶ Displays safe movement options when at or near limits
- ▶ Override for supervisors on screen
- ▶ Simple or complex height limits can be set to match working profile (e.g. tunnels)
- ▶ Context specific icons display status on screen
- ▶ Hydraulic control on movement at limit (H, E, L variants)
- ▶ Full cab protection including complex shapes and movements possible (E variant)
- ▶ Control on depth, maximum and minimum radius plus complex cab protection available (E variant required)

- ▶ Multiple duties possible (up to 8 without extra hardware) allowing maximisation of lift envelope
- ▶ Dig mode feature makes system dormant during excavation

Optional features

- ▶ External keyswitch, alarm and beacon inputs possible
- ▶ Multiple tool options possible allowing variance of load charts with tools
- ▶ Telescoping boom inputs
- ▶ Multiple and complex boom configurations possible (may need software changes)
- ▶ Alternative language files selectable
- ▶ Upgrades to guidance available with limited hardware addition
- ▶ Alternative angle sensor inputs possible (hardware required)
- ▶ Fail safe variants available (hardware required)
- ▶ Upgrade to ALO working off track (Network Rail Standards) with appropriate safe systems of work (consult Prolec prior to implementing ALO off track work)

Standards, Tests and Specification

- ▶ Complies with H&S requirements on the machinery directive EN2006/42/E
- ▶ Designed to meet EN474; BS7262; EN10567; EN13000:2010; EN13844; EN12077; EN62061; EN60204:2006
- ▶ Complies with LOLER requirements for UK lifting
- ▶ EMC EN13309:2010; EN50121-3:2006
- ▶ Tested for Vibration, Temperature, Impact and environmental protection to standards
- ▶ Display daylight viewable (650cd/m²)
- ▶ Input voltage 10-32V
- ▶ Power requirements as installed. System off: 2mA; 10V system: 1A; 32V system: 500mA (power requirements may vary dependant on hardware configuration)
- ▶ Firmware designed consistent with SIL2 functionality
- ▶ Operating system independent to ensure SIL2 functionality
- ▶ Operating temperature range -20°C to 65°C
- ▶ Controller (IO module) tested to IP69k
- ▶ Display tested to IP65
- ▶ Touch button (capacitive) input on display
- ▶ CAN communications protocol
- ▶ M12 connectors
- ▶ USB 2 input for data transfer

Configurator

OPTIONS	Optional Adders (add to part number)							
	Base Part Number	Motion Cut Envelope (height, min/max radius, depth)	SIL 2	External Alarm	External Beacon	External Keyswitch	Extending Boom	4.3" Daylight Viewable Screen
Single boom (e.g crane)	PME500CEL	Included	2	A	B	K	Z	Standard
Mono boom (excavator) height/slew only	PME500MH	Included	2	A	B	K	Z	Standard
Mono boom (excavator)	PME500MEL	Included	2	A	B	K	Z	Standard
Triple boom (excavator/crane)	PME500TEL	Included	2	A	B	K	Z	Standard
Multiple articulations	PME500XEL	Included	2	A	B	K	Z	Standard

Note: Only motion cut enabled systems available. Motion cut valves extra
 Example: PME500X2AZ – multiple articulation machine with SIL2 control and extending boom