

PME400

– 3D Envelope monitor (combined height and slew limiter)

SPECIFICATION SHEET



PRO | safe

Functions



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

FUNCTIONALITY

PME400 is a machine envelope monitor designed to limit movement on both the vertical plane (height, depth, cab protection) plus the horizontal plane (slew and radius limits) simultaneously. 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 largely independent of machine type allowing any slewing 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

- ▶ Fits any equipment with virtually no hardware change
- ▶ Easily upgraded to include load moment or guidance functions
- ▶ Fully compliant to relevant codes
- ▶ Options to monitor cab and depth as well as reach and slew
- ▶ Compatible with OEM design requirements for envelope monitoring

f Prolec Ltd @ProlecLtd YouTube Prolec Ltd. LinkedIn Prolec Ltd.

+44 (0)1202 681190 www.prolec.co.uk sales@prolec.co.uk f. +44(0)1202 677909

Prolec Ltd. 25 Benson Road, Nuffield Industrial Estate, Poole, Dorset BH17 0GB United Kingdom

PRO
Your safety, your profit, our commitment

PME400

– 3D Envelope monitor (combined height and slew limiter)

Standard Features

- ▶ Real time machine position monitored giving immediate warning of approach to limit
- ▶ Audible and visual alarm at or near limits
- ▶ 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)
- ▶ Complex slew profiles (e.g. dual wall) possible
- ▶ Context specific icons display status on screen
- ▶ Hydraulic control on movement at limit (H, E 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 for alternative boom/tool configurations

Optional features

- ▶ External keyswitch, alarm and beacon inputs possible
- ▶ Telescoping boom inputs
- ▶ Multiple and complex boom configurations possible (may need software changes)
- ▶ Alternative language files selectable
- ▶ Upgrades to other safety functions (PME500) and guidance available with limited hardware update
- ▶ 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/EC
- ▶ 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
- ▶ Controller (IO module) tested to IP69k
- ▶ Display tested to IP65
- ▶ 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)
- ▶ Software design following MISRA development guidelines
- ▶ Operating system independent to ensure SIL2 functionality
- ▶ Operating temperature range -20°C to 65°C
- ▶ 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 Height (only)	Motion Cut Envelope (height, min/max radius, depth)	SIL2	External Alarm	External Beacon	Fail Safe	External Keyswitch 1 = Supervisor 2 = Override	Extending section X = R (Reeler) S (Prox switch)	4.3" Daylight Viewable Screen
Single Boom (e.g. crane)	PME400C	H	E	2	A	B	G	KX	ZX	Standard
Mono boom (excavator)	PME400M	H	E	2	A	B	G	KX	ZX	Standard
Triple boom (excavator/crane)	PME400T	H	E	2	A	B	G	KX	ZX	Standard
Multiple Articulations	PME400X	H	E	2	A	B	G	KX	ZX	Standard