

# PMERail

## – Road Rail (Hi Rail) Excavator Controller

SPECIFICATION SHEET



**PRO** | safe

### Functions



HEIGHT



ENVELOPE  
MONITORING



LOAD  
CONTROL



STABILITY



RAIL SAFETY



2D DIGGING

(When combined with PME  
Machine Control)

### Suitable for

- ▶ All excavators (multiple articulations possible)
- ▶ Backhoes (incl on-rail versions)
- ▶ Road-rail (hi-rail) excavators (incl tandem lifting)
- ▶ Cranes and other on-rail lifting plant

## FUNCTIONALITY

PMERail provides a control system for the functions of a Road-Rail (Hi Rail) excavator working on rails. PMERail monitors all functions of the machine when loaded and when moving to ensure it remains within safe limits as set out by rail operating authorities. The system comes with multiple inputs and duties as standard ensuring it operates optimally regardless of rail conditions and its current orientation. Additionally Prolec offers variants to comply with Adjacent Line Open works and when working under Live Overhead Lines. All systems are programmed to be compliant with the local rail authority's codes and are configured, when shipped, to operate in their country of use. The system will also provide full logging of operation and driver behaviour for later retrieval and play back and stores up to a year's worth of data.

### Benefits

- ▶ Fully compliant to local rail authority codes
- ▶ Maximises lifting and slewing capability through unique hardware
- ▶ Easily upgraded to include guidance functions
- ▶ Multiple inputs and duties available without further cost
- ▶ Configurable to include external trailer inputs
- ▶ Tandem lift function available

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Your safety, your profit, our commitment

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### Standard Features

- ▶ Backwards and sectorised stability
- ▶ Tandem lifting control mode
- ▶ On-screen and printed load charts
- ▶ Lift planner program supplied separately for input to MMI
- ▶ Flexible sectorised duties down to 1°
- ▶ Height control on all variants plus OLE on Ultra variant
- ▶ Separate “closed control” hydraulic slew function for Max/Ultra variants
- ▶ High Integrity virtual wall and control up to pre-set slew limit (Max/Ultra only)
- ▶ High-reliability slew encoder with measurement checking
- ▶ Multiple interlocks preventing travel or axle unlock in unsafe conditions
- ▶ Multiple duties for differing conditions (e.g cant)
- ▶ Axle lock inputs for controlling movement
- ▶ SIL2 equivalent safety (performance level D) for PMERail and higher variants
- ▶ Full traceability and logging for audit purposes (4GB capacity approx 6 month’s usage)
- ▶ In gauge lock function
- ▶ Key switches (override and supervisor) provided

- ▶ Sensors: fail safe as standard (rail operator dependant), direct drive capacity on Ultra
- ▶ Context specific icons displaying current state of load and envelope control
- ▶ On screen display of pre-set limits; axle and cant status
- ▶ Full traceability and fault finding on screen and via downloadable data log
- ▶ Virtual wall can be set either side or both

### Optional features

- ▶ Multiple extra inputs as needed e.g. trailer, speed, axle-lock (extra hardware may be required)
- ▶ Multiple lifting points: set separate lifting points with individual load characteristics
- ▶ Tandem lifting option prevents overload between machines (hardware required)
- ▶ Access control privileges
- ▶ Languages: multiple as required (extra cost may be incurred)
- ▶ London Underground mode - other rail approvals on request

### Standards, Tests and Specification

- ▶ Complies with the “essential H&S requirements” of machinery directive EN2006/42/EC
- ▶ Compliant to RIS1530 PLT Issue4 MLD/R004 for ALO
- ▶ Designed to meet EN474; BS7262; EN10567; EN13000:2010; EN13849; EN12077; EN62061; EN60204:2006; EN15746-2010
- ▶ SIL2 integrity to EN13849 and EN62061
- ▶ Complies with LOLER requirements for UK lifting
- ▶ EMC EN13309:2010; EN50121-3:2006
- ▶ CE Marked
- ▶ Tested for vibration, temperature, impact and environmental protection to standards
- ▶ Controller: IP67 & IP69k, display: IP65
- ▶ Display daylight viewable (650cd/m2)
- ▶ Input voltage 10-32V

### Configurator

System description/application	Optional Adders (add to part number)										
	Base Part Number	Motion Cut Envelope (height, min/max radius, depth)	Motion Cut Lifting	SIL 2	External Alarm	External Beacon	Fail Safe	External Keyswitch 1 = Supervisor 2 = Override	Extending Section	4.3" Daylight Viewable	Multiple Lifting Duties
<b>F. PMERail (substitute “T” for “M” in base part for triple excavators or X for multiple articulations) See notes on SIL2</b>											
Standard system	PMERailM	Standard	Standard	Standard	Standard	Standard	Available	Standard	ZX	Standard	Included
ALO system (UK RIS1530 MLD004)	PMERailM Max	Standard	Standard	Standard	Standard	Standard	Standard	Standard	ZX	Standard	Included
ALO/OLE system (UK RIS1530 MLD004)	PMERailM Ultra	Standard	Standard	Standard	Standard	Standard	Standard	Standard	ZX	Standard	Included

Notes: PMERail complies to “Performance Level D” per RIS1530 standards which equates to SIL2 performance levels.  
 ALO = Adjacent Line Open  
 OLE = Overhead Live Equipment