



# UNISTAR HR

## Electro-hydraulic Point Machine for Freight, Urban and Mixed Traffic

### Description

The UNISTAR HR has already been installed over 2,500 times in 30 different countries in different climate zones. It meets the strictest safety requirements and among others specifications of German Railways (DB), ProRail and AREMA.

The UNISTAR HR series also includes

- » UNISTAR HR EM
- » UNISTAR HR COMPACT
- » UNISTAR HR NG

Worldwide under various environmental and operational conditions, the UNISTAR HR family proves market leading quality and reliability. All family members offer watertight and dust-tight boxes certified according to IP67.



### System advantages

- » Railway, Heavy Haul, Metro and Light Rail applications
- » Choice of electro-hydraulic or electro-mechanic drive systems
- » Up to four setting levels
- » Operation of turnouts with and without stretcher bars (track rods)
- » Operation of swing nose crossings (movable point frogs)
- » Reduced track downtime
- » Industry leading reliability and availability
- » Short and sturdy connecting rods with thermal expansion compensation
- » Low weight of components, no lifting gear required for installation

## Additional description

The unique and SIL4 certified design of UNISTAR HR is proving excellent reliability and highest availability in daily operation.

- » Motor unit and DLD (drive, locking, detection) unit are split into two individual IP67 certified boxes. This allows versatile installation.
- » The motor unit with hydraulic drive is capable of operating up to four DLD units installed in a turnout.

- » In case of distributed drives in a turnout, identical DLD units are applied.
- » the throw of each adjustment level can be individually adjusted

The connecting rods compensate for thermal expansion and contraction of the switch points without affecting the end position adjustments. Integrated pressure heads positively close the switch points against the stock rail.



## Technical Data:

Item	Value
Safety level	SIL4 according to DIN EN 50126, 50128 and 50129
MTBF	> 500 000 h
MTTR	< 20 minutes
Environmental conditions Standard configuration	temperature -40 to +80°C, Solar Radiation tested with 1120 W/m <sup>2</sup> , humidity up to 95 %
Protection class	IP67
Weight	weight DLD unit approx. 80 kg, Motor unit approx. 50 kg
Throw	60 - 160 mm, adjustable
Throw time	2 - 5 sec
Throw force	up to 17 000 N, adjustable
Motor voltages	24 - 750 V AC or DC
Locking system	lock integrated prism lock, trailable or non-trailable
Fixation to track	concrete or hollow steel sleeper, stock rail fixation, sleeper fixation
Interfaces	all types of turnouts, with or without tongue connecting rods