

INNOVATION ON THE TRACKS



UNISTAR CSV 24

Electric Switch Machine
for grooved rail and
T-rail turnouts

ELECTRIC SWITCH MACHINE UNISTAR CSV 24

One Switch Machine for **universal application**

The small and low profile **UNISTAR CSV 24** stainless steel box with its outer dimensions of only 920 x 450 x 180 mm (36 x 17.75 x 7 inches) is housing all in compact design mechanic and electric hydraulic modules. Installation into existing earth boxes of other vendors is possible by adapter frames - mostly without modifying the earth boxes.

The compact dimensions with large throw of up to 120 mm (4.75 inches) combined with the working principle of the internal prism lock allow universal installation in turnouts with gauges starting with 900 mm (35.5 inches):

- Trailable and non-trailable turnouts
- Grooved rail, Phoenix type rail and t-rail turnouts of all rail sizes and standards
- Moveable point frogs in grooved rail and T-rail turnouts
- Between the gauge and beside the rail

Reliable and low in maintenance

The **UNISTAR CSV 24** is a sustainable investment: locking device and detector rods can be retrofitted at any time thanks to the modular design philosophy. Adaptations to meet existing signalling system standards are also possible.

The hydraulic power unit has low noise emissions and provides the throw force constantly on the entire throw. There are no limitations of the throw or the mechanic characteristics by variations on motor voltages. Separate dampers are not required.



DVG Duisburger Verkehrsgesellschaft AG, Germany

Options

Type	Locking Device		Detector Rods		Drive Unit			Manual Operation		
	w/o	Prismlock	w/o	with	w/o	Electro-hydraulic	Electro-magnetic	Fully manual	Hydraulic assist	Manual and hydraulic
CSV 24 UNISTAR	O	PV	O	P	O	EH	EM	M	H	MH

All options can be retrofitted at any time!

FLEXIBLE INSTALLATION POSSIBILITIES BY UNIQUE CHARACTERISTICS

Modular Design

With the UNISTAR CSV 24 a system is available which can be adapted flexibly with its modular design to the respective on sight requirements. All modules can be retrofitted at any time.

Basis Version

- Stainless steel box
- Spring mechanism, trailable, for fixation of the switch tongues
- Stainless steel drive rods
- Main carrier with detector bars and contact equipment
- Lever recess for manual operation, in a pure mechanical way directly acting on the locking device

Options

Locking Device

PV: Adjustable throw without exchanging parts from 38-120 mm (1.50-4.75 inches)

Detector Rods

P: Two separate detector rods for monitoring and for additional locking of the switch points.

Manual Operation

MH: Manual hydraulic for easy manual operation. Two hydraulic manual pumps are integrated in the Mono-Block hydraulic unit.

Drive Unit

EH: Mono-Block hydraulic unit: all modules bolted to one unit, no tubes or pipes.

Fixation of the electric motor over bayonet locking device.

Motor voltages from 24-750 V AC or DC.

EM: Electromagnet for voltages from 600-750 V DC instead of the Mono-Block hydraulic unit.

Typical combinations:

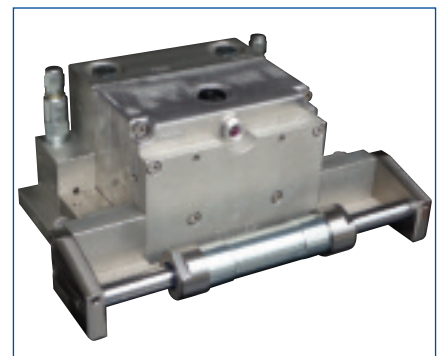
Depot: Unistar CSV 24 O-P-EH-M

Main line: Unistar CSV 24 PV-P-EH-M

Watertight stainless steel box



Mono-Block hydraulic unit



Simple design



Installation Possibilities

T-Rail turnout



Metropolitan Transit Authority Houston, USA

Grooved rail turnout



Metropolitan Transit Authority Houston, USA

Outside the gauge (6 foot)



Metropolitano de Alicante, Spain

TECHNICAL DATA

System Advantages

- safe and reliable
- approved acc. to SIL 4
- watertight stainless steel box IP67, sand tight
- extreme low profile design - height only 180 mm (7 inches)
- simple installation, easy design
- Mono-Block hydraulic unit: no pipes, no hydraulic expertise required, integrated damping
- Locking device made of inductive hardened special steel
- Drive and detector rods made of stainless steel
- low in maintenance
- low wear
- low noise emissions

Technical Data

Installation	between the gauge (4 foot) and outside the gauge (6 foot)
Types of turnouts	Grooved and T-rail turnout
Gauges	from 900 mm (35.5 inches)
Throw	38 - 120 mm (1.50 - 4.75 inches), adjustable without changing parts
Throw time	0,5 - 1,5 sec
Throw force	up to 6.000 N, adjustable
Holding force	up to 9.000 N, adjustable
Motor voltage	24 V - 750 V AC and DC typical 110 V DC, 230 V AC, 400 V AC, 750 V DC
Locking device	internal prism lock, trailable or non-trailable
Degree of protection	IP67

Why CONTEC?

Economy and society need mobility. Increasing energy and material costs are introducing an even stronger focus on rail systems. Increasing traffic requires innovative ideas. CONTEC improves rail safety, competitiveness and attractiveness, by developing and manufacturing innovative products for railbound traffic. CONTEC products are

- Safe
- Reliable
- Economical
- Low in maintenance

References

Extract

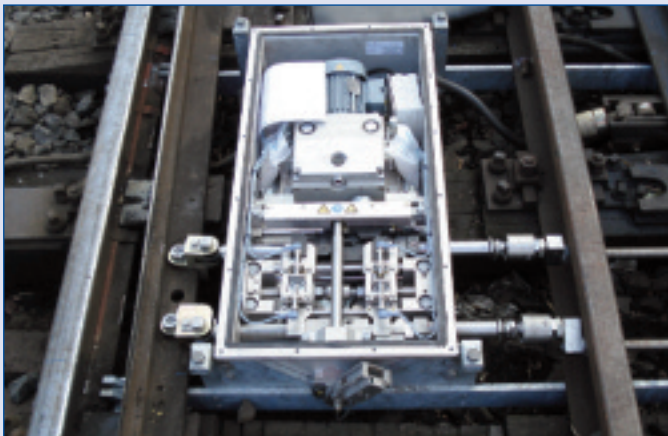
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 Metro Sao Paulo	 Metrolink Manchester	 RATP Paris

PROJECTIVE DESIGN BY REFLECTIVE THINKING



REFERENCES

SSB Stuttgarter Straßenbahnen AG, Germany



Kayseri Ulasim, Turkey





CONTEC

TRANSPORTATION SYSTEMS

CONTEC GmbH
Oberahrer Straße 9
56244 Ötzingen - Sainerholz
Germany
Phone +49 (0) 26 66 / 95 20 - 0
Fax +49 (0) 26 66 / 95 20 - 28
E-Mail info@contec-ts.com
Internet www.contec-ts.com