

FO converters - PSI-MOS-RS422/FO 850 T - 2708397

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FO converter with integrated optical diagnosis, alarm contact, for RS-422/RS-485 4-wire/ INTERBUS to 2 Mbps, T-coupler with two FO interfaces (BFOC), 850 nm, for HCS/fiber glass cable

Product Features

- Supply voltage routed through via DIN rail connectors
- Connections can be plugged in using a COMBICON screw terminal block
- Redundant power supply possible by means of optional system power supply unit
- High-quality electrical isolation between all interfaces (INTERBUS // fiber optic ports // power supply // DIN rail connector)
- Approved for use in zone 2
- Integrated optical diagnostics for continuous monitoring of fiber optic paths
- Intrinsically safe fiber optic interface (Ex op is) for direct connection to devices in zone 1
- Floating switch contact for leading alarm generation in relation to critical fiber optic paths
- Automatic data rate detection for all data rates up to 2 Mbps



Key commercial data

package_quantity	1
GTIN	4017918974091

Technical data

Note:

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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Dimensions

Width	35 mm
Height	99 mm
Depth	103 mm

Ambient conditions

Ambient temperature (operation)	-20 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	30 % ... 95 % (no condensation)
Altitude	5000 m (For restrictions see manufacturer's declaration)
Degree of protection	IP20

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Technical data

Ambient conditions

Noise immunity	EN 61000-6-2:2005
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Serial interface

Interface 1	RS-422 interface in acc. with ITU-T V.11, EIA/TIA-422, DIN 66348-1
Operating mode	Full duplex
Connection method	Pluggable screw connection
Transmission medium	Copper
Transmission length	≤ 1000 m (depending on the data rate, with shielded, twisted data cable)
Termination resistor	220 Ω
Termination resistor	100 Ω
Termination resistor	220 Ω
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section stranded min.	0.2 mm ²
Conductor cross section stranded max.	2.5 mm ²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	14
Serial transmission speed	≤ 2 Mbps

Optical interface FO

Transmit capacity, minimum	-4.6 dBm (200/230 μm)
Transmit capacity, minimum	-17.6 dBm (50/125 μm)
Transmit capacity, minimum	-13.6 dBm (62,5/125 μm)
Minimum receiver sensitivity	-33.2 dBm
Wavelength	850 nm
Transmission length incl. 3 dB system reserve	2800 m (With F-K 200/230 10 dB/km with quick mounting connector)
Transmission length incl. 3 dB system reserve	4200 m (with F-G 50/125 2.5 dB/km)
Transmission length incl. 3 dB system reserve	4800 m (with F-G 62,5/125 3.0 dB/km)
Transmission medium	HCS fiber
Transmission medium	Multi-mode fiberglass
Transmission protocol	Transparent to protocol for RS-422 interface
Connection method	B-FOC (ST [®])

Fault warning output

Maximum switching voltage	60 V DC
Maximum switching voltage	42 V AC
Limiting continuous current	0.46 A

Power supply

Supply voltage range	18 V DC ... 30 V DC
Max. current consumption	130 mA

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Power supply

Typical current consumption	120 mA (24 V DC)
Connection method	COMBICON plug-in screw terminal block

General

Transmission channels	2 (1/1) RD, TD, full duplex
Bit distortion, input	± 35 % (permitted)
Bit distortion, output	< 6.25 %
Electrical isolation	(VCC // RS-422)
Test voltage data interface/power supply	1.5 kV _{rms} (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Noise emission	EN 55011
Net weight	200 g
Housing material	PA 6.6-FR
Color	green
MTBF	178 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
MTBF	26 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))
Conformance	CE-compliant
ATEX	# II 3 G Ex nAC IIC T4 X
ATEX	# II (2) GD [Ex op is] IIC (PTB 06 ATEX 2042 U)
UL, USA / Canada	Class I, Zone 2, AEx nc IIC T5
UL, USA / Canada	Class I, zone 2, Ex nC nL IIC T5 X
UL, USA / Canada	Class I, Div. 2, Groups A, B, C, D

classifications

eCl@ss

eCl@ss 4.0	27230207
eCl@ss 4.1	27230207
eCl@ss 5.0	27230207
eCl@ss 5.1	27230207
eCl@ss 6.0	27230207
eCl@ss 7.0	27230207
eCl@ss 8.0	27230207

ETIM

ETIM 2.0	EC001423
ETIM 3.0	EC001423
ETIM 4.0	EC001423
ETIM 5.0	EC001423

UNSPSC

UNSPSC 6.01	30211506
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classifications

UNSPSC

UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	43201553

approvals

ATEX / UL Listed / cUL Listed / cULus Listed / UL Recognized / cUL Recognized / cULus Recognized /

Approval details

ATEX	
Nominal voltage UN	
Nominal current IN	
mm ² /AWG/kcmil	

UL Listed

cUL Listed

cULus Listed

UL Recognized

cUL Recognized

cULus Recognized

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accessories

Connector set

PSM-SET-B-FOC/4-HCS - 2708481



Data cable by the meter

PSM-LWL-HCS-RUGGED-200/230 - 2799885



PSM-LWL-HCSO-200/230 - 2799445



PSM-LWL-GDM-RUGGED- 50/125 - 2799322



PSM-LWL-GDO- 50/125 - 2799432



Power supply

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accessories

MINI-SYS-PS-100-240AC/24DC/1.5 - 2866983



DIN rail connector

ME 17,5 TBUS 1,5/ 5-ST-3,81 GN - 2709561



Assembly tool

PSM-HCS-KONFTOOL/B-FOC - 2708465



Measuring tools

PSM-FO-POWERMETER - 2799539



Adapter

PSM-SET-BFOC-LINK/2 - 2799429



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accessories

Data plug

SUBCON-PLUS 9/F - 2744241



SUBCON-PLUS 9/M - 2744018



Screwdriver tools

SZS 0,4X2,5 VDE - 1205037



Interface converter

PSM-ME-RS232/RS485-P - 2744416



Data cable preassembled

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accessories

FL MM PATCH 1,0 LC-ST - 2989174



FL MM PATCH 2,0 LC-ST - 2989271



FL MM PATCH 5,0 LC-ST - 2901801



FL MM PATCH 1,0 SC-ST - 2901809



FL MM PATCH 5,0 SC-ST - 2901811



FL MM PATCH 1,0 ST-ST - 2901815



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accessories

FL MM PATCH 2,0 ST-ST - 2901816



FL MM PATCH 5,0 ST-ST - 2901817



FL MM PATCH 1,0 ST-SCRJ - 2901820



FL MM PATCH 2,0 ST-SCRJ - 2901821



FL MM PATCH 5,0 ST-SCRJ - 2901822



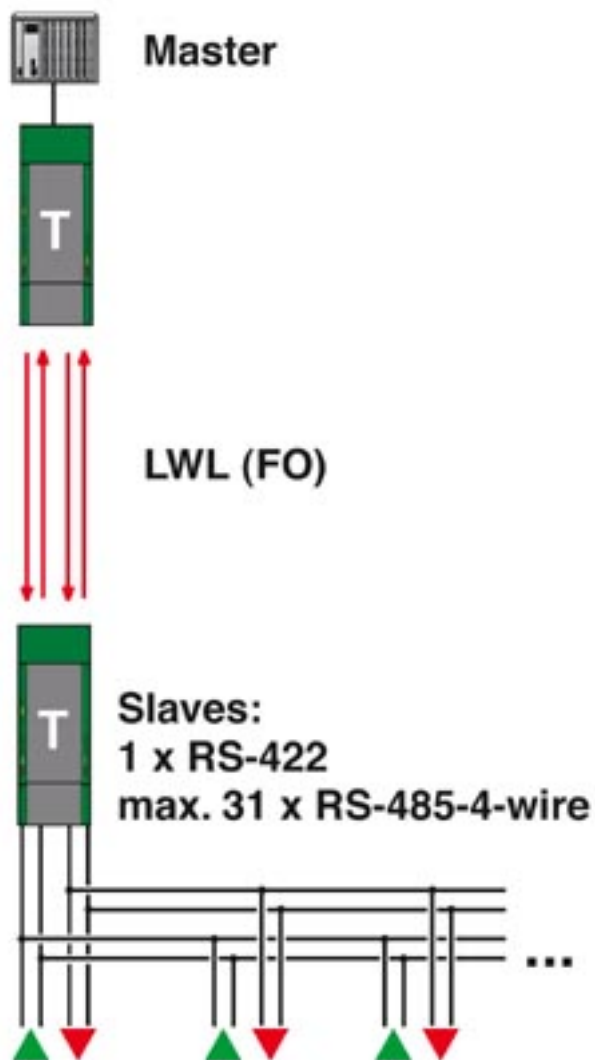
FO converters - PSI-MOS-RS422/FO 850 T - 2708397

accessories

ME 17,5 TBUS 1,5/PP000-3,81 BK - 2890014

Drawings

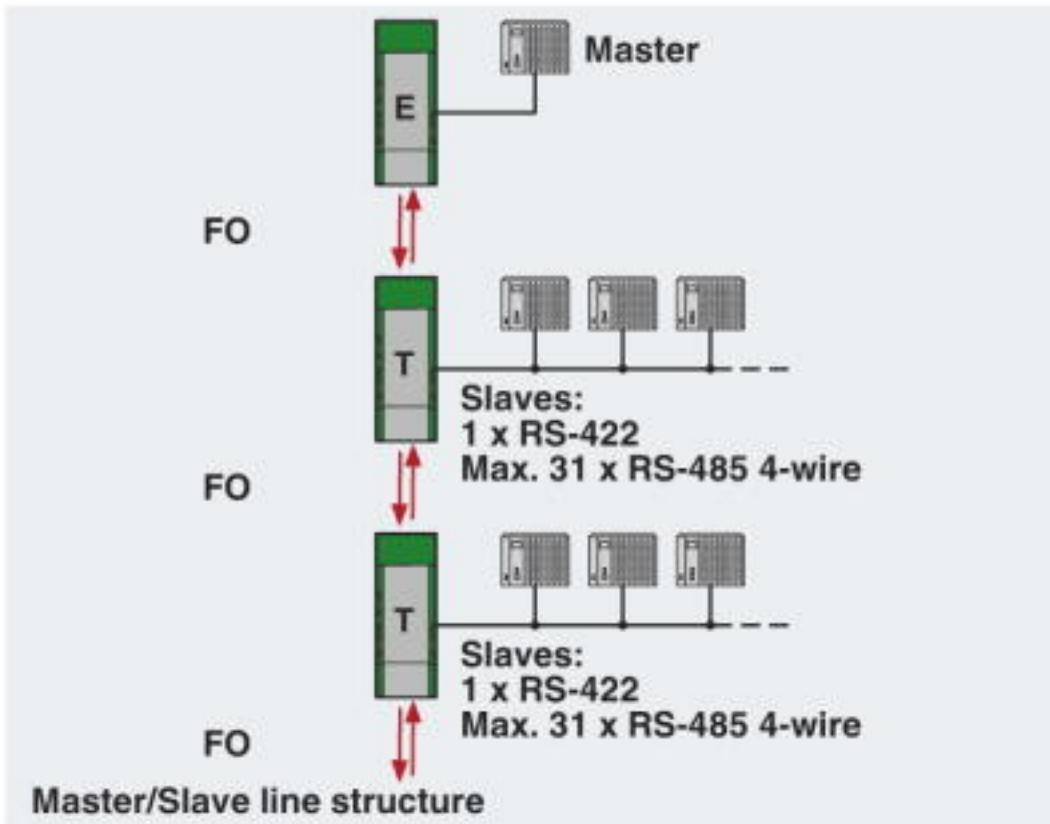
Application drawing



Redundant point-to-point connection

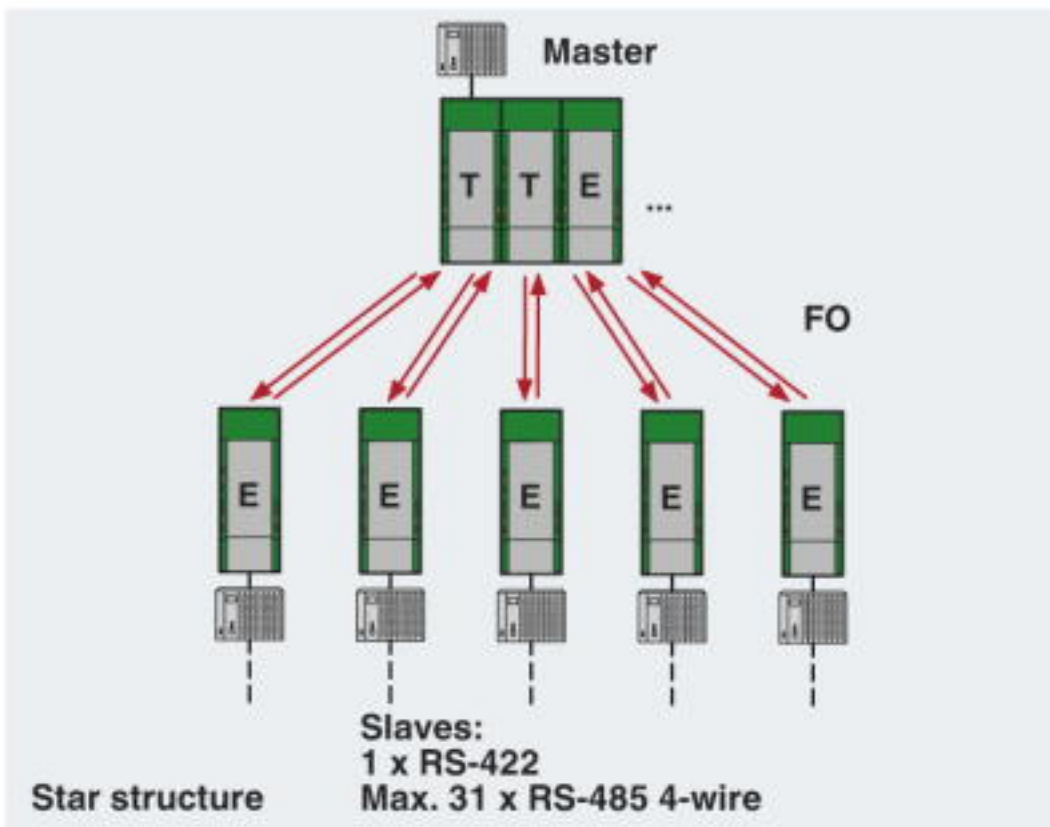
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Application drawing



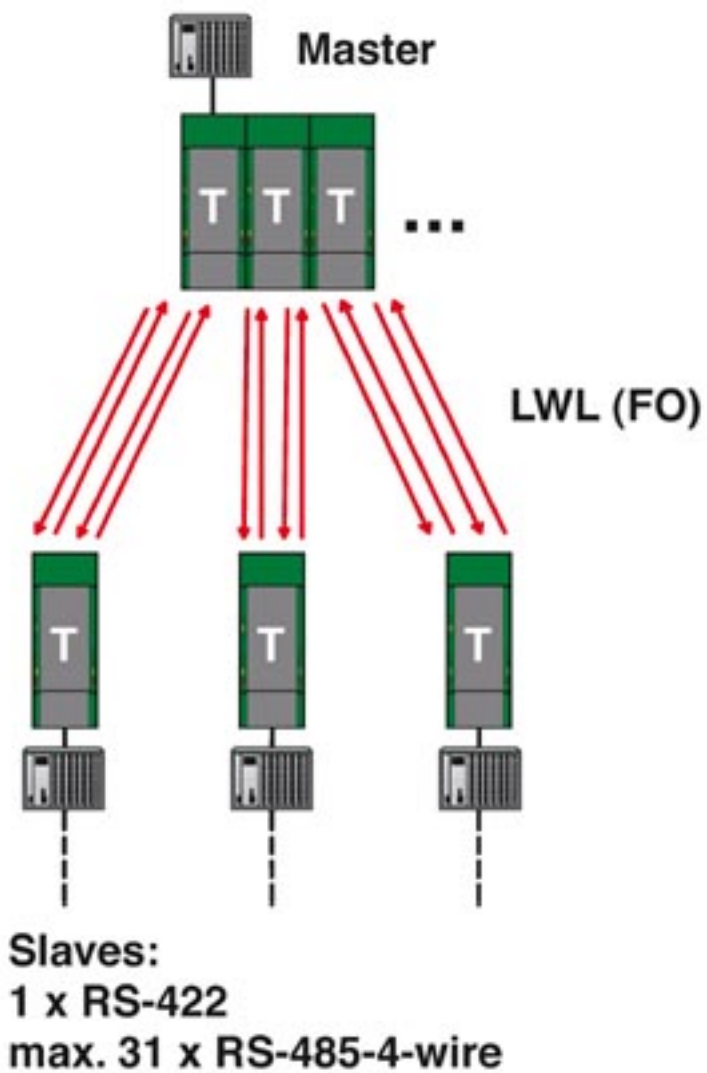
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Application drawing



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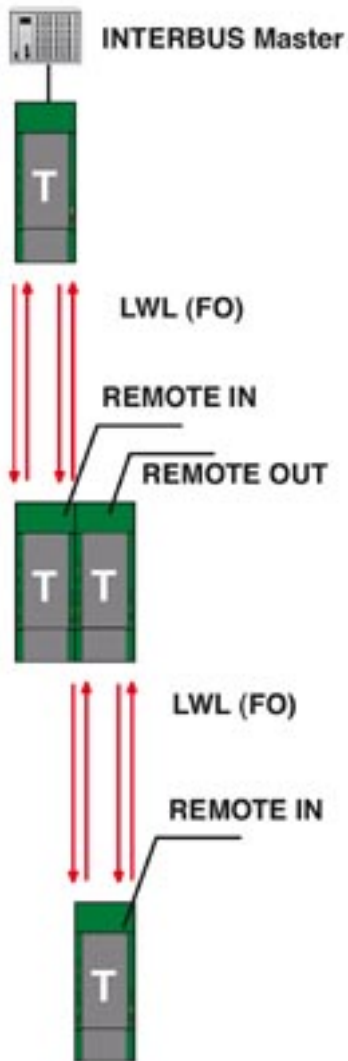
Application drawing



Redundant structure

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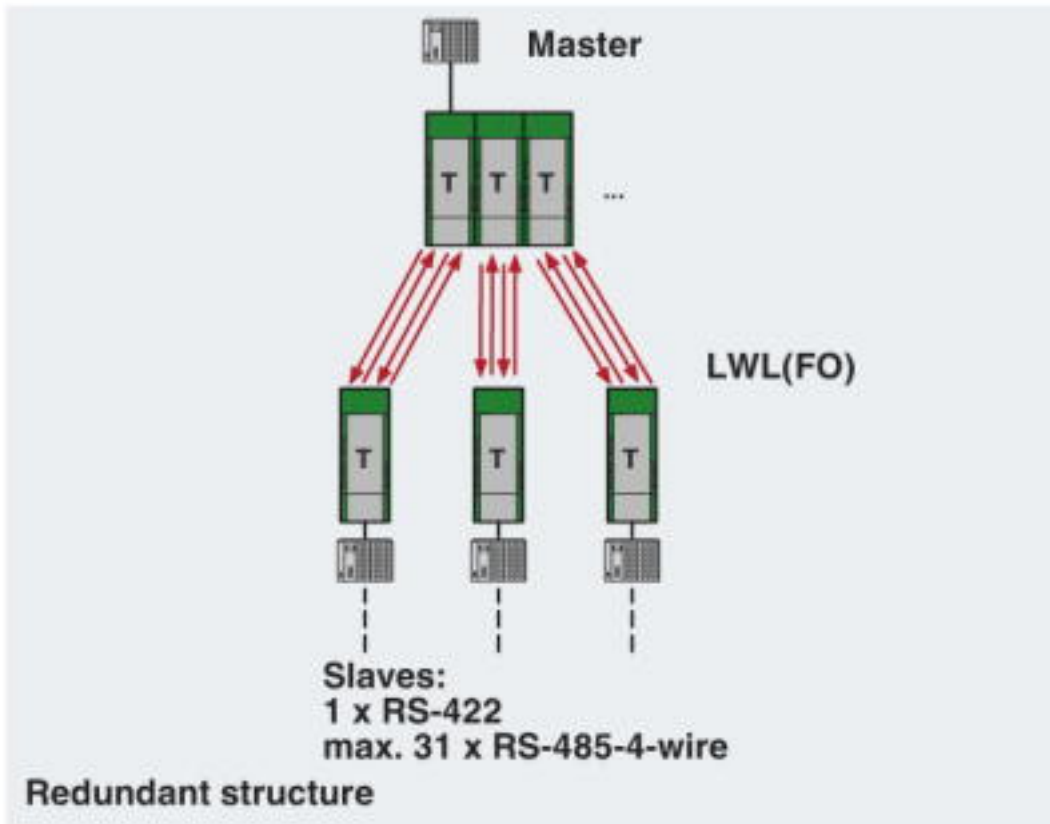
Application drawing



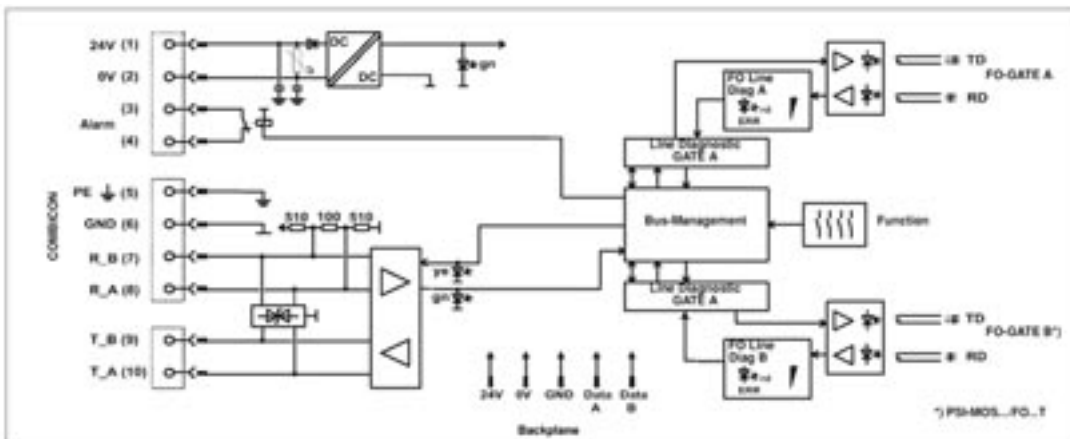
INTERBUS with PSI-MOS-RS-422Redundant connection

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Application drawing



Block diagram



*) only with PSI-MOS.../FO...T

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