SIEMENS

Data sheet

3RP1576-1NP30



Timing relay, electronic Phased-out product !!! For further information, please contact our sales department with star-delta (wye-delta) function 1 NO contact, delayed 1 NO contact, instantaneous 1 time range 3...60 s 24 V AC/DC and 200...240 V AC at 50/60 Hz AC screw terminal

product brand name SIRIUS product designation timing relay product designation 3RP15 General technical data		
product type designation 3RP15 General technical data	product brand name	SIRIUS
General tochnical data product component • relay output • semi-conductor output No product extension required remote control No power loss [W] maximum 2 W insulation voltage for overoltage category III according to IEC 300 V 60864 with degree of pollution 3 rated value 2 kV test voltage for isolation test 2 kV degree of pollution 3 surge voltage resistance rated value 4 000 V protection class IP IP20 shock resistance according to IEC 60068-2-27 11g /15 ms mechanical service IIf6 (operating cycles) typical 10000 000 electrical endurance (operating cycles) typical 1000 000 electrical endurance (operating cycles) typical 100 000 relative setting accuracy relating to full-scale value 5 % relative repeat accuracy 1 % influence of the surrounding temperature 45 % power supply influence 41 % Substance Prohibitance (Date) 05/28/2009 SVHC substance name Lead monoxide (lead oxide) - 1317-36-8 Control supply voltage 1 at AC -	product designation	timing relay
product component Yes • relay output Yes • semi-conductor output No product extension required remote control No product extension required remote control No power loss [W] maximum 2 W insulation voltage for overvoltage category III according to IEC 300 V 60664 with degree of pollution 3 rated value 300 V degree of pollution 3 surge voltage resistance rated value 4 000 V protection class IP IP20 shock resistance according to IEC 60068-2-27 11g / 15 ms mechanical service life (operating cycles) typical 10 000 000 electrical endurance (operating cycles) typical 100 000 dypical 3 60 s relative setting accuracy relating to full-scale value 5 % thermal current 5 A rescovery time 150 ms reference code according to IEC 81346-2 K relative repeat accuracy 1 % influence of the surrounding temperature 45 % power supply influence 11 % Substance Prohibitance (Date) 05/28/2009 SVHCs substance name Lead monoxide (lead oxide) - 1317-36-8 Control supply voltage of the control supply voltage AC/IDC contr	product type designation	3RP15
• relay output Yes • semi-conductor output No product extension required remote control No product extension required remote control No product extension optional remote control No power loss [W] maximum 2 W insulation voltage for overvoltage category III according to IEC 300 V 60664 with degree of pollution 3 surge voltage resistance rated value 4 000 V protect extance according to IEC 60068-2-27 11g / 15 ms mechanical service life (operating cycles) typical 100 000 electrical endurance (operating cycles) typical 100 000 electrical endurance (operating cycles) typical 5 % thermal current 5 A reservery time 150 ms referve code according to IEC 81346-2 K relative repeat accuracy 1 % jinfluence of the surrounding temperature 45 % opwer supply influence 15 % Substance Prohibitance (Date) 05/28/2009 SWHC substance name Lead monoxide (lead oxide) - 1317-36-8 Control supply voltage 1 at AC	General technical data	
• semi-conductor output No product extension required remote control No product extension optional remote control No power loss [W] maximum 2 W insulation voltage for overvoltage category III according to IEC 300 V 60664 with degree of pollution 3 rated value 2 kV test voltage for isolation test 2 kV degree of pollution 3 rated value 4 000 V protection class IP IP20 stock resistance according to IEC 60068-2-27 11g / 15 ms mechanical service life (operating cycles) typical 10 000 000 electrical endurance (operating cycles) at AC-15 at 230 V 000 000 optical for solution to full-scale value 5 % thermal current 5 A relative setting accuracy relating to full-scale value 5 % relative repeat accuracy 1% power supply influence 1 % Substance Prohibitance (Date) 55/8/2009 SVL substance name Lead monoxide (lead oxide) - 1317-36-8 Control supply voltage 1 at AC AC/DC Control supply voltage 1 at AC 42 V	product component	
product extension required remote control No product extension optional remote control No power loss [W] maximum 2 W insulation voltage for vervoltage category III according to IEC 300 V 60664 with degree of pollution 3 rated value 300 V test voltage for isolation test 2 kV degree of pollution 3 surge voltage resistance rated value 4 000 V protection class IP IP20 shock resistance according to IEC 60068-2-27 11g / 15 ms mechanical service life (operating cycles) typical 100 000 electrical endurance (operating cycles) at AC-15 at 230 V 100 000 typical 3 60 s relative setting accuracy relating to full-scale value 5 % thermal current 5 A recovery time 150 ms reference code according to IEC 81346-2 K relative repeat accuracy 1 % juftuece 1 % Substance Prohibitance (Date) 05/28/2009 SVHS substance name Lead monoxide (lead oxide) - 1317-36-8 Control supply voltage 1 at AC C//DC	 relay output 	Yes
Product extension optional remote control No power loss [W] maximum 2 W insulation voltage for overvoltage category III according to IEC 300 V 60664 with degree of pollution 3 rated value 2 kV test voltage for isolation test 2 kV degree of pollution 3 surge voltage resistance rated value 4 000 V protection class IP IP20 shock resistance according to IEC 60068-2-27 11g / 15 ms mechanical service life (operating cycles) typical 10 000 000 electrical endurance (operating cycles) typical 100 000 electrical endurance (operating typical 5 % relative setting accuracy relating to full-scale value 5 % relative setting accuracy relating to full-scale value 5 % reference code according to IEC 81346-2 K relative repeat accuracy 150 ms influence of the surrounding temperature 45 % power supply influence 41 % Substance Prohibitance (Date) 05/28/2009 SVH substance name Leat monoxide (lead oxide) - 1317-36-8 Control circuit/ Control 40/00	semi-conductor output	No
power loss [W] maximum2 Winsulation voltage for overvoltage category III according to IEC 60664 with degree of pollution 3 rated value300 Vtest voltage for isolation test2 kVdegree of pollution3surge voltage resistance rated value4 000 Vprotection class IPIP20shock resistance according to IEC 60068-2-2711g / 15 msmechanical service life (operating cycles) typical10 000 000electrical endurance (operating cycles) typical10 000 000electrical endurance (operating cycles) at AC-15 at 230 V typical3 60 srelative setting accuracy relating to full-scale value5 %thermal current5 Arecovery time150 msreference code according to IEC 81346-2Krelative repeat accuracy1 %Influence of the surrounding temperature±5 %power supply influence41 %Substance Prohibitance (Date)Dic28/2009SVHC substance nameLead monoxide (lead oxide) - 1317-36-8Control circuit/ Control24 V	product extension required remote control	No
Insulation voltage for vervoltage category III according to IEC 300 V 60664 with degree of pollution 3 rated value 2 kV degree of pollution 3 surge voltage resistance rated value 4 000 V protection class IP IP20 shock resistance according to IEC 60068-2-27 11g / 15 ms mechanical service Iife (operating cycles) typical 10 000 000 electrical endurance (operating cycles) typical 10 000 000 electrical endurance (operating to full-scale value 5 % relative setting accuracy relating to full-scale value 5 % recovery time 150 ms reference code according to IEC 81346-2 K relative repeat accuracy 1 % influence of the surrounding temperature ±5 % power supply influence ±1 % Substance Prohibitance (Date) 05/28/2009 SVHC substance name Lead monoxide (lead oxide) - 1317-36-8 Control circuit/ Control 4C/DC control supply voltage 1 at AC 24 V	product extension optional remote control	No
60664 with degree of pollution 3 rated value 2 kV test voltage for isolation test 2 kV degree of pollution 3 surge voltage resistance rated value 4 000 V protection class IP IP20 shock resistance according to IEC 60068-2-27 11g / 15 ms mechanical service life (operating cycles) typical 10 000 000 electrical endurance (operating cycles) at AC-15 at 230 V 100 000 typical 3 60 s adjustable time 3 60 s relative setting accuracy relating to full-scale value 5 % thermal current 5 A recovery time 150 ms relative repeat accuracy 1 % influence of the surrounding temperature 45 % power supply influence 41 % Substance Prohibitance (Date) 05/28/2009 SWHC substance name Lead monoxide (lead oxide) - 1317-36-8 Control circuit/ Control 4C/DC e at 50 Hz rated value 24 V	power loss [W] maximum	2 W
degree of pollution3surge voltage resistance rated value4 000 Vprotection class IPIP20shock resistance according to IEC 60068-2-2711g / 15 msmechanical service life (operating cycles) typical10 000 000electrical endurance (operating cycles) at AC-15 at 230 V100 000typical3 60 srelative setting accuracy relating to full-scale value5 %thermal current5 Arecovery time150 msreference code according to IEC 81346-2Krelative repeat accuracy1 %influence of the surrounding temperature±5 %power supply influence41 %Substance Prohibitance (Date)05/28/2009SVHC substance nameLead monoxide (lead oxide) - 1317-36-8Control circuit/ Control24 V		300 V
aurge voltage resistance rated value4 000 Vprotection class IPIP20shock resistance according to IEC 60068-2-2711g / 15 msmechanical service life (operating cycles) typical10 000 000electrical endurance (operating cycles) at AC-15 at 230 V typical100 000adjustable time3 60 srelative setting accuracy relating to full-scale value5 %thermal current5 Arecovery time150 msreference code according to IEC 81346-2Krelative repeat accuracy1 %influence of the surrounding temperature±5 %power supply influence±1 %Substance Prohibitance (Date)05/28/2009SVHC substance nameLead monoxide (lead oxide) - 1317-36-8Control circuit/ Control4C/DCtype of voltage of the control supply voltageAC/DCe at 50 Hz rated value24 V	test voltage for isolation test	2 kV
protection class IP IP20 shock resistance according to IEC 60068-2-27 11g / 15 ms mechanical service life (operating cycles) typical 10 000 000 electrical endurance (operating cycles) at AC-15 at 230 V typical 100 000 adjustable time 3 60 s relative setting accuracy relating to full-scale value 5 % thermal current 5 A recovery time 150 ms reference code according to IEC 81346-2 K relative repeat accuracy 1 % influence of the surrounding temperature ±5 % power supply influence ±1 % Substance Prohibitance (Date) 05/28/2009 SVHC substance name Lead monoxide (lead oxide) - 1317-36-8 Control circuit/ Control AC/DC type of voltage of the control supply voltage AC/DC e at 50 Hz rated value 24 V	degree of pollution	3
shock resistance according to IEC 60068-2-2711g / 15 msmechanical service life (operating cycles) typical10 000 000electrical endurance (operating cycles) at AC-15 at 230 V typical100 000adjustable time3 60 srelative setting accuracy relating to full-scale value5 %thermal current5 Arecovery time150 msreference code according to IEC 81346-2Krelative repeat accuracy1 %influence of the surrounding temperature±5 %power supply influence±1 %Substance Prohibitance (Date)05/28/2009SVHC substance nameLead monoxide (lead oxide) - 1317-36-8Control circuit/ ControlAC/DCcontrol supply voltage 1 at AC • at 50 Hz rated value24 V	surge voltage resistance rated value	4 000 V
mechanical service life (operating cycles) typical10 000 000electrical endurance (operating cycles) at AC-15 at 230 V typical100 000adjustable time3 60 srelative setting accuracy relating to full-scale value5 %thermal current5 Arecovery time150 msreference code according to IEC 81346-2Krelative repeat accuracy1 %influence of the surrounding temperature±5 %power supply influence±1 %Substance Prohibitance (Date)05/28/2009SVHC substance nameLead monoxide (lead oxide) - 1317-36-8Control circuit/ ControlAC/DCe at 50 Hz rated value24 V	protection class IP	IP20
electrical endurance (operating cycles) at AC-15 at 230 V typical100 000adjustable time3 60 srelative setting accuracy relating to full-scale value5 %thermal current5 Arecovery time150 msreference code according to IEC 81346-2Krelative repeat accuracy1 %influence of the surrounding temperature±5 %power supply influence±1 %Substance Prohibitance (Date)05/28/2009SVHC substance nameLead monoxide (lead oxide) - 1317-36-8Control circuit/ ControlAC/DCcontrol supply voltage 1 at AC • at 50 Hz rated value24 V	shock resistance according to IEC 60068-2-27	11g / 15 ms
typicaladjustable time3 60 srelative setting accuracy relating to full-scale value5 %thermal current5 Arecovery time150 msreference code according to IEC 81346-2Krelative repeat accuracy1 %influence of the surrounding temperature±5 %power supply influence±1 %Substance Prohibitance (Date)05/28/2009SVHC substance nameLead monoxide (lead oxide) - 1317-36-8Control circuit/ ControlAC/DCtype of voltage of the control supply voltageAC/DCe at 50 Hz rated value24 V	mechanical service life (operating cycles) typical	10 000 000
relative setting accuracy relating to full-scale value 5 % thermal current 5 A recovery time 150 ms reference code according to IEC 81346-2 K relative repeat accuracy 1 % influence of the surrounding temperature ±5 % power supply influence ±1 % Substance Prohibitance (Date) 05/28/2009 SVHC substance name Lead monoxide (lead oxide) - 1317-36-8 Control circuit/ Control AC/DC type of voltage of the control supply voltage AC/DC e at 50 Hz rated value 24 V		100 000
thermal current 5 A recovery time 150 ms reference code according to IEC 81346-2 K relative repeat accuracy 1 % influence of the surrounding temperature ±5 % power supply influence ±1 % Substance Prohibitance (Date) 05/28/2009 SVHC substance name Lead monoxide (lead oxide) - 1317-36-8 Control circuit/ Control 4C/DC type of voltage of the control supply voltage AC/DC e at 50 Hz rated value 24 V	adjustable time	3 60 s
recovery time 150 ms reference code according to IEC 81346-2 K relative repeat accuracy 1 % influence of the surrounding temperature ±5 % power supply influence ±1 % Substance Prohibitance (Date) 05/28/2009 SVHC substance name Lead monoxide (lead oxide) - 1317-36-8 Control circuit/ Control type of voltage of the control supply voltage AC/DC at 50 Hz rated value 24 V 24 V	relative setting accuracy relating to full-scale value	5 %
reference code according to IEC 81346-2 K relative repeat accuracy 1 % influence of the surrounding temperature ±5 % power supply influence ±1 % Substance Prohibitance (Date) 05/28/2009 SVHC substance name Lead monoxide (lead oxide) - 1317-36-8 Control circuit/ Control type of voltage of the control supply voltage AC/DC control supply voltage 1 at AC • at 50 Hz rated value 24 V	thermal current	5 A
relative repeat accuracy 1 % influence of the surrounding temperature ±5 % power supply influence ±1 % Substance Prohibitance (Date) 05/28/2009 SVHC substance name Lead monoxide (lead oxide) - 1317-36-8 Control circuit/ Control type of voltage of the control supply voltage AC/DC control supply voltage 1 at AC • at 50 Hz rated value 24 V	recovery time	150 ms
influence of the surrounding temperature ±5 % power supply influence ±1 % Substance Prohibitance (Date) 05/28/2009 SVHC substance name Lead monoxide (lead oxide) - 1317-36-8 Control circuit/ Control type of voltage of the control supply voltage AC/DC control supply voltage 1 at AC • at 50 Hz rated value 24 V	reference code according to IEC 81346-2	К
power supply influence ±1 % Substance Prohibitance (Date) 05/28/2009 SVHC substance name Lead monoxide (lead oxide) - 1317-36-8 Control circuit/ Control type of voltage of the control supply voltage AC/DC AC/DC • at 50 Hz rated value 24 V	relative repeat accuracy	1 %
Substance Prohibitance (Date) 05/28/2009 SVHC substance name Lead monoxide (lead oxide) - 1317-36-8 Control circuit/ Control type of voltage of the control supply voltage AC/DC AC/DC • at 50 Hz rated value 24 V	influence of the surrounding temperature	±5 %
SVHC substance name Lead monoxide (lead oxide) - 1317-36-8 Control circuit/ Control Control supply voltage of the control supply voltage type of voltage of the control supply voltage AC/DC control supply voltage 1 at AC 24 V	power supply influence	±1 %
Control circuit/ Control AC/DC type of voltage of the control supply voltage AC/DC control supply voltage 1 at AC 24 V	Substance Prohibitance (Date)	05/28/2009
type of voltage of the control supply voltage AC/DC control supply voltage 1 at AC 24 V	SVHC substance name	Lead monoxide (lead oxide) - 1317-36-8
control supply voltage 1 at AC • at 50 Hz rated value 24 V	Control circuit/ Control	
• at 50 Hz rated value 24 V	type of voltage of the control supply voltage	AC/DC
	control supply voltage 1 at AC	
• at 60 Hz rated value 24 V	• at 50 Hz rated value	24 V
	• at 60 Hz rated value	24 V
control supply voltage 2 at AC	control supply voltage 2 at AC	
• at 50 Hz 200 240 V	• at 50 Hz	200 240 V
• at 60 Hz 200 240 V	• at 60 Hz	200 240 V
control supply voltage frequency 1 50 60 Hz	control supply voltage frequency 1	50 60 Hz
control supply voltage 1 at DC	control supply voltage 1 at DC	
• rated value 24 V	rated value	24 V

operating range factor control supply voltage rated value at DC	
initial value	0.85
full-scale value	1.1
operating range factor control supply voltage rated value at	1.1
AC at 50 Hz	
• initial value	0.85
• full-scale value	1.1
operating range factor control supply voltage rated value at	
AC at 60 Hz	0.05
initial value full accle value	0.85
full-scale value Switching Function	1.1
switching function ON-delay 	No
	No
 ON-delay/instantaneous contact passing make contact 	No
passing make contact/instantaneous contact	No
OFF delay	No
switching function	
flashing symmetrically with interval start/instantaneous	No
flashing symmetrically with interval start	No
flashing symmetrically with pulse start/instantaneous	No
flashing symmetrically with pulse start	No
flashing asymmetrically with interval start	No
 flashing asymmetrically with pulse start 	No
switching function	
star-delta circuit with delay time	No
• star-delta circuit	Yes
switching function with control signal	
additive ON-delay	No
 passing break contact 	No
 passing break contact/instantaneous 	No
• OFF delay	No
OFF delay/instantaneous	No
pulse delayed	No
 pulse delayed/instantaneous 	No
pulse-shaping	No
 pulse-shaping/instantaneous 	No
additive ON-delay/instantaneous	No
ON-delay/OFF-delay/instantaneous	No
passing make contact	No
passing make contact/instantaneous contact	No
switching function of interval relay with control signal	Na
 retrotriggerable with deactivated control signal/instantaneous contact 	No
retrotriggerable with switched-on control signal	No
retrotriggerable with switched-on control	No
signal/instantaneous contact	
 retriggerable with deactivated control signal 	No
Short-circuit protection	
design of the fuse link for short-circuit protection of the auxiliary switch required	fuse gL/gG: 4 A
Auxiliary circuit	
material of switching contacts	AcSnO2
material of switching contacts	AgSnO2
number of NC contacts	
number of NC contacts delayed switching 	0
number of NC contacts delayed switching instantaneous contact 	
number of NC contacts • delayed switching • instantaneous contact number of NO contacts	0 0
number of NC contacts delayed switching instantaneous contact 	0

	0
delayed switching instantaneous contact	0
	0
operational current of auxiliary contacts at AC-15 • at 24 V	3 A
• at 250 V	3A
operational current of auxiliary contacts at DC-13	
• at 24 V	1A
• at 125 V	0.2 A
• at 250 V	0.1 A
operating frequency with 3RT2 contactor maximum	5 000 1/h
contact reliability of auxiliary contacts	one incorrect switching operation of 100 million switching operations (17 V, 5
	mA)
contact rating of auxiliary contacts according to UL	R300 / B300
Inputs/ Outputs	
product function onumber of the second sec	No
Electromagnetic compatibility	INU
EMC emitted interference according to IEC 61812-1	EN 61000-6-4(3)
EMC immunity according to IEC 61812-1	EN 61000-6-2
conducted interference	
 due to burst according to IEC 61000-4-4 	2 kV network connection / 1 kV control connection
• due to conductor-earth surge according to IEC 61000-4-5	2 kV
 due to conductor-conductor surge according to IEC 61000-4-5 	1 kV
field-based interference according to IEC 61000-4-3	10 V/m
electrostatic discharge according to IEC 61000-4-2	4 kV contact discharge / 8 kV air discharge
Safety related data	
category according to EN 954-1	none
Electrical Safety	
protection class IP on the front according to IEC 60529	IP20
type of insulation	Basic insulation
Connections/ Terminals product component removable terminal for auxiliary and	Yes
control circuit	105
type of electrical connection for auxiliary and control circuit	screw-type terminals
type of connectable conductor cross-sections	
• solid	1x (0.5 4.0 mm²), 2x (0.5 2.5 mm²)
 finely stranded with core end processing 	1x (0.5 2.5 mm²), 2x (0.5 1.5 mm²)
 for AWG cables solid 	2x (20 14)
for AWG cables stranded	2x (20 14)
connectable conductor cross-section	
• solid	0.5 4 mm ²
finely stranded with core end processing AWG number as coded connectable conductor cross	0.5 2.5 mm²
section	
• solid	20 14
stranded	20 14
tightening torque	0.8 1.2 N·m
design of the thread of the connection screw	M3
Installation/ mounting/ dimensions	
mounting position	any
fastening method	screw and snap-on mounting onto 35 mm DIN rail
height	83 mm
width	22.5 mm
depth required spacing	91 mm
with side-by-side mounting	
- forwards	0 mm
— backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	0 mm

 for grounded par 	ts					
— forwards			0 mm			
— backwards			0 mm			
— upwards			0 mm			
— at the side		0 mm				
— downwards	— downwards		0 mm			
 for live parts 						
— forwards			0 mm			
- backwards			0 mm			
— upwards			0 mm			
— downwards	— downwards		0 mm			
— at the side			0 mm			
Ambient conditions						
installation altitude at h	eight above sea level ma	ximum	2 000 m			
ambient temperature						
 during operation 			-25 +60 °C			
 during storage 			-40 +85 °C			
 during transport 			-40 +85 °C			
relative humidity during	operation		10 95 %			
Approvals Certificates						
General Product App	roval					
	iovai					
UK CA	EG-Konf.	Confirmation			EHC	
	CE	Confirmation		ing	EAC	
UK CA	CE		s Marine / Shipp	ing	EAC	
UK CA	C C EG-Konf.	Test Certificate	s Marine / Shipp	ing	EAC	
UK EMV EMV	C C EG-Konf.	Test Certificate Type Test Cert ates/Test Rep	A Marine / Shipp ific- ort UREAU VERITAS Environment	RINA	EAC	

 Further information

 Information on the packaging

 https://support.industry.siemens.com/cs/ww/en/view/109813875

 Information- and Downloadcenter (Catalogs, Brochures,...)

 https://www.siemens.com/ic10

 Industry Mall (Online ordering system)

 https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RP1576-1NP30

 Cax online generator

 https://support.automation.siemens.com/WV/CAXorder/default.aspx?lang=en&mlfb=3RP1576-1NP30

 Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

 https://support.industry.siemens.com/cs/ww/en/ps/3RP1576-1NP30

 Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

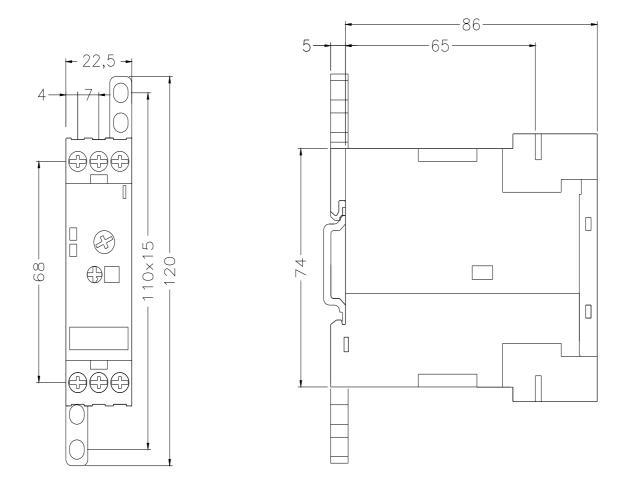
 https://support.industry.siemens.com/cs/ww/en/ps/3RP1576-1NP30

 Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

 http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RP1576-1NP30&lang=en

 Characteristic: Derating

https://support.industry.siemens.com/cs/ww/en/ps/3RP1576-1NP30/manual



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