Siemens Point Pickup Module Owner's Manual

125-704 Rev. AA, March 2009

Siemens Building Technologies, Inc.

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WARNING

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case users at their own expense will be required to take whatever measures may be required to correct the interference.

SERVICE STATEMENT

Control devices are combined to make a system. Each control device is mechanical in nature and all mechanical components must be regularly serviced to optimize their operation. All Siemens Building Technologies branch offices and authorized distributors offer Technical Support Programs that will ensure your continuous, trouble-free system performance.

For further information, contact your nearest Siemens Building Technologies, Inc. representative.

TO THE READER

Your feedback is important to us. If you have comments about this document, please send them to SBT_technical.editor.us.sbt@siemens.com

CREDITS

Country of Origin: US

Table of Contents

How To Use This Manual

This manual is written for the owner and user of Siemens Building Technologies Point Pickup Module (PPM). It is designed to help you become familiar with the PPM and its functionality.

This section covers manual organization, manual conventions and symbols used in the manual, how to access help, related publications, and other information that will help you use this manual.

Manual Organization

This manual contains the following sections:

- *Chapter 1 Product Overview* describes the hardware components and the accessories that are used with the controller.
- *Chapter 2 Hardware* describes the control applications available in the controller.
- The *Glossary* describes terms and acronyms.
- The *Index* helps you find information.

Manual Conventions

The following table lists conventions used in this manual.

Convention	Example
Actions that you should perform are specified in boldface font.	Type **F** for Field panels. Click **OK** to save changes and close the dialog box.
Error and system messages are displayed in `Courier New` font.	The message **`Report Definition successfully renamed`** appears in the status bar.
New terms appearing for the first time are italicized.	The Open Processor continuously executes a user-defined set of instructions called the *control program*.

Manual Symbols

The following table lists symbols that are used to draw your attention to important information.

Notation	Symbol	Meaning
CAUTION:		Indicates that equipment damage or loss of data may occur if you do not perform a procedure as specified.
WARNING:		Indicates that personal injury or loss of life may occur if you do not perform a procedure as specified.

Prerequisites

In addition to reading this owner's manual, you should also become familiar with the following Siemens Building Technologies technical documentation. Each document has been written to help you get the most out of your PPM.

These manuals, along with information about other Siemens Building Technologies products, technical training classes, and services can be obtained from your local Siemens Building Technologies representative.

- *Powers Process Control Language (PPCL) User's Manual* (125-1896). This manual describes Powers Process Control Language (PPCL), the language used to write the control programs for the PPM.
- *APOGEE Field Panel User's Manual* (125-3000). This manual describes the operator interface program you use to communicate with the PPM and APOGEE field panels.
- If you are using Insight software, see the *Insight 3.x Documentation* for online help. To view this documentation, open the Insight Online Documentation window, which you can access from the Insight Main menu or the Insight program group.

Getting Help

If at any time you find that you need help with a Point Pickup Module issue not covered in this manual, contact your local Siemens Building Technologies, Inc. representative.

Where To Send Comments

Your feedback is important to us. If you have comments about this manual, please submit them to SBT_technical.editor.us.sbt@siemens.com.

1

Product Overview

Introduction

The Siemens Point Pickup Module (PPM) is a slave I/O device that communicates P1 FLN. The PPM allows point expansion for any APOGEE field panel that has P1 FLN capabilities.

Ordering Notes

Point Pickup Module with Removable Terminal Blocks	PPM-1U32.PPR
Point Pickup Module DIN KIT	PPM-DIN.KIT

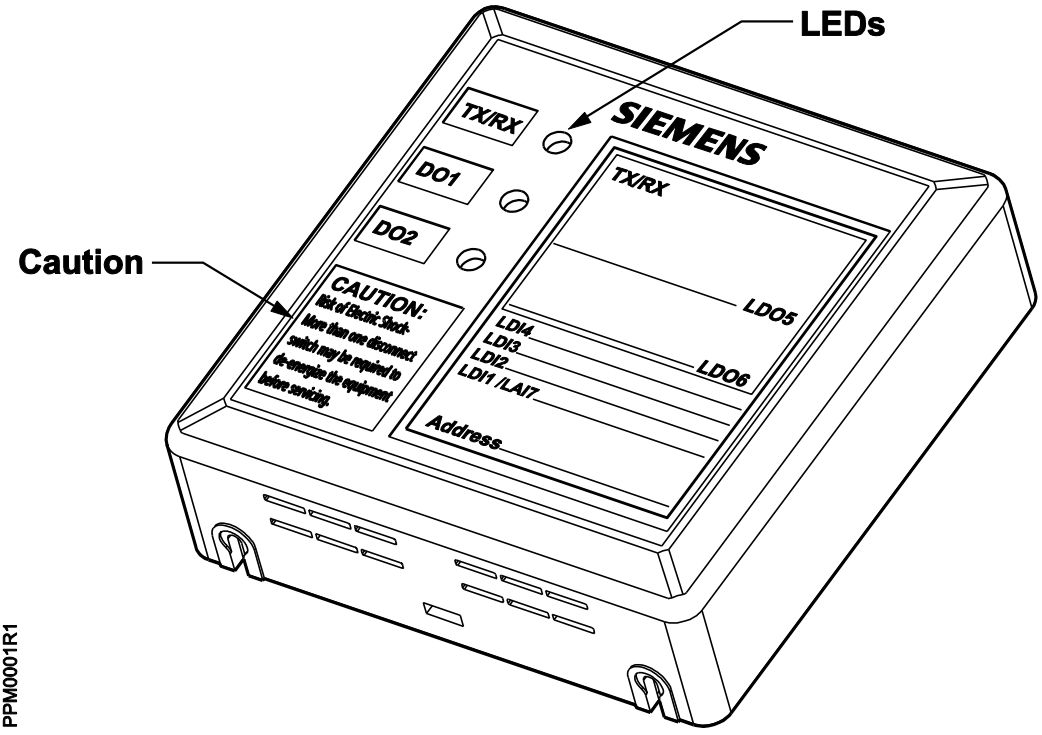

Figure 1. Point Pickup Module.

Controller LED Indicators

The controller has three Light Emitting Diode (LED) indicators (Figure 1).

Table 1. Controller LEDs.

LED Type	Label	Indication
DO	DO1 and DO2	Indicates the ON/OFF status of the DO associated with it. A glowing LED indicates that the DO is energized.
Transmit/ Receive	TX/ RX	Indicates the controller is powered and transmitting information to and from the field panel. Solid ON indicates unit is powered, no communication. OFF indicates unit not powered. Flashing indicates controller is communicating.

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Hardware

Overview

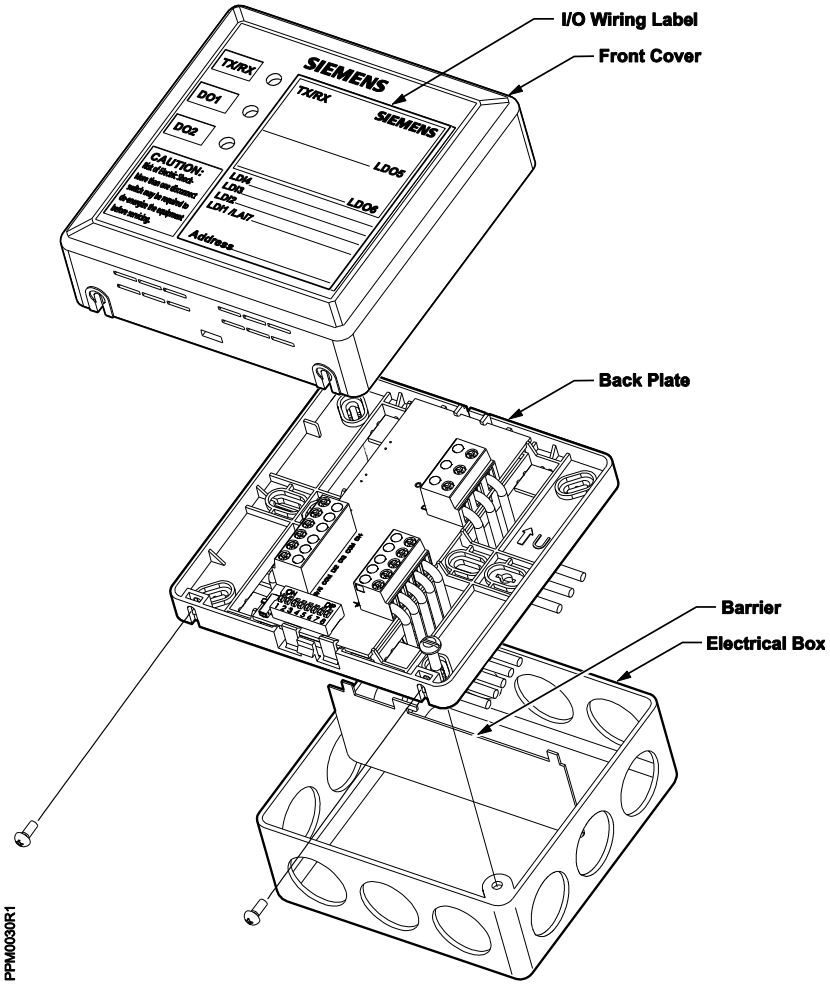

Figure 2. Point Pickup Module components.

Hardware Inputs

Analog

- 1 configurable (AI or DI) via on-board switch (10k Ω NTC Type II)

Digital

- 3 fixed dry contacts
- 1 configurable (AI or DI) via on-board switch (dry contact)

Hardware Outputs

Digital

- Relays (2A, inductive, power factor 0.85)
  120-240 VAC (1/3 HP) contact normally open

Power Wiring

The controller is powered by 24 Vac. Power wiring connects to the two screw terminals on the controller labeled "⊥" (Common) and "24V" (Hot) on the terminal block labeled "24 VAC". No earth ground connection is required (Figure 3); "⊥" (Common) should be connected to earth ground at the transformer.

Communication Wiring

The controller connects to the field panel by means of a Floor Level Network (FLN) trunk. Communication wiring connects to the three screw terminals on the controller labeled "+" (positive), "-"(negative), and "S" (Shield) (Figure 4).

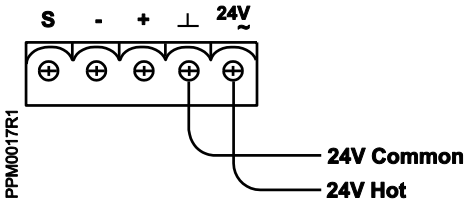

Figure 3. Power Wiring.

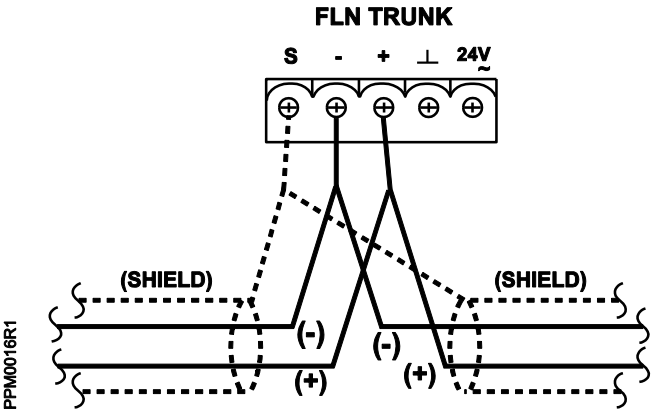

Figure 4. Communication Wiring.

Set the controller address by setting the DIP Switches (Figure 5).

Table 1 shows the DIP switch settings for each address. *X* = DIP switch is ON.

Valid address values are 0 to 255. Address 99 and 255 are broadcast addresses and should not be used.

Points must be manually unbundled at the field panel. All points must be controlled from the field panel in order to be used.

Adding End Devices into the APOGEE Field Panel Database

When adding the end devices into the APOGEE field panel database, the following information is required:

Point Address

The point address applies to all logical point types. The point address uniquely defines the exact location of the point. As a rule, no two point addresses are the same. A point address contains the following four parts, each of which tells the field panel something about the point:

Field Panel – The field panel information identifies where the point resides.

- Field panels residing on an RS-485 ALN/BLN are numbered from 0 through 99.
- Field panels residing on an Ethernet BLN use a unique node name. Domain Name Server (DNS) node names are limited to 30 characters and cannot contain spaces.

FLN – The Field Level Network/Floor Level Network (FLN) number identifies if the point resides on an optional FLN device.

- Points residing on the Point Pickup Module that is connected to the MEC EXP port must always use 0 for the FLN number.
- Points residing on the Point Pickup Module that are connected to a field panels P1 FLN, use the number of the FLN connection on the field panel. Valid FLN numbers are 1, 2, and 3.

Drop – The address of the PPM that is communicating with the field panel. (This is set using the binary DIP switches located on the PPM.)

- Points residing on a Point Pickup Module that are connected to the EXP port, use drop numbers 1 through 8.

Points residing on the Point Pickup Module that are connected to a field panels P1 FLN use drop numbers 0 through 255.

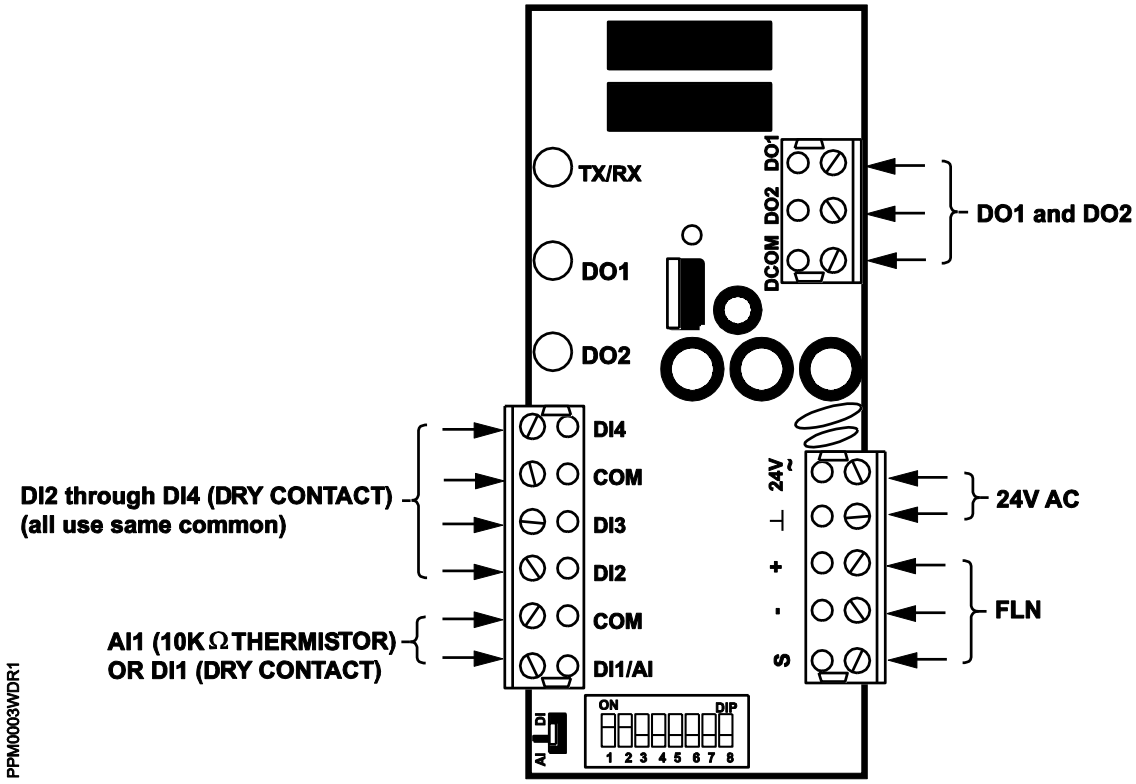

Figure 5. DIP Switch for PPM Address.

Table 1. DIP Switch Setting for Binary Address.

Address	Switch 1	Switch 2	Switch 3	Switch 4	Switch 5	Switch 6	Switch 7	Switch 8
0								
1	X							
2		X						
3	X	X						
4			X					
5	X		X					
6		X	X					
7	X	X	X					
8				X				
9	X			X				
10		X		X				
11	X	X		X				
12			X	X				
13	X		X	X				
14		X	X	X				
15	X	X	X	X				
16					X			
17	X				X			
18		X			X			
19	X	X			X			
20			X		X			
21	X		X		X			
22		X	X		X			
23	X	X	X		X			
24				X	X			
25	X			X	X			
26		X		X	X			
27	X	X		X	X			
28			X	X	X			
29	X		X	X	X			
30		X	X	X	X			
31	X	X	X	X	X			
32						X		
33	X					X		
34		X				X		
35	X	X				X		
36			X			X		
37	X		X			X		
38		X	X			X		
39	X	X	X			X		
40				X		X		
41	X			X		X		

Address	Switch 1	Switch 2	Switch 3	Switch 4	Switch 5	Switch 6	Switch 7	Switch 8
42		X		X		X		
43	X	X		X		X		
44			X	X		X		
45	X		X	X		X		
46		X	X	X		X		
47	X	X	X	X		X		
48					X	X		
49	X				X	X		
50		X			X	X		
51	X	X			X	X		
52			X		X	X		
53	X		X		X	X		
54		X	X		X	X		
55	X	X	X		X	X		
56				X	X	X		
57	X			X	X	X		
58		X		X	X	X		
59	X	X		X	X	X		
60			X	X	X	X		
61	X		X	X	X	X		
62		X	X	X	X	X		
63	X	X	X	X	X	X		
64							X	
65	X						X	
66		X					X	
67	X	X					X	
68			X				X	
69	X		X				X	
70		X	X				X	
71	X	X	X				X	
72				X			X	
73	X			X			X	
74		X		X			X	
75	X	X		X			X	
76			X	X			X	
77	X		X	X			X	
78		X	X	X			X	
79	X	X	X	X			X	
80					X		X	
81	X				X		X	
82		X			X		X	
83	X	X			X		X	

Address	Switch 1	Switch 2	Switch 3	Switch 4	Switch 5	Switch 6	Switch 7	Switch 8
84			X		X		X	
85	X		X		X		X	
86		X	X		X		X	
87	X	X	X		X		X	
88				X	X		X	
89	X			X	X		X	
90		X		X	X		X	
91	X	X		X	X		X	
92			X	X	X		X	
93	X		X	X	X		X	
94		X	X	X	X		X	
95	X	X	X	X	X		X	
96						X	X	
97	X					X	X	
98		X				X	X	
99	X	X				X	X	
100			X			X	X	
101	X		X			X	X	
102		X	X			X	X	
103	X	X	X			X	X	
104				X		X	X	
105	X			X		X	X	
106		X		X		X	X	
107	X	X		X		X	X	
108			X	X		X	X	
109	X		X	X		X	X	
110		X	X	X		X	X	
111	X	X	X	X		X	X	
112					X	X	X	
113	X				X	X	X	
114		X			X	X	X	
115	X	X			X	X	X	
116			X		X	X	X	
117	X		X		X	X	X	
118		X	X		X	X	X	
119	X	X	X		X	X	X	
120				X	X	X	X	
121	X			X	X	X	X	
122		X		X	X	X	X	
123	X	X		X	X	X	X	
124			X	X	X	X	X	
125	X		X	X	X	X	X	
126		X	X	X	X	X	X	
127	X	X	X	X	X	X	X	

Address	Switch 1	Switch 2	Switch 3	Switch 4	Switch 5	Switch 6	Switch 7	Switch 8
128								X
129	X							X
130		X						X
131	X	X						X
132			X					X
133	X		X					X
134		X	X					X
135	X	X	X					X
136				X				X
137	X			X				X
138		X		X				X
139	X	X		X				X
140			X	X				X
141	X		X	X				X
142		X	X	X				X
143	X	X	X	X				X
144					X			X
145	X				X			X
146		X			X			X
147	X	X			X			X
148			X		X			X
149	X		X		X			X
150		X	X		X			X
151	X	X	X		X			X
152				X	X			X
153	X			X	X			X
154		X		X	X			X
155	X	X		X	X			X
156			X	X	X			X
157	X		X	X	X			X
158		X	X	X	X			X
159	X	X	X	X	X			X
160						X		X
161	X					X		X
162		X				X		X
163	X	X				X		X
164			X			X		X
165	X		X			X		X
166		X	X			X		X
167	X	X	X			X		X
168				X		X		X
169	X			X		X		X
170		X		X		X		X
171	X	X		X		X		X

Address	Switch 1	Switch 2	Switch 3	Switch 4	Switch 5	Switch 6	Switch 7	Switch 8
172			X	X		X		X
173	X		X	X		X		X
174		X	X	X		X		X
175	X	X	X	X		X		X
176					X	X		X
177	X				X	X		X
178		X			X	X		X
179	X	X			X	X		X
180			X		X	X		X
181	X		X		X	X		X
182		X	X		X	X		X
183	X	X	X		X	X		X
184				X	X	X		X
185	X			X	X	X		X
186		X		X	X	X		X
187	X	X		X	X	X		X
188			X	X	X	X		X
189	X		X	X	X	X		X
190		X	X	X	X	X		X
191	X	X	X	X	X	X		X
192							X	X
193	X						X	X
194		X					X	X
195	X	X					X	X
196			X				X	X
197	X		X				X	X
198		X	X				X	X
199	X	X	X				X	X
200				X			X	X
201	X			X			X	X
202		X		X			X	X
203	X	X		X			X	X
204			X	X			X	X
205	X		X	X			X	X
206		X	X	X			X	X
207	X	X	X	X			X	X
208					X		X	X
209	X				X		X	X
210		X			X		X	X
211	X	X			X		X	X
212			X		X		X	X
213	X		X		X		X	X
214		X	X		X		X	X

Address	Switch 1	Switch 2	Switch 3	Switch 4	Switch 5	Switch 6	Switch 7	Switch 8
215	X	X	X		X		X	X
216				X	X		X	X
217	X			X	X		X	X
218		X		X	X		X	X
219	X	X		X	X		X	X
220			X	X	X		X	X
221	X		X	X	X		X	X
222		X	X	X	X		X	X
223	X	X	X	X	X		X	X
224						X	X	X
225	X					X	X	X
226		X				X	X	X
227	X	X				X	X	X
228			X			X	X	X
229	X		X			X	X	X
230		X	X			X	X	X
231	X	X	X			X	X	X
232				X		X	X	X
233	X			X		X	X	X
234		X		X		X	X	X
235	X	X		X		X	X	X
236			X	X		X	X	X
237	X		X	X		X	X	X
238		X	X	X		X	X	X
239	X	X	X	X		X	X	X
240					X	X	X	X
241	X				X	X	X	X
242		X			X	X	X	X
243	X	X			X	X	X	X
244			X		X	X	X	X
245	X		X		X	X	X	X
246		X	X		X	X	X	X
247	X	X	X		X	X	X	X
248				X	X	X	X	X
249	X			X	X	X	X	X
250		X		X	X	X	X	X
251	X	X		X	X	X	X	X
252			X	X	X	X	X	X
253	X		X	X	X	X	X	X
254		X	X	X	X	X	X	X
255	X	X	X	X	X	X	X	X

Point – Each point residing on the Point Pickup Module has a unique point number associated with it.

Table 2. Logical Point Descriptions.

Logical Point Number	Description (on board)
1	DI 1
2	DI 2
3	DI 3
4	DI 4
5	DO 1
6	DO 2
7	AI 1

Glossary

Overview

The glossary contains terms and acronyms that are used in this manual. For definitions of point database descriptors, see Chapter 3, *Point Database,* in this manual.

AI

Analog Input. A point receiving a signal that represents a condition that has more than two states. For example, flow rate sensors (water or air), temperature sensors (room or duct), pressure sensors (static or velocity), and humidity sensors (room, duct, or outdoor).

DI

Digital Input. Physical input point that receives a two-state signal (ON/OFF, OPEN/CLOSED, YES/NO).

DO

Digital Output. Physical output point that sends a two-state signal (ON/OFF, OPEN/CLOSED, YES/NO).

field panel

A device containing a microprocessor for centralized control of system components and equipment controllers.

FLN

Field Level Network. Network consisting of equipment controllers, FLN end devices, fume hoods, etc.

HMI

Human Machine Interface. Terminal and its interface program that allows you to communicate with a field panel or equipment controller.

unbundle

Term used to describe the entering of a point that resides in a controller's database into the field panel's database so that it can be monitored and controlled from the field panel.

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