

# **High-Performance Process Manager Planning**

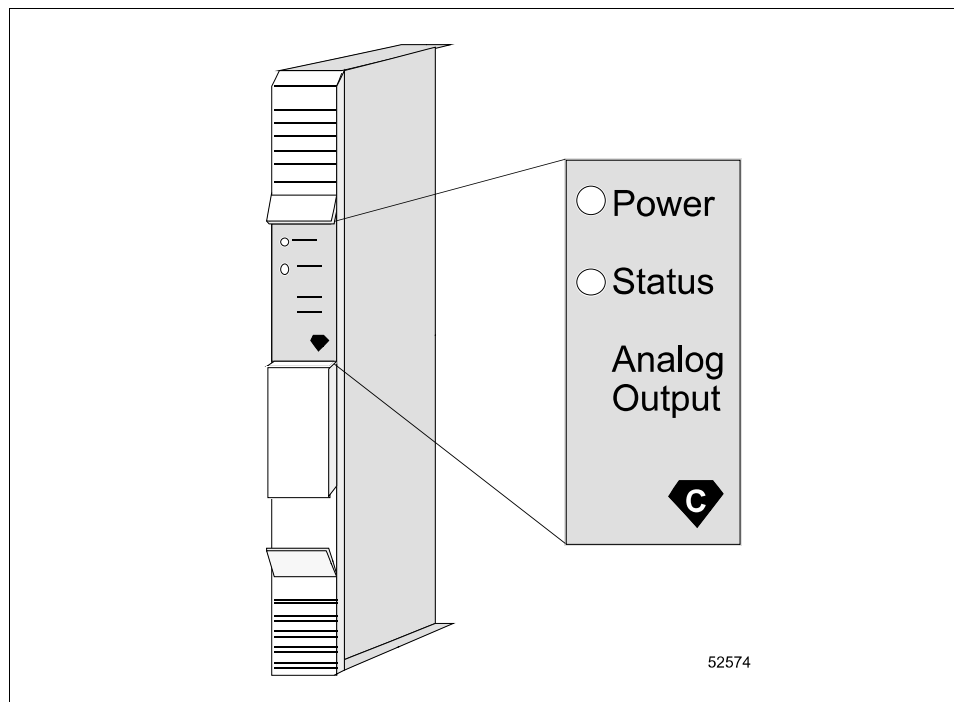
HP02-500

## 6.1 Overview, Continued

### Conformal coating symbol

Conformally coated assemblies can be easily identified by a distinctive symbol located on the assembly. The symbol consists of a “C” that is surrounded by a solid diamond. The diamond universally symbolizes hardness. The symbol is intended to represent the hardened protection against harsh environments that conformal coating provides. Figure 6-1 illustrates the symbol on the faceplate of an Analog Output IOP.

Figure 6-1 Conformal Coating Symbol



### Harsh Environment Enclosure

For those users who want to locate their IOPs closer to the process and outside the control room in a severe environment, another level of protection is required. Honeywell offers the availability of a harsh environment IOP enclosure that is capable of withstanding a Gx rated atmosphere. The product includes a sealed NEMA 4x stainless steel enclosure, a special 7-Slot card file with fans for air circulation to house conformally coated IOP and I/O Link Extender cards, and a 24 Vdc Power System that uses components found in the HPM AC Only Power System. There is no active external cooling required for external ambient temperatures of up to 60°C. The IOPs interface with the HPMM(s) in the control room by fiber optic I/O Link Extender. Standard IOP to FTA cables that are enclosed in sealed conduit provide the IOP to associated FTA interface. The FTAs are mounted in sealed NEMA 4x stainless steel enclosures that are provided by the user.

## 6.2 Model Numbers

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**Model numbers**

Model numbers for conformally coated assemblies and upgrade kits are identified by a “MC” prefix, instead of the normal “MU” prefix for a noncoated assembly. An example would be a conformally coated Low Level Analog Input IOP. Its model number is MC-PAIL02. The model number of the noncoated version of the IOP is MU-PAIL02.

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**ATTENTION**

ATTENTION—The High Level Analog Input and Analog Output IOPs are available only as conformally coated assemblies. There are no noncoated versions available. The model numbers are MC-PAIH03 and MC-PAOX03, respectively.

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**Assembly numbers**

Typically, the part number’s tab for a conformally coated assembly has the format “x5x” (non-CE Compliant) or “x7x” (CE Compliant), where “x” can be any number, 1 through 9. This provides a standard method of identifying conformally coated assemblies.

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## 6.2 Model Numbers, Continued

### Conformally coated model list

Table 6-3 is a list of conformally coated High-Performance Process Manager assemblies.

Table 6-3 Conformally Coated Assembly Model Numbers

Model Number	Non CE Compliant Part Number	CE Compliant Part Number	Description
<b>IOPs</b>			
MC-PAIH03	N/A	51304754-150	High Level Analog Input (HLAI)
MC-PAIL02	N/A	51304481-150	Low level Analog Input (LLAI)
MC-PAOX03	51304672-150	51309152-175	Analog Output (AO)
MC-PAOY22	N/A	80363969-150	Analog Output (AO)
MC-PDIS12	N/A	51402625-175	Digital Input Sequence of Events (DI)
MC-PDIX02	N/A	51304485-150	Digital Input (DI)
MC-PDIY22	N/A	80363972-150	Digital Input (DI)
MC-PDOX02	N/A	51304487-150	Digital Output (DO)
MC-PDOY22	N/A	80363975-150	Digital Output (DO)
MC-PLAM02	N/A	51304362-150	Low Level Multiplexer (LLMux)
MC-PRHM01	N/A	51404109-175	Remote Hardened Low Level Multiplexer (RHMUX)
MC-PPIX02	N/A	51304386-150	Pulse Input (PI)
MC-PSDX02	N/A	51304362-250	Serial Device Interface (SDI)
MC-PSIM11	N/A	51304362-350	Serial Interface (SI)
MC-PSTX02	51304516-150	N/A	Smart Transmitter Interface (STI)
MC-PSTX03	N/A	51304516-250	Smart Transmitter Interface Multivariable (STIM)
<b>Standard FTAs</b>			
MC-TAIH02	51304453-150	N/A	High Level Analog Input/STI with compression term
MC-TAIH03	N/A	51309136-175	High Level Analog Input with compression terminals
MC-TAIH12	51304337-150	N/A	High Level Analog Input/STI with compression term
MC-TAIH13	N/A	51309138-175	High Level Analog Input with compression terminals
MC-TAIH22	80366195-150	N/A	High Level Analog Input/STI with compression term
MC-TAIH23	N/A	80366195-175	High Level Analog Input with compression terminals
MC-TAIH52	51304337-250	N/A	High Level Analog Input/STI with screw terminals

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## 6.2 Model Numbers, Continued

### Conformally coated model list, continued

Table 6-3 Conformally Coated Assembly Model Numbers, Continued

Model Number	Non CE Compliant Part Number	CE Compliant Part Number	Description
<b>Standard FTAs, continued</b>			
MC-TAIH53	N/A	51309138-275	High Level Analog Input with screw terminals
MC-TAIH62	80366192-150	N/A	High Level Analog Input/STI with screw terminals
MC-TSTX03	N/A	51309140-175	Smart Transmitter Interface with Compression Term
MC-TSTX13	N/A	51309142-175	Smart Transmitter Interface with Compression Term
MC-TSTX53	N/A	51309142-275	Smart Transmitter Interface with Screw Terminals
MC-TAIL02	51304437-150	N/A	Low Level Analog Input with compression terminals
MC-TAIL03	N/A	51309202-175	Low Level Analog Input with compression terminals
MC-TAMR02	51304477-150	N/A	LLMux Analog Input RTD with compression terminals
MC-TAMR03	N/A	51309218-175	LLMux Analog Input RTD with compression terminals
MC-TAMT02	51401491-150	N/A	LLMux Analog Input TC with compression terminals
MC-TAMT03	N/A	51301491-175	LLMux Analog Input TC with compression terminals
MC-TAMT12	51401573-150	N/A	LLMux Analog Input TC with remote CJR, comp term
MC-TAMT13	N/A	51301573-175	LLMux Analog Input TC with remote CJR, comp term
MC-TAOX02	51304476-150	51304476-175	Analog Output with compression terminals
MC-TAOX12	51304335-150	51304335-175	Analog Output with compression terminals
MC-TAOX52	51304335-250	51304335-275	Analog Output with screw terminals
MC-TAOY22	80366177-150	80366177-175	Analog Output with compression terminals
MC-TAOY23	80366177-250	80366177-275	Analog Output with compression terminals
MC-TAOY52	80364007-150	80364007-175	Analog Output with screw terminals
MC-TAOY53	80364007-250	80364007-275	Analog Output with screw terminals
MC-TDIA12	51304439-150	51304439-175	120 Vac Digital Input with compression terminals
MC-TDIA52	51304439-250	51304439-275	120 Vac Digital Input with fixed-screw terminals
MC-TDIA72	51303930-150	N/A	120 Vac Digital Input with removable-screw terminals
MC-TDIA22	51304431-150	51304431-175	240 Vac Digital Input with compression terminals

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## 7.5 FTAs, Continued

### Conformally coated FTAs

Table 7-5 is a list of CE Compliant and non-CE Compliant FTAs that are conformally coated. Model numbers and part numbers identify the assemblies.

Table 7-5 Field Termination Assemblies—Conformally Coated

FTA Type	Model Number	Non-CE Compliant Part Number	CE Compliant Part Number
LLAI	MC-TAIL02	51304437-150	N/A
LLAI	MC-TAIL03	N/A	51309202-175
LLMux RTD	MC-TAMR02	51304477-150	N/A
LLMux RTD	MC-TAMR03	N/A	51309218-175
LLMux TC	MC-TAMT02	51401491-150	N/A
LLMux TC	MC-TAMT03	N/A	51309223-175
LLMux TC Remote	MC-TAMT12	51401573-150	N/A
LLMux TC Remote	MC-TAMT13	N/A	51309213-175
RHMUX TC Local CJR	MC-GRMT01	N/A	51404106-175
RHMUX GI/IS Power Adapter	MC-GRPA01	N/A	51304724-175
RHMUX GI/NI Power Adapter	MC-TRPA01	N/A	51304722-175
HLAI/STI	MC-TAIH02	51304453-150	N/A
HLAI/STI	MC-TAIH12	51304337-150	N/A
HLAI/STI	MU-TAIH22	80366195-150	N/A
HLAI/STI	MU-TAIH52	51304337-250	N/A
HLAI/STI	MU-TAIH62	80366192-150	N/A
HLAI	MC-TAIH03	N/A	51309136-175
HLAI	MC-TAIH13	N/A	51309138-175
HLAI	MU-TAIH23	N/A	80369165-175
HLAI	MC-TAIH53	N/A	51309138-275
STI	MC-TSTX03	N/A	51309136-175
STI	MC-TSTX13	N/A	51309138-175
STI	MC-TSTX53	N/A	51309138-275

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## 12.2 LLMux Version

### 12.2.1 LLMux Configurations

#### CE Compliance

All models of the Low Level Analog Input Multiplexer (LLMux) Field Termination Assemblies (FTAs), the Power Adapter, and its IOP can be used in a CE Compliant application. However, they must be used with the model MU-KFTSxx IOP to FTA cable and the IOP must be installed in a CE Compliant card file. Table 12-1 lists FTA, Power Adapter, and IOP model and part numbers.

Table 12-1 LLMux Assemblies

Model Number	Description	Part Number
MU-TAMR03	LLMux RTD FTA	51309218-125
MC-TAMR03	LLMux RTD FTA – Conformally Coated	51309218-175
MU-TAMT03	LLMux TC FTA	51309223-125
MC-TAMT03	LLMux TC FTA – Conformally Coated	51309223-175
MU-TAMT13	LLMux TC FTA with Remote CJR	51309213-125
MC-TAMT13	LLMux TC FTA with Remote CJR – Conformally Coated	51309213-175
MU-TLPA02	Power Adapter	51309204-125
MC-TLPA02	Power Adapter – Conformally Coated	51309204-175
MU-PLAM02	LLMux IOP	51304362-100
MC-PLAM02	LLMux IOP – Conformally Coated	51304362-150

#### Compatibility

The LLMux assemblies are compatible only with each other. The assemblies are not compatible with the RHMUX assemblies that are discussed in subsection 12.3.

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