Application Description

Hot Water Heating

Property Identifiers

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Summary:

This document is a part of the HVAC Application Interworking Standard. It specifies the standardised Property Identifiers for each HWH specific Functional Block / Interface Object

Version 01.01.01 is a KNX Approved Standard.

This document is part of the KNX Specifications v2.1.

Document updates

Version	Date	Modifications
0.1	2000.12.20	BKY document creation for HWH
0.2	2001.01.15	BKY document updated (DPT N°included, minor DPT corrections, some properties added)
0.3	2001.07.03	BKY Properties updated for BUC, BOC, HPM, HPM-BST, HPM-BST/BOC, HZC and DHWC (new Properties, update of DPT's), HZCopt, DHWCopt and HIRCopt deleted
0.4	2001.09.12	BKY Properties updated for HFDM, HZC, HIRC, HRDM, HDTACT, HTDRT, DHWSM, DHWC, DHWCPC, SDHWC
0.5	2001.09.27	BKY Properties updated for DHWSM, SDHWC, DHWCPC
0.6	2001.11.28	BKY Properties updated for FTC, HDAUX, HDTRT, HDTACT
0.7	2002.01.09	BKY Properties updated for DHWSM, DHWTS, HDTACT rename UDHWM (181) => UDHWSET with outputs of UDHWTS, UDHWP delete: UDHWTS (182), UDHWP (183) shift HVA, RSMHD, OTS, RTS, FWTS, RNWTS to HVAC common property ID description
0.8	2002.02.22	BKY editorial corrections; TFI approved, KNX Handbook 1.0
1.0	2002.09.12	BKY, editorial corrections, TFI approved, updated for KNX Handbook 1.1
1.1	2002.11.07 2003.08.08	BKY, editorial corrections, new property DHWModeUserEff in DHWSM; TFI approved, updated for KNX Handbook 1.1
1.1	2009.06.17	Update in view of publication in the KNX Specifications v2.0.
01.01.01	2013.10.29	Editorial updates for the publication of KNX Specifications 2.1.

References

None.

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Contents

1   Introduction

1.1   Scope

This document specifies the Property Identifiers and datapoint types for LTE-HEE Process Data (runtime interworking) and parameters / diagnostic data used in the data-interfaces of HVAC Hot Water Heating (HWH) Functional Blocks. This document is part of the Convergence HVAC Application Interworking Standard.

1.1.1   Runtime Interworking

The main focus of this document is LTE-HEE runtime interworking. For each Functional Block / Interface Object those properties for runtime interworking are listed for which the Interface Object is the property server (e.g. InfoReport Output, Write Input)

This document does not list the properties for which the Interface Object is the property client (e.g. InfoReport Input, Write Output). These properties are listed in the detailed Functional Block specification.

LTE-HEE runtime interworking properties are also accessible via individual addressing. Therefore these property definitions could be used in other configuration modes.

1.1.2   Parameters and Diagnostic Data

LTE implementation:
- Parameters and Diagnostic Data of a Functional Block shall be implemented as Properties of the corresponding Interface Object which are accessed using individual addressing.
- These Properties are addressed via the standard Interface Object Type (IO Type) for this Functional Block. This IO Type is also used for datapoint addressing in the LTE runtime interworking model
- Standard DPT or HVAC specific DPT with extended features are used where appropriate.

Other modes:
- Parameters and Diagnostic Data can in principle be implemented as memory mapped datapoints or Group Objects or Properties of an Interface Object using individual addressing. This document does not lay down how to implement Parameters and Diagnostic Data in S, LT-R, LT-S, Ctrl, Pb and A-Mode.
- In case of **Memory Mapped** datapoints the DPT may be manufacturer specific
- In case of **Group Objects** standard DPT shall be used instead of HVAC specific (extended) DPT. The description of these Group Objects shall be part of the mode-dependent specification (e.g. Channel definition).

- In case of **Properties**, the implementation of HVAC specific DPT with extended features may be a problem (depending on the available microcontroller resources). The manufacturer has the choice:
  - ⇨ to use the LTE style Property implementation as specified in this document (with the DPT and IO Type for LTE implementations) **IO Type^{used} = IO Type$^{HVAC-LTE}$**
  - ⇨ to implement these Properties using standard DPT only.
    In this case, the same Property ID but a different IO Type shall be used since the DPT of a Property shall be unambiguous for each IO Type.
    Simple IOT mapping rule: IO Type^{used} = IO Type^{standardDPT} = IO Type$^{HVAC-LTE}$ + 10000d
    (e.g. BUC$^{HVAC-LTE}$ = 128 => BUC^{standardDPT} = 10128)
  - ⇨ It is allowed to implement in a device both Interface Object Types IO Type$^{HVAC-LTE}$ and IO Type^{standardDPT}. The implementation of parameters and diagnostic data of one given Functional Block shall however be complete. It is thus not allowed to implement part of the datapoints of a Functional Block in IO Type^{standardDPT} and the remaining in IO Type^{HVACLTE}.

	Implementation of Parameter and Diagnostic Data			
	Property based		**Group Object**	**Memory mapped**
	HVAC-LTE style	**Standard DPT**		
IO Type	IO Type$^{HVAC-LTE}$ e.g. BUC=128	IO Type$^{HVAC-LTE}$ + 10000 e.g. BUC=10128	/////	/////
Property ID	Property ID x	=> same Property ID x	/////	/////
DPT	if standard DPT	=> same standard DPT	=> same standard DPT	company specific
	if HVAC-LTE specific***)** e.g. 205.100	=> mapped standard DPT, e.g. 9.001	=> mapped standard DPT, e.g. 9.001	

☐ In this document only the **HVAC-LTE style** of Parameters and Diagnostic Data is specified for IO Type$^{HVAC-LTE}$.

In the FB datapoint overview those Parameters and Diagnostic Data with HVAC-LTE specific (extended) DPT are marked " ***)** "
The mapping of HVAC specific DPT to standard DPT is generic and described in the document [17] – HVAC Datapoint Types; Supplement 11 (TFI 18)

2 Functional Block   Burner Controller

Object Name: **BUC**
Object Type: **128**

Property Identifier	Datapoint Name	Datapoint Type Name	Datapoint Type Code
LTE-HEE process data (runtime interworking, zone addressing and individual addressing)			
51	StatusBUC	DPT_StatusBUC	207.100
52	BurnerSpec	DPT_SpecHeatProd	216.100
53	FuelSelect	DPT_FuelType	20.100
54	BurnerReset	DPT_Reset	01.015
55	OpHrsBurnerStage1	DPT_LongDeltaTimeSec	13.100
56	OpHrsBurnerStage2	DPT_LongDeltaTimeSec	13.100
Parameters and Diagnostic Data (individual addressing only)			
101	ProdSegmH	DPT_UcountValue8_Z	202.002
102	Producer	DPT_UcountValue8_Z	202.002
...			
110	PrelBurner	DPT_RelValue_Z	202.001
111	Fault	DPT_Bool	1.002
112	StatusStage1	DPT_Switch	1.001
113	StatusStage2	DPT_Switch	1.001
114	BurnerType	DPT_BurnerType	20.101
115	FuelTypeSupport	DPT_FuelTypeSet	21.104
116	FuelTypeActual	DPT_FuelType	20.100
117	PnomBurner	DPT_PowerKW_Z	203.014
118	BstageLimit	DPT_RelValue_Z	202.001
119	reserved		
120	reserved		
121	OperatingPhaseBurner	DPT_Value_1_Ucount	5.010
122	BurnerStarts	DPT_Value_4_Ucount	12.001
123	ErrorCodeBUC	DPT_Value_2_Ucount	7.001
124	VolumeOilCumul	DPT_VolumeLiter_Z	218.001
125	FlowRateOil	DPT_UFlowRateLiter/h_Z	203.011
126	StatusFlame	DPT_Switch	1.001
127	CurrentIonisation	DPT_UElCurrentµA_Z	203.013
128	FanControl	DPT_RelValue_Z	202.001
129	PauseTimeBurnerMin	DPT_TimePeriod100MSec	7.004
130	RunTimeBurnerMin	DPT_TimePeriod100MSec	7.004
131	PreIgnitionTime	DPT_TimePeriod100MSec	7.004
132	PostPurgingTime	DPT_TimePeriod100MSec	7.004
133	PrePurgingTime	DPT_TimePeriod100MSec	7.004
134	SafetyTime	DPT_TimePeriod100MSec	7.004
135	IgnitionLoadInterval	DPT_TimePeriod100MSec	7.004
136	NumberOfRestarts	DPT_Value_1_Ucount	5.010
137	PmaxBurner	DPT_PowerKW_Z	203.014

3 Functional Block   Boiler Controller

Object Name: **BOC**
Object Type: **129**

Property Identifier	Datapoint Name	Datapoint Type Name	Datapoint Type Code
LTE-HEE process data (runtime interworking, zone addressing and individual addressing)			
51	StatusBOC	DPT_StatusBOC	215.100
52	BoilerSpec	DPT_SpecHeatProd	216.100
53	ValueDemBOC	DPT_ValueDemBOC	207.102
54	ForceSignBOC	DPT_ForceSign	21.100
55	LockSignBOC	DPT_LockSign	207.101
56	OpHrsBurner	DPT_LongDeltaTimeSec	13.100
Parameters and Diagnostic Data (individual addressing only)			
101	ProdSegmH	DPT_UcountValue8_Z	202.002
102	Producer	DPT_UcountValue8_Z	202.002
103	PeripheralLinkPump	DPT_UcountValue16_Z	203.012
104	PeripheralLinkFTC	DPT_UcountValue16_Z	203.012
105	OutsideSensorZone	DPT_UcountValue8_Z	202.002
...			
110	TempBoiler	DPT_TempHVACAbs	205.100
111	TempReturnBoiler	DPT_TempHVACAbs	205.100
112	TempBoilerSetp	DPT_TempHVACAbs	205.100
113	StatusBoilerPump	DPT_RelValue_Z	202.001
114	TempBoilerMax	DPT_TempHVACAbs	205.100
115	TempBoilerMin	DPT_TempHVACAbs	205.100
116	TempBoilerSwitchDiff	DPT_TempHVACRel_Z	205.101
117	ProducerLock	DPT_Bool	1.002
118	TempReturnBoilerMinLimit	DPT_TempHVACAbs_Z	205.100
119	ChimneySweepMode	DPT_Bool	1.002
120	TempFlueGas	DPT_TempHVACAbs_Z	205.100
121	TempFlueGasMaxValue	DPT_TempHVACAbs_Z	205.100
122	PrelBurner	DPT_RelValue_Z	202.001
123	PnomBoiler	DPT_PowerKW_Z	203.014
124	reserved		
125	Fault	DPT_Bool	1.002
126	SummerMode	DPT_Bool	1.002
127	OffPerm	DPT_Bool	1.002
128	NoHeatAvailable	DPT_Bool	1.002
129	StatusBurnerStage1Enable	DPT_Enable	1.003
130	StatusBurnerStage2Enable	DPT_Enable	1.003
131	StatusBurnerModulation	DPT_RelValue_Z	202.001
132	ErrorCodeBOC	DPT_Value_2_Ucount	7.001

4   Functional Block Heat Producer Manager

Object Name: **HPM**
Object Type: **136**

Property Identifier	Datapoint Name	Datapoint Type Name	Datapoint Type Code
LTE-HEE process data (runtime interworking, zone addressing and individual addressing)			
51	StatusHPM	DPT_StatusHPM	209.100
52	PowerFlowWaterDemHPM	DPT_PowerFlowWater DemHPM	214.100
53	ForceSignHPM	DPT_ForceSign	21.100
54	LockSignHPM	DPT_LockSign	207.101
Parameters and Diagnostic Data (individual addressing only)			
101	ProdSegmH	DPT_UcountValue8_Z	202.002
102	DistrSegmH	DPT_UcountValue8_Z	202.002
103	PeripheralLinkPump	DPT_UcountValue16_Z	203.012
104	PeripheralLinkFTC	DPT_UcountValue16_Z	203.012
105	OutsideSensorZone	DPT_UcountValue8_Z	202.002
...			
110	TempFlowWaterProdSegmH	DPT_TempHVACAbs	205.100
111	TempReturnWaterProdSegmH	DPT_TempHVACAbs	205.100
112	TempProdSegmHSetp	DPT_TempHVACAbs	205.100
113	BoilersTotal	DPT_Value_1_Ucount	5.010
114	BoilersActive	DPT_Value_1_Ucount	5.010
115	PnomHPM	DPT_PowerKW_Z	203.014
116	PrelHPM	DPT_RelValue_Z	202.001
117	Fault	DPT_Bool	1.002
118	SummerMode	DPT_Bool	1.002
119	OffPerm	DPT_Bool	1.002
120	NoHeatAvailable	DPT_Bool	1.002
121	StatusPumpHPM	DPT_RelValue_Z	202.001
122	StagesActive	DPT_Value_1_Ucount	5.010
123	ErrorCodeHPM	DPT_Value_2_Ucount	7.001

5 Functional Block Heat Producer Manager for BST

Object Name: **HPM-BST**
Object Type: **137**

Property Identifier	Datapoint Name	Datapoint Type Name	Datapoint Type Code
LTE-HEE process data (runtime interworking, zone addressing and individual addressing)			
	none: concerning runtime interworking the HPB-BST behaves like a standard HPM		
Parameters and Diagnostic Data (individual addressing only)			
101	ProdSegmH	DPT_UcountValue8_Z	202.002
102	DistrSegmH	DPT_UcountValue8_Z	202.002
103	PeripheralLinkPump	DPT_UcountValue16_Z	203.012
104	PeripheralLinkFTC	DPT_UcountValue16_Z	203.012
105	OutsideSensorZone	DPT_UcountValue8_Z	202.002
...			
110	TempFlowWaterProdSegmH	DPT_TempHVACAbs	205.100
111	TempReturnWaterProdSegmH	DPT_TempHVACAbs	205.100
112	TempProdSegmHSetp	DPT_TempHVACAbs	205.100
113	BoilersTotal	DPT_Value_1_Ucount	5.010
114	BoilersActive	DPT_Value_1_Ucount	5.010
115	PnomHPM	DPT_PowerKW_Z	203.014
116	PrelHPM	DPT_RelValue_Z	202.001
117	Fault	DPT_Bool	1.002
118	SummerMode	DPT_Bool	1.002
119	OffPerm	DPT_Bool	1.002
120	NoHeatAvailable	DPT_Bool	1.002
121	StatusPumpHPM	DPT_RelValue_Z	202.001
122	StagesActive	DPT_Value_1_Ucount	5.010
123	ErrorCodeHPM	DPT_Value_2_Ucount	7.001
...			
140	TempBSTMax	DPT_TempHVACAbs	205.100
141	TempBSTMin	DPT_TempHVACAbs	205.100
142	TempBSTStart	DPT_TempHVACAbs	205.100
143	TempBSTStop	DPT_TempHVACAbs	205.100

6 Functional Block HPM for BST in boiler sub-cascade

Object Name: **HPM-BST/BOC**
Object Type: **138**

Property Identifier	Datapoint Name	Datapoint Type Name	Datapoint Type Code
LTE-HEE process data (runtime interworking, zone addressing and individual addressing)			
	none: concerning runtime interworking the HPB-BST behaves like a standard HPM and a BOC		
Parameters and Diagnostic Data (individual addressing only)			
101	ProdSegmHSubCascade	DPT_UcountValue8_Z	202.002
102	ProdSegmH	DPT_UcountValue8_Z	202.002
103	Producer	DPT_UcountValue8_Z	202.002
104	PeripheralLinkPump	DPT_UcountValue16_Z	203.012
105	PeripheralLinkFTC	DPT_UcountValue16_Z	203.012
106	OutsideSensorZone	DPT_UcountValue8_Z	202.002
...			
110	TempFlowWaterBST	DPT_TempHVACAbs	205.100
111	TempReturnWaterBST	DPT_TempHVACAbs	205.100
112	TempBSTSetp	DPT_TempHVACAbs	205.100
113	BoilersTotal	DPT_Value_1_Ucount	5.010
114	BoilersActive	DPT_Value_1_Ucount	5.010
115	TempFlowWaterProdSegmH	DPT_TempHVACAbs	205.100
116	TempReturnWaterProdSegmH	DPT_TempHVACAbs	205.100
117	Fault	DPT_Bool	1.002
118	SummerMode	DPT_Bool	1.002
119	OffPerm	DPT_Bool	1.002
120	NoHeatAvailable	DPT_Bool	1.002
121	StatusPumpBST	DPT_RelValue_Z	202.001
122	StagesActive	DPT_Value_1_Ucount	5.010
123	ErrorCodeBST	DPT_Value_2_Ucount	7.001
...			
140	TempBSTMax	DPT_TempHVACAbs	205.100
141	TempBSTMin	DPT_TempHVACAbs	205.100
142	TempBSTStart	DPT_TempHVACAbs	205.100
143	TempBSTStop	DPT_TempHVACAbs	205.100

7 Functional Block Heat Flow Demand Manager

Object Name: **HFDM**
Object Type: **144**

Property Identifier	Datapoint Name	Datapoint Type Name	Datapoint Type Code
LTE-HEE process data (runtime interworking, zone addressing and individual addressing)			
51	TempFlowWaterDemAbsHFDM	DPT_TempFlowWaterDemAbs	210.100
52	ForceSignHFDM	DPT_ForceSign	21.100
53	LockSignHFDM	DPT_LockSign	207.101
Parameters and Diagnostic Data (individual addressing only)			
101	DistrSegmHPrimary	DPT_UcountValue8_Z	202.002
102	DistrSegmHSecondary	DPT_UcountValue8_Z	202.002
103	PeripheralLinkPump	DPT_UcountValue16_Z	203.012
104	PeripheralLinkFTC	DPT_UcountValue16_Z	203.012
...	...		
110	TempFlowWaterSetpAct	DPT_TempHVACAbs	205.100
111	TempFlowWaterDiffFTC	DPT_TempHVACRel	205.101
112	TempFlowWaterMax	DPT_TempHVACAbs	205.100

8 Functional Block Auxiliary Heat Demand

Object Name: **HDAUX**
Object Type: **145**

Property Identifier	Datapoint Name	Datapoint Type Name	Datapoint Type Code
LTE-HEE process data (runtime interworking, zone addressing and individual addressing)			
51	TempFlowWaterDemAbsHDAUX	DPT_TempFlowWaterDemAbs	210.100
Parameters and Diagnostic Data (individual addressing only)			
101	DistrSegmH	DPT_UcountValue8_Z	202.002
...	...		
110			

9   Functional Block Heating Zone Controller

Object Name: **HZC**
Object Type: **160**

Property Identifier	Datapoint Name	Datapoint Type Name	Datapoint Type Code
LTE-HEE process data (runtime interworking, zone addressing and individual addressing)			
51	TempFlowWaterDemAbsHZC	DPT_TempFlowWaterDemAbs	210.100
52	HVACModeAct	DPT_HVACMode_Z	201.100
53	TempRoomSetpHeatAct	DPT_TempHVACAb_Zs	205.100
54	StatusHZC	DPT_StatusRHC	21.102
55	TempFlowWaterHZC	DPT_TempHVACAbs_Z	205.100
Parameters and Diagnostic Data (individual addressing only)			
101	Apartment	DPT_UcountValue8_Z	202.002
102	Room	DPT_UcountValue8_Z	202.002
103	Subzone	DPT_UcountValue8_Z	202.002
104	DistrSegmH	DPT_UcountValue8_Z	202.002
105	OutsideSensorZone	DPT_UcountValue8_Z	202.002
106			
...			
110	TempFlowWaterMax	DPT_TempHVACAbs_Z	205.100
111	TempFlowWaterMin	DPT_TempHVACAbs_Z	205.100
112	TempReturnWaterMax	DPT_TempHVACAbs_Z	205.100
113	TempReturnWaterMin	DPT_TempHVACAbs_Z	205.100
114	TimeHeatUpMax	DPT_TimePeriodMin	07.006
115	TimeEarlyHeatShutdownMax	DPT_TimePeriodMin	07.006
116	TempReturnWaterHZC	DPT_TempHVACAbs_Z	205.100
117	TempFlowWaterSetpHZC	DPT_TempHVACAbs_Z	205.100
118	TempRoomAct	DPT_TempHVACAbs_Z	205.100
119	TempOutsideAct	DPT_TempHVACAbs_Z	205.100
120	TempOutsideAttenuat	DPT_TempHVACAbs_Z	205.100
121	WindSpeedAct	DPT_WindSpeed_Z	203.101
122	SunIntensityAct	DPT_SunIntensity_Z	203.102
123	StatusPumpHZC	DPT_RelValue_Z	202.001
124	Fault	DPT_Bool	1.002
125	ErrorCodeHZC	DPT_Value_2_Ucount	7.001
126	StatusMorningBoost	DPT_Bool	1.002

10 Functional Block Heating Individual Room Controller

Object Name: **HIRC**
Object Type: **167**

Property Identifier	Datapoint Name	Datapoint Type Name	Datapoint Type Code
LTE-HEE process data (runtime interworking, zone addressing and individual addressing)			
51	TempRoomDemAbsHeat	DPT_TempRoomDemAbs	209.101
52	ActPosDemAbsHeat	DPT_ActPosDemAbs	207.104
53	TempRoomSetpHeatAct	DPT_TempHVACAbs_Z	205.100
54	HVACModeAct	DPT_HVACMode_Z	201.100
55	StatusHIRC	DPT_StatusRHC	21.102
56			
Parameters and Diagnostic Data (individual addressing only)			
101	Apartment	DPT_UcountValue8_Z	202.002
102	Room	DPT_UcountValue8_Z	202.002
103	Subzone	DPT_UcountValue8_Z	202.002
104	--		
105	OutsideSensorZone	DPT_UcountValue8_Z	202.002
...			
114	TimeHeatUpMax	DPT_TimePeriodMin	07.006
115	TimeEarlyHeatShutdownMax	DPT_TimePeriodMin	07.006
116	--		
117	ActPosSetpHIRC	DPT_RelValue_Z	202.001
118	TempRoomAct	DPT_TempHVACAbs_Z	205.100
119	TempOutsideAct	DPT_TempHVACAbs_Z	205.100
120	TempOutsideAttenuat	DPT_TempHVACAbs_Z	205.100
121	WindSpeedAct	DPT_WindSpeed_Z	203.101
122	SunIntensityAct	DPT_SunIntensity_Z	203.102
123	--		
124	Fault	DPT_Bool	1.002
125	ErrorCodeHIRC	DPT_Value_2_Ucount	7.001
126	StatusMorningBoost	DPT_Bool	1.002

11 Functional Block Heating Room Demand Manager

Object Name: **HRDM**
Object Type: **170**

Property Identifier	Datapoint Name	Datapoint Type Name	Datapoint Type Code
LTE-HEE process data (runtime interworking, zone addressing and individual addressing)			
51	TempRoomDemAbsHeatMax	DPT_TempRoomDemAbs	209.101
52	ActPosDemAbsHeatMax	DPT_ActPosDemAbs	207.104
53			
54			
Parameters and Diagnostic Data (individual addressing only)			
101	Apartment	DPT_UcountValue8_Z	202.002
102			
...			
110	NumberOfHIRC	DPT_Value_1_Ucount	5.010

12 Functional Block Heating Demand Transformer Actuator Position

Object Name: **HDTACT**
Object Type: **169**

Property Identifier	Datapoint Name	Datapoint Type Name	Datapoint Type Code
LTE-HEE process data (runtime interworking, zone addressing and individual addressing)			
51	TempFlowWaterDemHeatShift	DPT_TempHVACRel_Z	205.101
52	PumpControl	DPT_Switch	1.001
Parameters and Diagnostic Data (individual addressing only)			
101	Apartment	DPT_UcountValue8_Z	202.002
102			
...			
110	ActPosSetpMax	DPT_Scaling	5.001
111	ClosedLoopGain	DPT_KelvinPerPercent	9.023
112	TempFlowWaterShiftMin	DPT_TempHVACRel_Z	205.101
113	TempFlowWaterShiftMax	DPT_TempHVACRel_Z	205.101
114	OperationMode	DPT_Mode_Boiler	3.009
115	MaxValvePosOn	DPT_Scaling	5.001
116	MaxValvePosOff	DPT_Scaling	5.001
117			

13 Functional Block Heating Demand Transformer Room Temp

Object Name:　　　　　**HDTRT**
Object Type:　　　　　**151**

Property Identifier	Datapoint Name	Datapoint Type Name	Datapoint Type Code
LTE-HEE process data (runtime interworking, zone addressing and individual addressing)			
51	TempFlowWaterDemAbsHDTRT	DPT_TempFlowWaterDemAbs	210.100
52			
Parameters and Diagnostic Data (individual addressing only)			
101	Apartment	DPT_UcountValue8_Z	202.002
102	reserved		
103	reserved		
104	DistrSegmH	DPT_UcountValue8_Z	202.002
105	OutsideSensorZone	DPT_UcountValue8_Z	202.002
...			
110	TempFlowWaterSetpEff	DPT_TempHVACAbs_Z	205.100
111	TempFlowWaterSetpDefault	DPT_TempHVACAbs_Z	205.100
112	TempFlowWaterDemHeatShiftAct	DPT_TempHVACRel_Z	205.101
113	TempRoomDemAbsHeatMaxAct	DPT_TempRoomDemAbs_Z	209.101
114	TempOutsideAct	DPT_TempHVACAbs_Z	205.100
115	SetpointMode	DPT_InputSource	1.014

14 Functional Block Domestic Hot Water Setpoint Manager

Object Name:　　　　　**DHWSM**
Object Type:　　　　　**176**

Property Identifier	Datapoint Name	Datapoint Type Name	Datapoint Type Code
LTE-HEE process data (runtime interworking, zone addressing and individual addressing)			
51	DHWModeEff	DPT_DHWMode_Z	201.102
52	DHWModeEffNext	DPT_DHWModeNext	206.102
53	TempDHWSetpSetEff [4]	DTP_TempDHWSetpSet[4]	213.101
54	DHWPush	DPT_Trigger	1.017
55	TempDHWSetpEff	DPT_TempHVACAbs_Z	205.100
56	DHWModeUserEff	DPT_DHWMode_Z	201.102
Parameters and Diagnostic Data (individual addressing only)			
101	DHWZone_Controller	DPT_UcountValue8_Z	202.002
102	DHWZone_Scheduler	DPT_UcountValue8_Z	202.002
...			
110	TempDHWSetpLegioProtect	DPT_TempHVACAbs_Z	205.100
111	TempDHWSetpNormal	DPT_TempHVACAbs_Z	205.100
112	TempDHWSetpReduced	DPT_TempHVACAbs_Z	205.100
113	TempDHWSetpOff/FrostProtect	DPT_TempHVACAbs_Z	205.100

15 Functional Block Domestic Hot Water Controller

Object Name: DHWC
Object Type: 177

Property Identifier	Datapoint Name	Datapoint Type Name	Datapoint Type Code
LTE-HEE process data (runtime interworking, zone addressing and individual addressing)			
51	TempFlowWaterDemAbsDHW	DPT_TempFlowWaterDemAbs	210.100
52	TempDHWSetpAct	DPT_TempHVACAbs	205.100
53	TempDHWSensorHigh	DPT_TempHVACAbs	205.100
54	TempDHWSensorLow	DPT_TempHVACAbs	205.100
55	StatusDHWC	DPT_StatusDHWC	22.100
56	DHWModeAct	DPT_DHWMode	201.102
57	TempFlowWaterDHW	DPT_TempHVACAbs	205.100
Parameters and Diagnostic Data (individual addressing only)			
101	DHWZone	DPT_UcountValue8_Z	202.002
102	DistrSegmH	DPT_UcountValue8_Z	202.002
103			
...			
110	TempFlowWaterSetpDHW	DPT_TempHVACAbs	205.100
111	StatusLoadPumpDHW	DPT_RelValue_Z	202.001
112	ThermostatDHWHigh	DPT_Switch	1.001
113	ThermostatDHWLow	DPT_Switch	1.001
114	Fault	DPT_Bool	1.002
115	ErrorCodeDHWC	DPT_Value_2_Ucount	7.001
116	TempDHWSwitchDiff	DPT_TempHVACRel_Z	205.101
117	TempDHWLoadBoost	DPT_TempHVACRel_Z	205.101
118	LoadPriorityDHW	DPT_LoadPriority	20.104
119			

16 Functional Block DHW Circulation Pump Controller

Object Name: **DHWCPC**
Object Type: **179**

Property Identifier	Datapoint Name	Datapoint Type Name	Datapoint Type Code
LTE-HEE process data (runtime interworking, zone addressing and individual addressing)			
51	*CtlSignPump output t.b.d.*		
Parameters and Diagnostic Data (individual addressing only)			
101	DHWZone	DPT_UcountValue8_Z	202.002
102			
103	PeripheralLinkPump	DPT_UcountValue16_Z	203.012
...			
110	StatusCircPumpDHW	DPT_RelValue_Z	202.001
111	RunTimeCPPush	DPT_TimePeriodMin	07.006
112			
113			

17 Functional Block Solar DHW Controller

Object Name: **SDHWC**
Object Type: **186**

Property Identifier	Datapoint Name	Datapoint Type Name	Datapoint Type Code
LTE-HEE process data (runtime interworking, zone addressing and individual addressing)			
51	StatusSDHWC	DPT_StatusSDHWC	21.103
52	TempCollectorAct	DPT_HVACTempAbs	205.100
Parameters and Diagnostic Data (individual addressing only)			
101	DHWZone	DPT_UcountValue8_Z	202.002
102			
103	PeripheralLinkPump	DPT_UcountValue16_Z	203.012
...			
110	Fault	DPT_Bool	1.002
111	StatusSolarPump	DPT_RelValue_Z	202.001
112	ErrorCodeSDHWC	DPT_Value_2_Ucount	7.001
113			
114			

18 Functional Block DHW Temperature Sensor

Object Name: **DHWTS**
Object Type: **180**

Property Identifier	Datapoint Name	Datapoint Type Name	Datapoint Type Code
LTE-HEE process data (runtime interworking, zone addressing and individual addressing)			
51	TempDHW	DPT_HVACTempAbs	205.100
52			
Parameters and Diagnostic Data (individual addressing only)			
101	DHWZone	DPT_UcountValue8_Z	202.002
...			
110	TempCorrValue	DPT_TempHVACRel_Z	205.101
111	TempCOVCondition	DPT_TempHVACRel_Z	205.101
112	TempAlarmLimitUpper	DPT_TempHVACAbs_Z	205.100
113	TempAlarmLimitLower	DPT_TempHVACAbs_Z	205.100

19 Functional Block DHW User Setting

Object Name: **UDHWSET**
Object Type: **181**

Property Identifier	Datapoint Name	Datapoint Type Name	Datapoint Type Code
LTE-HEE process data (runtime interworking, zone addressing and individual addressing)			
51	DHWModeUser	DPT_DHWModeUser	201.103
52	TempDHWSetpUser	DPT_HVACTempAbs	205.100
53	DHWPushUser	DPT_Trigger	1.017
54	DHWOtherEnergySource	DPT_Bool	1.002
55	DHWCPCPush	DPT_Trigger	1.017
Parameters and Diagnostic Data (individual addressing only)			
101	DHWZone	DPT_UcountValue8_Z	202.002
...			
110			

20 Functional Block: Collector Temperature Sensor

Object Name: **COLTS**
Object Type: **187**

Property Identifier	Datapoint Name	Datapoint Type Name	Datapoint Type Code
LTE-HEE process data (runtime interworking, zone addressing and individual addressing)			
51	TempCollector	DPT_HVACTempAbs	205.100
52			
Parameters and Diagnostic Data (individual addressing only)			
101	DHWZone	DPT_UcountValue8_Z	202.002
...			
110	TempCorrValue	DPT_TempHVACRel_Z	205.101
111	TempCOVCondition	DPT_TempHVACRel_Z	205.101
112	TempAlarmLimitUpper	DPT_TempHVACAbs_Z	205.100
113	TempAlarmLimitLower	DPT_TempHVACAbs_Z	205.100
110			

21 Functional Block Flow Temperature Controller

Object Name: **FTC**
Object Type: **120**

Property Identifier	Datapoint Name	Datapoint Type Name	Datapoint Type Code
LTE-HEE process data (runtime interworking, zone addressing and individual addressing)			
51	StatusFTC	DPT_StatusWTC	209.103
52	TempFlowWaterSetp	DPT_HVACTempAbs	205.100
Parameters and Diagnostic Data (individual addressing only)			
101	PeripheralLinkFTC	DPT_UcountValue16_Z	203.012
102			
...			
110	RunTimeMixValve	DPT_TimePeriodSec	07.005
111	TempFlowWaterAct	DPT_TempHVACAbs_Z	205.100
112	CtrlStatus	DPT_Switch	1.001
113	Fault	DPT_Bool	1.002
114	ErrorCodeFTC	DPT_Value_2_Ucount	7.001