
IEC /SC 3D Open Technical Forum

プロセスオートメーション分野向け IEC CDD製品オントロジー開発
～ IEC 61987シリーズの現状 ～

2021年11月15日

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IEC TC65国際エキスパート／IEC TC65国内委員長

IEC 61987シリーズとは

- IEC61897シリーズとは
 - IEC/TC65/SC65E/WG2が中心となって作成している
 - 「工業プロセス用計測制御機器に関する電子辞書群」を示す。
 - 「工業プロセス用計測制御機器」とは
 - 石油・化学・発電など各種産業プラントが扱う輸送流体の
 - 圧力・流量・温度・液位などを測定し(検出部)・調節し(調節部)・操作する(操作部)
 - 計装機器群を指す。
 - 「電子辞書」とは
 - 機器のクラス分類と機器の属性を表す全仕様を網羅し、
 - オントロジー(体系学的分類学)に従い分類体系化し、
 - それぞれの用語に固有の検索コードを付し、
 - コンピュータ可読としたデータベースを指す。
-

IEC61897シリーズとは

- IEC 61987シリーズは
 - プロセス制御装置, 計装及び補助装置, 並びにそれらの動作環境及び動作要件(例えば, 測定点仕様データ)の記述を標準化する方法を規定している。
- この規格の目的は
 - LOP (Lists of Properties) の発行を通じて、顧客とサプライヤーの共通言語を定義する。
 - 顧客とサプライヤーの間のワークフロー、および顧客の組織内のエンジニアリング、開発、購買などのプロセスを最適化する。
 - 取引コスト並びにライフサイクルに渡る管理コストを削減する。
- この規格では、
 - 工業用プロセス機器のタイプとデバイスを、構造化されたプロパティのリストを使って記述し、関連するプロパティをコンポーネントデータ辞書で利用できるようにしている。
- この規格の意図は、
 - プロパティのリストに基づいて、プロセス制御システム、計装機器、補助機器の問い合わせ、オフアー、機器内部などの記述を可能にする参照辞書を作成することである。

IEC CDDにおけるProcess automationドメイン(IEC 61987シリーズ)

**International Electrotechnical Commission**Home Classes Search

IEC 61987 - SC 65E/WG 2 - Common Data Dictionary (CDD - V2.0014.0016)

Domain: < > Print Export

English French German Japanese Chinese

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Process automation (IEC 61987 series)

- 0112/2///61987#ABA000 - Equipment for industrial-process a
 - ABV000 - Characterization
 - ABA001 - Measuring instrument
 - ABA643 - Gauge
 - ABA684 - Measuring assembly
 - ABA689 - Sight indicator
 - ABA697 - Switch
 - ABA751 - Transmitter**
 - ABA845 - Measuring instrument component
 - ABD340 - Final control element
 - ABD341 - Control valve or automated on/off-valve
 - ABD385 - Process regulator
 - ABV001 - Libraries
 - ABJ604 - LOQ
 - ABJ725 - LOPD
 - ABV500 - LOP
 - ABH525 - Additional aspects
 - ABV503 - OLOP
 - ABV504 - DLOP
 - ABV501 - Block

CLASS	
Code:	0112/2///61987#ABA751
Version:	004
Revision:	01
IRDI:	0112/2///61987#ABA751#004
Preferred name:	Transmitter
Synonymous name:	
Coded name:	
Definition:	instrument intended to transmit a standardized signal that represents the measured variable, which may or may not include an integral sensing element
Note:	NOTE 1: A transmitter may also be equipped with the means to indicate a measured value , NOTE 2: In process engineering a transmitter is often called a meter, for example flowmeter , NOTE 3: A transmitter may also be a component of a composite device or measuring assembly
Remark:	
Definition source:	
Drawing:	

<https://cdd.iec.ch/cdd/iec61987/iec61987.nsf/TreeFrameset?OpenFrameSet>

IEC CDDにおけるProcess automationドメイン(IEC 61987シリーズ)

International Electrotechnical Commission

IEC 61987 - SC 65E/WG 2 - Common Data Dictionary (CDD - V2.0014.0016)

Home Classes Search

Domain: Process automation (IEC 61987 series) < > Print Export

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機種分類(Class) **測定機器(Class)** **トランスミッター(Class)** CLASS

Process automation (IEC 61987 series)	Code:	0112/2///61987#ABA751
0112/2///61987#ABA751 - Equipment for industrial process automation	Version:	004
ABV000 - Characterization	Revision:	01
ABA001 - Measuring instrument	IRDI:	0112/2///61987#ABA751#004
ABA643 - Gauge	Preferred name:	Transmitter
ABA684 - Measuring assembly	Synonymous name:	
ABA689 - Sight indicator	Coded name:	
ABA697 - Switch	Definition:	instrument intended to transmit a standardized signal that represents the measured variable, which may or may not include an integral sensing element
ABA751 - Transmitter	Note:	NOTE 1: A transmitter may also be equipped with the means to indicate a measured value , NOTE 2: In process engineering a transmitter is often called a meter, for example flowmeter , NOTE 3: A transmitter may also be a component of a composite device or measuring assembly
ABA845 - Measuring instrument component	Remark:	
ABD340 - Final control element	Definition source:	
ABD341 - Control valve or automated on/off-valve	Drawing:	
ABD385 - Process regulator		
ABV001 - Libraries		
ABJ604 - LOQ		
ABJ725 - LOPD		
ABV500 - LOP		
ABH525 - Additional aspects		
ABV503 - OLOP		
ABV504 - DLOP		
ABV501 - Block		

<https://cdd.iec.ch/cdd/iec61987/iec61987.nsf/TreeFrameset?OpenFrameSet>

IEC CDDにおけるProcess automationドメイン(IEC 61987シリーズ)

International Electrotechnical Commission
IEC 61987 - SC 65E/WG 2 - Common Data Dictionary (CDD - V2.0014.0016)

Domain: Process automation (IEC 61987 series)

English French German Japanese Chinese

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機種分類(Class) 測定機器(Class) トランスミッター(Class)

0112/2///61987#ABA751 - Equipment for industrial process automation

ABV000 - Characterization

ABA001 - Measuring instrument

ABA643 - Gauge

ABA684 - Measuring assembly

ABA689 - Sight indicator

ABA697 - Switch

ABA751 - Transmitter

ABA845 - Measuring instrument component

ABD340 - Final control element

ABD341 - Control valve or automated on/off-valve

ABD385 - Process regulator

ABV001 - Libraries

ABJ604 - LOQ

ABJ725 - LOPD

ABV500 - LOP

ABH525 - Additional aspects

ABV503 - OLOP

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Code:	0112/2///61987#ABA751
Version:	004
Revision:	01
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Remark:	
Definition source:	
Drawing:	

IRDI(International Registration Data Identifier: 国際登録データ識別記号) データ・エレメントに関する固有の検索記号

推奨名称

定義

<https://cdd.iec.ch/cdd/iec61987/iec61987.nsf/TreeFrameset?OpenFrameSet>

IEC CDDにおけるProcess automationドメイン(IEC 61987シリーズ)

International Electrotechnical Commission
IEC 61987 - SC 65E/WG 2 - Common Data Dictionary (CDD - V2.0014.0016)

Domain: Process automation (IEC 61987 series)

English French German Japanese Chinese

Open all | Close all

機種分類(Class) 測定機器(Class) トランスミッター(Class)

CLASS

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Remark:
Definition source:
Drawing:

IRDI (International Registration Data Identifier: 国際登録データ識別記号) データ・エレメントに関する国際的に唯一の識別記号

推奨名称

定義

ダイナミックデータ(LOPD) 機器の測定データ・操作データなど

Operating List of Property (OLOP): 機器の運転条件・設置条件など

Device List of Property (DLOP): 機器の仕様など

<https://cdd.iec.ch/cdd/iec61987/iec61987.nsf/TreeFrameset?OpenFrameSet>

IEC61987 シリーズの開発経過

- 「工業プロセス用計測制御機器」に関する電子辞書規格化作業は、**2000年頃ドイツのNAMUR**（工業プロセス自動制御工業会、1949年設立）の作業部会が開始したものである。
- **2003年**には、**PROLIST**（**Project List** of Property／**Property List**）というグループがNAMUR内に結成され、同年**NE100**（**NAMUR Recommendation 100**）というコンソーシアム規格として発行された。
- **2005年**には、**国際規格化**のために、NE100 を基本とした NWIP（新規作業項目提案）が **IEC TC65** に提案され、**TC65/SC65B/WG11**（**当時：後にTC65/SC65E/WG2と改名**）によって**国際作業**が開始された。同時に、**国際エキスパート**が募集され、**日本からも国際エキスパート**を登録し、今日に至る。

IEC 61987シリーズ規格一覧(1)

- Industrial-process measurement and control - Data structures and elements in process equipment catalogues

IEC 61987-10:2009 ED1	List of Properties (LOPs) for Industrial-Process Measurement and Control for Electronic Data Exchange - Fundamentals	電子的情報交換の基礎	2009/7/23
IEC 61987-11:2016 ED2	List of properties (LOPs) of measuring equipment for electronic data exchange - Generic structures	測定機器のLOPの一般構造	2016/12/15
IEC 61987-12:2016 ED1	Lists of properties (LOPs) for flow measuring equipment for electronic data exchange	流量測定機器	2016/3/23
IEC 61987-13:2016 ED1	Lists of properties (LOP) for pressure measuring equipment for electronic data exchange	圧力測定機器	2016/3/23
IEC 61987-14:2016 ED1	Lists of properties (LOP) for temperature measuring equipment for electronic data exchange	温度測定機器	2016/4/26
IEC 61987-15:2016 ED1	Lists of properties (LOPs) for level measuring equipment for electronic data exchange	レベル測定機器	2016/11/8
IEC 61987-16:2016 ED1	List of properties (LOPs) for density measuring equipment for electronic data exchange	密度測定機器	2016/12/15
IEC 61987-92:2018 ED1	Lists of properties (LOP) of measuring equipment for electronic data exchange - Aspect LOPs	付帯情報のLOP	2018/6/5

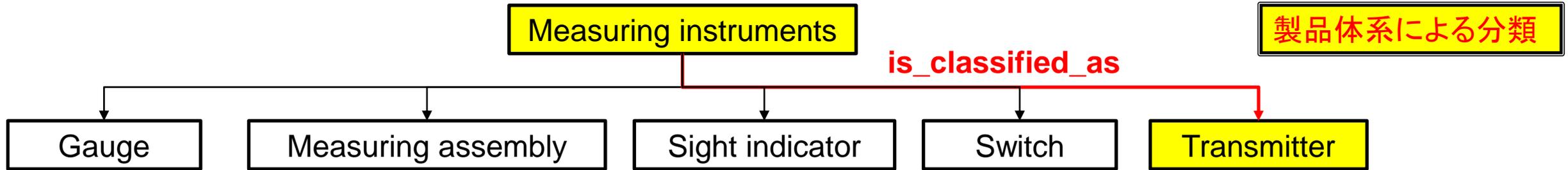
IEC 61987シリーズ規格一覧(2)

- Industrial-process measurement and control - Data structures and elements in process equipment catalogues

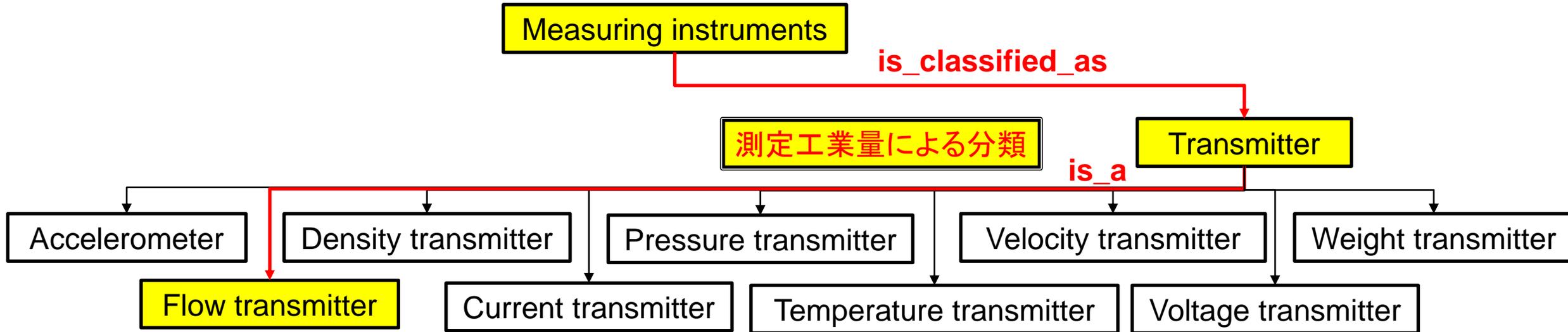
IEC 61987-21:2015 ED1	List of Properties (LOP) of automated valves for electronic data exchange - Generic structures	自動制御バルブの LOPの一般構造	2015/9/15
IEC 61987-22:2015 ED1	Lists of Properties (LOPs) of valve body assemblies for electronic data exchange	バルブ本体	2015/9/15
IEC 61987-23:2015 ED1	Lists of Properties (LOPs) of actuators for electronic data exchange	アクチュエータ	2015/9/15
IEC 61987-24-1:2015 ED1	List of Properties (LOPs) of positioners and I/P converters for electronic data exchange	ポジショナ・IP変換器	2015/9/15
IEC 61987-24-2:2017 ED1	List of properties (LOPs) of valve/actuator accessories for electronic data exchange	バルブ・アクチュエータ用アクセサリ	2017/6/19
IEC 61987-24-3:2017 ED1	Lists of properties (LOPs) of flow modification accessories for electronic data exchange	整流用アクセサリ	2017/6/19

IEC 61987-31 開発中	List of Properties (LOP) of infrastructure devices for electronic data exchange – Generic structures	パネル・ラック計器の LOPの一般構造	2022/12 計画
IEC 61987-32 開発中	Lists of properties (LOP) for I/O modules for electronic data exchange	I/Oモジュール	2022/9 計画

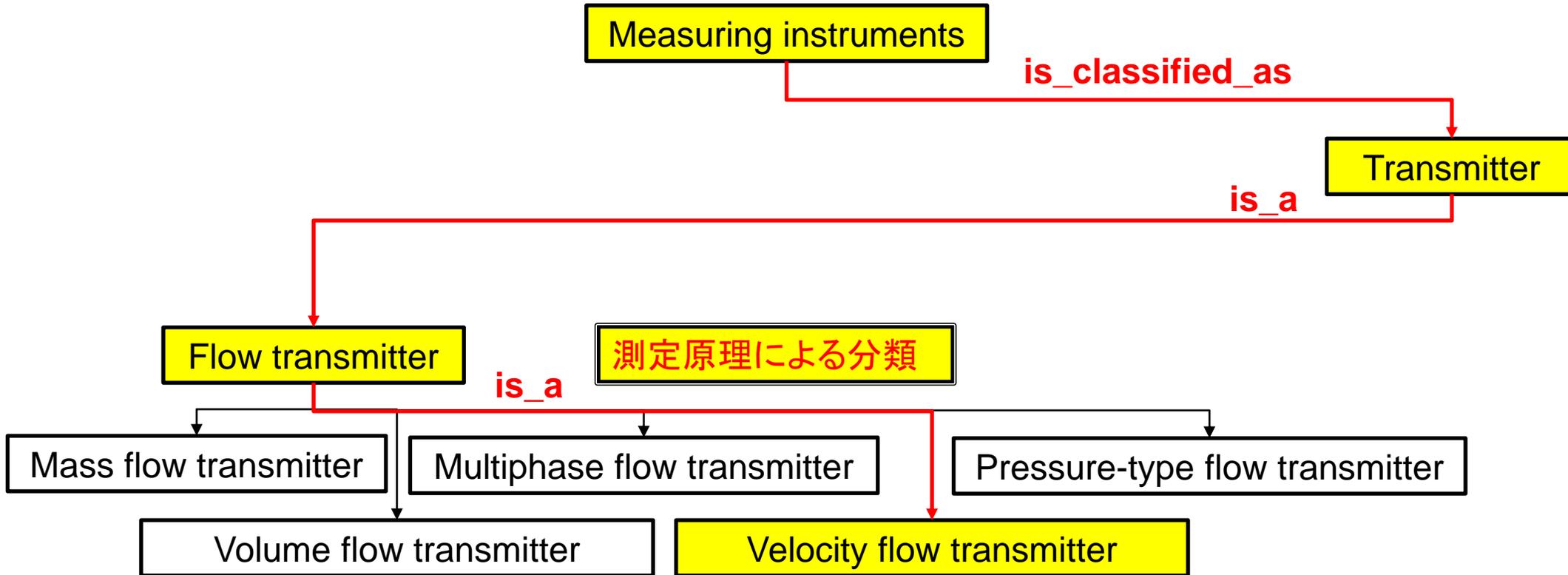
Measuring instrumentの機種(クラス)分類



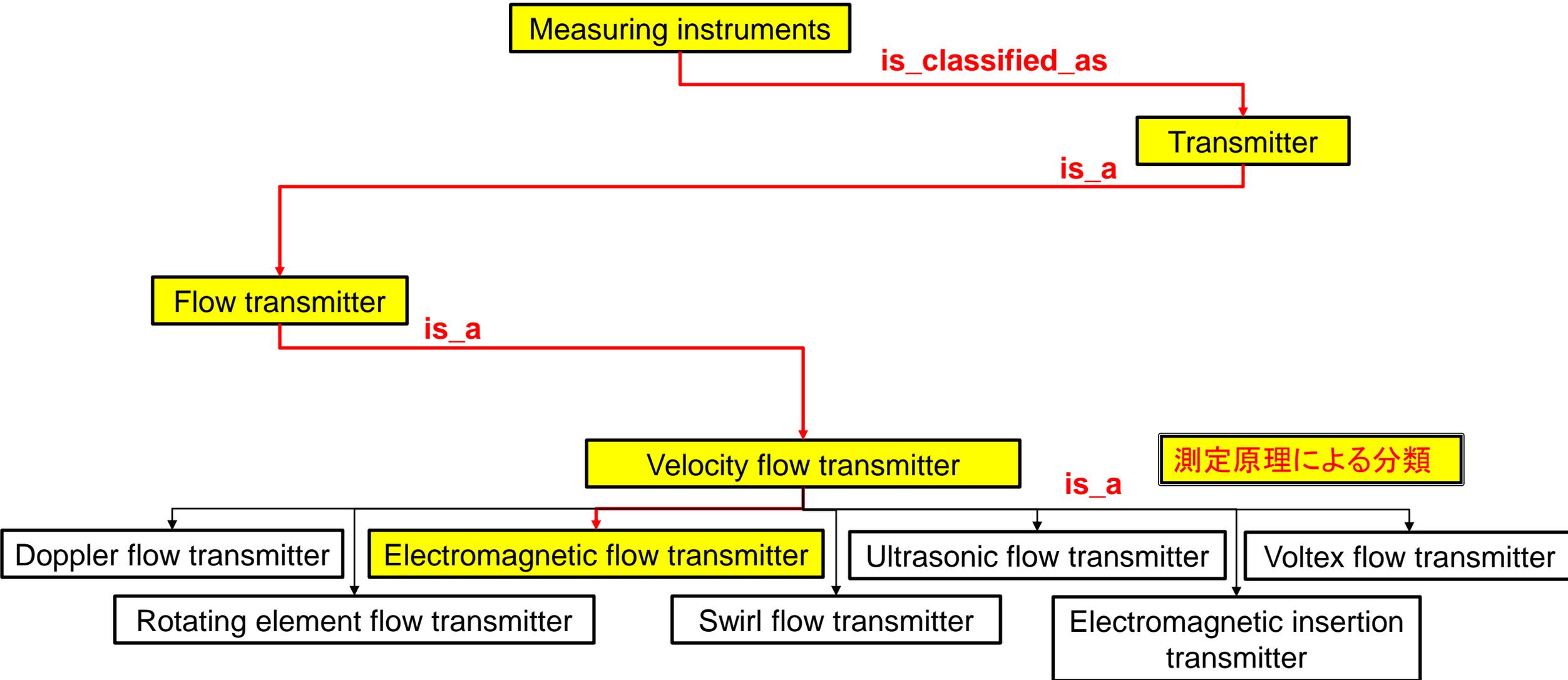
Transmitterの機種(クラス)分類



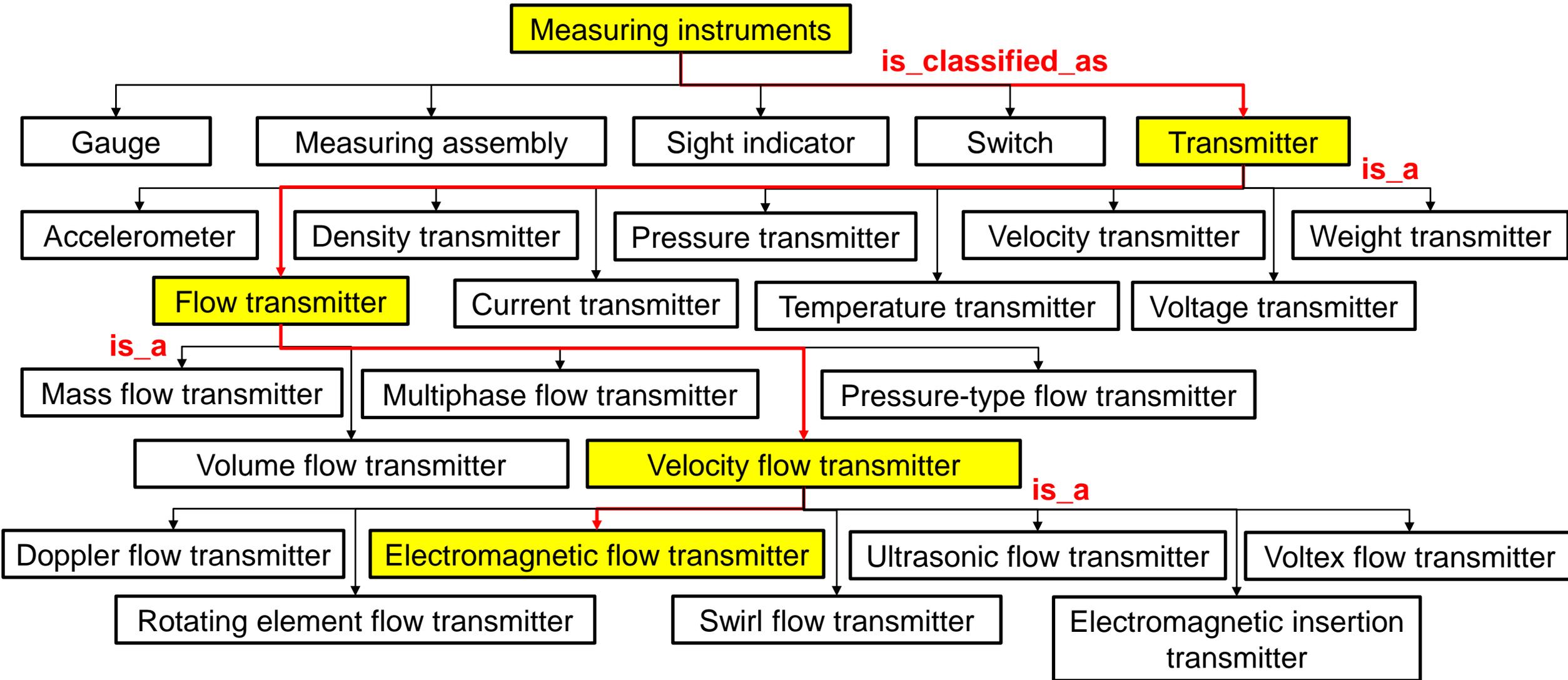
Flow transmitterの機種(クラス)分類



Velocity flow transmitterの機種(クラス)分類



Measuring instrumentの機種(クラス)分類



プロパティによる機器仕様の表現

差圧伝送器の型名・仕様コード

Product Data Sheet
00813-0100-4001, Rev WB
April 2021

Rosemount™ 3051 Pressure Transmitter

General Specifications

EJX110A
Differential Pressure Transmitter

DPharp **EJX**™

GS 01C25B01-01EN

[Style: S3]

The high performance differential pressure transmitter EJX110A features single crystal silicon resonant sensor and is suitable to measure liquid, gas, or steam flow as well as liquid level, density and pressure. EJX110A outputs a 4 to 20 mA DC signal corresponding to the measured differential pressure. Its highly accurate and stable sensor can also measure the static pressure which can be shown on the integral indicator or remotely monitored via BRAIN or HART communications. Other key features include quick response, remote set-up using communications, diagnostics and optional status output for pressure high/low alarm. The multi-sensing technology provides the advanced diagnostic function to detect such abnormalities as an impulse line blockage or heat trace breakage. FOUNDATION Fieldbus and PROFIBUS PA protocol types are also available. All EJX series models in their standard configuration, with the exception of the Fieldbus and PROFIBUS types, are certified as complying with SIL 2 for safety requirement.



差圧伝送器の型名・仕様コード(横河電機)

Model		Suffix Codes	Description	測定範囲		
EJX110A		製品名称	Differential pressure transmitter	Measurement Span/Range	kPa	
Output signal 出力信号	-D	.....	4 to 20 mA DC with digital communication (BRAIN protocol)	F*	Span	0.1 to 5
	-E	.....	4 to 20 mA DC with digital communication (HART 5 protocol)		Range	-5 to 5
	-J	.....	4 to 20 mA DC with digital communication (HART 5/HART 7 protocol) (Refer to GS 01C25T01-01EN)	L*	Span	0.1 to 10
	-F	.....	Digital communication (FOUNDATION Fieldbus protocol, refer to GS 01C25T02-01EN)		Range	-10 to 10
	-G	.....	Digital communication (PROFIBUS PA protocol, refer to GS 01C25T04-01EN)	M	Span	0.5 to 100
Measurement span (capsule) 測定範囲	F	.....	0.1 to 5 kPa (0.4 to 20 inH ₂ O) (For Wetted parts material code S)		Range	-100 to 100
	L	.....	0.1 to 10 kPa (0.4 to 40 inH ₂ O) (For Wetted parts material code M, H, T, A, D, B and W)	H	Span	2.5 to 500
	M	.....	0.5 to 100 kPa (2 to 400 inH ₂ O)		Range	-500 to 500
	H	.....	2.5 to 500 kPa (10 to 2000 inH ₂ O)			
	V	.....	0.07 to 14 MPa (10 to 2000 psi)			

差圧伝送器の型名・仕様コード(横河電機)

プロセスへの接続口

Process connections See the table in the next page for the codes for a diaphragm seal system.	0	without process connector (Rc1/4 female on the cover flanges)
	1	with Rc1/4 female process connector
	2	with Rc1/2 female process connector
	3	with 1/4 NPT female process connector
	4	with 1/2 NPT female process connector
	5	without process connector (1/4 NPT female on the cover flanges)

接液材質

Wetted parts material code	Cover flange and process connector	Capsule
S #	ASTM CF-8M *1*8	Hastelloy C-276 *2 (Diaphragm) F316L SST, 316L SST (Others)
L #	ASTM CF-3M *7*8	Hastelloy C-276 *2 (Diaphragm) F316L SST, 316L SST (Others)
H #	ASTM CF-8M *1*8	Hastelloy C-276 *2
M #	ASTM CF-8M *1*8	Monel
T	ASTM CF-8M *1*8	Tantalum

差圧伝送器の型名・仕様コード(横河電機)

プロセスへの接続口	ABU458 - Process connection	ABA592 - type of process connection	ABI456 - style of process connection	ABA576 - nominal size
Process connections See the table in the next page for the codes for a diaphragm seal system.	0	without process connector (Rc1/4 female on the cover flanges)		ABK071 - Rc 1/4
	1	with Rc1/4 fem	ABK268 - female thread ABK292 - female tapered thread	ABK071 - Rc 1/4
	2	with Rc1/2 female process connector		ABK073 - Rc 1/2
	3	with 1/4 NPT female process connector		ABJ813 - 1/4 - 18 NPT
	4	with 1/2 NPT female process connector		ABJ815 - 1/2 - 14NPT
	5	without process connector (1/4 NPT female on the cover flanges)		ABJ813 - 1/4 - 18 NPT

接液材質	ABC684 - Wetted material of measuring cell	ABB455 - designation of material	ABA908 - material code	ABI460 - brand name of material	
Wetted parts material code	Cover flange and process connector	Capsule			
S #	ASTM CF-8M *1*8	Hastelloy C-276 *2 (Diaphragm) F316L SST, 316L SST (Others)	ABK364 - nickel alloy ABK377 - stainless steel	ABK398 - C276 ABK391L - 316	Hastelloy C 316LSST
L #	ASTM CF-3M *7*8	Hastelloy C-276 *2 (Diaphragm) F316L SST, 316L SST (Others)	ABK364 - nickel alloy ABK377 - stainless steel	ABK398 - C276 ABK391L - 316	Hastelloy C 316LSST
H #	ASTM CF-8M *1*8	Hastelloy C-276 *2	ABK364 - nickel alloy	ABK398 - C276	Hastelloy C
M #	ASTM CF-8M *1*8	Monel	ABK364 - nickel alloy	ABI407 - others	Monel
T	ASTM CF-8M *1*8	Tantalum	ABK378 - tantalum	ABI407 - others	Tantalum

仕様コード選択の例:

EJX110A-EJH1..... : 4-20mA出力(HART7)、Mレンジ(0.5 to 100kPa)、Hastelloy C-276カプセル/ダイヤフラム、Rc1/4雌テーパネジ、.....

差圧伝送器の型名・仕様コード(Emerson)

Model

製品名称

Code	Description
3051C	Coplanar pressure transmitter

Measurement type

測定方式

Code	Description
D	Differential
G	Gage
A ⁽¹⁾	Absolute

測定範囲

Wireless output code X, only available with 316L stainless steel (SST) diaphragm material (code 2), and silicone fill fluid (code 1).

Pressure range

Code	Differential (Rosemount 3051CD)	Gage (Rosemount 3051CG)	Absolute (Rosemount 3051CA)
1	-25 to 25 inH ₂ O (-62.16 to 62.16 mbar)	-25 to 25 inH ₂ O (-62.16 to 62.16 mbar)	0 to 30 psia (0 to 2.06 bar)
2	-250 to 250 inH ₂ O (-621.60 to 621.60 mbar)	-250 to 250 inH ₂ O (-621.60 to 621.60 mbar)	0 to 150 psia (0 to 10.34 bar)
3	-1000 to 1000 inH ₂ O (-2.48 to 2.48 bar)	-393 to 1000 inH ₂ O (-0.97 to 2.48 bar)	0 to 800 psia (0 to 55.15 bar)
4	-300 to 300 psi (-20.68 to 20.68 bar)	-14.2 to 300 psi (-0.97 to 20.68 bar)	0 to 4000 psia (0 to 275.79 bar)
5	-2000 to 2000 psi (-137.89 to 137.89 bar)	-14.2 to 2000 psi (-0.97 to 137.89 bar)	N/A
0 ⁽¹⁾	-3 to 3 inH ₂ O (-7.46 to 7.46 mbar)	N/A	N/A

測定範囲

Range ⁽¹⁾	Minimum span	Range and sensor limits	
	Rosemount 3051CD, 3051CG, 3051CF, 3051L ⁽²⁾	Upper (URL)	Lower (LRL)
0	0.10 inH ₂ O (0.24 mbar)	3.00 inH ₂ O (7.45 mbar)	-3.00 inH ₂ O (-7.45 mbar)
1	0.50 inH ₂ O (1.24 mbar)	25.00 inH ₂ O (62.16 mbar)	-25.00 inH ₂ O (-62.16 mbar)
2	1.67 inH ₂ O (4.15 mbar)	250.00 inH ₂ O (621.60 mbar)	-250.00 inH ₂ O (-621.60 mbar)
3	6.67 inH ₂ O (16.58 mbar)	1000.00 inH ₂ O (2.48 bar)	-1000.00 inH ₂ O (-2.48 bar)
4	2.00 psi (137.89 mbar)	300.00 psi (20.68 bar)	-300.00 psi (-20.68 bar)
5	13.33 psi (919.01 mbar)	2000.00 psi (137.89 bar)	-2000.00 psi (-137.89 bar)

差圧伝送器の型名・仕様コード(Emerson)

Model	製品名称	ABA567 - name of product
Code	Description	
3051C	Coplanar pressure transmitter	

Measurement type	測定方式	ABA566 - type of product
Code	Description	
D	Differential	ABL033 - differential pressure transmitter
G	Gage	ABN441 - gauge pressure transmitter
A ⁽¹⁾	Absolute	ABN442 - absolute pressure transmitter

測定範囲 **ABC420 - Measuring range for pressure**

Pressure range **ABB212 - upper range-limit of pressure** **UAA323 - bar**

Code	Differential (Rosemount 3051CD)	Gage (Rosemount 3051CG)	Absolute (Rosemount 3051CA)
1	-25 to 25 inH ₂ O (-62.16 to 62.16 mbar)	-25 to 25 inH ₂ O (-62.16 to 62.16 mbar)	0 to 30 psia (0 to 2.06 bar)
2	-250 to 250 inH ₂ O (-621.60 to 621.60 mbar)	-250 to 250 inH ₂ O (-621.60 to 621.60 mbar)	0 to 150 psia (0 to 10.34 bar)
3	-1000 to 1000 inH ₂ O (-2.48 to 2.48 bar)	-393 to 1000 inH ₂ O (-0.97 to 2.48 bar)	0 to 800 psia (0 to 55.15 bar)
4	-300 to 300 psi (-20.68 to 20.68 bar)	-14.2 to 300 psi (-0.97 to 20.68 bar)	0 to 4000 psia (0 to 275.79 bar)
5	-2000 to 2000 psi (-137.89 to 137.89 bar)	-14.2 to 2000 psi (-0.97 to 137.89 bar)	N/A
0 ⁽¹⁾	-3 to 3 inH ₂ O (-7.46 to 7.46 mbar)	N/A	N/A

ABB211 - lower range-limit of pressure **UAA323 - bar**

ABB213 - minimum span for pressure	ABB212 - upper range-limit of pressure	ABB211 - lower range-limit of pressure
UAA810 - millibar	UAA323 - bar	UAA323 - bar
測定範囲		
Range ⁽¹⁾	Minimum span Rosemount 3051CD, 3051CG 3051CF, 3051L ⁽²⁾	Range and sensor limits Upper (URL) Lower (LRL) Rosemount 3051CD Differential, 3051CF Flow Meters
0	0.10 inH ₂ O (0.24 mbar)	3.00 inH ₂ O (7.45 mbar) -3.00 inH ₂ O (-7.45 mbar)
1	0.50 inH ₂ O (1.24 mbar)	25.00 inH ₂ O (62.16 mbar) -25.00 inH ₂ O (-62.16 mbar)
2	1.67 inH ₂ O (4.15 mbar)	250.00 inH ₂ O (621.60 mbar) -250.00 inH ₂ O (-621.60 mbar)
3	6.67 inH ₂ O (16.58 mbar)	1000.00 inH ₂ O (2.48 bar) -1000.00 inH ₂ O (-2.48 bar)
4	2.00 psi (137.89 mbar)	300.00 psi (20.68 bar) -300.00 psi (-20.68 bar)
5	13.33 psi (919.01 mbar)	2000.00 psi (137.89 bar) -2000.00 psi (-137.89 bar)

差圧伝送器の型名・仕様コード(Emerson)

Transmitter output

出力信号

Code	Description
A ⁽¹⁾	4–20 mA with digital signal based on HART® Protocol
F	FOUNDATION™ Fieldbus Protocol
W ⁽²⁾	PROFIBUS® PA Protocol
X ⁽³⁾	Wireless (requires wireless options and engineered polymer housing)

Isolating diaphragm

接液材質

Code	Description
2 ⁽¹⁾	316L SST
3 ⁽¹⁾	Alloy C-276
4 ⁽²⁾	Alloy 400
5 ⁽²⁾	Tantalum (available on Rosemount 3051CD and CG, ranges 2–5 only; not available on Rosemount 3051CA)
6 ⁽²⁾	Gold-plated alloy 400 (use in combination with O-ring option code B)
7 ⁽²⁾	Gold-plated 316 SST

Housing material

ハウジングの材質

プロセスへの接続口

Code	Description	Conduit entry size
A	Aluminum	½–14 NPT
B	Aluminum	M20 x 1.5
E	Aluminum, ultra low copper	½–14 NPT
F	Aluminum, ultra low copper	M20 x 1.5
J	SST	½–14 NPT
K	SST	M20 x 1.5

差圧伝送器の型名・仕様コード(Emerson)

Transmitter output		出力信号		ABC201 – Digital communication interface	
Code	Description	ABU388 – output type	ABC089 - Analog current output	ABB279 - designation of digital communication interface	ABL158 - HART
A ⁽¹⁾	4–20 mA with digital signal based on HART® Protocol				ABL162 - FOUNDATION fieldbus H1
F	FOUNDATION™ Fieldbus Protocol				ABL159 - PROFIBUS PA
W ⁽²⁾	PROFIBUS® PA Protocol				ABL167 - Wireless HART
X ⁽³⁾	Wireless (requires wireless options and engineered polymer housing)				
Isolating diaphragm		接液材質		ABB455 - designation of material	
Code	Description	ABC684 - Wetted material of measuring cell	ABA908 - material code	ABI460 - brand name of material	
2 ⁽¹⁾	316L SST		ABK391 - 316L	316LSST	
3 ⁽¹⁾	Alloy C-276		ABK398 - C276	Hastelloy C	
4 ⁽²⁾	Alloy 400		ABK398 - C276	Monel	
5 ⁽²⁾	Tantalum (available on Rosemount 3051CD and CG, ranges 2–5 only; not available on Rosemount 3051BK)		ABI407 - others	Tantalum	
6 ⁽²⁾	Gold-plated alloy 400 (use in combination with O-ring option code B)		ABI407 - others	Gold-plated Monel	
7 ⁽²⁾	Gold-plated 316 SST		ABI407 - others	Gold-plated 316SST	
Housing material		ハウジングの材質		プロセスへの接続口	
ABA158 - material of housing		Conduit entry size		ABA592 - type of process connection	
		ABA576 - nominal size			
A	Aluminum	ABK349 - aluminum	½–14 NPT	ABK268 - female thread	ABK292 - female tapered thread
B	Aluminum	ABK349 - aluminum	M20 x 1.5	ABK268 - female thread	ABK291 - female straight thread
E	Aluminum, ultra low copper	ABI407 - others	½–14 NPT	ABK268 - female thread	ABK292 - female tapered thread
F	Aluminum, ultra low copper	ABI407 - others	M20 x 1.5	ABK268 - female thread	ABK291 - female straight thread
J	SST	ABK377 - stainless steel	½–14 NPT	ABK268 - female thread	ABK292 - female tapered thread
K	SST	ABK377 - stainless steel	M20 x 1.5	ABK268 - female thread	ABK291 - female straight thread
ABU458 - Process connection					

IEC 61987による記述の共通化(1)

0112/2///61987#ABA031 - Device LOP for differential pressure transmitter

0112/2///61987#ABC269 - Identification (Ref: 0112/2///61987#AB)

0112/2///61987#ABA565 - manufacturer

0112/2///61987#ABB064 - supplier

0112/2///61987#ABA567 - name of product

0112/2///61987#ABA566 - type of product

0112/2///61987#ABA300 - code of product

0112/2///61987#ABA950 - order code of product

0112/2///61987#ABA581 - article number

0112/2///61987#ABA587 - GTIN code

製品名称

横河電機 EJX110A

EJX110A データ型: 文字列型

ABL033 - differential pressure transmitter
データ型: コード列挙型(バリュースト)

Emerson 3051CD

3051CD

ABL033 - differential pressure transmitter

データ型: 実数測定値型

-2.48	UAA323 - bar
2.48	UAA323 - bar
16.58	UAA810 - millibar

単位コード

0112/2///61987#ABC528 - Pressure measurement

0112/2///61987#ABB196 - type of pressure measurement variable

0112/2///61987#ABB015 - measuring principle

0112/2///61987#ABC420 - Measuring range for pressure (Ref: (

0112/2///61987#ABB211 - lower range-limit of pressure

0112/2///61987#ABB212 - upper range-limit of pressure

0112/2///61987#ABB213 - minimum span for pressure

0112/2///61987#ABA967 - maximum turndown ratio

0112/2///61987#ABA339 - zero adjustment pressure value

測定範囲

データ型: 実数測定値型

-100	UAA575 - kPa
100	UAA575 - kPa
0.5	UAA575 - kPa

単位コード

IEC 61987による記述の共通化(2)

プロセスへの接続口

- 0112/2///61987#ABU458 - Process connection
- 0112/2///61987#ABB963 - designation of process connection
- 0112/2///61987#ABC039 - description of process connection
- 0112/2///61987#ABA592 - type of process connection
- 0112/2///61987#ABI456 - style of process connection
- 0112/2///61987#ABI458 - brand name of process connection
- 0112/2///61987#ABA591 - nominal rating
- 0112/2///61987#ABA576 - nominal size
- 0112/2///61987#ABA893 - style of sealing surface

横河電機 EJX110A

- ABK268 - female thread コード列挙型(バリュースト)
- ABK292 - female tapered thread コード列挙型(バリュースト)
- ABK073 - Rc 1/2 コード列挙型(バリュースト)

Emerson 3051CD

- ABK268 - female thread
- ABK292 - female tapered thread
- ABJ815 - 1/2 - 14 NPT

接液材質

- 0112/2///61987#ABC684 - Wetted material of measuring cell
- 0112/2///61987#ABB455 - designation of material
- 0112/2///61987#ABI460 - brand name of material
- 0112/2///61987#ABA908 - material code
- 0112/2///61987#ABA907 - reference standard for material code

- ABK364 - nickel alloy コード列挙型(バリュースト)
- Hastelloy C 文字列型
- ABK398 - C276 コード列挙型(バリュースト)

- ABK364 - nickel alloy
- Hastelloy C
- ABK398 - C276

プロパティの詳細: upper range-limit of pressure

Unit list: Pressure

圧力の単位リスト

Class: Measuring range for pressure

0112/2///61987#ABC420 - Measuring range for pressure
0112/2///61987#ABB211 - lower range-limit of pressure
0112/2///61987#ABB212 - upper range-limit of pressure
0112/2///61987#ABB213 - minimum span for pressure
0112/2///61987#ABA967 - maximum turndown ratio
0112/2///61987#ABA339 - zero adjustment pressure value

Property: upper range-limit of pressure

Code:	0112/2///61987#ABB212
Version:	001
Revision:	04
IRDI:	識別コード 0112/2///61987#ABB212#001
Preferred name:	推奨名 upper range-limit of pressure
Synonymous name:	
Definition:	定義 highest value of pressure that a device can be adjusted to measure within its specified accuracy limits
Data type:	データ型 REAL_MEASURE_TYPE 実数測定値型
Value list code:	
Value list:	
Code for unit:	0112/2///62720#UAA323 - bar デフォルトの単位
Codes for alternative units:	
Code for unit list:	0112/2///61987#ABT524 - Pressure

Code:	0112/2///61987#ABT524
Version:	001
Revision:	02
IRDI:	識別コード 0112/2///61987#ABT524#001
Preferred name:	推奨名 Pressure
Synonymous name:	
Short name:	
Definition:	定義 recommended units to specify pressure

圧力の単位のリスト

- 0112/2///62720#UAA321 - technical
- 0112/2///62720#UAA322 - standard atmosphere
- 0112/2///62720#UAA323 - bar
- 0112/2///62720#UAA403 - centimetre of mercury
- 0112/2///62720#UAA424 - dyne per square centimetre
- 0112/2///62720#UAA464 - foot of mercury
- 0112/2///62720#UAA510 - gram-force per square centimetre
- 0112/2///62720#UAA153 - gigapascal
- 0112/2///62720#UAA527 - hectopascal
- 0112/2///62720#UAA554 - inch of mercury
- 0112/2///62720#UAA633 - kilogram-force per square centimetre
- 0112/2///62720#UAA636 - kilogram-force per square millimetre
- 0112/2///62720#UAA635 - kilogram-force per metre squared
- 0112/2///62720#UAA575 - kilopascal
- 0112/2///62720#UAA698 - pound-force per square foot
- 0112/2///62720#UAA810 - millibar
- 0112/2///62720#UAA876 - conventional millimetre of mercury
- 0112/2///62720#UAA215 - megapascal
- 0112/2///62720#UAA796 - millipascal
- 0112/2///62720#UAA250 - newton per millimetre squared
- 0112/2///62720#UAA258 - pascal
- 0112/2///62720#UAA701 - pound-force per square inch
- 0112/2///62720#UAB022 - torr

単位リストのコード

圧力の単位リスト

プロパティの詳細: type of process connection

Class: Process connection

0112/2///61987#ABU458 - Process connection
0112/2///61987#ABB963 - designation of process connection
0112/2///61987#ABC039 - description of process connection
0112/2///61987#ABA592 - type of process connection
0112/2///61987#ABI456 - style of process connection
0112/2///61987#ABI458 - brand name of process connection
0112/2///61987#ABA591 - nominal rating
0112/2///61987#ABA576 - nominal size
0112/2///61987#ABA893 - style of sealing surface

Property: type of process connection

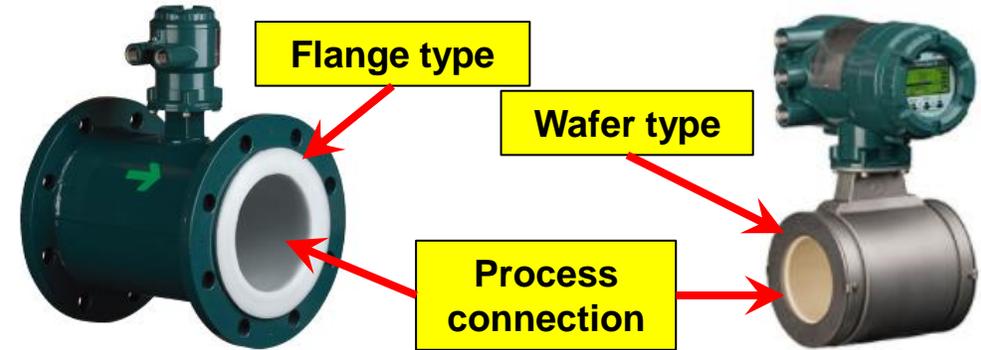
Code:	0112/2///61987#ABA592
Version:	004
Revision:	01
IRDI:	識別コード 0112/2///61987#ABA592#004
Preferred name:	推奨名 type of process connection
Definition:	定義 classification of a process connection according to its fabricated form
Note:	
Data type:	データ型 ENUM_CODE_TYPE(0112/2///61987#ABJ731) コード列挙型 (バリューリスト)
Format:	
Value list code:	0112/2///61987#ABJ731 バリューリストのコード
Value list:	<div style="border: 1px solid gray; padding: 5px;"> <p style="text-align: center; margin: 0;">バリューリスト</p> <ul style="list-style-type: none"> 0112/2///61987#ABK267 - collar flange 0112/2///61987#ABK268 - female thread バリュー 0112/2///61987#ABK269 - flange 0112/2///61987#ABK270 - wafer/sandwich 0112/2///61987#ABK271 - male thread 0112/2///61987#ABK272 - oval flange 0112/2///61987#ABK273 - clamp/coupling 0112/2///61987#ABI407 - others </div>

Value term: female thread

Code:	0112/2///61987#ABK268
Version:	001
Revision:	01
IRDI:	識別コード 0112/2///61987#ABK268#001
Preferred name:	推奨名 female thread
Enumeration code:	0112/2///61987#ABJ731 - type of process connection
Symbol:	female thread
SGML Symbol:	
Synonymous name:	
Short name:	
Definition:	定義 term indicating female thread

IEC 61987による機器の記述例－電磁流量計のプロセス接続口の選定

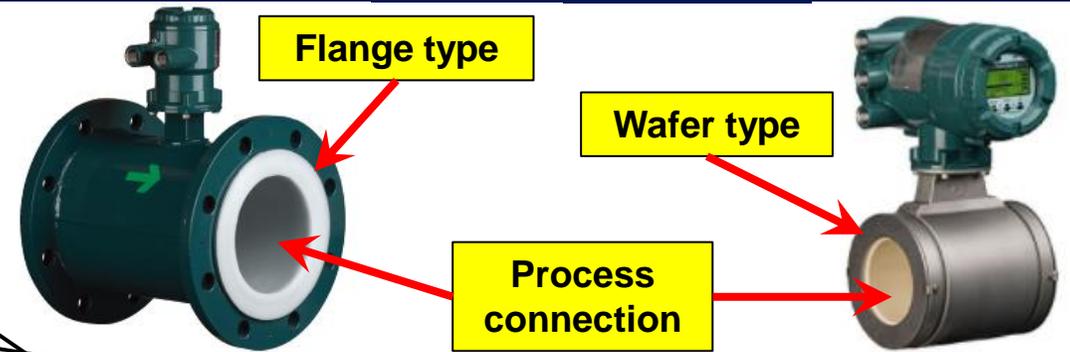
- クラス
 - “Process connection” (プロセス接続口)
- プロパティ
 - “type of process connection” (プロセス接続口の種類)
 - “nominal size of a process connection” (呼び径)
 - “nominal rating of a process connection” (呼び圧力)
 -
- プロパティへの値 (value) の設定
 - “type of process connection”
(プロセス接続口の種類) = **Flange**
 - “nominal size of a process connection”
(呼び径) = **JIS 200A**
 - “nominal rating of a process connection”
(呼び圧力) = **JIS 20K**
 -



Process Connection	Wafer	AA1	ASME Class 150 Wafer	2.5 to 200 mm (0.1 to 8 in.)
		AA2	ASME Class 300 Wafer	2.5 to 200 mm (0.1 to 8 in.)
		AE1	EN PN10 Wafer	200 mm (8 in.)
		AE2	EN PN16 Wafer	65 to 200 mm (2.5 to 8 in.)
		AE4	EN PN40 Wafer	2.5 to 50 mm (0.1 to 2 in.)
		AG1	JIS F12 Wafer	80 to 200 mm (3 to 8 in.)
		AJ1	JIS 10K Wafer	2.5 to 200 mm (0.1 to 8 in.)
		AJ2	JIS 20K Wafer	2.5 to 200 mm (0.1 to 8 in.)
	Stainless Steel Flange (F304)	BA1	ASME Class 150 Flange	
		BA2	ASME Class 300 Flange	2.5 to 300 mm (0.1 to 12 in.)
		BE1	EN PN10 Flange	200 to 400 mm (8 to 16 in.)
		BE2	EN PN16 Flange	65 to 300 mm (2.5 to 12 in.)
		BE3	EN PN25 Flange	80 to 400 mm (3 to 16 in.)
		BE4	EN PN40 Flange	2.5 to 50 mm (0.1 to 2 in.)
BG1	JIS F12 Flange	80 to 400 mm (3 to 16 in.)		
BJ1	JIS 10K Flange			
BJ2	JIS 20K Flange	2.5 to 300 mm (0.1 to 12 in.)		

IEC 61987 Device List of Properties との対応

- 0112/2///61987#ABU458 - Process connection
- 0112/2///61987#ABB963 - designation of process connection
- 0112/2///61987#ABC039 - description of process connection
- 0112/2///61987#ABA592 - type of process connection
- 0112/2///61987#ABI456 - style of process connection
- 0112/2///61987#ABI458 - brand name of process connection
- 0112/2///61987#ABA591 - nominal rating
- 0112/2///61987#ABA576 - nominal size
- 0112/2///61987#ABA893 - style of sealing surface
- 0112/2///61987#ABA150 - face finish
- 0112/2///61987#ABA145 - design code
- 0112/2///61987#ABH417 - quantity of holes
- 0112/2///61987#ABC353 - Material of construction
 - 0112/2///61987#ABB455 - designation of material
 - 0112/2///61987#ABI460 - brand name of material
 - 0112/2///61987#ABA908 - material code
 - 0112/2///61987#ABA907 - reference standard for material code
- 0112/2///61987#ABI464 - material of process connection lining/coating
- 0112/2///61987#ABI466 - brand name of lining/coating material
- 0112/2///61987#ABA151 - type of gasket
- 0112/2///61987#ABA154 - nominal size of gasket
- 0112/2///61987#ABB136 - material of gasket
- 0112/2///61987#ABI459 - brand name of gasket material
- 0112/2///61987#ABC349 - Material of bolting



Wafer	AA1	ASME Class 150 Wafer	2.5 to 200 mm (0.1 to 8 in.)	
	AA2	ASME Class 300 Wafer	2.5 to 200 mm (0.1 to 8 in.)	
	AE1	EN PN10 Wafer	200 mm (8 in.)	
	AE2	EN PN16 Wafer	65 to 200 mm (2.5 to 8 in.)	
	AE4	EN PN40 Wafer	2.5 to 50 mm (0.1 to 2 in.)	
	AG1	JIS F12 Wafer	80 to 200 mm (3 to 8 in.)	
	AJ1	JIS 10K Wafer	2.5 to 200 mm (0.1 to 8 in.)	
	AJ2	JIS 20K Wafer	2.5 to 200 mm (0.1 to 8 in.)	
	Process Connection	BA1	ASME Class 150 Flange	
		BA2	ASME Class 300 Flange	2.5 to 300 mm (0.1 to 12 in.)
BE1		EN PN10 Flange	200 to 400 mm (8 to 16 in.)	
BE2		EN PN16 Flange	65 to 300 mm (2.5 to 12 in.)	
BE3		EN PN25 Flange	80 to 400 mm (3 to 16 in.)	
BE4		EN PN40 Flange	2.5 to 50 mm (0.1 to 2 in.)	
BG1		JIS F12 Flange	80 to 400 mm (3 to 16 in.)	
BJ1		JIS 10K Flange		
BJ2		JIS 20K Flange	2.5 to 300 mm (0.1 to 12 in.)	
		Stainless Steel Flange (F304)		

データシートの記述

- [Class]ABC044 - Transmitter body [1]
- [Cardinality]ABB102 - number of process connections
- [Class]ABU458 - Process connection
 - [Property]ABA592 - type of process connection
 - [Value term]ABK269 - flange
 - [Value term]ABK270 - wafer/sandwich
 - [Property]ABA591 - nominal rating
 - [Value term]ABK224 - Class 150
 - [Value term]ABK228 - Class 300
 - [Value term]ABK241 - PN 10
 - [Value term]ABK242 - PN 16
 - [Value term]ABK244 - PN 40
 - [Value term]ABK253 - 10K
 - [Value term]ABK255 - 20K
 - [Property]ABA576 - nominal size
 - [Value term]ABK111 - 40A
 - [Value term]ABK112 - 50A
 - [Value term]ABK116 - 100A
 - [Value term]ABK120 - 200A
 - [Value term]ABK161 - 1 1/2B
 - [Value term]ABK162 – 2B
 - [Value term]ABK166 - 4B
 - [Value term]ABK169 - 8B

Process Connection	Wafer	AA1	ASME Class 150 Wafer	2.5 to 200 mm (0.1 to 8 in.)
		AA2	ASME Class 300 Wafer	2.5 to 200 mm (0.1 to 8 in.)
		AE1	EN PN10 Wafer	200 mm (8 in.)
		AE2	EN PN16 Wafer	65 to 200 mm (2.5 to 8 in.)
		AE4	EN PN40 Wafer	2.5 to 50 mm (0.1 to 2 in.)
		AG1	JIS F12 Wafer	80 to 200 mm (3 to 8 in.)
		AJ1	JIS 10K Wafer	2.5 to 200 mm (0.1 to 8 in.)
		AJ2	JIS 20K Wafer	2.5 to 200 mm (0.1 to 8 in.)
	Stainless Steel Flange (F304)	BA1	ASME Class 150 Flange	
		BA2	ASME Class 300 Flange	2.5 to 300 mm (0.1 to 12 in.)
		BE1	EN PN10 Flange	200 to 400 mm (8 to 16 in.)
		BE2	EN PN16 Flange	65 to 300 mm (2.5 to 12 in.)
		BE3	EN PN25 Flange	80 to 400 mm (3 to 16 in.)
		BE4	EN PN40 Flange	2.5 to 50 mm (0.1 to 2 in.)
		BG1	JIS F12 Flange	80 to 400 mm (3 to 16 in.)
		BJ1	JIS 10K Flange	
BJ2	JIS 20K Flange	2.5 to 300 mm (0.1 to 12 in.)		

- [Sub Class]ABC353 - Material of construction
 - [Property]ABB455 - designation of material
 - [Value term]ABK352 - carbon steel
 - [Value term]ABK377 - stainless steel
 - [Property]ABA908 - material code
 - [Value term]ABK412 - JIS G 5102
 - [Value term]ABK438 - ASTM A105
 - [Value term]ABK388 - 304

仕様の選択 ⇒ 発注用仕様コード決定

- [Class]ABC044 - Transmitter body [1]
- [Cardinality]ABB102 - number of process connections
- [Class]ABU458 - Process connection
 - [Property]ABA592 - type of process connection
 - [Value term]ABK269 - flange
 - [Value term]ABK270 - wafer/sandwich
 - [Property]ABA591 - nominal rating
 - [Value term]ABK224 - Class 150
 - [Value term]ABK228 - Class 300
 - [Value term]ABK241 - PN 10
 - [Value term]ABK242 - PN 16
 - [Value term]ABK244 - PN 40
 - [Value term]ABK253 - 10K
 - [Value term]ABK255 - 20K
 - [Property]ABA576 - nominal size
 - [Value term]ABK111 - 40A
 - [Value term]ABK112 - 50A
 - [Value term]ABK116 - 100A
 - [Value term]ABK120 - 200A
 - [Value term]ABK161 - 1 1/2B
 - [Value term]ABK162 - 2B
 - [Value term]ABK166 - 4B
 - [Value term]ABK169 - 8B

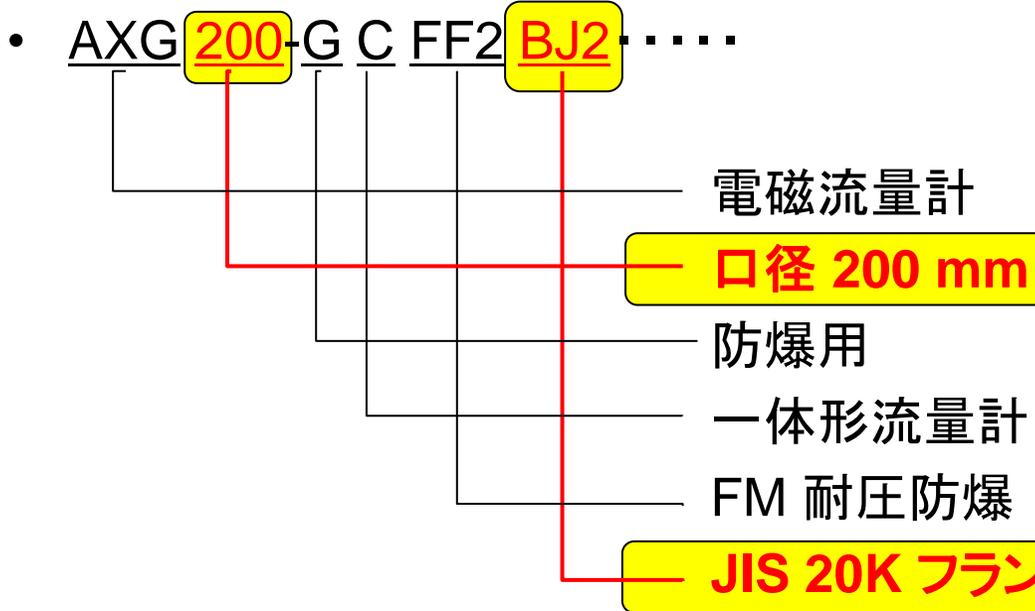
Process Connection	Wafer	AA1	ASME Class 150 Wafer	2.5 to 200 mm (0.1 to 8 in.)
		AA2	ASME Class 300 Wafer	2.5 to 200 mm (0.1 to 8 in.)
		AE1	EN PN10 Wafer	200 mm (8 in.)
		AE2	EN PN16 Wafer	65 to 200 mm (2.5 to 8 in.)
		AE4	EN PN40 Wafer	2.5 to 50 mm (0.1 to 2 in.)
		AG1	JIS F12 Wafer	80 to 200 mm (3 to 8 in.)
		AJ1	JIS 10K Wafer	2.5 to 200 mm (0.1 to 8 in.)
		AJ2	JIS 20K Wafer	2.5 to 200 mm (0.1 to 8 in.)
	Stainless Steel Flange (F304)	BA1	ASME Class 150 Flange	
		BA2	ASME Class 300 Flange	2.5 to 300 mm (0.1 to 12 in.)
		BE1	EN PN10 Flange	200 to 400 mm (8 to 16 in.)
		BE2	EN PN16 Flange	65 to 300 mm (2.5 to 12 in.)
		BE3	EN PN25 Flange	80 to 400 mm (3 to 16 in.)
		BE4	EN PN40 Flange	2.5 to 50 mm (0.1 to 2 in.)
		BG1	JIS F12 Flange	80 to 400 mm (3 to 16 in.)
		BJ1	JIS 10K Flange	
BJ2	JIS 20K Flange	2.5 to 300 mm (0.1 to 12 in.)		

発注用仕様コード

プロセス接続:
 - 接続タイプ: フランジタイプ
 - 材質: ステンレススチール(SUS304)
 - 呼び圧力: JIS 20K
 - (呼び径: 200A)

- [Sub Class]ABC353 - Material of construction
 - [Property]ABB455 - designation of material
 - [Value term]ABK352 - carbon steel
 - [Value term]ABK377 - stainless steel
 - [Property]ABA908 - material code
 - [Value term]ABK412 - JIS G 5102
 - [Value term]ABK438 - ASTM A105
 - [Value term]ABK388 - 304

電磁流量計 型名および仕様コード



- [Class]ABU458 - Process connection
 - [Property]ABA592 - type of process connection
 - [Value term]ABK269 - flange
 - [Property]ABA591 - nominal rating
 - [Value term]ABK255 - 20K
 - [Property]ABA576 - nominal size
 - [Value term]ABK120 - 200A
 - [Sub Class]ABC353 - Material of construction
 - [Property]ABB455 - designation of material
 - [Value term]ABK352 - carbon steel
 - [Property]ABA908 - material code
 - [Value term]ABK388 - 304

プロセス接続:

- 接続タイプ: フランジタイプ
- 材質: ステンレススチール (SUS304)
- 呼び圧力: JIS 20K
- (呼び径: 200A)

プロセスオートメーションにおけるコミュニケーション

- 今日のコミュニケーションは、データの交換を意味する。
- データ交換をする両者がお互いに理解できるように、標準化された方法で記述されなければならない。
- これは、人間の作業を容易にするためにコンピュータ間で通信を行う場合には、特に重要である。 ⇒ Machine readable
- プロセスオートメーションの場合、このようなデータは以下を意味する。
 - 測定機器やコントロールバルブの構成(仕様)データ(Device List of Property : DLOP)
 - 測定機器やコントロールバルブの運転条件などのデータ(Operating List of Property : OLOP)
 - 測定機器の測定データ(Dynamic data:LOPD 開発中)
 - コントロールバルブの制御データ(Dynamic data:LOPD 開発中)
- そして、それらのデータは、
 - エンジニアリングシステムの間で交換される。
 - プラントのライフサイクルに渡って必要とされる。
 - オートメーション機器の間で交換される。

LOP(List of Property)の種類

- **DLOP: Device List of Properties**

- 機器(デバイス)を表すプロパティのリスト
- 註: CAEシステムに関連するデータが含まれてもよい。

- **OLOP: Operating List of Properties (Aspect: 付帯情報)**

- 機器(デバイス)の運転条件・設置条件に関する追加情報を記述したプロパティのリスト

- **ALOP: Administrative List of Properties (Aspect: 付帯情報)**

- トランザクションの開始、追跡、完了に関する局面を記述するプロパティのリスト
- 註1: ALOPには、例えば、**文書の種類**(例えば、引合書、見積書)や**発行者の詳細**(例えば、連絡先)などの情報が含まれており、取引文書の先頭に配置することができる。
- 註2: ALOPは、1つまたは複数のデバイスタイプの複数のインスタンスのトランザクションに適用されることがあり、単一のデバイスタイプのみに関連することはほとんどない。

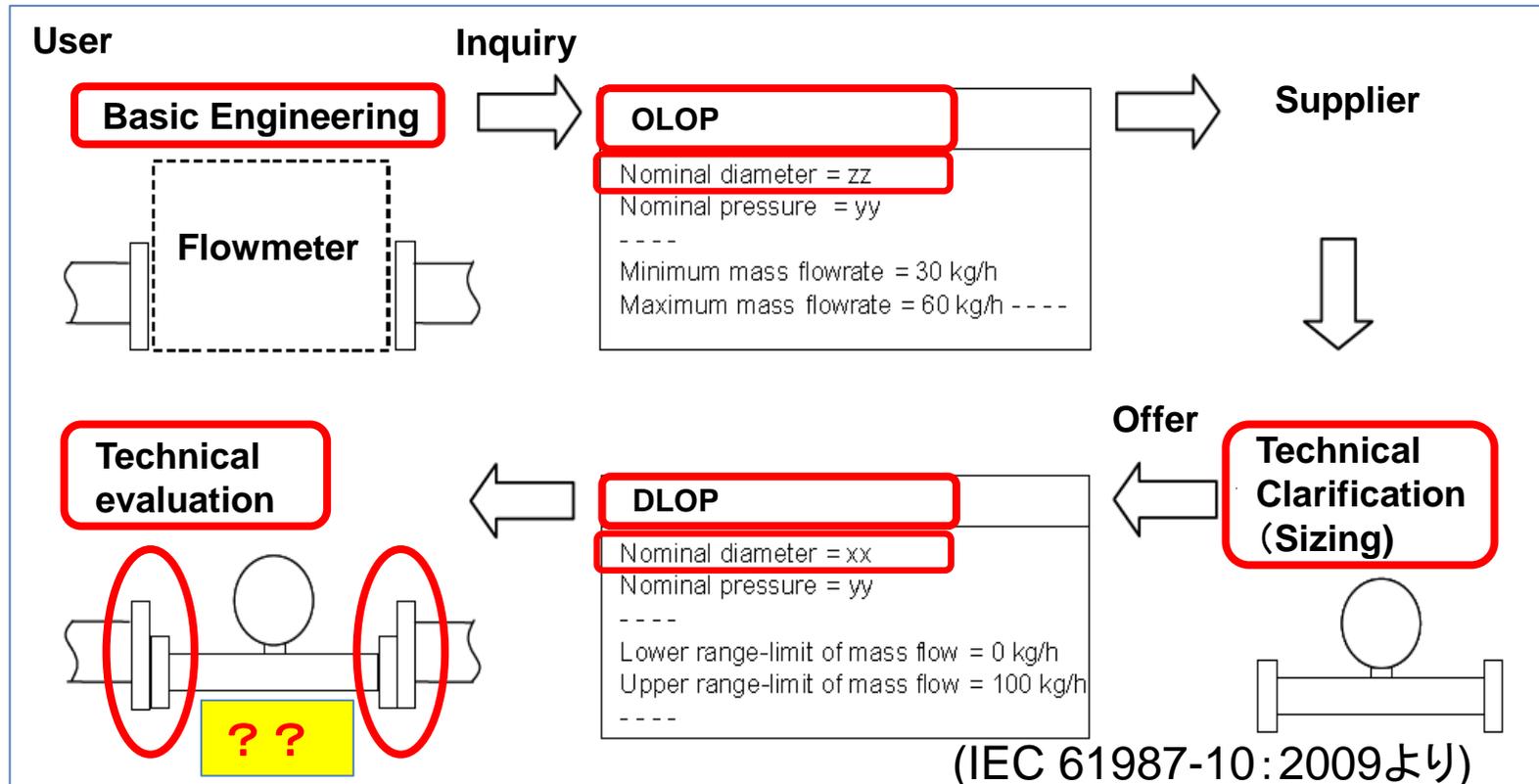
- **CLOP: Commercial List of Properties (Aspect: 付帯情報)**

- ビジネスワークフローに関する側面を記述したプロパティのリスト
- 註: CLOPには、例えば、**価格、コスト、納期、輸送情報、注文数**または**配送数**などが含まれる。

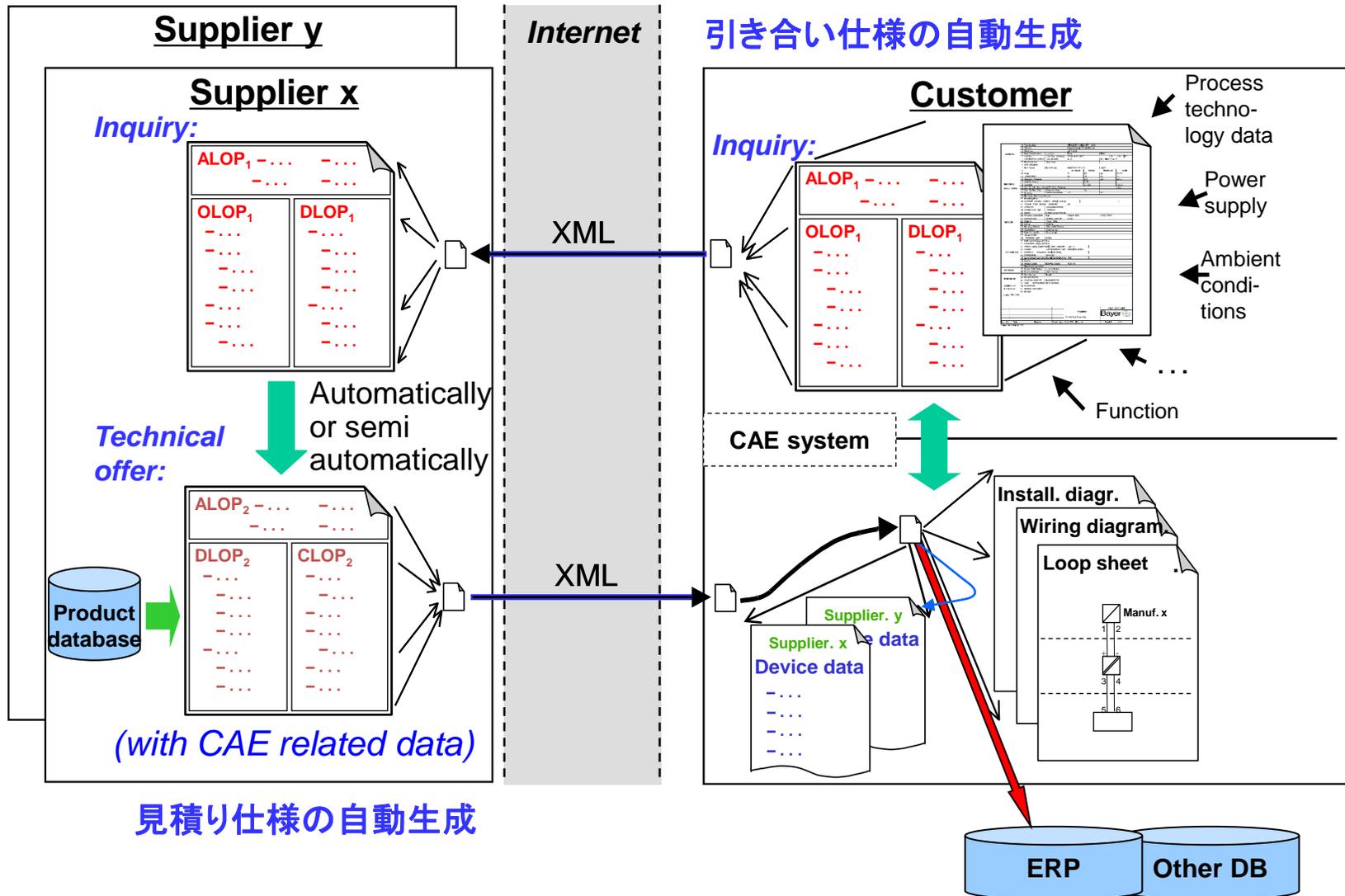
(IEC 61987-10:2009より)

OLOPとDLOPのプロパティの値の関係

- プラントの基本設計では、質量流量計が必要であると判断されている。
 - パイプラインは、呼び径「zz」、呼び圧力「yy」、流量範囲などで設計されている。
 - 測定される質量流量は30kg/hから60kg/hの間である。
 - 設計値とその他の環境条件に基づいて**OLOP**を作成し、引き合いとしてサプライヤーに送る。
- サプライヤー側では、適切な流量計が選択され、**サイズが決定**される。
 - 技術的検討の結果、**提供される流量計は呼び径が「xx」となり、OLOPのそれとは異なる。**
 - 測定範囲も、OLOPとは異なり、流量計の範囲(0kg/h~100kg/h)となっている。
 - これらをもとに**DLOP**を作成し、顧客にオファー(見積り)として届ける。
- 顧客には、
 - ①この見積りを受け入れて、流量計を中心に配管を再設計するか、
 - ②要求に合う流量計を供給できる別のサプライヤーを探すか、という選択肢がある。



LOPを用いたエンジニアリングワークフローにおけるシステム



引き合い (Inquiry)

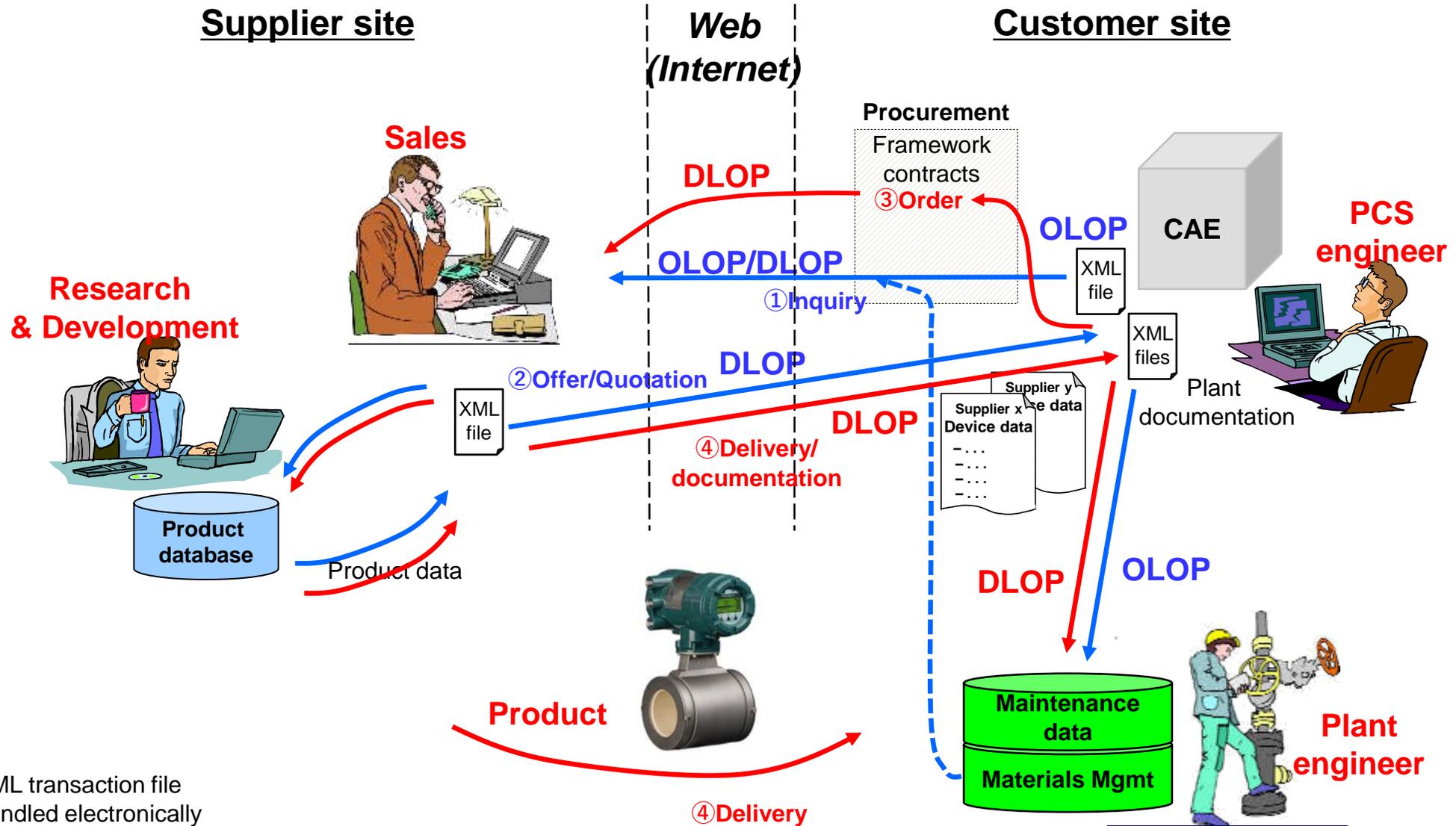
- ① 機器の詳細仕様
⇒ DLOP
- ② 機器の運転条件・設置条件
⇒ OLOP

見積り (Offer/Quotation)

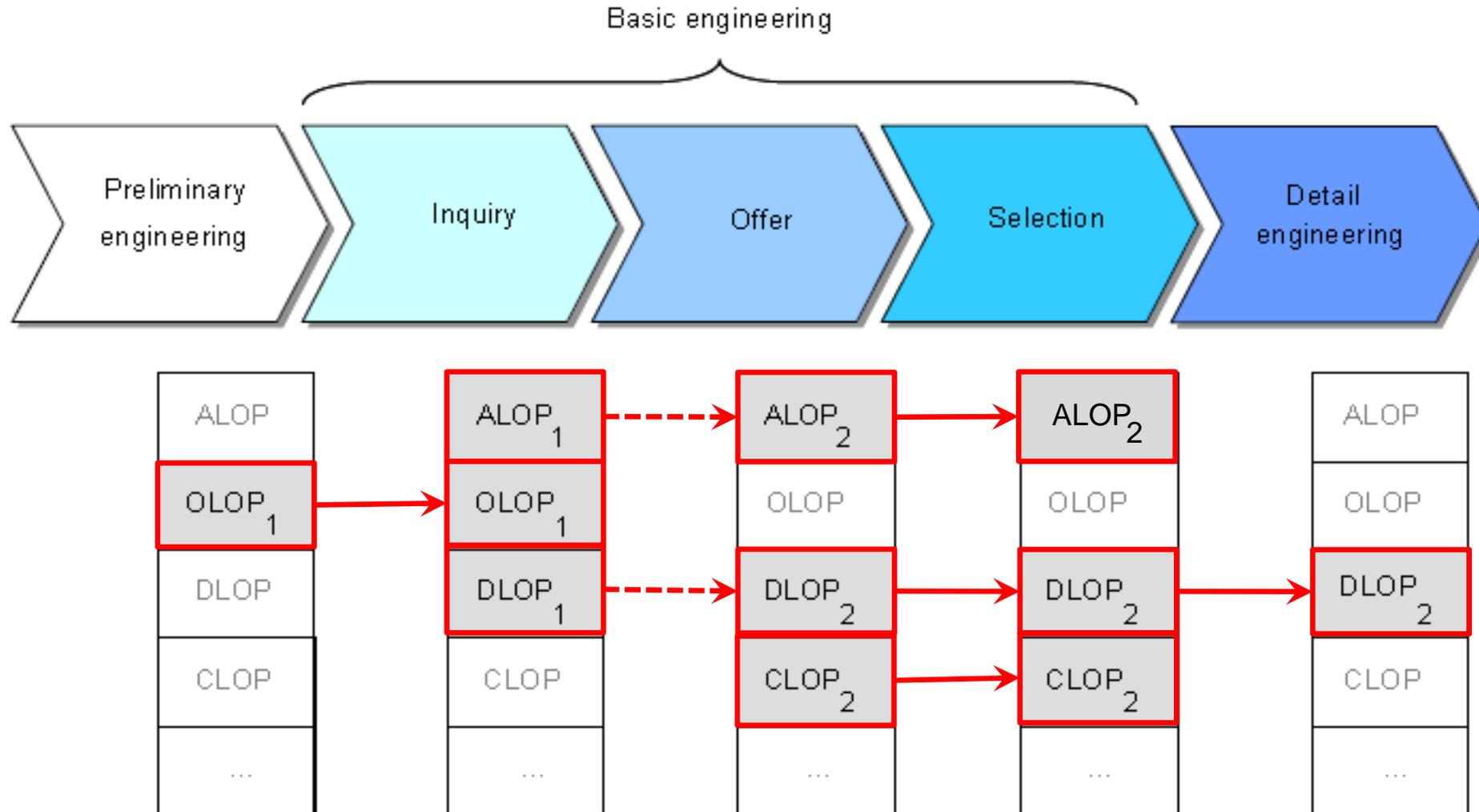
- 機器の詳細仕様
⇒ DLOP

ALOP – Administrative List of Properties
 OLOP – Operating List of Properties
 DLOP – Device List of Properties
 CLOP – Commercial List of Properties

LOPを用いたエンジニアリングワークフローの将来図



個々のプロジェクトステージにおいて使われるLOP



(IEC 61987-10:2009より)

LOPによるエンジニアリングワークフローの原則

- 特定のプロセス制御装置またはシステムのために IT システムに入力しなければならぬすべてのデータは、ワークフローのサブプロセスのチェーン全体を通して一度だけの入力であるべきである。
- この原則を守ることで、データハンドリングの質が格段に向上する。

(IEC 61987-10:2009 より)

IEC 61987シリーズ製品オントロジー辞書



International Electrotechnical Commission

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Classes

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IEC 61987 - SC 65E/WG 2 - Common Data Dictionary (CDD - V2.0014.0016)

Domain: Process automation (IEC 61987 series)

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Open all | Close all

- Process automation (IEC 61987 series)
 - 0112/2///61987#ABA000 - Equipment for industrial-process a
 - ABV000 - Characterization
 - ABA001 - Measuring instrument**
 - ABA643 - Gauge
 - ABA684 - Measuring assembly
 - ABA689 - Sight indicator
 - ABA697 - Switch
 - ABA751 - Transmitter
 - ABA845 - Measuring instrument component
 - ABD340 - Final control element
 - ABD341 - Control valve or automated on/off-valve
 - ABD385 - Process regulator
 - ABV001 - Libraries
 - ABJ604 - LOQ
 - ABJ725 - LOPD
 - ABV500 - LOP
 - ABH525 - Additional aspects
 - ABV503 - OLOP
 - ABV504 - DLOP

CLASS

Code:	0112/2///61987#ABA001
Version:	004
Revision:	01
IRDI:	0112/2///61987#ABA001#004
Preferred name:	Measuring instrument
Synonymous name:	
Coded name:	
Definition:	automation equipment that detects an aspect of a material in order to record, transform or display such an aspect or to perform a combination of these activities
Note:	
Remark:	
Definition source:	
Drawing:	
Class type:	ITEM_CLASS

Measuring instrument – Transmitter



International Electrotechnical Commission

IEC 61987 - SC 65E/WG 2 - Common Data Dictionary (CDD - V2.0014.0016)

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- Process automation (IEC 61987 series)
 - 0112/2///61987#ABA000 - Equipment for industrial-process a
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 - ABD385 - Process regulator
 - ABV001 - Libraries
 - ABJ604 - LOQ
 - ABJ725 - LOPD
 - ABV500 - LOP
 - ABH525 - Additional aspects
 - ABV503 - OLOP
 - ABV504 - DLOP

CLASS

Code:	0112/2///61987#ABA751
Version:	004
Revision:	01
IRDI:	0112/2///61987#ABA751#004
Preferred name:	Transmitter トランスミッター is_classified_as
Synonymous name:	測定された変数を表す標準化された信号を送信することを目的とした、一体型の検出素子を含む場合も含まない場合もある機器
Coded name:	
Definition:	instrument intended to transmit a standardized signal that represents the measured variable, which may or may not include an integral sensing element
Note:	NOTE 1: A transmitter may also be equipped with the means to indicate a measured value , NOTE 2: In process engineering a transmitter is often called a meter, for example flowmeter , NOTE 3: A transmitter may also be a component of a composite device or measuring assembly
Remark:	
Definition source:	

Flow transmitter – Velocity flow transmitter (流速流量計)

Domain: Process automation (IEC 61987 series)

Open all | Close all

- Process automation (IEC 61987 series)
 - 0112/2///61987#ABA000 - Equipment for industrial-proces
 - ABV000 - Characterization
 - ABA001 - Measuring instrument
 - ABA643 - Gauge
 - ABA684 - Measuring assembly
 - ABA689 - Sight indicator
 - ABA697 - Switch
 - ABA751 - Transmitter
 - ABA752 - Accelerometer
 - ABA753 - Current transmitter
 - ABA754 - Density transmitter
 - ABA761 - Flow transmitter
 - ABA762 - Mass flow transmitter
 - ABA765 - Multiphase flow transmitter
 - ABA766 - Pressure-type flow transmitter
 - ABA782 - Volume flow transmitter
 - ABA790 - Velocity flow transmitter**
 - ABA791 - Doppler flow transmitter
 - ABA792 - Electromagnetic flow transmitt
 - ABA793 - Electromagnetic insertion flow
 - ABA794 - Rotating element flow transmi
 - ABA800 - Swirl flow transmitter
 - ABA801 - Ultrasonic flow transmitter

English French German Japanese Chinese

CLASS

Code:	0112/2///61987#ABA790
Version:	003
Revision:	01
IRDI:	0112/2///61987#ABA790#003
Preferred name:	Velocity flow transmitter 流速流量計 is_a
Synonymous name:	
Coded name:	流量を計算するために流体の速度を測定する流量計
Definition:	flow transmitter that measures the velocity of a fluid in order to calculate its flow rate
Note:	
Remark:	
Definition source:	
Drawing:	
Class type:	ITEM_CLASS
Applicable documents:	
Requistry of properties:	
Superclass:	0112/2///61987#ABA761

Velocity flow transmitter – Electromagnetic flow transmitter (電磁流量計)

Domain: Process automation (IEC 61987 series)

Open all | Close all

- Process automation (IEC 61987 series)
 - 0112/2///61987#ABA000 - Equipment for industrial-proces
 - ABV000 - Characterization
 - ABA001 - Measuring instrument
 - ABA643 - Gauge
 - ABA684 - Measuring assembly
 - ABA689 - Sight indicator
 - ABA697 - Switch
 - ABA751 - Transmitter
 - ABA752 - Accelerometer
 - ABA753 - Current transmitter
 - ABA754 - Density transmitter
 - ABA761 - Flow transmitter
 - ABA762 - Mass flow transmitter
 - ABA765 - Multiphase flow transmitter
 - ABA766 - Pressure-type flow transmitter
 - ABA782 - Volume flow transmitter
 - ABA790 - Velocity flow transmitter
 - ABA791 - Doppler flow transmitter
 - ABA792 - Electromagnetic flow transmit**
 - ABA793 - Electromagnetic insertion flow
 - ABA794 - Rotating element flow transmi
 - ABA800 - Swirl flow transmitter
 - ABA801 - Ultrasonic flow transmitter

English French German Japanese Chinese

CLASS

Code:	0112/2///61987#ABA792
Version:	003
Revision:	01
IRDI:	0112/2///61987#ABA792#003
Preferred name:	Electromagnetic flow transmitter 電磁流量計 is_a
Synonymous name:	
Coded name:	電磁気の原理を利用して流量を測定する流速流量計
Definition:	velocity flow transmitter that uses electromagnetic principles to measure flow
Note:	
Remark:	
Definition source:	
Drawing:	
Class type:	ITEM_CLASS
Applicable documents:	
Requistry of properties:	
Superclass:	0112/2///61987#ABA790

流量計 — 日本語の例

Domain: Process automation (IEC 61987 series)

Open all | Close all

Process automation (IEC 61987 series)

- 0112/2///61987#ABA000 - Equipment for industrial-proces
 - ABV000 - Characterization
 - ABA001 - Measuring instrument
 - ABA643 - Gauge
 - ABA684 - Measuring assembly
 - ABA689 - Sight indicator
 - ABA697 - Switch
 - ABA751 - Transmitter**
 - ABA752 - Accelerometer
 - ABA753 - Current transmitter
 - ABA754 - Density transmitter
 - ABA761 - 流量計**
 - ABA762 - 質量流量計
 - ABA765 - 多相流量計
 - ABA766 - Pressure-type flow transmitter**
 - ABA782 - 容積流量計
 - ABA790 - 流速流量計
 - ABA791 - ドップラ流量計
 - ABA792 - 電磁流量計
 - ABA793 - Electromagnetic insertion flow
 - ABA794 - Rotating element flow transmi
 - ABA800 - スワール流量計
 - ABA801 - 超音波流量計
 - ABA802 - 渦流量計
 - ABV010 - Flow transmitter (generic)

English French German **Japanese** Chinese

分類(クラス)

識別コード:	0112/2///61987#ABA761
改訂版:	003
修正刷:	01
IRDI:	0112/2///61987#ABA761#003
推奨名:	流量計
別名:	
コード化された名称:	
定義:	プロセス流量を計測する計器
注記:	
備考:	JEMIS-043_ANNEX_A_080331 Draft, ID: JEMIMA_C000003
翻訳者:	Mr. Takaharu Matsumoto
翻訳第 m 版:	0
翻訳版発行日:	2016-08-04
定義出典:	
図:	
Class type:	ITEM_CLASS
Applicable documents:	
Requirement of properties:	

日本語を入れていない項目は英語で表示

電磁流量計 — 日本語の例

- ABA761 - 流量計
 - ABA762 - 質量流量計
 - ABA763 - コリオリ質量流量計
 - ABA764 - 熱式質量流量計
 - ABC566 - ソニックノズル流量計
 - ABA765 - 多相流量計
- ABA766 - Pressure-type flow transmitter
 - ABA767 - 差圧流量計
 - ABA768 - ビトーマ流量計
 - ABA769 - ウェッジ流量計
 - ABA770 - Vコーン流量計
 - ABA771 - 面積流量計
 - ABA772 - ロータメータ流量計
 - ABA773 - ベンチュリ管流量計
 - ABC567 - 楕円スロット流量計
 - ABE425 - オリフィス流量計
 - ABE426 - ダルチューブ流量計
 - ABE427 - エルボー流量計
 - ABE428 - フローノズル流量計
 - ABA774 - Force-balance flow transmitter
 - ABA775 - Impact flow transmitter
 - ABA776 - ターゲット流量計
 - ABA777 - ペーン流量計
 - ABA778 - Head-type flow transmitter
 - ABA779 - 開水路流量計
- ABA782 - 容積流量計
 - ABA783 - Positive displacement flow tra
 - ABA784 - ギア流量計
 - ABA786 - Helix flow transmitter
 - ABA787 - 才差ディスク流量計
 - ABA788 - ビストン流量計
 - ABA789 - ロータリー流量計
- ABA790 - 流速流量計
 - ABA791 - ドップラ流量計
 - ABA792 - 電磁流量計
 - ABA793 - Electromagnetic insertion flow
 - ABA794 - Rotating element flow transmi
- ABA800 - スワール流量計
- ABA801 - 超音波流量計
- ABA802 - 渦流量計

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English French German Japanese Chinese

分類 (クラス)

識別コード:	0112/2///61987#ABA792
改訂版:	003
修正刷:	01
IRDI:	0112/2///61987#ABA792#003
推奨名:	電磁流量計
別名:	
コード化された名称:	
定義:	測定にファラディ法則を使用する流速流量計
注記:	
備考:	JEMIS-043_ANNEX_A_080331 Draft, ID: JEMIMA_C000040
翻訳者:	Mr. Takaharu Matsumoto
翻訳第 m 版:	0
翻訳版発行日:	2016-09-22
定義出典:	
図:	
Class type:	ITEM_CLASS
Applicable documents:	
Requistry of properties:	
上位分類:	0112/2///61987#ABA790
上位クラス:	0112/2///61987#ABA761 - 流量計 0112/2///61987#ABA751 - Transmitter 0112/2///61987#ABA001 - Measuring instrument 0112/2///61987#ABV000 - Characterization 0112/2///61987#ABA000 - Equipment for industrial-process automation
分類プロパティ:	
プロパティ:	0112/2///61987#ABU240 - reference to Device LOP for electromagnetic flow transmitter

Electromagnetic flow transmitterのプロパティ

Domain: Process automation (IEC 61987 series)

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Process automation (IEC 61987 series)

- 0112/2///61987#ABA000 - Equipment for industrial-process automation
 - ABV000 - Characterization
 - ABA001 - Measuring instrument
 - ABA643 - Gauge
 - ABA684 - Measuring assembly
 - ABA689 - Sight indicator
 - ABA697 - Switch
 - ABA751 - Transmitter
 - ABA752 - Accelerometer
 - ABA753 - Current transmitter
 - ABA754 - Density transmitter
 - ABA761 - Flow transmitter
 - ABA762 - Mass flow transmitter
 - ABA765 - Multiphase flow transmitter
 - ABA766 - Pressure-type flow transmitter
 - ABA782 - Volume flow transmitter
 - ABA790 - Velocity flow transmitter
 - ABA791 - Doppler flow transmitter
 - ABA792 - Electromagnetic flow transmitter**
 - ABA793 - Electromagnetic insertion flow transmitter
 - ABA794 - Rotating element flow transmitter
 - ABA800 - Swirl flow transmitter
 - ABA801 - Ultrasonic flow transmitter
 - ABA802 - Vortex flow transmitter
 - ABV010 - Flow transmitter (generic)

English French German Japanese Chinese

CLASS

Code:	0112/2///61987#ABA792
Version:	003
Revision:	01
IRDI:	0112/2///61987#ABA792#003
Preferred name:	Electromagnetic flow transmitter
Synonymous name:	
Coded name:	
Definition:	velocity flow transmitter that uses electromagnetic principles to measure flow
Note:	
Remark:	
Definition source:	
Drawing:	
Class type:	ITEM_CLASS
Applicable documents:	
Requisiy of properties:	
Superclass:	0112/2///61987#ABA790
Higher level classes:	0112/2///61987#ABA761 - Flow transmitter 0112/2///61987#ABA751 - Transmitter 0112/2///61987#ABA001 - Measuring instrument 0112/2///61987#ABV000 - Characterization 0112/2///61987#ABA000 - Equipment for industrial-process automation
Classifying DET:	
Properties:	0112/2///61987#ABU240 - reference to Device LOP for electromagnetic flow transmitter
Properties tree:	<ul style="list-style-type: none"> 0112/2///61987#ABA792 - Electromagnetic flow transmitter <ul style="list-style-type: none"> 0112/2///61987#ABA008 - Device LOP for electromagnetic flow transmitter (Ref: 0112/2///61987#ABU240 - reference to Device LOP for electromagnetic flow transmitter) 0112/2///61987#ABA003 - Operating LOP for flow measuring equipment (Ref: 0112/2///61987#ABU125 - reference to Operating LOP for flow measuring equipment)

ABA008 - Device LOP for electromagnetic flow transmitter
定義: list of properties characterizing an electromagnetic flow transmitter
電磁流量計を表すプロパティのリスト

ABA003 - Operating LOP for flow measuring equipment
定義: list of properties characterizing the operating conditions of flow measuring equipment
流量測定機器の運転条件を表すプロパティのリスト
※Operating LOPは流量測定機器のクラスで共通

Electromagnetic flow transmitter DLOP & OLOP

Classification

Process automation (IEC 61987 series)

- 0112/2///61987#ABA000 - Equipment for industrial-process a
 - ABV000 - Characterization
 - ABA001 - Measuring instrument
 - ABA643 - Gauge
 - ABA684 - Measuring assembly
 - ABA689 - Sight indicator
 - ABA697 - Switch
 - ABA751 - Transmitter
 - ABA752 - Accelerometer
 - ABA753 - Current transmitter
 - ABA754 - Density transmitter
 - ABA761 - Flow transmitter
 - ABA762 - Mass flow transmitter
 - ABA765 - Multiphase flow transmitter
 - ABA766 - Pressure-type flow transmitter
 - ABA782 - Volume flow transmitter
 - ABA790 - Velocity flow transmitter
 - ABA791 - Doppler flow transmitter
 - ABA792 - Electromagnetic flow transmitter**
 - ABA793 - Electromagnetic insertion flow tr:
 - ABA794 - Rotating element flow transmitt
 - ABA800 - Swirl flow transmitter
 - ABA801 - Ultrasonic flow transmitter
 - ABA802 - Vortex flow transmitter
 - ABV010 - Flow transmitter (generic)
 - ABA803 - Level transmitter

Properties tree:

Open all
Close all

ABA008 - Device LOP
for electromagnetic
flow transmitter

ABA003 - Operating LOP
for flow measurement
equipment

Assigned DLOP and OLOP

0112/2///61987#ABA792 - Electromagnetic flow transmitter

- 0112/2///61987#ABA008 - Device LOP for electromagnetic flow transmitter (Ref: 0112/2///61987#ABA008) (Ref: 0112/2///61987#ABA008)
 - 0112/2///61987#ABC269 - Identification (Ref: 0112/2///61987#ABC899 - reference to 0112/2///61987#ABC269)
 - 0112/2///61987#ABC100 - Application (Ref: 0112/2///61987#ABC730 - reference to 0112/2///61987#ABC100)
 - 0112/2///61987#ABC255 - Function and system design (Ref: 0112/2///61987#ABC899 - reference to 0112/2///61987#ABC255)
 - 0112/2///61987#ABC293 - Input [4] (Ref: 0112/2///61987#ABC923 - reference to 0112/2///61987#ABC293)
 - 0112/2///61987#ABB206 - number of outputs
 - 0112/2///61987#ABC478 - Output [3] (Ref: 0112/2///61987#ABD108 - reference to 0112/2///61987#ABC478)
 - 0112/2///61987#ABC200 - Digital communication (Ref: 0112/2///61987#ABC830 - reference to 0112/2///61987#ABC200)
 - 0112/2///61987#ABC493 - Performance [3] (Ref: 0112/2///61987#ABD123 - reference to 0112/2///61987#ABC493)
 - 0112/2///61987#ABC557 - Rated Operating Conditions [1] (Ref: 0112/2///61987#ABD123 - reference to 0112/2///61987#ABC557)
 - 0112/2///61987#ABC425 - Mechanical and electrical construction [electromagnetic flow transmitter]
 - 0112/2///61987#ABC458 - Operability (Ref: 0112/2///61987#ABD088 - reference to 0112/2///61987#ABC458)
 - 0112/2///61987#ABC523 - Power supply [1] (Ref: 0112/2///61987#ABD153 - reference to 0112/2///61987#ABC523)
 - 0112/2///61987#ABC156 - Certificates and approvals (Ref: 0112/2///61987#ABC786 - reference to 0112/2///61987#ABC156)
 - 0112/2///61987#ABC165 - Component part identifications (Ref: 0112/2///61987#ABD153 - reference to 0112/2///61987#ABC165)
 - 0112/2///61987#ABA293 - number of additional components
 - 0112/2///61987#ABC080 - Additional component (Ref: 0112/2///61987#ABC710 - reference to 0112/2///61987#ABC080)
- 0112/2///61987#ABA003 - Operating LOP for flow measuring equipment (Ref: 0112/2///61987#ABA003) (Ref: 0112/2///61987#ABA003)
 - 0112/2///61987#ABH439 - Measuring or control point (Ref: 0112/2///61987#ABH440 - reference to 0112/2///61987#ABH439)
 - 0112/2///61987#ABC136 - Base conditions (Ref: 0112/2///61987#ABC766 - reference to 0112/2///61987#ABC136)
 - 0112/2///61987#ABB164 - number of process cases
 - 0112/2///61987#ABC534 - Process case [flow] (Ref: 0112/2///61987#ABD164 - reference to 0112/2///61987#ABC534)
 - 0112/2///61987#ABC459 - Operating conditions for device design (Ref: 0112/2///61987#ABD164 - reference to 0112/2///61987#ABC459)
 - 0112/2///61987#ABC546 - Process equipment (Ref: 0112/2///61987#ABD176 - reference to 0112/2///61987#ABC546)
 - 0112/2///61987#ABB348 - number of physical locations
 - 0112/2///61987#ABC512 - Physical location (Ref: 0112/2///61987#ABD142 - reference to 0112/2///61987#ABC512)

Flow measurement equipment の Operating LOP 詳細 (1)

- 0112/2///61987#ABA003 - Operating LOP for flow measuring equipment
 - 0112/2///61987#ABH439 - Measuring or control point (Ref: 0112/2///61987#ABH440 - reference to Measuring or control point)
 - 0112/2///61987#ABB271 - tag name **プロセスのタグ名**
 - 0112/2///61987#ABA577 - PCE category and control function
 - 0112/2///61987#ABA578 - tag description
 - 0112/2///61987#ABC136 - Base conditions (Ref: **密度や流量を計算する場合の基準状態** tions)
 - 0112/2///61987#ABA328 - base absolute pressure
 - 0112/2///61987#ABB781 - base temperature
 - 0112/2///61987#ABB284 - base liquid density
 - 0112/2///61987#ABB285 - base vapor/gas density
 - 0112/2///61987#ABB286 - base vapor/gas compressibility
 - 0112/2///61987#ABB287 - base humidity
 - 0112/2///61987#ABB164 - number of process cases
 - 0112/2///61987#ABC534 - Process case [flow] (Ref: **プロセス流体の条件** reference to Process case [flow])
 - 0112/2///61987#ABB165 - designation of process case
 - 0112/2///61987#ABB376 - identifier of stream
 - 0112/2///61987#ABB377 - designation of stream
 - 0112/2///61987#ABB288 - description of stream
 - 0112/2///61987#ABC537 - Process case variables [flow] (Ref: 0112/2///61987#ABD167 - reference to Process case variables [flow])
 - 0112/2///61987#ABB322 - number of other process case variables
 - 0112/2///61987#ABC472 - Other process case variable (Ref: 0112/2///61987#ABD102 - reference to Other process case variable)

Flow measurement equipment の Operating LOP 詳細 (2)

- 0112/2///61987#ABA003 - Operating LOP for flow measuring equipment
 - + 0112/2///61987#ABH439 - Measuring or control point (Ref: 0112/2///61987#ABH440 - reference to Measuring or control point)
 - + 0112/2///61987#ABC136 - Base conditions (Ref: 0112/2///61987#ABC766 - reference to Base conditions)
 - 0112/2///61987#ABB164 - number of process cases
 - + 0112/2///61987#ABC534 - Process case [flow] (Ref: 0112/2///61987#ABD164 - reference to Process case [flow])
 - 0112/2///61987#ABC459 - Operating conditions for device design (Ref: 0112/2///61987#ABD164 - reference to Operating conditions for device design) **機器設計のための運転条件**
 - 0112/2///61987#ABB087 - measured variable
 - 0112/2///61987#ABD395 - service description of device
 - 0112/2///61987#ABD393 - intended type of device
 - 0112/2///61987#ABD394 - intended style of device
 - 0112/2///61987#ABC307 - Installation design conditions [2] (Ref: 0112/2///61987#ABC815 - reference to Installation design conditions [2]) **設置条件(上流直管長など)**
 - + 0112/2///61987#ABC185 - Deployment design conditions [2] (Ref: 0112/2///61987#ABC815 - reference to Deployment design conditions [2])
 - 0112/2///61987#ABC228 - Environmental design conditions (Ref: 0112/2///61987#ABC815 - reference to Environmental design conditions) **環境条件(周囲温度など)**
 - + 0112/2///61987#ABC450 - Normal environmental design conditions (Ref: 0112/2///61987#ABD080 - reference to Normal environmental design conditions)
 - + 0112/2///61987#ABC316 - Limiting environmental design conditions (Ref: 0112/2///61987#ABC946 - reference to Limiting environmental design conditions)
 - + 0112/2///61987#ABC186 - Design conditions for external cleaning in place (Ref: 0112/2///61987#ABC816 - reference to Design conditions for external cleaning in place)
 - 0112/2///61987#ABC540 - Process design conditions [flow] (Ref: 0112/2///61987#ABC815 - reference to Process design conditions [flow]) **プロセス流体の条件(流量・温度・圧力・密度など)**
 - + 0112/2///61987#ABC455 - Normal process design conditions [2] (Ref: 0112/2///61987#ABD085 - reference to Normal process design conditions [2])
 - + 0112/2///61987#ABC187 - Design conditions for internal cleaning in place (Ref: 0112/2///61987#ABC817 - reference to Design conditions for internal cleaning in place)
 - + 0112/2///61987#ABC532 - Pressure-temperature design conditions (Ref: 0112/2///61987#ABD162 - reference to Pressure-temperature design conditions)

Flow measurement equipment の Operating LOP 詳細 (3)

- 0112/2///61987#ABA003 - Operating LOP for flow measuring equipment
 - + 0112/2///61987#ABH439 - Measuring or control point (Ref: 0112/2///61987#ABH440 - reference to Measuring or control point)
 - + 0112/2///61987#ABC136 - Base conditions (Ref: 0112/2///61987#ABC766 - reference to Base conditions)
 - 0112/2///61987#ABB164 - number of process cases
 - + 0112/2///61987#ABC534 - Process case [flow] (Ref: 0112/2///61987#ABD164 - reference to Process case [flow])
 - + 0112/2///61987#ABC459 - Operating conditions for device design (Ref: 0112/2///61987#ABD089 - reference to Operating conditions for device design)
 - 0112/2///61987#ABC546 - Process equipment (Ref: 0112/2///61987#ABC765 - reference to Process equipment) **機器接続のための配管側の条件**
 - 0112/2///61987#ABB335 - number of lines or nozzles
 - + 0112/2///61987#ABC322 - Line or nozzle (Ref: 0112/2///61987#ABC952 - reference to Line or nozzle)
 - 0112/2///61987#ABB348 - number of physical locations
 - 0112/2///61987#ABC512 - Physical location (Ref: 0112/2///61987#ABC765 - reference to Physical location) **設置場所の物理的条件**
 - 0112/2///61987#ABB349 - designation of physical location
 - 0112/2///61987#ABB350 - description of physical location
 - 0112/2///61987#ABB271 - tag name
 - 0112/2///61987#ABA577 - PCE category and control function
 - 0112/2///61987#ABA578 - tag description
 - + 0112/2///61987#ABC135 - Available power supply (Ref: 0112/2///61987#ABC765 - reference to Available power supply) **電源供給**
 - 0112/2///61987#ABD410 - number of purge gas supplies
 - + 0112/2///61987#ABD411 - Purge gas supply (Ref: 0112/2///61987#ABD412 - reference to Purge gas supply)
 - + 0112/2///61987#ABC538 - Process criticality classification (Ref: 0112/2///61987#ABC765 - reference to Process criticality classification) **要求安全度水準 (SIL)**
 - 0112/2///61987#ABB362 - number of area classifications
 - + 0112/2///61987#ABC104 - Area classification (Ref: 0112/2///61987#ABC734 - reference to Area classification) **防爆エリア**

Electromagnetic flow transmitterのDLOP

Domain: Process automation (IEC 61987 series)	Definition:	velocity flow transmitter that uses electromagnetic principles to measure flow
	Note:	
	Remark:	
	Definition source:	
	Drawing:	
	Class type:	ITEM_CLASS
	Applicable documents:	
	Requisy of properties:	
	Superclass:	0112/2///61987#ABA790
	Higher level classes:	0112/2///61987#ABA761 - Flow transmitter 0112/2///61987#ABA751 - Transmitter 0112/2///61987#ABA001 - Measuring instrument 0112/2///61987#ABV000 - Characterization 0112/2///61987#ABA000 - Equipment for industrial-process automation
	Classifying DET:	
	Properties:	0112/2///61987#ABU240 - reference to Device LOP for electromagnetic flow transmitter
	Properties tree:	<ul style="list-style-type: none"> 0112/2///61987#ABA792 - Electromagnetic flow transmitter <ul style="list-style-type: none"> 0112/2///61987#ABA008 - Device LOP for electromagnetic flow transmitter (Ref: 0112/2///61987#ABA008) 電磁流量計のDLOP 0112/2///61987#ABC269 - Identification (Ref: 0112/2///61987#ABC899 - referen 0112/2///61987#ABC100 - Application (Ref: 0112/2///61987#ABC730 - reference to Application) 0112/2///61987#ABC255 - Function and system design (Ref: 0112/2///61987#ABC885 - reference to Function and system design) 0112/2///61987#ABC293 - Input [4] (Ref: 0112/2///61987#ABC923 - reference to Input [4]) 0112/2///61987#ABB206 - number of outputs 0112/2///61987#ABC478 - Output [3] (Ref: 0112/2///61987#ABD108 - reference to Output [3]) 0112/2///61987#ABC200 - Digital communication (Ref: 0112/2///61987#ABC830 - reference to Digital communication) 0112/2///61987#ABC493 - Performance [3] (Ref: 0112/2///61987#ABD123 - reference to Performance [3]) 0112/2///61987#ABC557 - Rated Operating Conditions [1] (Ref: 0112/2///61987#ABD187 - reference to Rated Operating Conditions [1]) 0112/2///61987#ABC425 - Mechanical and electrical construction [electromagnetic flow transmitter] (Ref: 0112/2///61987#ABD055 - referen 0112/2///61987#ABC458 - Operability (Ref: 0112/2///61987#ABD088 - reference to Operability) 0112/2///61987#ABC523 - Power supply [1] (Ref: 0112/2///61987#ABD153 - reference to Power supply [1]) 0112/2///61987#ABC156 - Certificates and approvals (Ref: 0112/2///61987#ABC786 - reference to Certificates and approvals) 0112/2///61987#ABC165 - Component part identifications (Ref: 0112/2///61987#ABC795 - reference to Component part identifications) 0112/2///61987#ABA293 - number of additional components 0112/2///61987#ABC080 - Additional component (Ref: 0112/2///61987#ABC710 - reference to Additional component) 0112/2///61987#ABA003 - Operating LOP for flow measuring equipment (Ref: 0112/2///61987#ABU125 - reference to Operating LOP for flow m
	Open all Close all	
	Inherited properties:	0112/2///61987#ABU125 - reference to Operating LOP for flow measuring equipment

- Open all | Close all
- Process automation (IEC 61987 series)
 - 0112/2///61987#ABA000 - Equipment for industrial-process automation
 - ABV000 - Characterization
 - ABA001 - Measuring instrument
 - ABA643 - Gauge
 - ABA684 - Measuring assembly
 - ABA689 - Sight indicator
 - ABA697 - Switch
 - ABA751 - Transmitter
 - ABA752 - Accelerometer
 - ABA753 - Current transmitter
 - ABA754 - Density transmitter
 - ABA761 - Flow transmitter
 - ABA762 - Mass flow transmitter
 - ABA765 - Multiphase flow transmitter
 - ABA766 - Pressure-type flow transmitter
 - ABA782 - Volume flow transmitter
 - ABA790 - Velocity flow transmitter
 - ABA791 - Doppler flow transmitter
 - ABA792 - Electromagnetic flow transmitter**
 - ABA793 - Electromagnetic insertion flow transmitter
 - ABA794 - Rotating element flow transmitter
 - ABA800 - Swirl flow transmitter
 - ABA801 - Ultrasonic flow transmitter
 - ABA802 - Vortex flow transmitter
 - ABV010 - Flow transmitter (generic)
- ABA803 - Level transmitter
- ABA830 - Power transmitter
- ABA831 - Pressure transmitter
- ABA835 - Temperature transmitter
- ABA839 - Velocity transmitter
- ABA841 - Voltage transmitter
- ABA842 - Weight transmitter
- ABA845 - Measuring instrument component
- ABD340 - Final control element
- ABV001 - Libraries

Electromagnetic flow transmitter の DLOP 詳細 — Identification

0112/2///61987#ABA008 - Device LOP for electromagnetic flow transmitter (Ref: 0112/2///61987#ABU240 - reference to Device LOP)

0112/2///61987#ABC269 - Identification (Ref: 0112/2///61987#ABC899 - reference to Identification)

- 0112/2///61987#ABA565 - manufacturer
- 0112/2///61987#ABB064 - supplier
- 0112/2///61987#ABA567 - name of product
- 0112/2///61987#ABA566 - type of product
- 0112/2///61987#ABA300 - code of product
- 0112/2///61987#ABA950 - order code of product
- 0112/2///61987#ABA581 - article number
- 0112/2///61987#ABA587 - GTIN code
- 0112/2///61987#ABA301 - national stock number
- 0112/2///61987#ABA601 - software version
- 0112/2///61987#ABA926 - hardware version
- 0112/2///61987#ABA302 - firmware version
- 0112/2///61987#ABB062 - fabrication number
- 0112/2///61987#ABA951 - serial number
- 0112/2///61987#ABN590 - URI of product instance
- 0112/2///61987#ABN591 - URI of manufacturer
- 0112/2///61987#ABB757 - date of manufacture
- 0112/2///61987#ABB511 - number of device tag plates

0112/2///61987#ABC193 - Device tag plate (Ref: 0112/2///61987#ABC823 - reference to Device tag plate)

製品の種類 → Value list ABN418

- ABN420 - coriolis mass flow transmitter
- ABN421 - swirl flow transmitter
- ABN422 - electromagnetic flow transmitter
- :

製品個体の情報へのリンク → <https://www.yokogawa.com/>

製造業者の情報へのリンク → <https://www.yokogawa.com/>

Electromagnetic flow transmitter の DLOP 詳細— Function and system design

- 0112/2///61987#ABA008 - Device LOP for electromagnetic flow transmitter (Ref: 0112/2///61987#ABU240 - reference to Device LOP for electromag
- + 0112/2///61987#ABC269 - Identification (Ref: 0112/2///61987#ABC899 - reference to Identification)
- + 0112/2///61987#ABC100 - Application (Ref: 0112/2///61987#ABC730 - reference to Application)
- 0112/2///61987#ABC255 - Function and system design (Ref: **機能設計に関する仕様** - reference to Function and system design)
 - 0112/2///61987#ABB015 - measuring principle
 - 0112/2///61987#ABB028 - operating frequency
 - 0112/2///61987#ABB082 - equipment architecture
 - 0112/2///61987#ABB006 - software configuration
 - 0112/2///61987#ABN592 - electric shock protection class **感電保護に関する仕様**
 - 0112/2///61987#ABN593 - reference standard for electric shock protection class
 - 0112/2///61987#ABA310 - number of dependabilities
 - 0112/2///61987#ABC181 - Dependability (R **信頼性に関する仕様** - reference to Dependability)
 - 0112/2///61987#ABB271 - tag name
 - 0112/2///61987#ABA577 - PCE category and control function
 - + 0112/2///61987#ABC257 - Functional safety and reliability (Re **機能安全に関する仕様** - reference to Functional safety and reliability)
 - 0112/2///61987#ABB020 - maintainability
 - 0112/2///61987#ABB021 - integrity
 - 0112/2///61987#ABB022 - access authorization
 - 0112/2///61987#ABJ598 - password protection
 - 0112/2///61987#ABJ599 - set password
 - 0112/2///61987#ABA317 - number of further security measures
 - + 0112/2///61987#ABC260 - Further security measure (Ref: 0112/2///61987#ABC890 - reference to Further security measure)

Electromagnetic flow transmitter の DLOP 詳細 — Input

The screenshot displays a hierarchical tree structure of DLOP (Data Link Object Protocol) objects for an electromagnetic flow transmitter. The tree is organized into several main categories, each highlighted with a yellow box and a red-bordered label:

- 入力に関する仕様 (Input specifications):** This category includes the root object `0112/2///61987#ABC293 - Input [4]` and its sub-objects, such as `0112/2///61987#ABB065 - number of measured variables`.
- 測定値に関する仕様 (Measured variable specifications):** This category includes `0112/2///61987#ABC409 - Measured variable [3]` and its sub-objects, such as `0112/2///61987#ABB271 - tag name` and `0112/2///61987#ABA577 - PCE category and control function`.
- 測定値の種類 (Measured variable types):** This category includes `0112/2///61987#ABC662 - Type of measured variable [3]` and its sub-objects, such as `0112/2///61987#ABU293 - measured variable type [3]` and `0112/2///61987#ABC337 - Mass flow measurement`.
- 流速測定に関する詳細仕様 (Detailed specifications for flow velocity measurement):** This category includes `0112/2///61987#ABD488 - Flow velocity measurement` and its sub-objects, such as `0112/2///61987#ABC528 - Pressure measurement` and `0112/2///61987#ABC650 - Temperature measurement`.
- 補助入力に関する仕様 (Auxiliary input specifications):** This category includes `0112/2///61987#ABC129 - Auxiliary input [4]` and its sub-objects, such as `0112/2///61987#ABB271 - tag name` and `0112/2///61987#ABA577 - PCE category and control function`.
- 補助入力の種類 (Auxiliary input types):** This category includes `0112/2///61987#ABC055 - Type of auxiliary input [4]` and its sub-objects, such as `0112/2///61987#ABU274 - auxiliary input type [4]` and `0112/2///61987#ABC084 - Analog current input [2]`.
- 接点入力に関する仕様詳細 (Detailed specifications for contact input):** This category includes `0112/2///61987#ABC142 - Binary input` and its sub-objects, such as `0112/2///61987#ABC143 - Binary input IEC 60947-5-6 (NAMUR)` and `0112/2///61987#ABC248 - Frequency input [2]`.

Electromagnetic flow transmitter の DLOP 詳細 — Output

- 0112/2///61987#ABC478 - Output [3] (Ref: 0112/2///61987#ABU205 - reference to Output [3])
 - 0112/2///61987#ABB271 - tag name
 - 0112/2///61987#ABA577 - PCE category and control function
 - 0112/2///61987#ABA607 - assigned process variable
 - 0112/2///61987#ABA342 - function of input/output
 - 0112/2///61987#ABC666 - Type of output [3] (Ref: 0112/2///61987#ABU205 - reference to Type of output [3])
 - 0112/2///61987#ABU273 - output type [3]
 - 0112/2///61987#ABC088 - Analog current output [3] (Ref: 0112/2///61987#ABU210 - reference to Analog current output [3])
 - 0112/2///61987#ABC121 - Assigned variable [4] (Ref: 0112/2///61987#ABU210 - reference to Assigned variable [4])
 - 0112/2///61987#ABC091 - Analog current output parameters (Ref: 0112/2///61987#ABC721 - reference to Analog current output parameters)
 - 0112/2///61987#ABC096 - Analog voltage output [2] (Ref: 0112/2///61987#ABU276 - reference to Analog voltage output [2])
 - 0112/2///61987#ABC121 - Assigned variable [4] (Ref: 0112/2///61987#ABU210 - reference to Assigned variable [4])
 - 0112/2///61987#ABC099 - Analog voltage output parameters (Ref: 0112/2///61987#ABC729 - reference to Analog voltage output parameters)
 - 0112/2///61987#ABC251 - Frequency output [2] (Ref: 0112/2///61987#ABU277 - reference to Frequency output [2])
 - 0112/2///61987#ABC553 - Pulse output (Ref: 0112/2///61987#ABU191 - reference to Pulse output)
 - 0112/2///61987#ABC118 - Assigned variable [1] (Ref: 0112/2///61987#ABU191 - reference to Assigned variable [1])
 - 0112/2///61987#ABC555 - Pulse/frequency input/output parameters (Ref: 0112/2///61987#ABD185 - reference to Pulse/frequency input/output parameters)
 - 0112/2///61987#ABC145 - Binary output IEC 60947-5-6 (NAMUR) (Ref: 0112/2///61987#ABU279 - reference to Binary output IEC 60947-5-6)
 - 0112/2///61987#ABC140 - Binary current output (Ref: 0112/2///61987#ABU280 - reference to Binary current output)
 - 0112/2///61987#ABC144 - Binary isolated output (Ref: 0112/2///61987#ABU281 - reference to Binary isolated output)
 - 0112/2///61987#ABC141 - Binary electronic output (Ref: 0112/2///61987#ABU282 - reference to Binary electronic output)
 - 0112/2///61987#ABC334 - Manufacturer-specific output [2] (Ref: 0112/2///61987#ABU283 - reference to Manufacturer-specific output [2])

Electromagnetic flow transmitter の DLOP 詳細 — Digital communication

The image shows a tree view of a Digital Location Object Protocol (DLOP) structure. The root node is '0112/2///61987#ABC200 - Digital communication (Reference to Digital communication)'. It contains several sub-nodes, some of which are expanded. Three specific nodes are highlighted with red boxes and yellow callouts:

- 0112/2///61987#ABC200 - Digital communication (Reference to Digital communication)**: デジタル通信に関する仕様
- 0112/2///61987#ABC685 - Wired communication interface (Reference to Wired communication interface)**: 有線通信に関する仕様
- 0112/2///61987#ABC686 - Wireless communication interface (Reference to Wireless communication interface)**: 無線通信に関する仕様

Other visible nodes include:

- 0112/2///61987#ABB242 - number of digital communication interfaces
- 0112/2///61987#ABC201 - Digital communication interface (Ref: 0112/2///61987#ABC831 - reference to Digital communication interface)
- 0112/2///61987#ABB279 - designation of digital communication interface
- 0112/2///61987#ABA085 - identification of configuration parameter set
- 0112/2///61987#ABA041 - type of digital communication
- 0112/2///61987#ABC162 - Communication protocol (Ref: 0112/2///61987#ABC792 - reference to Communication protocol)
- 0112/2///61987#ABA047 - number of communication variables
- 0112/2///61987#ABC163 - Communication variable (Ref: 0112/2///61987#ABC793 - reference to Communication variable)
- 0112/2///61987#ABC511 - Physical layer (Ref: 0112/2///61987#ABD141 - reference to Physical layer)
- 0112/2///61987#ABA061 - number of wired communication interfaces
- 0112/2///61987#ABB247 - number of optical communication interfaces
- 0112/2///61987#ABC462 - Optical communication interface (Ref: 0112/2///61987#ABD092 - reference to Optical communication interface)
- 0112/2///61987#ABB248 - number of wireless communication interfaces
- 0112/2///61987#ABB241 - number of device integrations
- 0112/2///61987#ABC191 - Device integration (Ref: 0112/2///61987#ABC821 - reference to Device integration)
- 0112/2///61987#ABC242 - Fieldbus parameters (Ref: 0112/2///61987#ABC872 - reference to Fieldbus parameters)

Electromagnetic flow transmitter の DLOP 詳細 — Performance

The image shows a hierarchical tree structure of DLOP (Data Link Object Protocol) objects. The tree is organized as follows:

- 0112/2///61987#ABC493 - Performance [3] (Reference to Performance [3])
 - 0112/2///61987#ABC570 - Reference conditions of the device [1] (Reference to Reference conditions of the device [1])
 - 0112/2///61987#ABC563 - Reference ambient conditions (Reference to Reference ambient conditions)
 - 0112/2///61987#ABC572 - Reference device conditions (Reference to Reference device conditions)
 - 0112/2///61987#ABC574 - Reference process conditions (Reference to Reference process conditions)
 - 0112/2///61987#ABB636 - number of performance variables
 - 0112/2///61987#ABC505 - Performance variable [3] (Reference to Performance variable [3])
 - 0112/2///61987#ABB271 - tag name
 - 0112/2///61987#ABA577 - PCE category and control function
 - 0112/2///61987#ABC564 - Reference conditions for the performance variable [1] (Reference to Reference conditions for the performance variable [1])
 - 0112/2///61987#ABC563 - Reference ambient conditions (Reference to Reference ambient conditions)
 - 0112/2///61987#ABC572 - Reference device conditions (Reference to Reference device conditions)
 - 0112/2///61987#ABC574 - Reference process conditions (Reference to Reference process conditions)
 - 0112/2///61987#ABC673 - Type of performance variable [3] (Reference to Type of performance variable [3])
 - 0112/2///61987#ABU295 - performance variable type [3]
 - 0112/2///61987#ABC489 - Percentage performance (Reference to Percentage performance)
 - 0112/2///61987#ABC490 - Percentage performance for pressure (Reference to Percentage performance for pressure)
 - 0112/2///61987#ABC061 - Absolute performance for mass flow (Reference to Absolute performance for mass flow)
 - 0112/2///61987#ABC060 - Absolute performance for flow velocity (Reference to Absolute performance for flow velocity)
 - 0112/2///61987#ABC057 - Absolute performance for actual volume flow (Reference to Absolute performance for actual volume flow)
 - 0112/2///61987#ABC062 - Absolute performance for normalized volume flow (Reference to Absolute performance for normalized volume flow)
 - 0112/2///61987#ABC064 - Absolute performance for pressure (Reference to Absolute performance for pressure)
 - 0112/2///61987#ABC065 - Absolute performance for temperature (Reference to Absolute performance for temperature)
 - 0112/2///61987#ABC063 - Absolute performance for other variable (Reference to Absolute performance for other variable)

Annotations in yellow boxes highlight specific parts of the tree:

- 性能に関する仕様 (Performance-related specifications) points to the top-level folder.
- 機器の基準条件 (Device reference conditions) points to the folder for reference conditions of the device.
- 性能評価指標 (Performance evaluation indicators) points to the folder for performance variables.
- 性能評価における基準状態 (Reference state in performance evaluation) points to the folder for reference conditions for the performance variable.
- 性能評価指標の種類 (Types of performance evaluation indicators) points to the folder for types of performance variables.
- パーセンテージによる性能評価 (Performance evaluation by percentage) points to the folder for percentage performance.
- 流速による性能評価 (Performance evaluation by flow velocity) points to the folder for absolute performance for flow velocity.

Electromagnetic flow transmitter の DLOP 詳細 — その他

0112/2///61987#ABC557 - Rated Operating Conditions [1]	定格運転条件	reference to Rated Operating Conditions [1])
0112/2///61987#ABC303 - Installation conditions [1]		reference to Installation conditions [1])
0112/2///61987#ABC229 - Environmental design ratings	設計上の環境条件、プロセス条件	reference to Environmental design ratings)
0112/2///61987#ABC541 - Process design ratings [1]		reference to Process design ratings [1])
0112/2///61987#ABC533 - Pressure-temperature design ratings		reference to Pressure-temperature design ratings)
0112/2///61987#ABC425 - Mechanical and electrical construction [electromagnetic flow transmitter]	機械的・電氣的構造	reference to Mechanical and electrical construction [electromagnetic flow transmitter])
0112/2///61987#ABC484 - Overall dimensions and weight		reference to Overall dimensions and weight)
0112/2///61987#ABC606 - Structural design [electromagnetic flow transmitter]		reference to Structural design [electromagnetic flow transmitter])
0112/2///61987#ABB139 - number of explosion protection design approvals		
0112/2///61987#ABC232 - Explosion protection design approval	防爆設計の認証	reference to Explosion protection design approval)
0112/2///61987#ABC159 - Codes and standards approval [1]		reference to Codes and standards approval [1])
0112/2///61987#ABC458 - Operability	操作性	reference to Operability)
0112/2///61987#ABC137 - Basic Configuration		reference to Basic Configuration)
0112/2///61987#ABC488 - Parametrization		reference to Parametrization)
0112/2///61987#ABC081 - Adjustment		reference to Adjustment)
0112/2///61987#ABB783 - type of zero-span adjustment		
0112/2///61987#ABC329 - Manual controls	手動調節・操作	reference to Manual controls)
0112/2///61987#ABC461 - Operation		reference to Operation)
0112/2///61987#ABC194 - Diagnosis	診断機能	reference to Diagnosis)
0112/2///61987#ABC523 - Power supply [1]	電源供給	reference to Power supply [1])
0112/2///61987#ABB603 - number of electrical power input circuits		
0112/2///61987#ABC218 - Electrical power input circuit		reference to Electrical power input circuit)
0112/2///61987#ABA594 - number of electrical power output circuits		
0112/2///61987#ABC219 - Electrical power output circuit		reference to Electrical power output circuit)

Electromagnetic flow transmitter の DLOP 詳細 — Certificates and approvals

- 0112/2///61987#ABC156 - Certificates and approvals (Ref: 0112/2///61987#ABC786 - reference to Certificates and approvals) **証明書(認証)**
- 0112/2///61987#ABA226 - number of approvals for general usage
- 0112/2///61987#ABC101 - Approval for general usage (Ref: 0112/2///61987#ABC731 - reference to Approval for general usage)
- 0112/2///61987#ABA230 - number of hazardous area approvals
- 0112/2///61987#ABC265 - Hazardous area approval (Ref: 0112/2///61987#ABC895 - reference to Hazardous area approval) **防爆認証**
- 0112/2///61987#ABC258 - Functional safety approval (Ref: 0112/2///61987#ABC888 - reference to Functional safety approval) **機能安全認証**
- 0112/2///61987#ABH471 - Fire proof design approval (Ref: 0112/2///61987#ABH489 - reference to Fire proof design approval)
- 0112/2///61987#ABC102 - Approval for use in special applications (Ref: 0112/2///61987#ABC732 - reference to Approval for use in special applications)
- 0112/2///61987#ABA258 - number of special procedures
- 0112/2///61987#ABC600 - Special procedure (Ref: 0112/2///61987#ABD226 - reference to Special procedure)
- 0112/2///61987#ABA262 - number of telecommunication compliances
- 0112/2///61987#ABC649 - Telecommunication compliance (Ref: 0112/2///61987#ABD275 - reference to Telecommunication compliance)
- 0112/2///61987#ABA266 - number of pressure test approvals
- 0112/2///61987#ABC531 - Pressure test approval (Ref: 0112/2///61987#ABD161 - reference to Pressure test approval)
- 0112/2///61987#ABC556 - Quality certificate (Ref: 0112/2///61987#ABD186 - reference to Quality certificate)
- 0112/2///61987#ABA282 - number of fieldbus certificates
- 0112/2///61987#ABC241 - Fieldbus certificate (Ref: 0112/2///61987#ABC871 - reference to Fieldbus certificate)
- 0112/2///61987#ABC152 - Calibration certificate (Ref: 0112/2///61987#ABC782 - reference to Calibration certificate)
- 0112/2///61987#ABC151 - Calculation certificate (Ref: 0112/2///61987#ABC781 - reference to Calculation certificate)
- 0112/2///61987#ABH388 - designation of reference drawing
- 0112/2///61987#ABA288 - number of other certificates
- 0112/2///61987#ABC466 - Other certificate (Ref: 0112/2///61987#ABD096 - reference to Other certificate)

今後の展開

Standards covered
by approved projects:



- 65B/555/NP



- 65B/790/NP



- 65E/598/NP
- 65E/599/NP

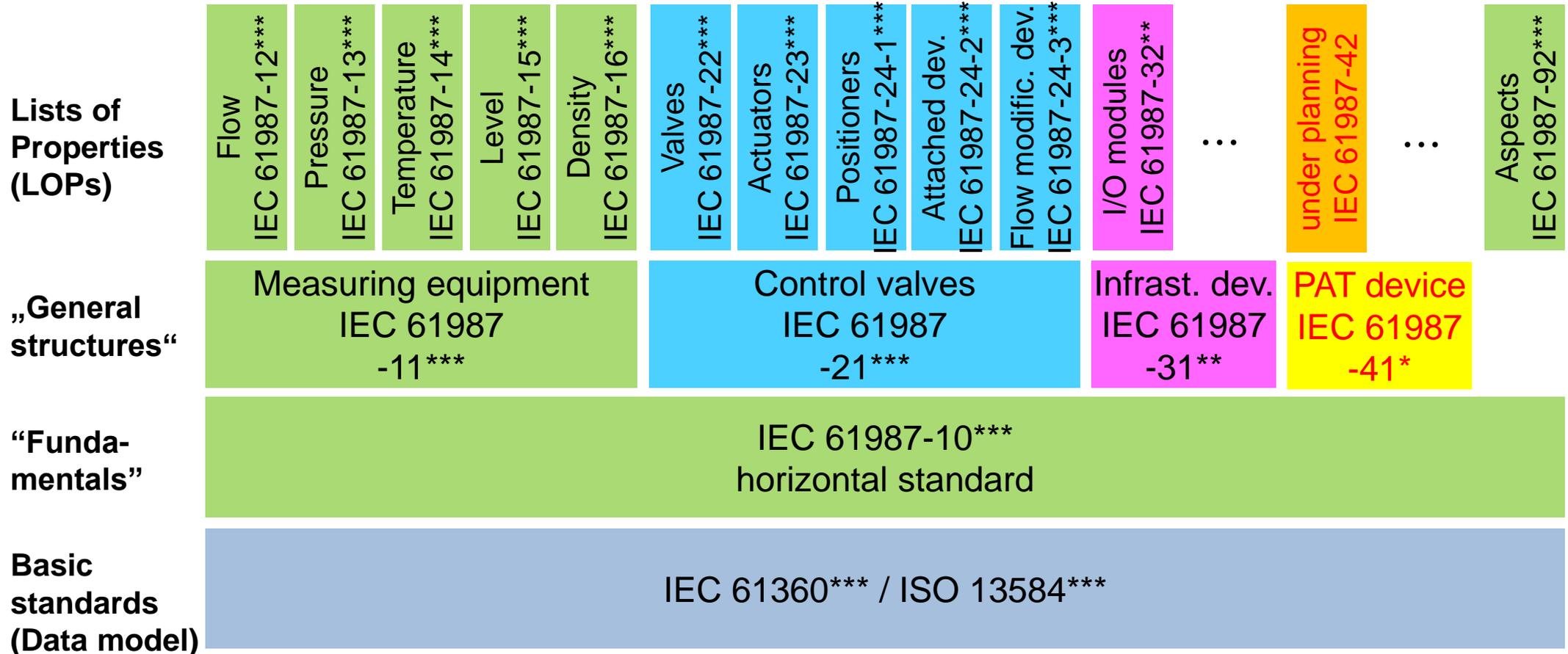


- 65E/839/NP (11/5回付)



- to be proposed

Device LOPs and Operating LOPs



*** - valid standard

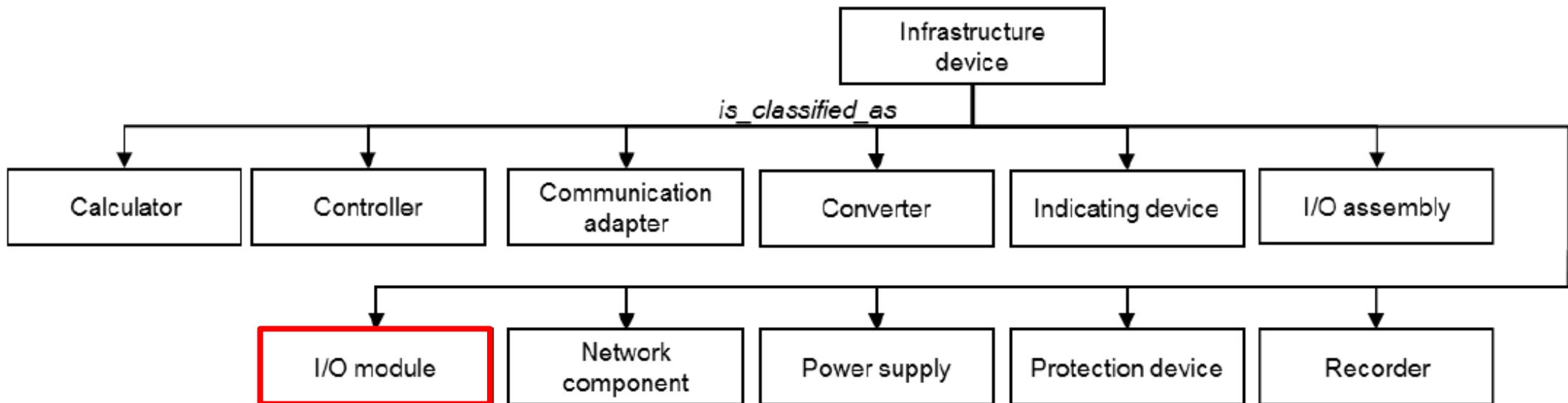
** - standard draft

* - standard in work

(without asterisk) - intended

Infrastructure devices (パネル・ラック計器) のLOP開発

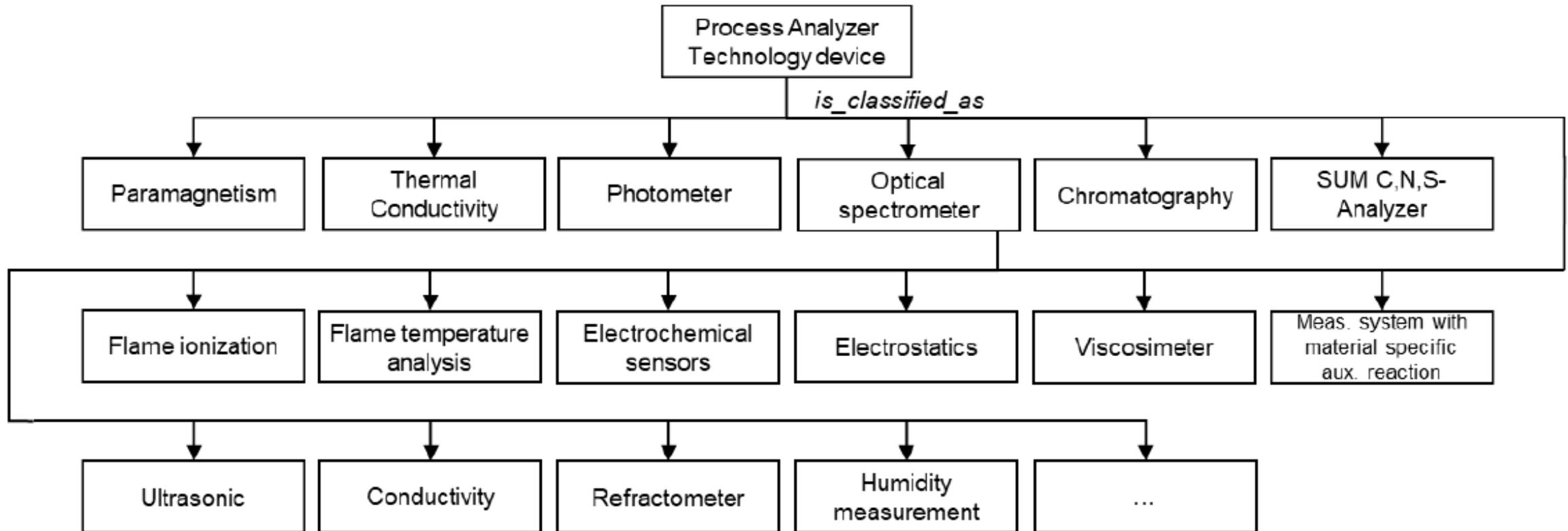
- IEC 61987 **Part 31**: List of Properties (LOP) of **infrastructure devices** for electronic data exchange – **Generic structures** (開発中)
- IEC 61987 **Part 32**: Lists of properties (LOP) for **I/O modules** for electronic data exchange (開発中)
- IEC 61987 Part 33、..... (計画中)



infrastructure devices (パネル・ラック計器) の機種(クラス)分類 (IEC 61987-31より)

Process Analyzer Technology (PAT) devices (プロセス用分析機器)のLOP開発

- IEC 61987 **Part 41: Generic structures** of List of Properties (LOP) of **Process Analyzer Technology (PAT) measuring devices** for electronic data exchange (2021/11/5 新規提案)
- IEC 61987 Part 42、・・・ (計画中)



Process Analyzer Technology devices(プロセス用分析機器)の機種(クラス)分類 (IEC 61987-41より)

IEC CDD IEC 61987シリーズへのアクセス



<https://cdd.iec.ch/cdd/iec61987/iec61987.nsf/TreeFrameset?OpenFrameSet>