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A typical structure of instrument index is shown in the table below.


The structure of instrument index shall be adjusted each time to the design type (new plant, modernisation).

Unit (*)	Loop No.	Tag No. (*)	Instrument type	Service (*)	P&ID (*)	I/O type (*)	Interconnection (*)	Location (*)	Range min.	Range max.	Alarm set value				Interlock set value				Units (*)	Loop diagram number	Junction box number	Primary Hook-up	Secondary Hook-up	Protection box drawing No.	Electrical heat / steam tracing drawing No.	Order No.	Remarks
											LL	L	H	HH	LL	L	H	HH									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28


(*) Legend and remarks:

Unit - Part of plant (unit)
 Tag No. - Instrument unique number
 Service - Place of installation, function, description
 P&ID - Process and instrumentation diagram
 I/O type - Type of input/output signal, for example:

D-AI	=	DCS analog input
D-AIR	=	DCS analog input redundant
D-AO	=	DCS analog output
D-AOR	=	DCS analog output redundant
D-DI	=	DCS digital input
D-DO	=	DCS digital output
D-DIR	=	DCS digital input relay
D-DOR	=	DCS digital output relay

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D-FI	=	DCS frequency input
D-FO	=	DCS frequency output
D-RI	=	DCS RTD input
D-RIX	=	DCS RTD input Multiplexer
D-TI	=	DCS thermocouple input
D-TIX	=	DCS thermocouple input Multiplexer
F-AI	=	FGS analog input
F-DI	=	FGS digital input
F-DO	=	FGS digital output
F-DIR	=	FGS digital input relay
F-DOR	=	FGS digital output relay
M-AI	=	MMS analog input
M-AO	=	MMS analog output
M-DI	=	MMS digital input
M-DO	=	MMS digital output
M-FI	=	MMS frequency input
M-RI	=	MMS RTD input
M-TI	=	MMS thermocouple input
S-AI	=	ESD analog input
S-AIR	=	ESD analog input redundant
S-AO	=	ESD analog output
S-AOR	=	ESD analog output redundant
S-DI	=	ESD digital input
S-DO	=	ESD digital output
S-DIR	=	ESD digital input relay
S-DOR	=	ESD digital output relay
S-FI	=	ESD frequency input
S-RI	=	ESD RTD input
S-TI	=	ESD thermocouple input


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Remarks: MMS – Machine Monitoring System
FGS – Fire & Gas Detection System

Interconnections determine the signal type, for example:

D-Algs	=	analog signal, serial link (software) between ESD and DCS
D-Dlgs	=	digital signal, serial link (software) between ESD and DCS
D-Alhs	=	analog cable connection (hardwired) between ESD and DCS
D-Dlhs	=	digital cable connection (hardwired) between ESD and DCS
D-Algm	=	analog signal, serial link (software) between MMS and DCS
D-Dlgm	=	digital signal, serial link (software) between MMS and DCS
D-Alhm	=	analog cable connection (hardwired) between MMS and DCS
D-Dlhm	=	digital cable connection (hardwired) between MMS and DCS
S-Alhd	=	analog cable connection (hardwired) between DCS and ESD
S-Dlhd	=	digital cable connection (hardwired) between DCS and ESD
S-Algd	=	analog signal, serial link (software) between DCS and ESD
S-Dlgd	=	digital signal, serial link (software) between DCS and ESD
S-Alhm	=	analog signal, serial link (software) between MMS and ESD
S-Dlhm	=	digital signal, serial link (software) between MMS and ESD
M-Alhd	=	analog signal, serial link (software) between DCS and MMS
M-Dlhd	=	digital signal, serial link (software) between DCS and MMS
M-Algd	=	analog signal, serial link (software) between DCS and MMS
M-Dlgd	=	digital signal, serial link (software) between DCS and MMS
M-Dihs	=	digital signal, serial link (software) between ESD and MMS

Location - AH – Analyser House

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CR - Control Room
DCS – Distributed Control System
ESD – Emergency Shutdown System
L – Local
LP – Local Panel
PLC – Programmable Logic Controller
TIR – Technical Instrumentation Room

Units - Engineering units (technological parameter)