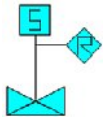
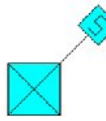
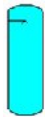
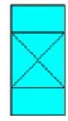
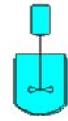

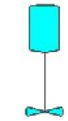
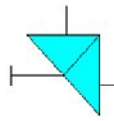
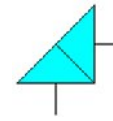
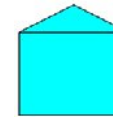

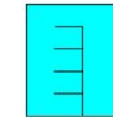
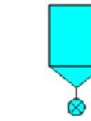



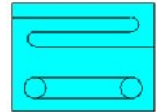
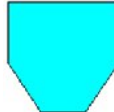
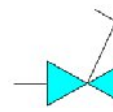
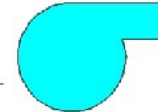
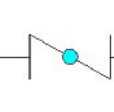




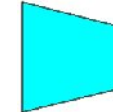
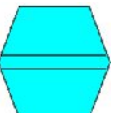
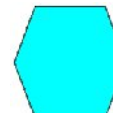
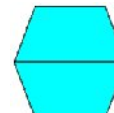
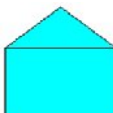


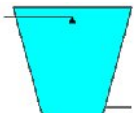

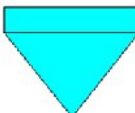
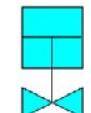
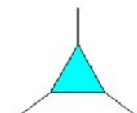
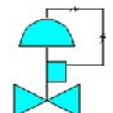
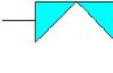
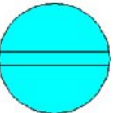
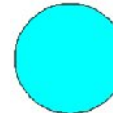
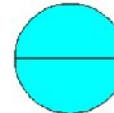


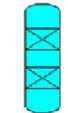
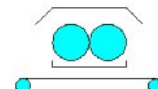









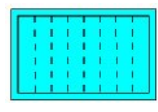
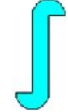
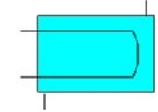
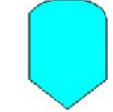


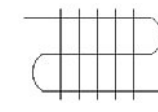


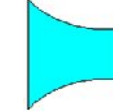
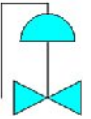


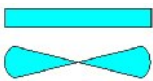
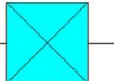




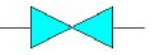
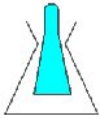
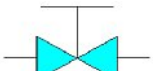
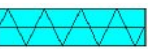
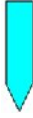

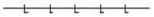

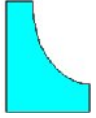
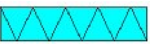
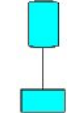

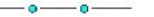
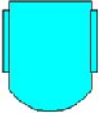
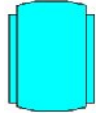

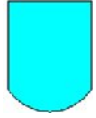





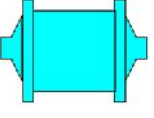
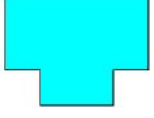
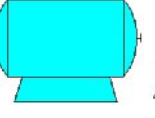
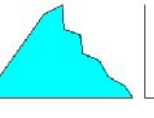

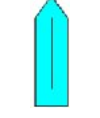
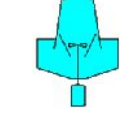
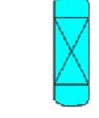
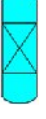

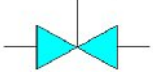




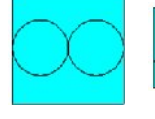

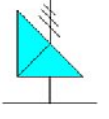
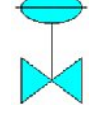
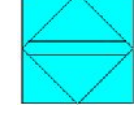
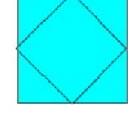
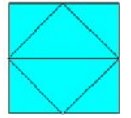
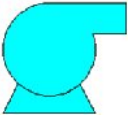
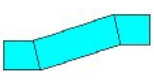
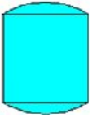

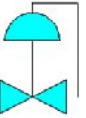
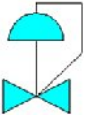
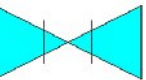

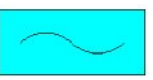
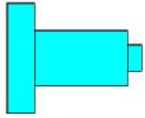
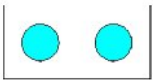



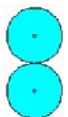
ISA Symbols

												
3-way solenoid valve with reset	4-way solenoid valve	Adsorption column	Adsorption dryer	Agitated batch crystallizer	Agitator blade	Agitator	Angle blowdown valve	Angle valve	Atmospheric tank	Autogenous grinder	Averaging pitot tube	Bag filter
												
Ball valve	Batch dryer	Belt conveyor	Belt dryer	Bin	Blowdown valve	Blower	Butterfly valve or damper	Capillary tube (long)	Capillary tube (short)	Check valve	Circuit breaker	Compressor
												
Computer Function, Auxiliary Location	Computer Function, Field Mounted	Computer Function, Primary Location	Cone roof tank	Control valve with hand actuator	Conveyor	Cooling tower	Cyclone separator	Cyclone	Cylinder actuated valve (double acting)	Delta connection	Diaphragm actuated valve with positioner	Diaphragm valve
												
Discrete Instrument, Auxiliary Location	Discrete Instrument, Field Mounted	Discrete Instrument, Primary Location	Distillation column with trays	Distillation tower	Distillation, packed column	Drum dryer	Drum mixer	Electric binary signal (long)	Electric binary signal (short)	Electric signal (long)	Electric signal (short)	Electromagnetic or sonic signal (guided) (long)
												
Electromagnetic or sonic signal (guided) (short)	Electromagnetic or sonic signal (not guided) (long)	Electromagnetic or sonic signal (not guided) (short)	Electrostatic precipitator	Elevator	Evaporator 1	Evaporator forced circulation	Evaporator natural convection	Evaporator	Finned exchanger	Floating roof tank	Floating roof vessel	Flow nozzle

ISA Symbols

												
Flow regulator, self-contained	Flow straightening vane	Flume	Forced air exchanger	Four way valve	Furnace	Fuse	Gas holder 1	Gas holder 2	Gate valve	Gyratory crusher	Hand control valve	Helical mixer
												
Hopper	Horizontal vessel	Hydraulic signal (long)	Hydraulic signal (short)	Hydroscreen	Inline mixer 1	Inline mixer 2	Internal system link (software or data link) (long)	Internal system link (software or data link) (short)	Jacketed kettle	Jacketed vessel	Jaw crusher	Kettle
												
Liquid filter	Manual contactor closed	Manual contactor open	Mechanical link (long)	Mechanical link (short)	Mill	Mixing tee	Motor	Open storage pile	Open tank	Orifice plate in quick-change fitting	Pachuca crystallizer	Packed adsorption column
												
Packed column	Plate and frame filter press	Plug valve	Pneumatic binary signal (long)	Pneumatic binary signal (short)	Pneumatic signal (long)	Pneumatic signal (short)	Positive-displacement-type flow totalizing indicator	Precipitator	Pressure safety valve	Pressure-balanced diaphragm actuated	Programmable Logic Control, Auxiliary Location	Programmable Logic Control, Field Mounted
												
Programmable Logic Control, Primary Location	Pump	Rack classifier	Reactor	Reciprocating compressor	Regulator with external pressure tap	Regulator, self-contained	Restriction orifice drilled in valve	Restriction orifice	Ribbon blender	Rod ball mill	Roll blender	Roll crusher

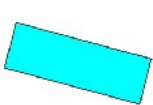
ISA Symbols



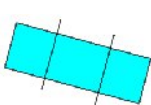
[Roll stand](#)



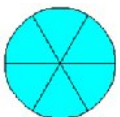
[Rotary actuated](#)



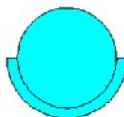
[Rotary calciner](#)



[Rotary dryer](#)



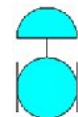
[Rotary feeder](#)



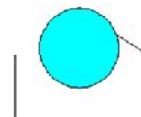
[Rotary filter](#)



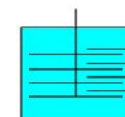
[Rotary kiln](#)



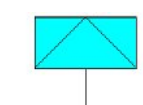
[Rotary plug valve](#)



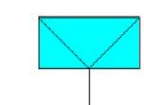
[Rotary separator](#)



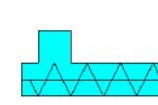
[Rotary shelf dryer](#)



[Rupture disc \(pressure\)](#)



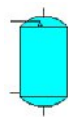
[Rupture disc \(vacuum\)](#)



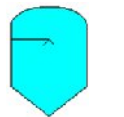
[Screw conveyor 1](#)



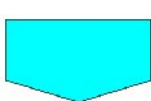
[Screw conveyor 2](#)



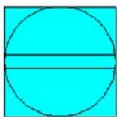
[Scrubber 1](#)



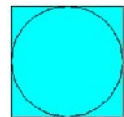
[Scrubber](#)



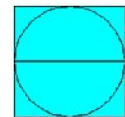
[Settler thickener](#)



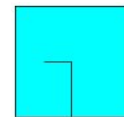
[Shared Display, Shared Control, Auxiliary Location](#)



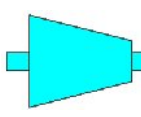
[Shared Display, Shared Control, Field Mounted](#)



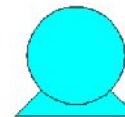
[Shared Display, Shared Control, Primary Location](#)



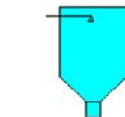
[Single port pitot tube or pitot-venturi tube](#)



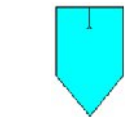
[Solid bowl centrifuge](#)



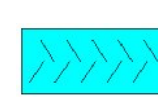
[Sphere](#)



[Spray dryer 1](#)



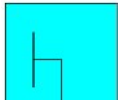
[Spray dryer 2](#)



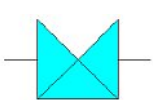
[Static mixer](#)



[Stop check valve](#)



[Target type sensor](#)



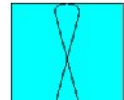
[Three way valve](#)



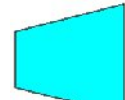
[Transformer](#)



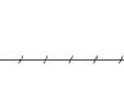
[Trap](#)



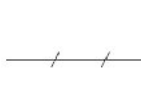
[Turbine or propeller-type primary element](#)



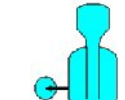
[Turbine](#)



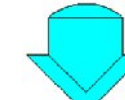
[Undefined signal \(long\)](#)



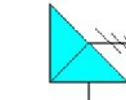
[Undefined signal \(short\)](#)



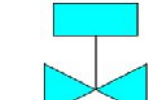
[Vacuum crystallizer](#)



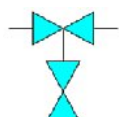
[Vacuum filter](#)



[Vacuum safety valve](#)



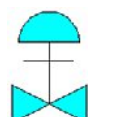
[Valve with actuator](#)



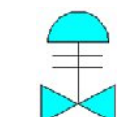
[Valve with bleed or purge connection under disc](#)



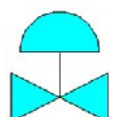
[Valve with long shaft](#)



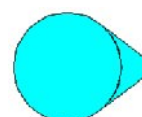
[Valve, fail indeterminate](#)



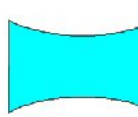
[Valve, fail locked](#)



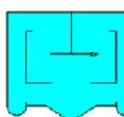
[Valve](#)



[Variable area flow indicator](#)



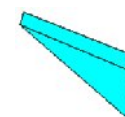
[Venturi tube](#)



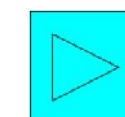
[Vertical centrifuge](#)



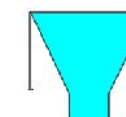
[Vessel](#)



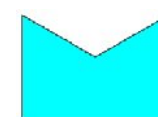
[Vibrating screen](#)



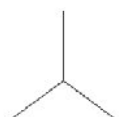
[Vortex sensor](#)



[Weigh hopper](#)



[Weir](#)



[WYE connection](#)