

White Paper

AutoCAD Electrical 2023 – IEC Symbols Guide

AutoCAD Electrical

Guide by: Miles Nicholson

The following document shows the default symbols that are included within the IEC2 library in accordance with IEC60617. This white paper aims to provide new users with a quick reference guide without having to view each web page on the Autodesk website. The following does not include the parametric and/or dynamic symbols such as cables, PLC's nor the dynamic source and destinations and only shows single phase representations of devices. Additional symbols may have been subsequently added by Autodesk and therefore this document is not guaranteed to be complete either.

PUSH BUTTONS

Horizontal Symbol	Vertical Symbol	Description
HPB11	VPB11	Push Button Normally Open
HPB12	VPB12	Push Button Normally Closed
HPB11L	VPB11L	Push Button Normally Open Latching
HPB12L	VPB12L	Push Button Normally Closed Latching

 HPB11M	 VPB11M	Mushroom Head Normally Open
 HPB12M	 VPB12M	Mushroom Head Normally Closed
 HPB11ML	 VPB11ML	Mushroom Head Normally Open Latching
 HPB12ML	 VPB12ML	Mushroom Head Normally Closed Latching
 HPB11MTL	 VPB11MTL	Mushroom Head Normally Open Twist Latch
 HPB12MTL	 VPB12MTL	Mushroom Head Normally Closed Twist Latch
 HPB11S80	 VPB11S80	Mushroom Head Normally Open Latching, Pull to Disengage
 HPB12S80	 VPB12S80	Mushroom Head Normally Closed Latching, Pull to Disengage
 HPB11S82	 VPB11S82	Mushroom Head Normally Open Latching, Key Operated
 HPB12S82	 VPB12S82	Mushroom Head Normally Closed Latching, Key Operated
 HPB11RE	 VPB11RE	Normally Open Push Button Recessed
 HPB12RE	 VPB12RE	Normally Closed Push Button Recessed







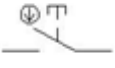







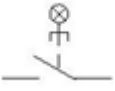


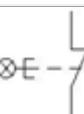
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 HPB11REL	 VPB11REL	Normally Open Push Button Recessed Latched
 HPB12REL	 VPB12REL	Normally Closed Push Button Recessed Latched
 HPB11PM	 VPB11PM	Normally Open Push Button Positive Make
 HPB12PB	 VPB12PB	Normally Closed Push Button Positive Break
 HPB21	 VPB21	2nd+ Normally Open Contact
 HPB22	 VPB22	2nd+ Normally Closed Contact
 HPB11S75	 VPB11S75	Illuminated Push Button Normally Open
 HPB12S75	 VPB12S75	Illuminated Push Button Normally Closed



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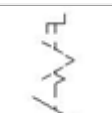

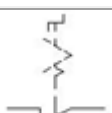
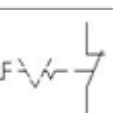
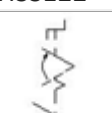
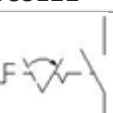

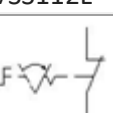

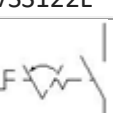

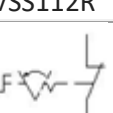

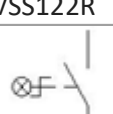
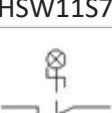
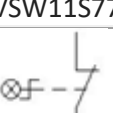


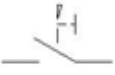

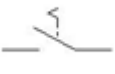



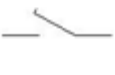

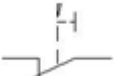

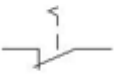

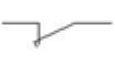



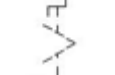







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ILLUMINATED PUSH BUTTONS

Horizontal Symbol	Vertical Symbol	Description
 HPB11S76	 VPB11S76	Non-Auto Return Illuminated Push Button Normally Open
 HPB12S76	 VPB12S76	Non-Auto return Illuminated Push Button Normally Closed

SELECTOR SWITCHES

Horizontal Symbol	Vertical Symbol	Description
 HSS112	 VSS112	2 Position Maintain, Normally Open
 HSS122	 VSS122	2 Position Maintain, Normally Closed
 HSS112L	 VSS112L	2 Position Normally Open Return From Left
 HSS122L	 VSS122L	2 Position Normally Closed Return From Left
 HSS112R	 VSS112R	2 Position Normally Open Return From Right
 HSS122R	 VSS122R	2 Position Normally Closed Return From Right
 HSW11S77	 VSW11S77	2 Position Normally Open with Lamp
 HSW12S77	 VSW12S77	2 Position Normally Closed with Lamp

 HSS2121F	 VSS2121F	Normally Open Contact with Manual Unlatching
 HSS2122F	 VSS2122F	Normally Open Contact with Maintained Position
 HSS217F	 VSS217F	Normally Open Anticipated Contact
 HSS218F	 VSS218F	Normally Open Delayed Contact
 HSS2221F	 VSS2221F	Normally Closed Contact with Manual Unlatching
 HSS2222F	 VSS2222F	Normally Closed Contact with Maintained Position
 HSS227F	 VSS227F	Normally Closed Anticipated Contact
 HSS228F	 VSS228F	Normally Closed Delayed Contact
 HSS11NL	 VSS11NL	Non-Latched, Normally Open
 HSS12NL	 VSS12NL	Non-Latched, Normally Closed
 HSS21	 VSS21	2nd+ Normally Open Contact
 HSS22	 VSS22	2nd+ Normally Closed Contact



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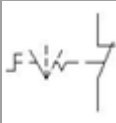



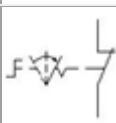


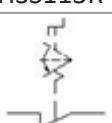
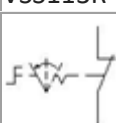
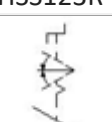


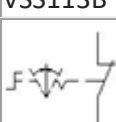



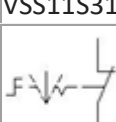
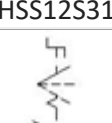





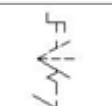
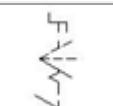
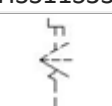
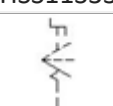
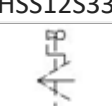
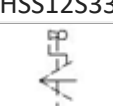
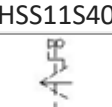
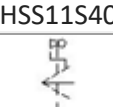
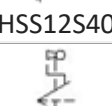
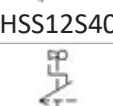
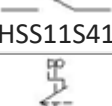
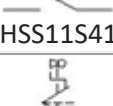

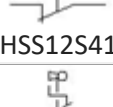
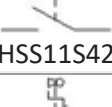
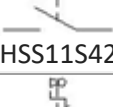
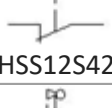
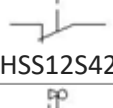
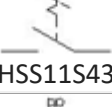
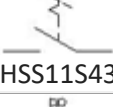
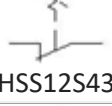
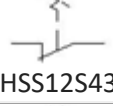
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3 POSITION SELECTOR SWITCHES

Horizontal Symbol	Vertical Symbol	Description
 HSS113	 VSS113	3 Position Maintain, Normally Open
 HSS123	 VSS123	3 Position Maintain, Normally Closed
 HSS113L	 VSS113L	3 Position Normally Open Return From Left
 HSS123L	 VSS123L	3 Position Normally Closed Return From Left
 HSS113R	 VSS113R	3 Position Normally Open Return From Right
 HSS123R	 VSS123R	3 Position Normally Closed Return From Right
 HSS113B	 VSS113B	3 Position Normally Open Return From Both
 HSS123B	 VSS123B	3 Position Normally Closed Return From Both
 HSS11S31	 VSS11S31	3 Position Normally Open Neutral 0
 HSS12S31	 VSS12S31	3 Position Normally Closed Neutral 0
 HSS11S32	 HSS11S32	3 Position Normally Open Neutral 1

 HSS12S32	 HSS12S32	3 Position Normally Closed Neutral 1
 HSS11S33	 HSS11S33	3 Position Normally Open Neutral 2
 HSS12S33	 HSS12S33	3 Position Normally Closed Neutral 2
 HSS11S40	 HSS11S40	3 Position Normally Open Key Operated Neutral 0
 HSS12S40	 HSS12S40	3 Position Normally Closed Key Operated Neutral 0
 HSS11S41	 HSS11S41	3 Position Normally Open Key Operated Neutral 1
 HSS12S41	 HSS12S41	3 Position Normally Closed Key Operated Neutral 1
 HSS11S42	 HSS11S42	3 Position Normally Open Key Operated Neutral 2
 HSS12S42	 HSS12S42	3 Position Normally Closed Key Operated Neutral 2
 HSS11S43	 HSS11S43	3 Stable Position Normally Open Key Operated Neutral 0
 HSS12S43	 HSS12S43	3 Stable Position Normally Closed Key Operated Neutral 0
 HSS11S44	 HSS11S44	3 Stable Position Normally Open Key Operated Neutral 1



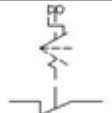



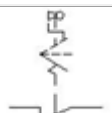
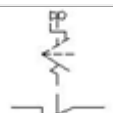
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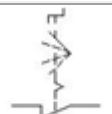
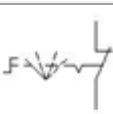
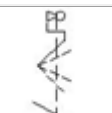

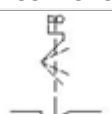
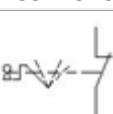
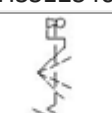

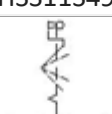

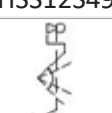

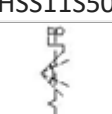

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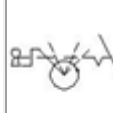
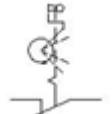
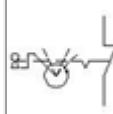


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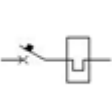
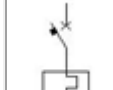
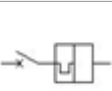
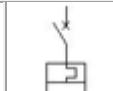
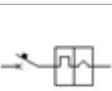
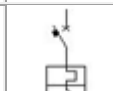
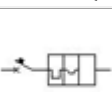
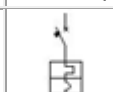
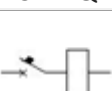
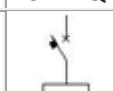
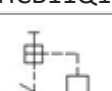
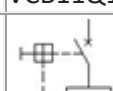


 HSS12S44	 HSS12S44	3 Stable Position Normally Closed Key Operated Neutral 1
 HSS11S45	 HSS11S45	3 Stable Position Normally Open Key Operated Neutral 2
 HSS12S45	 HSS12S45	3 Stable Position Normally Closed Key Operated Neutral 2

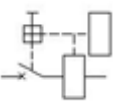

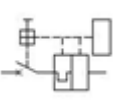
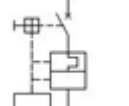
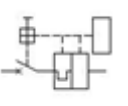
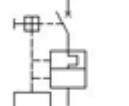
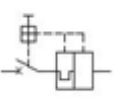
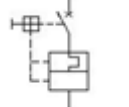
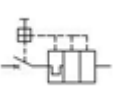
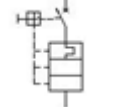
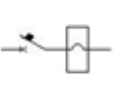
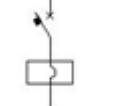
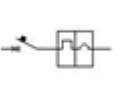
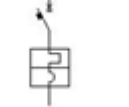
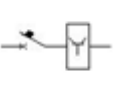
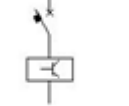
4 POSITION SELECTOR SWITCHES

Horizontal Symbol	Vertical Symbol	Description
 HSS114	 VSS114	4 Position Maintain, Normally Open
 HSS124	 VSS124	4 Position Maintain, Normally Closed
 HSS11S46	 VSS11S46	4 Position Key Selector Normally Open
 HSS12S46	 VSS12S46	4 Position Key Selector Normally Closed
 HSS11S49	 VSS11S49	4 Stable Positions Key Selector Normally Open
 HSS12S49	 VSS12S49	4 Stable Positions Key Selector Normally Closed
 HSS11S50	 VSS11S50	4 Stable Positions Key Selector Normally Open-Rotating in 2 Ways
 HSS12S50	 VSS12S50	4 Stable Positions Key Selector Normally Closed-Rotating in 2 Ways

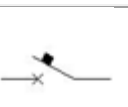
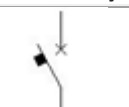
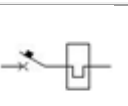
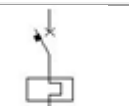
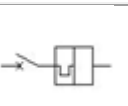
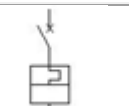
HSS12S50	VSS12S50	
		4 Stable Positions Key Selector Normally Open-Rotating CW
HSS11S51	VSS11S51	
		4 Stable Positions Key Selector Normally Closed-Rotating CW
HSS12S51	VSS12S51	

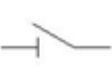

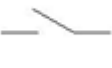








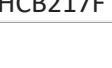



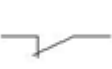






1 POLE CIRCUIT BREAKERS

Horizontal Symbol	Vertical Symbol	Description
		Circuit Breaker 1 Pole
HCB1	VCB1	
		Thermal Circuit Breaker
HCB11TH	VCB11TH	
		Current Limit/Thermal
HCB11THI	VCB11THI	
		Magneto/Thermal
HCB11Q9	VCB11Q9	
		Magneto/Thermal with Differential
HCB11Q13	VCB11Q13	
		Differential
HCB11Q17	VCB11Q17	
		With Current Protection
HCB11Q29	VCB11Q29	
		With Current Protection and Lack of Voltage Protection
HCB11Q33	VCB11Q33	

 HCB11Q37	 VCB11Q37	With Max. Current and Min. Voltage Protection
 HCB11Q41	 VCB11Q41	With Max. Thermal/Current and Min. Voltage Protection
 HCB11Q45	 VCB11Q45	With Max. Thermal and Min. Voltage Protection
 HCB11Q21	 VCB11Q21	With Max. Thermal and Current Protection
 HCB11Q25	 VCB11Q25	With Max. Thermal Protection and Differential
 HCB11Q146	 VCB11Q146	1 Pole Auto Switch with Magneto
 HCB11Q134	 VCB11Q134	1 Pole Auto Magneto-Thermal Switch/Disconnect
 HCB11Q138	 VCB11Q138	1 Pole Auto Disconnect Switch with Electronic Relay

2ND+ POLE CIRCUIT BREAKERS

Horizontal Symbol	Vertical Symbol	Description
 HCB2	 VCB2	Circuit Breaker 2nd+ Pole
 HCB21TH	 VCB21TH	Thermal 2nd+ Pole
 HCB21THI	 VCB21THI	Current Limit/Thermal 2nd+ Pole

 HDS21	 VDS21	Disconnect 2nd+ Pole
 HDS21AUX	 VDS21AUX	Disconnect Normally Open Auxiliary Contact
 HDS22AUX	 VDS22AUX	Disconnect Normally Closed Auxiliary Contact
 HCB2120F	 VCB2120F	Auto Return
 HCB2121F	 VCB2121F	With Mechanical Block and Manual Unlatching
 HCB2122F	 VCB2122F	With Maintained Position
 HCB217F	 VCB217F	Anticipated Contact
 HCB218F	 VCB218F	Delayed Contact
 HCB21	 VCB21	Circuit Breaker Normally Open Auxiliary Contact
 HCB22	 VCB22	Circuit Breaker Normally Closed Auxiliary Contact
 HCB2220F	 VCB2220F	Auto Return
 HCB2221F	 VCB2221F	With Mechanical Block and Manual Unlatching



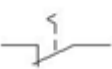





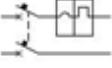
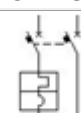
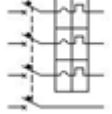
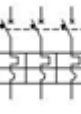
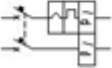
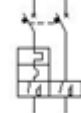
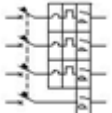
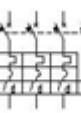
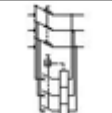

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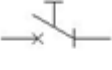

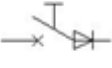

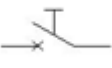

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 HCB2222F	 VCB2222F	With Maintained Position
 HCB227F	 VCB227F	Anticipated Contact
 HCB228F	 VCB228F	Delayed Contact
 HCB1Q142	 VCB1Q142	2 P Magneto-Thermal Switch, 1P Protected
 HCB1Q143	 VCB1Q143	4 P Magneto-Thermal Switch, 3P Protected
 HCB1Q144	 VCB1Q144	2 P Magneto-Thermal Switch with Differential, 1P Protected
 HCB1Q145	 VCB1Q145	4 P Magneto-Thermal Switch with Differential, 3P Protected
 HDS1Q93	 VDS1Q93	3 P 2 Way Disconnect Switch with Fuses

POWER SWITCHES

Horizontal Symbol	Vertical Symbol	Description
 HCB11Q53	 VCB11Q53	1P with Semiconductors
 HCB11Q57	 VCB11Q57	1P with Semiconductors - unidirectional
 HCB11Q50	 VCB11Q50	2P Power Switch

FUSIBLE DISCONNECTS

Horizontal Symbol	Vertical Symbol	Description
HDS11F	VDS11F	Fused switch
HDS21F	VDS21F	2nd+ Pole Fused Switch
HDS21AUX	VDS21AUX	Auxiliary Contact, Normally Open
HDS22AUX	VDS22AUX	Auxiliary Contact, Normally Closed
HDS10L	VDS10L	1 Pole on load
HDS20L	VDS20L	2nd+ Pole on load
HDS11Q81	VDS11Q81	1 Phase Disconnect with Fuse
HDS11Q85	VDS11Q85	1 Phase maneuver Switch/Disconnect with Fuse



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DISCONNECT 1 POLE

Horizontal Symbol	Vertical Symbol	Description
HDS11Q65	VDS11Q65	Disconnect 1 Pole
HDS11	VDS11	Disconnect 1 Pole Non-Fused
HDS11Q119	VDS11Q119	Maneuver Switch with Fuse
HDS11Q123	VDS11Q123	PE Earthing Switch
HDS11Q5	VDS11Q5	Power Auto Switch/Disconnect
HDS11Q69	VDS11Q69	Maneuver Switch/Disconnect
HDS11Q73	VDS11Q73	Disconnect with Lock Device
HDS11Q77	VDS11Q77	Switch/Disconnect with Lock Device
HDS11Q89	VDS11Q89	Two Way Disconnect with 3 Positions

REACTORS

Horizontal Symbol	Vertical Symbol	Description
 HRT1	 VRT1	Reactors - General
 HRT1IC	 VRT1IC	Reactors - Iron cored
 HRT1L3	 VRT1L3	Inductor With Magnetic Core Air Gap
 HRT1L4	 VRT1L4	Inductor With Magnetic Core Continuously Variable

FUSES

Horizontal Symbol	Vertical Symbol	Description
 HFU1	 VFU1	Fuse
 HFU21	 VFU21	Fuse Auxiliary Contact, Normally Open
 HFU22	 VFU22	Fuse Auxiliary Contact, Normally Closed
 HFU1ST	 VFU1ST	Stiker
 HFU1AC	 VFU1AC	With alarm contact
 HFU1LS	 VFU1LS	With separate alarm contact





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 HFU2LS	 VFU2LS	1 Pole - Live Side
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FUSE SWITCHES

Horizontal Symbol	Vertical Symbol	Description
 HFU1FS	 VFU1FS	1 Pole
 HFU2FS	 VFU2FS	1 Pole Child



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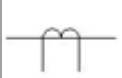





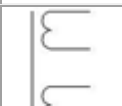





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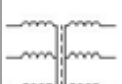
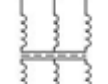
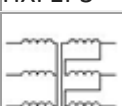
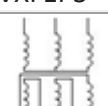
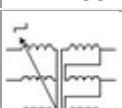
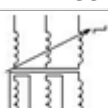


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TRANSFORMERS
CURRENT TRANSFORMERS

Horizontal Symbol	Vertical Symbol	Description
 HXF1CT	 VXF1CT	CT Current Transformer
 HXF1CTR	 VXF1CTR	CT (Flipped)
 HXF1T1	 VXF1T1	Current Transformer 2
 HXF1T30	 VXF1T30	With 2 Secondaries - Independent Magnetic Circuits
 HXF1T31	 VXF1T31	With 2 Secondaries - Common Magnetic Circuit
 HXF1T32	 VXF1T32	With Tapped Secondary Winding
 HXF1T33	 VXF1T33	With Conductor Indication

3 PHASE TRANSFORMERS

Horizontal Symbol	Vertical Symbol	Description
 HXF1P3	 VXF1P3	3 Phase
 HXF1P3SD	 VXF1P3SD	3 Phase Star/Delta
 HXF1P3SD	 VXF1P3SD	3 Phase Star/Delta Primary with Sockets

HXF1T11	VXF1T11	
		3 Phase Star/Zigzag
HXF1T12	VXF1T12	
		3 Phase Delta/Delta
HXF1T13	VXF1T13	
		3 Phase Delta/Star
HXF1T14	VXF1T14	
		3 Phase Star/Star/Delta with 3 Windings
HXF1T15	VXF1T15	
		3 Phase Delta/Delta
HXF1T20	VXF1T20	
		3 Phase Star/Star
HXF1T7	VXF1T7	
		3 Phase Star/Star Secondary with Neutral
HXF1T8	VXF1T8	
		3 Phase Star/Star Primary with Plugs
HXF1T9	VXF1T9	
		3 Phase Dy5
HXF1T21	VXF1T21	
		3 Phase Dd6
HXF1T22	VXF1T22	
		3 Phase Yd5
HXF1T23	VXF1T23	



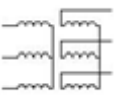
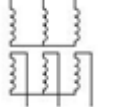

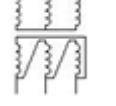








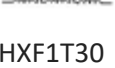
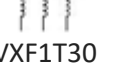
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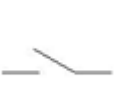

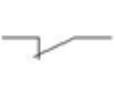



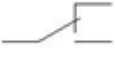

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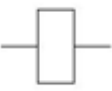

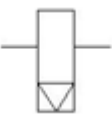
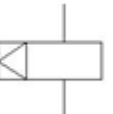
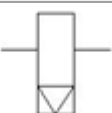
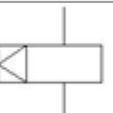
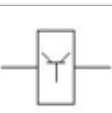
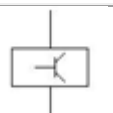
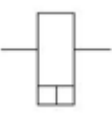
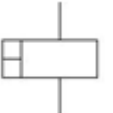


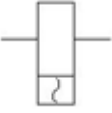
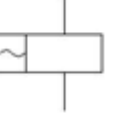
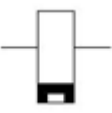
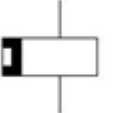


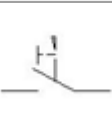

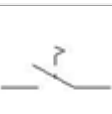
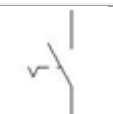


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 HXF1T24	 VXF1T24	3 Phase Yy6
 HXF1T25	 VXF1T25	3 Phase Yd11
 HXF1T26	 VXF1T26	3 Phase Dy11
 HXF1T27	 VXF1T27	3 Phase Dz0
 HXF1T28	 VXF1T28	3 Phase Yz5
 HXF1T29	 VXF1T29	3 Phase Dz6
 HXF1T30	 VXF1T30	3 Phase Yz11

RELAYS AND CONTACTS

Horizontal Symbol	Vertical Symbol	Description
 HCR21	 VCR21	Relay Normally Open Contact
 HCR22	 VCR22	Relay Normally Closed Contact
 HCR23R	 VCR23R	Relay Form C
 HCR23R	 VCR23R	Relay Form C Flipped

HCR23	VCR23	
		Relay Coil
HCR1	VCR1	
		Latch Relay Coil
HLR1	VLR1	
		Latch relay (child coil)
HLR2	VLR2	
		Solid State
HCR1SSD	VCR1SSD	
		High Speed
HCR1HSP	VCR1HSP	
		AC Unaffected
HCR1ACU	VCR1ACU	
		AC
HCR1AC	VCR1AC	
		Polarized
HCR1POL	VCR1POL	
		Measuring
HCR1MSR	VCR1MSR	
		With Mechanical Block and Manual Unlatching
HCR2121F	VCR2121F	
		With Maintained Position
HCR2122F	VCR2122F	







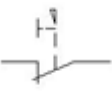

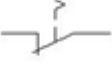





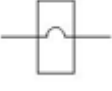
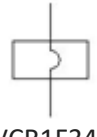
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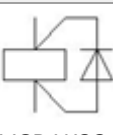
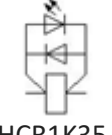
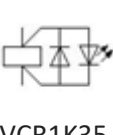
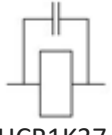
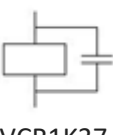


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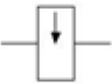

















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 HCR217F	 VCR217F	Anticipated Contact
 HCR218F	 VCR218F	Delayed Contact
 HCR2221F	 VCR2221F	With Mechanical Block and Manual Unlatching
 HCR2222F	 VCR2222F	With Maintained Position
 HCR227F	 VCR227F	Anticipated Contact
 HCR228F	 VCR228F	Delayed Contact
 HCR1F34	 VCR1F34	Magnetic Protection

RELAYS WITH SUPPRESSION


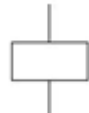

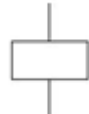

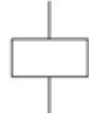

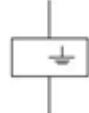

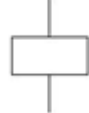
Horizontal Symbol	Vertical Symbol	Description
 HCR1K33	 VCR1K33	Relay with Integrated Block Diode
 HCR1K35	 VCR1K35	Relay with Integrated Block Diode and Integrated LED
 HCR1K37	 VCR1K37	Relay with Capacitor
 HCR1K39	 VCR1K39	Relay with RC Circuit

CURRENT PROTECTION RELAYS

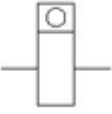
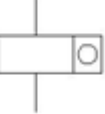
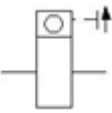
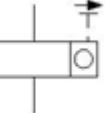
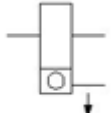
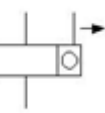
Horizontal Symbol	Vertical Symbol	Description
 HCR1F28	 VCR1F28	Come Back Current Protection
 HCR1F29	 VCR1F29	Differential Current Protection
 HCR1F30	 VCR1F30	Differential Current Protection - Relative Value
 HCR1F25	 VCR1F25	Maximum Current Protection
 HCR1F26	 VCR1F26	Minimum Current Protection
 HCR1F27	 VCR1F27	Minimum and Maximum Current Protection
 HCR1F32	 VCR1F32	In Neutral
 HCR1F33	 VCR1F33	In Neutral between 2 Multi-Phase Systems
 HCR1F37	 VCR1F37	Ground Failure Current Protection



VOLTAGE PROTECTION RELAYS

Horizontal Symbol	Vertical Symbol	Description
 HCR1F35	 VCR1F35	Minimum Voltage Protection
 HCR1F36	 VCR1F36	Maximum Voltage Protection
 HCR1F38	 VCR1F38	Residual Voltage Protection
 HCR1F31	 VCR1F31	Ground Failure Voltage Protection
 HCR1F39	 VCR1F39	Lack of Voltage Protection

COUNTER RELAYS

Horizontal Symbol	Vertical Symbol	Description
 HCR1CNN	 VCR1CNN	Counter No Reset
 HCR1CNM	 VCR1CNM	Counter Manual Reset
 HCR1CNE	 VCR1CNE	Counter Electronic Reset



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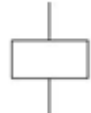

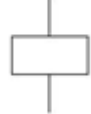
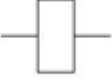
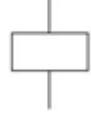

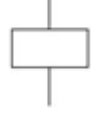

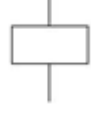
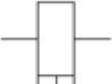
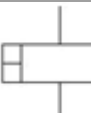
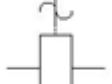
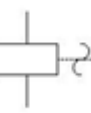


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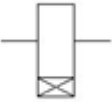
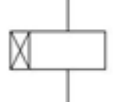
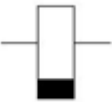
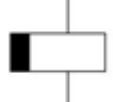
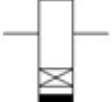

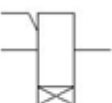
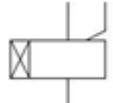

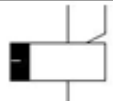
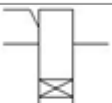

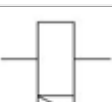
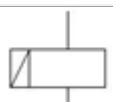






















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MISCELLANEOUS RELAYS

Horizontal Symbol	Vertical Symbol	Description
 HCR1F40	 VCR1F40	Frequency Relay
 HCR1F41	 VCR1F41	Minimum Impedance Relay
 HCR1F42	 VCR1F42	Relay Sensing Lack of Phase in Three Phase System
 HCR1F43	 VCR1F43	Minimum Active Power Relay
 HCR1F44	 VCR1F44	Insulating Relay
 HCR1K1	 VCR1K1	Quick Relay Coil
 HCR1K11	 VCR1K11	Mechanical Resonance Relay

TIME DELAY RELAYS

Horizontal Symbol	Vertical Symbol	Description
 HTD1N	 VTD1N	ON Delay Coil
 HTD1F	 VTD1F	OFF Delay Coil
 HCR1OOD	 VCR1OOD	ON/OFF Delay
 HTD1K25	 VTD1K25	3 Clamp Delay Relay - Energized
 HTD1K27	 VTD1K27	3 Clamp Delay Relay - De-energized
 HTD1K29	 VTD1K29	3 Clamp Delay Relay - Energized/De-energized
 HTD1K5	 VTD1K5	Latency Relay
 HTD21N	 VTD21N	ON Delay Normally Open (Delay Close)
 HTD22N	 VTD22N	ON Delay Normally Closed (Delay Open)
 HTD21F	 VTD21F	OFF Delay Normally Open (Instant Close/Delay Open)
 HTD22F	 VTD22F	OFF Delay Normally Closed (Instant Open/Delay Close)

 HTD21I	 VTD21I	Normally Open Contact (Instant)
 HTD22I	 VTD22I	Normally Closed Contact (Instant)
 HTD21IF	 VTD21IF	Normally Open Contact (Instant-for Delay Close)
 HTD22IF	 VTD22IF	Normally Closed Contact (Instant-for Delay Close)
 HTD21DOO	 VTD21DOO	Normally Open Delay ON/OFF
 HTD22DOO	 VTD22DOO	Normally Closed Delay ON/OFF



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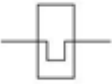

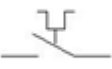



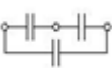
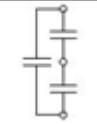


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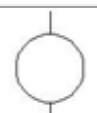
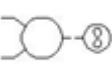

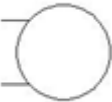







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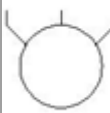

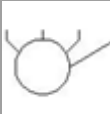
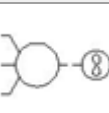
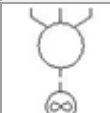
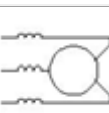
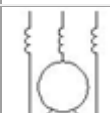
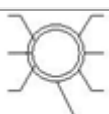
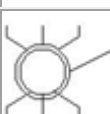

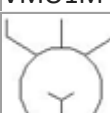

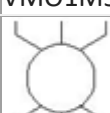


MOTOR CONTROL

Horizontal Symbol	Vertical Symbol	Description
 HOL1	 VOL1	Overload, 1 Pole
 HOL2	 VOL2	2nd+ Overload Pole
 HOL21	 VOL21	2nd+ Overload, Normally Open Contact
 HOL22	 VOL22	2nd+ Overload, Normally Closed Contact
 HCA113	 VCA113	3 Phase KVAR Capacitor









1 PHASE MOTORS

Horizontal Symbol	Vertical Symbol	Description
 HMO12	 VMO12	1 Phase Motor
 HMO1M3M	 VMO1M3M	1 Phase Motor with Fan
 HMO1M9	 VMO1M9	1 Phase AC Motor
 HMO1M10	 VMO1M10	1 Phase AC Motor in Series Connection
 HMO1M16	 VMO1M16	1 Phase Synchronous AC Motor

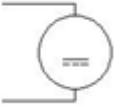

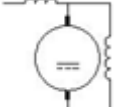
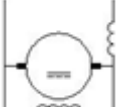

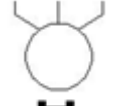



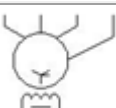
3 PHASE MOTORS

Horizontal Symbol	Vertical Symbol	Description
 HMO13	 VMO13	3 Phase Motor
 HMO14	 VMO14	3 Phase Motor (4 Connections)
 HMO1M2	 VMO1M2	3 Phase Motor with Fan
 HMO1M3	 VMO1M3	3 Phase Asynchro Motor with Series Excitation
 HMO1M4	 VMO1M4	3 Phase Asynchro Wound-Rotor Motor
 HMO1M5	 VMO1M5	3 Phase Asynchro Star Connected Stator Auto Starter on Rotor
 HMO1M11	 VMO1M11	3 Phase Asynchro Motor - 6 Pole
 HMO1M17	 VMO1M17	3 Phase Synchronous AC Motor


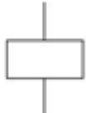








DC MOTORS

Horizontal Symbol	Vertical Symbol	Description
 HMO1M6	 VMO1M6	DC Motor
 HMO1M13	 VMO1M13	DC Motor with Permanent Magnets
 HMO1M14	 VMO1M14	DC Motor - Linear with Permanent Magnets
 HMO1M15	 VMO1M15	DC Motor - Stepping with Permanent Magnets
 HMO1M7	 VMO1M7	DC Motor - Series Excitation
 HMO1M8	 VMO1M8	DC Motor - Derived Excitation
 HMO1M12	 VMO1M12	DC Motor - Independent Excitation

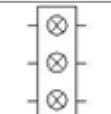
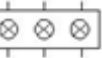




GENERATORS

Horizontal Symbol	Vertical Symbol	Description
 HPW1G9	 VPW1G9	DC Generator
 HPW1G10	 VPW1G10	DC Generator with Compound Excitation
 HPW1G6	 VPW1G6	3 Phase Synchro Generator with Permanent Magnets
 HPW1G7	 VPW1G7	3 Phase Synchro Generator 1
 HPW1G8	 VPW1G8	3 Phase Synchro Generator 2









MOTOR STARTERS

Horizontal Symbol	Vertical Symbol	Description
 HMS1	 VMS1	Motor Starter Coil
 HMS21P	 VMS21P	Motor Starter 1 Pole Normally Open (Power)
 HMS22P	 VMS22P	Motor Starter 1 Pole Normally Closed (Power)
 HMS21	 VMS21	2nd+ Motor Starter Normally Open
 HMS22	 VMS22	2nd+ Motor Starter Normally Closed

PILOT LIGHTS

Horizontal Symbol	Vertical Symbol	Description
 HLT1H21	 VLT1H21	Blinking Device
 HLT1H22	 VLT1H22	Neon Lamp
 HLT1H24	 VLT1H24	Incandescent Lamp

STANDARD LIGHTS

Horizontal Symbol	Vertical Symbol	Description
 HLT1R	 VLT1R	Red Standard
 HLT1G	 VLT1G	Green Standard
 HLT1A	 VLT1A	Orange Standard
 HLT1Y	 VLT1Y	Yellow Standard
 HLT1B	 VLT1B	Blue Standard
 HLT1W	 VLT1W	White Standard
 HLT1C	 VLT1C	Clear Standard



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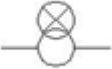

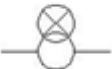













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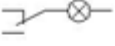

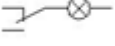

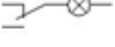









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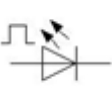
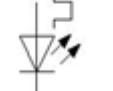


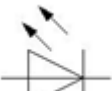
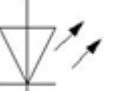
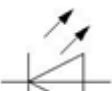
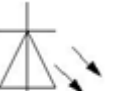
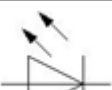

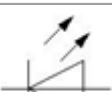
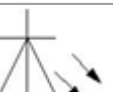
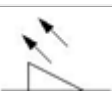
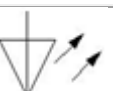
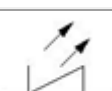







TRANSFORMER LIGHTS

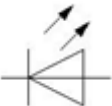
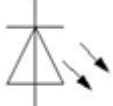
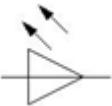
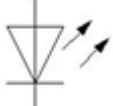
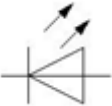
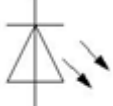
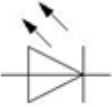
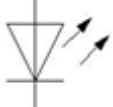
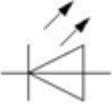

Horizontal Symbol	Vertical Symbol	Description
 HLT1H10	 VLT1H10	Blinking Light - Bulb with Transformer
 HLT1H23A	 VLT1H23A	Indicator Lamp Energized by Built-in Transformer
 HLT1RT	 VLT1RT	Red
 HLT1GT	 VLT1GT	Green
 HLT1AT	 VLT1AT	Orange
 HLT1YT	 VLT1YT	Yellow
 HLT1BT	 VLT1BT	Blue
 HLT1WT	 VLT1WT	White
 HLT1CT	 VLT1CT	Clear

PUSH TO TEST LIGHTS

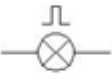
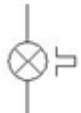
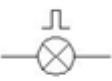
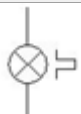
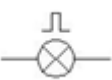
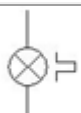
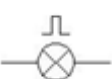

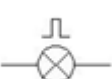

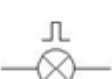

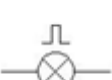
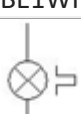
Horizontal Symbol	Vertical Symbol	Description
 HLT1RP	 VLT1RP	Red Press To Test
 HLT1GP	 VLT1GP	Green Press To Test
 HLT1AP	 VLT1AP	Orange Press To Test
 HLT1YP	 VLT1YP	Yellow Press To Test
 HLT1BP	 VLT1BP	Blue Press To Test
 HLT1WP	 VLT1WP	White Press To Test
 HLT1CP	 VLT1CP	Clear Press To Test

LEDS












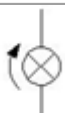

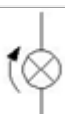
Horizontal Symbol	Vertical Symbol	Description
		Blinking LED
HLT1H13	VLT1H13	
		LED Indicator Lamp
HLT1H25	VLT1H25	
		Red
HLT1RL	VLT1RL	
		Red 180
HLT1RLR	VLT1RLR	
		Green
HLT1GL	VLT1GL	
		Green 180
HLT1GLR	VLT1GLR	
		Orange
HLT1AL	VLT1AL	
		Orange 180
HLT1ALR	VLT1ALR	
		Yellow
HLT1YL	VLT1YL	
		Yellow 180
HLT1YLR	VLT1YLR	
		Blue
HLT1BL	VLT1BL	

 HLT1BLR	 VLT1BLR	Blue 180
 HLT1WL	 VLT1WL	White
 HLT1WLR	 VLT1WLR	White 180
 HLT1CL	 VLT1CL	Clear
 HLT1CLR	 VLT1CLR	Clear 180

















BEACONS - FLASHING

Horizontal Symbol	Vertical Symbol	Description
 HBE1RFL	 VBE1RFL	Red
 HBE1GFL	 VBE1GFL	Green
 HBE1AFL	 VBE1AFL	Orange
 HBE1YFL	 VBE1YFL	Yellow
 HBE1BFL	 VBE1BFL	Blue
 HBE1WFL	 VBE1WFL	White
 HBE1CFL	 VBE1CFL	Clear

BEACONS - ROTATING









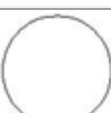
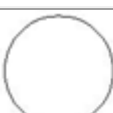

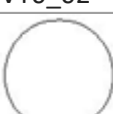



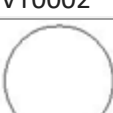






Horizontal Symbol	Vertical Symbol	Description
 HBE1RRT	 VBE1RRT	Red
 HBE1GRT	 VBE1GRT	Green
 HBE1ART	 VBE1ART	Orange
 HBE1YRT	 VBE1YRT	Yellow
 HBE1BRT	 VBE1BRT	Blue
 HBE1WRT	 VBE1WRT	White
 HBE1CRT	 VBE1CRT	Clear



















PLC I/O

Horizontal Symbol	Vertical Symbol	Description
 PLCIO11T	 PLCIO11TV	IN, 1st Point, 1 Wire
 PLCIO12T	 PLCIO12TV	IN, 1st Point, 2 Wires
 PLCIOO1T	 PLCIOO1TV	OUT, 1st Point, 1 Wire
 PLCIOO2T	 PLCIOO2TV	OUT, 1st Point, 2 Wires
 PLCIO11	 PLCIO11V	IN, 2nd+ Child, 1 Wire
 PLCIO12	 PLCIO12V	IN, 2nd+ Child, 2 Wires
 PLCIOO1	 PLCIOO1V	OUT, 2nd+ Child, 1 Wire
 PLCIOO2	 PLCIOO2V	OUT, 2nd+ Child, 2 Wires



TERMINALS

Horizontal Symbol	Vertical Symbol	Description
 HT0_01	 VT0_01	Square
 HT0W01	 VT0W01	Square with Wire Number
 HT0001	 VT0001	Square with Terminal Number
 HT1001	 VT1001	Square with Wire Number Change
 HT0_02	 VT0_02	Round
 HT0W02	 VT0W02	Round with Wire Number
 HT0002	 VT0002	Round with Terminal Number
 HT1002	 VT1002	Round with Wire Number Change
 HT0_03	 VT0_03	Hexagon
 HT0W03	 VT0W03	Hexagon with Wire Number
 HT0003	 VT0003	Hexagon with Terminal Number

 HT1003	 VT1003	Hexagon with Wire Number Change
 HT0_04	 VT0_04	Diamond
 HT0W04	 VT0W04	Diamond with Wire Number
 HT0004	 VT0004	Diamond with Terminal Number
 HT1004	 VT1004	Diamond with Wire Number Change
 HT0_05	 VT0_05	Triangle
 HT0W05	 VT0W05	Triangle with Wire Number
 HT0005	 VT0005	Triangle with Terminal Number
 HT1005	 VT1005	Triangle with Wire Number Change



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IN-LINE WIRE LABELS

Horizontal Symbol	Vertical Symbol	Description
HT0_LGENERIC	VT0_LGENERIC	In-Line Wire Label
HT0_WGENERIC	VT0_WGENERIC	Wire Number Copy

POWER DISTRIBUTION BLOCKS

Horizontal Symbol	Vertical Symbol	Description
 HDB1308	 VDB1308	3 Terminal, 10 Unit Spacing
 HDB1312	 VDB1312	3 Terminal, 15 Unit Spacing
 HDB1316	 VDB1316	3 Terminal, 20 Unit Spacing



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NO WIRENUMBER CHANGES

Horizontal Symbol	Vertical Symbol	Description
 HC01PJ	 VC01PJ	Plug/Jack
 HC01PJ1	 VC01PJ1	Plug/Jack (common pin number)
 HC01P_	 VC01P_	Plug Up or Left
 HC01_J	 VC01_J	Jack Down or Right
 HC02PJ	 VC02PJ	2nd+ Plug/Jack
 HC02PJ1	 VC02PJ1	2nd+ Plug/Jack (common pin number)
 HC02P_	 VC02P_	2nd+ Plug Up or Left
 HC02_J	 VC02_J	2nd+ Jack Down or Right
 HC01JP	 VC01JP	Jack/Plug
 HC01JP1	 VC01JP1	Jack/Plug (common pin number)
 HC01_P	 VC01_P	Plug Down or Right

		Jack Up or Left
HC01J_	VC01J_	
		2nd+ Jack/Plug
HC02JP	VC02JP	
		2nd+ Jack/Plug (common pin number)
HC02JP1	VC02JP1	
		2nd+ Plug Down or Right
HC02_P	VC02_P	
		2nd+ Jack Up or Left
HC02J_	VC02J_	
		Plug/Jack
HCN1PJ	VCN1PJ	
		Plug/Jack (common pin number)
HCN1PJ1	VCN1PJ1	
		Plug Up or Left
HC01P_	VC01P_	
		Jack Down or Right
HC01_J	VC01_J	
		2nd+ Plug/Jack
HCN2PJ	VCN2PJ	
		2nd+ Plug/Jack (common pin number)
HCN2PJ1	VCN2PJ1	
		2nd+ Plug Up or Left
HC02P_	VC02P_	

		2nd+ Jack Down or Right
HC02_J	VC02_J	

CONNECTORS - WIRENUMBER CHANGES

Horizontal Symbol	Vertical Symbol	Description
		Plug/Jack
HCN1PJ	VCN1PJ	
		Plug/Jack (common pin number)
HCN1PJ1	VCN1PJ1	
		Plug Up or Left
HC01P_	VC01P_	
		Jack Down or Right
HC01_J	VC01_J	
		2nd+ Plug/Jack
HCN2PJ	VCN2PJ	
		2nd+ Plug/Jack (common pin number)
HCN2PJ1	VCN2PJ1	
		2nd+ Plug Up or Left
HC02P_	VC02P_	
		2nd+ Jack Down or Right
HC02_J	VC02_J	
		Jack/Plug
HCN1JP	VCN1JP	



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		Jack/Plug (common pin number)
HCN1JP1	VCN1JP1	
		Plug Down or Right
HC01_P	VC01_P	
		Jack Up or Left
HC01J_	VC01J_	
		2nd+ Jack/Plug
HCN2JP	VCN2JP	
		2nd+ Jack/Plug (common pin number)
HCN2JP1	VCN2JP1	
		2nd+ Plug Down or Right
HC02_P	VC02_P	
		2nd+ Jack Up or Left
HC02J_	VC02J_	

LIMIT SWITCHES

Horizontal Symbol	Vertical Symbol	Description
		Limit Switch Normally Open
HLS11	VLS11	
		Limit Switch Normally Closed
HLS12	VLS12	
		Limit Switch, Roller Normally Open
HLS11C	VLS11C	









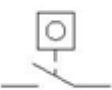


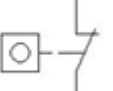




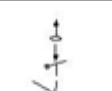
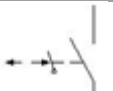
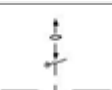
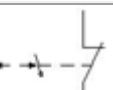
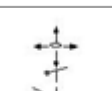
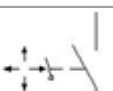
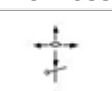
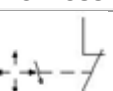
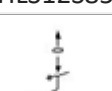
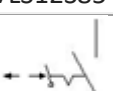
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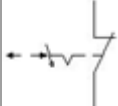
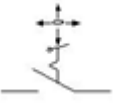
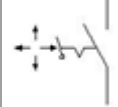
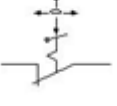
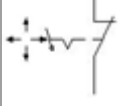



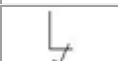


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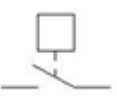

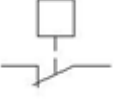

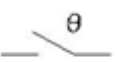
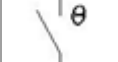
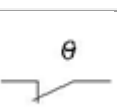
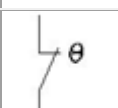
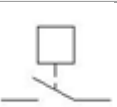





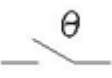

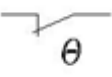
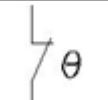


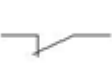

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 HLS12C	 VLS12C	Limit Switch, Roller Normally Closed
 HLS11S13	 VLS11S13	Limit Switch Normally Open - Cam Driven
 HLS12S13	 VLS12S13	Limit Switch Normally Closed - Cam Driven
 HLS11S16	 VLS11S16	Limit Switch Normally Open - Events Driven
 HLS12S16	 VLS12S16	Limit Switch Normally Closed - Events Driven
 HLS11S78	 VLS11S78	2 Position Switch Normally Open with Detents and Lamp
 HLS12S78	 VLS12S78	2 Position Switch Normally Closed with Detents and Lamp
 HLS11S84	 VLS11S84	Bi-directional Lever Actuated - Normally Open
 HLS12S84	 VLS12S84	Bi-directional Lever Actuated - Normally Closed
 HLS11S85	 VLS11S85	Four-directional Lever Actuated - Normally Open
 HLS12S85	 VLS12S85	Four-directional Lever Actuated - Normally Closed
 HLS11S87	 VLS11S87	Bi-directional Lever Actuated - Normally Open with Detent


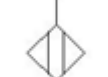




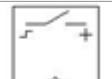
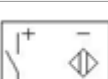
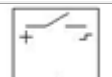

 HLS12S87	 VLS12S87	Bi-directional Lever Actuated - Normally Closed with Detent
 HLS11S88	 VLS11S88	Four-directional Lever Actuated - Normally Open with Detent
 HLS12S88	 VLS12S88	Four-directional Lever Actuated - Normally Closed with Detent
 HLS21	 VLS21	2nd+ Normally Open Contact
 HLS22	 VLS22	2nd+ Normally Closed Contact



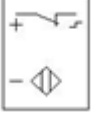
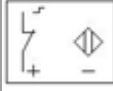
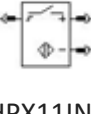
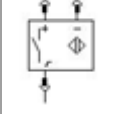
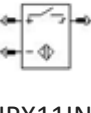
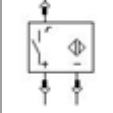
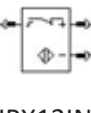
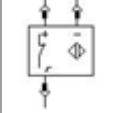
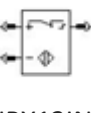
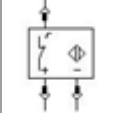
PRESSURE AND TEMPERATURE SWITCHES

Horizontal Symbol	Vertical Symbol	Description
 HPS11	 VPS11	Pressure Switch, Normally Open
 HPS12	 VPS12	Pressure Switch, Normally Closed
 HTS11	 VTS11	Temperature Switch 1, Normally Open
 HTS12	 VTS12	Temperature Switch 1, Normally Closed
 HTS11S18	 VTS11S18	Temperature Switch 2, Normally Open

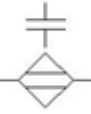
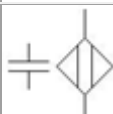
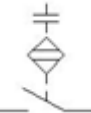

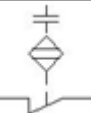
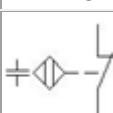


 HTS12S18	 VTS12S18	Temperature Switch 2, Normally Closed
 HTS11S74	 VTS11S74	Temperature Switch 3, Normally Open
 HTS12S74	 VTS12S74	Temperature Switch 3, Normally Closed
 HSW21	 VSW21	2nd+ Normally Open Contact
 HSW22	 VSW22	2nd+ Normally Closed Contact

INDUCTIVE SWITCHES

Horizontal Symbol	Vertical Symbol	Description
 HPX1I	 VPX1I	Ferrous
 HPX11I	 VPX11I	Ferrous Proximity Switch, Normally Open
 HPX12I	 VPX12I	Ferrous Proximity Switch, Normally Closed
 HPX11IN3	 VPX11IN3	Normally Open 3 Wire
 HPX11IN3R	 VPX11IN3R	Normally Open 3 Wire 180

		Normally Closed 3 Wire
HPX12IN3	VPX12IN3	
		Normally Closed 3 Wire 180
HPX12IN3R	VPX12IN3R	
		Normally Open 3 Wire with connector
HPX11IN3C	VPX11IN3C	
		Normally Open 3 Wire 180 with connector
HPX11IN3RC	VPX11IN3RC	
		Normally Closed 3 Wire with connector
HPX12IN3C	VPX12IN3C	
		Normally Closed 3 Wire 180 with connector
HPX12IN3RC	VPX12IN3RC	

CAPACITIVE SWITCHES

Horizontal Symbol	Vertical Symbol	Description
		Capacitive
HPX1C	VPX1C	
		Capacitive Switch, Normally Open
HPX11C	VPX11C	
		Capacitive Switch, Normally Closed
HPX12C	VPX12C	
		Normally Open 3 Wire
HPX11C3	VPX11C3	




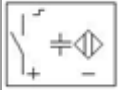

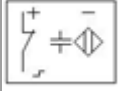
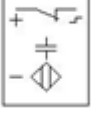
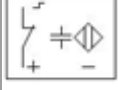
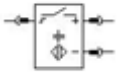
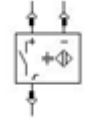
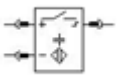
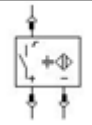
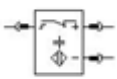
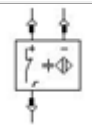

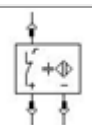
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






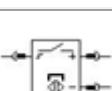







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 HPX11C3R	 VPX11C3R	Normally Open 3 Wire 180
 HPX12C3	 VPX12C3	Normally Closed 3 Wire
 HPX12C3R	 VPX12C3R	Normally Closed 3 Wire 180
 HPX11C3C	 VPX11C3C	Normally Open 3 Wire with connector
 HPX11C3RC	 VPX11C3RC	Normally Open 3 Wire 180 with connector
 HPX12C3C	 VPX12C3C	Normally Closed 3 Wire with connector
 HPX12C3RC	 VPX12C3RC	Normally Closed 3 Wire 180 with connector

MAGNETIC SWITCHES

Horizontal Symbol	Vertical Symbol	Description
 HPX1M	 VPX1M	Magnetic
 HPX11M	 VPX11M	Magnetic Proximity Switch, Normally Open
 HPX12M	 VPX12M	Magnetic Proximity Switch, Normally Closed
 HPX11M3	 VPX11M3	Normally Open 3 Wire
 HPX11M3R	 VPX11M3R	Normally Open 3 Wire 180
 HPX12M3	 VPX12M3	Normally Closed 3 Wire
 HPX12M3R	 VPX12M3R	Normally Closed 3 Wire 180
 HPX11M3C	 VPX11M3C	Normally Open 3 Wire with connector
 HPX11M3RC	 VPX11M3RC	Normally Open 3 Wire 180 with connector
 HPX12M3C	 VPX12M3C	Normally Closed 3 Wire with connector
 HPX12M3RC	 VPX12M3RC	Normally Closed 3 Wire 180 with connector



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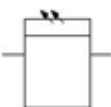
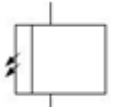
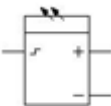
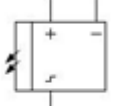
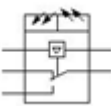
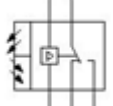
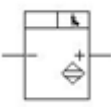
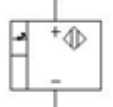
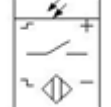


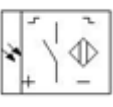

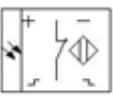

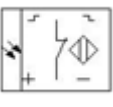
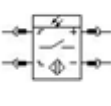
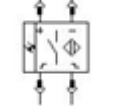
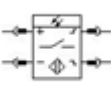
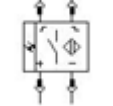
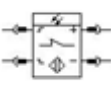
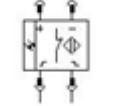


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PHOTOELECTRIC EMITTER SWITCHES

Horizontal Symbol	Vertical Symbol	Description
 HPE1B14	 VPE1B14	Emitter - AC Driven
 HPE1B15	 VPE1B15	Emitter - DC Driven
 HPE13B16SC	 VPE13B16SC	Emitter - Receiver with Form C
 HPE1B20	 VPE1B20	Emitter - DC Driven
 HPE11PE4	 VPE11PE4	Normally Open 4 wire
 HPE11PE4R	 VPE11PE4R	Normally Open 4 wire 180
 HPE12PE4	 VPE12PE4	Normally Closed 4 wire
 HPE12PE4R	 VPE12PE4R	Normally Closed 4 wire 180
 HPE11PE4C	 VPE11PE4C	Normally Open 4 wire with connector
 HPE11PE4RC	 VPE11PE4RC	Normally Open 4 wire 180 with connector
 HPE12PE4C	 VPE12PE4C	Normally Closed 4 wire with connector




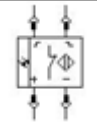
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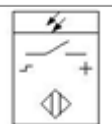

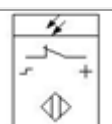
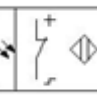

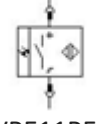

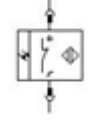


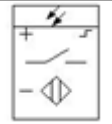

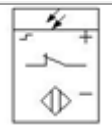
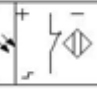
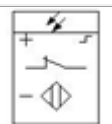
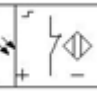
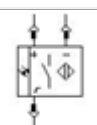
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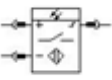
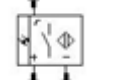
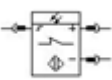
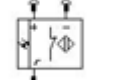
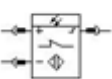
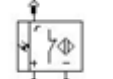
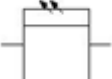


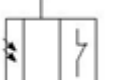

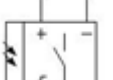

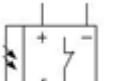


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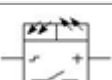
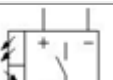
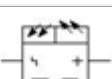
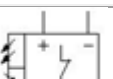
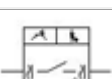
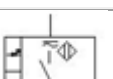
 HPE12PE4RC	 VPE12PE4RC	Normally Closed 4 wire 180 with connector
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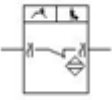
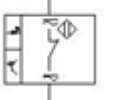

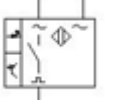

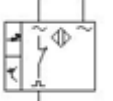

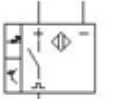
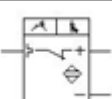
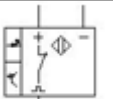
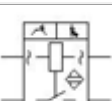

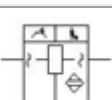
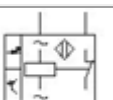
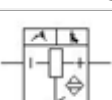

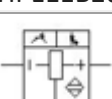
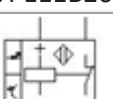
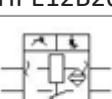
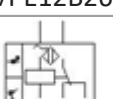

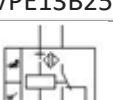
PHOTOELECTRIC RECEIVER SWITCHES

Horizontal Symbol	Vertical Symbol	Description
 HPE11PE2	 VPE11PE2	Normally Open Receiver 2 wire
 HPE12PE2	 VPE12PE2	Normally Closed Receiver 2 wire
 HPE11PE2C	 VPE11PE2C	Normally Open Receiver 2 wire with connector
 HPE12PE2C	 VPE12PE2C	Normally Closed Receiver 2 wire with connector
 HPE11PE3	 VPE11PE3	Normally Open Receiver 3 wire
 HPE11PE3R	 VPE11PE3R	Normally Open Receiver 3 wire 180
 HPE12PE3	 VPE12PE3	Normally Closed Receiver 3 wire
 HPE12PE3R	 VPE12PE3R	Normally Closed Receiver 3 wire 180
 HPE11PE3C	 VPE11PE3C	Normally Open Receiver 3 wire with connector

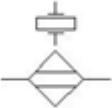



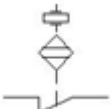
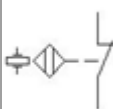
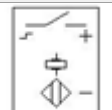
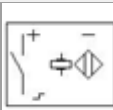
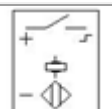
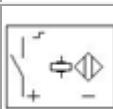
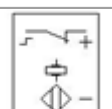
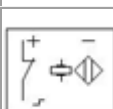
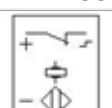
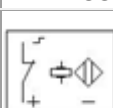
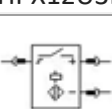
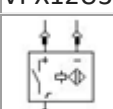

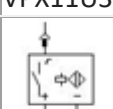
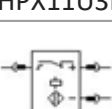
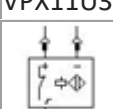
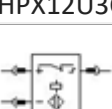
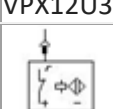
		Normally Open Receiver 3 wire 180 with connector
		Normally Closed Receiver 3 wire with connector
		Normally Closed Receiver 3 wire 180 with connector
		Normally Open Receiver - AC Driven
		Normally Closed Receiver - AC Driven
		Normally Open Receiver - DC Driven
		Normally Closed Receiver - DC Driven

PHOTOELECTRIC EMITTER/RECEIVER SWITCHES

Horizontal Symbol	Vertical Symbol	Description
		Normally Open Emitter-Receiver - DC Driven
		Normally Closed Emitter-Receiver - DC Driven
		Normally Open Emitter-Receiver AC/DC Driven 2 PIN

 HPE12B22	 VPE12B22	Normally Closed Emitter-Receiver AC/DC Driven 2 PIN
 HPE11B23	 VPE11B23	Normally Open Emitter-Receiver AC Driven 3 PIN
 HPE12B23	 VPE12B23	Normally Closed Emitter-Receiver AC Driven 3 PIN
 HPE11B24	 VPE11B24	Normally Open Emitter-Receiver DC Driven 3 PIN
 HPE12B24	 VPE12B24	Normally Closed Emitter-Receiver DC Driven 3 PIN
 HPE11B25	 VPE11B25	Normally Open Emitter-Receiver AC Driven 4 PIN
 HPE12B25	 VPE12B25	Normally Closed Emitter-Receiver AC Driven 4 PIN
 HPE11B26	 VPE11B26	Normally Open Emitter-Receiver DC Driven 4 PIN
 HPE12B26	 VPE12B26	Normally Closed Emitter-Receiver DC Driven 4 PIN
 HPE13B25SC	 VPE13B25SC	FORM C Emitter-Receiver AC Driven 5 PIN
 HPE13B26SC	 VPE13B26SC	FORM C Emitter-Receiver DC Driven 5 PIN

ULTRASONIC SWITCHES

Horizontal Symbol	Vertical Symbol	Description
 HPX1U	 VPX1U	Ultrasonic
 HPX11U	 VPX11U	Ultrasonic Switch, Normally Open
 HPX12U	 VPX12U	Ultrasonic Switch, Normally Closed
 HPX11U3	 VPX11U3	Normally Open 3 Wire
 HPX11U3R	 VPX11U3R	Normally Open 3 Wire 180
 HPX12U3	 VPX12U3	Normally Closed 3 Wire
 HPX12U3R	 VPX12U3R	Normally Closed 3 Wire 180
 HPX11U3C	 VPX11U3C	Normally Open 3 Wire with connector
 HPX11U3RC	 VPX11U3RC	Normally Open 3 Wire 180 with connector
 HPX12U3C	 VPX12U3C	Normally Closed 3 Wire with connector
 HPX12U3RC	 VPX12U3RC	Normally Closed 3 Wire 180 with connector



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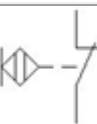
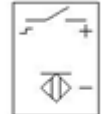
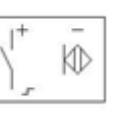
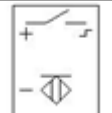

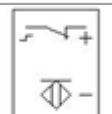
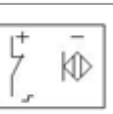
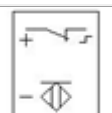
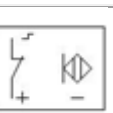
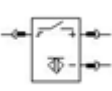
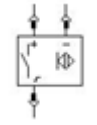
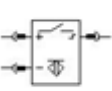
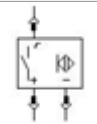
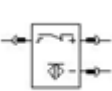
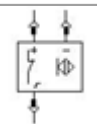
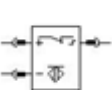
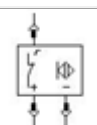


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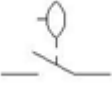

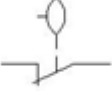

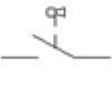
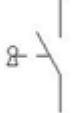
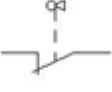
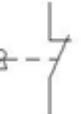
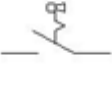

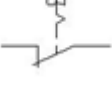

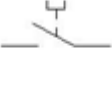

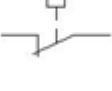

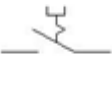



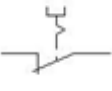

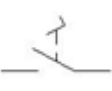

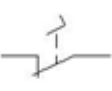

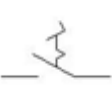

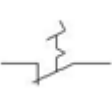

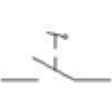
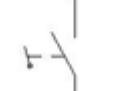

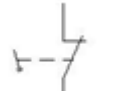

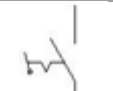

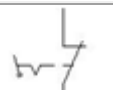
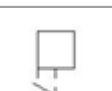

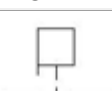
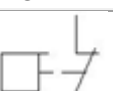
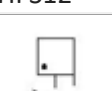
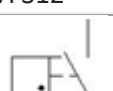
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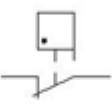

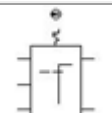
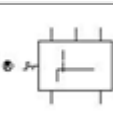
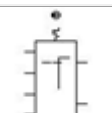
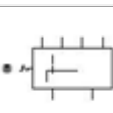
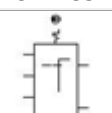
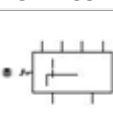
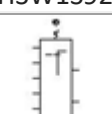
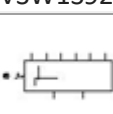
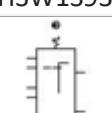
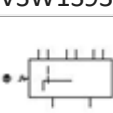
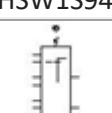

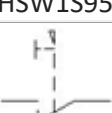


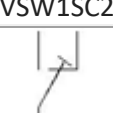


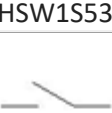

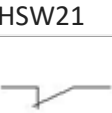
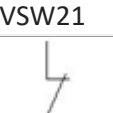
TOUCH SWITCHES

Horizontal Symbol	Vertical Symbol	Description
		Touch
HPX1TS	VPX1TS	
		Touch Sense Proximity Switch, Normally Open
HPX11TS	VPX11TS	
		Touch Sense Proximity Switch, Normally Closed
HPX12TS	VPX12TS	
		Normally Open 3 Wire
HPX11TS3	VPX11TS3	
		Normally Open 3 Wire 180
HPX11TS3R	VPX11TS3R	
		Normally Closed 3 Wire
HPX12TS3	VPX12TS3	
		Normally Closed 3 Wire 180
HPX12TS3R	VPX12TS3R	
		Normally Open 3 Wire with Connector
HPX11TS3C	VPX11TS3C	
		Normally Open 3 Wire 180 with Connector
HPX11TS3RC	VPX11TS3RC	
		Normally Closed 3 Wire with Connector
HPX12TS3C	VPX12TS3C	
		Normally Closed 3 Wire 180 with connector
HPX12TS3RC	VPX12TS3RC	

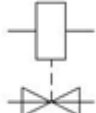
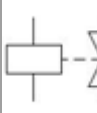
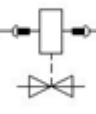
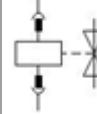
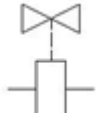
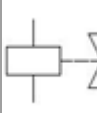
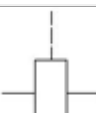
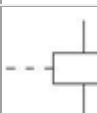
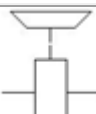
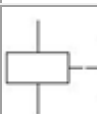


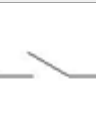



MISCELLANEOUS SWITCHES

Horizontal Symbol	Vertical Symbol	Description
 HSW11	 VSW11	Generic Switch, Normally Open
 HSW12	 VSW12	Generic Switch, Normally Closed
 HFL11	 VFL11	Float/Level Switch, Normally Open
 HFL12	 VFL12	Float/Level Switch, Normally Closed
 HPB11KS	 VPB11KS	Key Switch, Normally Open
 HPB12KS	 VPB12KS	Key Switch, Normally Closed
 HPB11KSL	 VPB11KSL	Key Switch Latched, Normally Open
 HPB12KSL	 VPB12KSL	Key Switch Latched, Normally Closed
 HPC11	 VPC11	Pull Cord Switch, Normally Open
 HPC12	 VPC12	Pull Cord Switch, Normally Closed
 HPC11L	 VPC11L	Pull Cord Switch Latched, Normally Open


















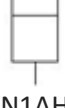




		Pull Cord Switch Latched, Normally Closed
		Foot Switch, Normally Open
		Foot Switch, Normally Closed
		Foot Switch Latched, Normally Open
		Foot Switch Latched, Normally Closed
		Lever Switch, Normally Open
		Lever Switch, Normally Closed
		Lever Switch Latched, Normally Open
		Lever Switch Latched, Normally Closed
		Flow Switch Normally Open
		Flow Switch Normally Closed
		Flow Switch Normally Open - Gas







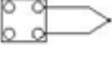

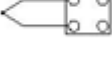







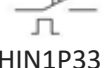
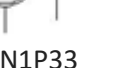


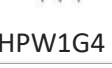
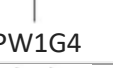
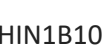
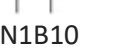
 HFS12S20	 VFS12S20	Flow Switch Normally Closed - Gas
 HSW1S90	 VSW1S90	3 Voltage Phase Switch
 HSW1S91	 VSW1S91	3 Voltage Phase-to-Neutral Switch
 HSW1S92	 VSW1S92	3 Voltage Phase-to-Phase and Phase-to-Neutral Switch
 HSW1S93	 VSW1S93	3 Voltage, 2-Network Phase-to-Phase Switch
 HSW1S94	 VSW1S94	Current Switch For 3 Measurement Points
 HSW1S95	 VSW1S95	Current Switch For 4 Measurement Points
 HSW1SC21_F	 VSW1SC21_F	Change-Over Contact with Mechanical Block and Manual Unlatching
 HSW1SC7_F	 VSW1SC7_F	Transfer Make Before Break Contact
 HSW1S53	 VSW1S53	Voltmetric Commutator
 HSW21	 VSW21	2nd+ Normally Open Contact
 HSW22	 VSW22	2nd+ Normally Closed Contact

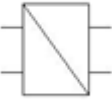
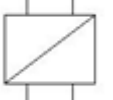






SOLENOIDS

Horizontal Symbol	Vertical Symbol	Description
 HSV1	 VSV1	Standard Solenoid Valve
 HSVC1	 V SVC1	Standard Solenoid Valve with Connection
 HSV1Y1	 VSV1Y1	Open Solenoid Valve - Closing
 HSV1Y1A	 VSV1Y1A	Open Solenoid Valve - Closing According to Solenoid
 HSV1Y3	 VSV1Y3	Magnetic Brake
 HSV1Y4	 VSV1Y4	Electromagnetic Brake
 HSV21	 VSV21	Solenoid Valve Auxiliary Normally Open Contact
 HSV22	 VSV22	Solenoid Valve Auxiliary Normally Closed Contact

INSTRUMENTATION AND SENSORS


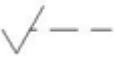


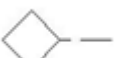

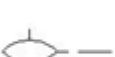


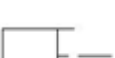


Horizontal Symbol	Vertical Symbol	Description
 HVM1	 VVM1	Voltage Meter
 HAM1	 VAM1	Amperage Meter
 HIN1PFM	 VIN1PFM	Power Factor Meter
 HIN1PHM	 VIN1PHM	Phase Meter
 HIN1FRM	 VIN1FRM	Frequency Meter
 HIN1THM	 VIN1THM	Thermometer
 HIN1TAC	 VIN1TAC	Tachometer
 HIN1HRM	 VIN1HRM	Hour Meter
 HIN1AHM	 VIN1AHM	Ampere-Hour meter
 HIN1P17	 VIN1P17	Recording Wattmeter
 HIN1P21	 VIN1P21	Varmeter







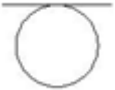





		Synchronoscope
		Thermocouple
		Thermocouple
		Thermocouple with Terminal Board
		Thermocouple with Terminal Board
		Active Power Indicator
		Thermometer/Pyrometer
		Clock
		Normally Open Clock Closing Every Minute
		Differential Voltmeter
		Accumulator Battery
		Pressure/Current Converter

 HIN1G1	 VIN1G1	AC-DC Current Converter Single Phase
 HIN1B11	 VIN1B11	Tachometric Dynamo
 HIN1B12	 VIN1B12	Tachometric Dynamo - Impulse
 HIN1B13	 VIN1B13	Tachometric Dynamo - Optical Type

OPERATING DEVICES

Symbol	Description
 Q070109	Positive Operation Direction
 Q021301	Manual Command General Sign
 Q021302	Manual Command with Protected Access
 Q021305	Push Button Command
 Q021308	Emergency Command
 Q021304	Rotary Command

 Q021313	Command with Key
 Q021310	Foot Actuated Command
 Q021311	Lever Command
 Q021214	Crank Command
 Q021312	Fixed Manual Command
 Q021309	Manual Command with Wheel
 Q021401	Actuated by the Level of a Fluid
 Q021402	Actuated by the Number of Events
 Q021403	Actuated by a Flow of Fluid
 Q021404	Actuated by a Gas Flow
 Q021326	Motorized Command
 Q021327	Timing Command

 Q021315	Command with Roll
 Q021316	Command with Cam
 Q021317	Cam Profile
 Q070106	Switch Position Function
 Q070106R	Switch Position (Flipped)
 Q070103	Disconnecter Isolator
 Q070104	Switch Disconnecter Isolator
 Q070102	Circuit Breaker Function
 Q070101	Power Contactor Function
 Q070105	Auto Trip Function
 Q070107	Auto Return (Spring Return)
 Q070108	Non Auto Return (Stay)



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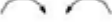




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LINEAR DIRECTION OF FORCE OR MOTION

Symbol	Description
 Q020401	One Way Force Or Movement
 Q020402	Two Way Force Or Movement
 Q101101	Transition

ROTATIVE DIRECTION OF FORCE OR MOTION

Symbol	Description
 Q020403	One Way Force Or Movement
 Q020404	Two Way Force Or Movement
 Q020405	Limited Two Way Force Or Movement



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PROPAGATION FLOW OR SIGNAL

Symbol	Description
 Q020501	One Way Propagation
 Q020502	Two Way Simultaneous Transmission Propagation
 Q020503	Two Way Alternate Transmission Propagation
 Q020504	Signal Transmission
 Q020505	Signal Reception

ENERGY FLOW

Symbol	Description
 Q020506	Outbound Energy Flux
 Q020507	Inbound Energy Flux
 Q020508	Inbound and Outbound Energy Flux



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EFFECT

Symbol	Description
 Q020801	Thermal Effect
 Q020802	Magnetic Effect
 Q020803	Magnetostriction Effect
 Q020804	Magnetic Field Effect









RADIATION

Symbol	Description
 Q020901	Non Ionizing Coherent Electromagnetic Radiation
 Q020902	Non Ionizing Coherent Radiation
 Q020903	Ionizing Radiation

FAULT

Symbol	Description
 Q021701	Indication Of Presumed Location Of Failure
 Q021702	Failure For Lack Of Insulation

WINDING

Symbol	Description
 Q060201	2 Phase Winding
 Q060202	3 Phase Partial V Winding
 Q060203	4 Phase Winding with Accessible Ground
 Q060204	3 Phase T Winding
 Q060205	3 Phase Delta Winding
 Q060206	3 Phase Open Delta Winding
 Q060207	3 Phase Star Winding
 Q060208	3 Phase Star Winding with Accessible Ground



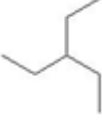








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 Q060209	3 Phase Zigzag Winding
 Q060210	Esaphase Winding with Double Delta
 Q060211	Esaphase Polygonal Winding
 Q060212	Esaphase Star Winding
 Q060213	Esaphase Double Zigzag Winding with Accessible Ground
 Q020201	DC Direct Current Indication
 Q020203	DC Direct Current Indication
 Q020212	Indication of Rectified Current with an Alternate Component
 Q020204	AC Alternate Current Indication



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MECHANICAL CONTROLS

Symbol	Description
 Q021207	Auto Return
 Q021208	Auto Non Return Stop Latch
 Q021209	Stop Latch in Neutral Position
 Q021210	Stop Latch Engaged
 Q021211	Interlock Between Two Devices





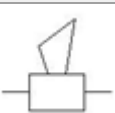
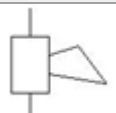
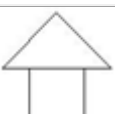

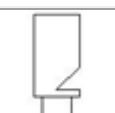
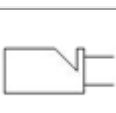

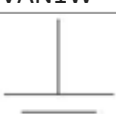



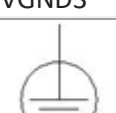

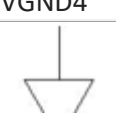
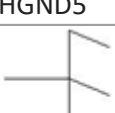

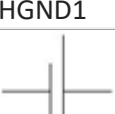
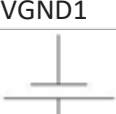
MECHANICAL CONTROLS, LATCHING DEVICE




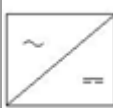
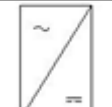
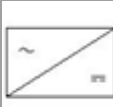
Symbol	Description
 Q021212	Latch Device Engaged
 Q021213	Latch Device in Neutral Position
 Q1020603	Two Ways Latch Device
 Q1020604	Latch Device with Manual Unlatching
 Q1029603	Two Ways Latch Device with Key

MECHANICAL CONTROLS, COUPLING



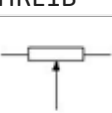
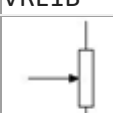
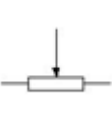
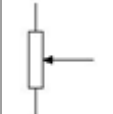
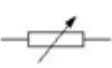

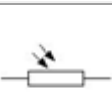
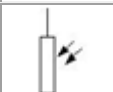
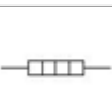

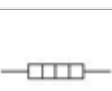

Symbol	Description
 Q021216	Clutch Joint
 Q021217	Disconnected Joint
 Q021218	Engaged Joint
 Q021219	Engaged Joint
 Q021223	Gear Joint



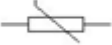

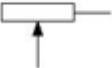

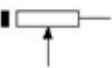

















MISCELLANEOUS

Horizontal Symbol	Vertical Symbol	Description
 HAN1B	 VAN1B	Bell
 HAN1Z	 VAN1Z	Buzzer
 HAN1H	 VAN1H	Horn
 HAN1S	 VAN1S	Siren
 HAN1W	 VAN1W	Whistle
 HGND2	 VGND2	Earth/Ground
 HGND3	 VGND3	Functional Earth
 HGND4	 VGND4	Protective Earth
 HGND5	 VGND5	Protective equipotential bond
 HGND1	 VGND1	Functional Equipotential Bond
 HBA1	 VBA1	Battery

 HBA1R	 VBA1R	Battery (Flipped)
 HPW1_1PH	 VPW1_1PH	Power Source 1 Phase
 HPW1_3PH	 VPW1_3PH	Power Source 3 Phase

ELECTRONICS

Horizontal Symbol	Vertical Symbol	Description
 HRE1B	 VRE1B	Fixed Resistor
 HVR1B	 VVR1B	Variable Resistor
 HVR1BR	 VVR1BR	Variable Resistor
 HVR1R2	 VVR1R2	Variable Resistor 2
 HRE1LDR	 VRE1LDR	Light dependent
 HRE1HT	 VRE1HT	Heater Element
 HRE2HT	 VRE2HT	2nd+ Element

 HRE1RCN	 VRE1RCN	RC Network
 HVR1R3	 VVR1R3	Varistor
 HVR1R4	 VVR1R4	Resistor with Mobile Contact
 HVR1R5	 VVR1R5	Resistor with Mobile Contact and Disconnecting Position
 HVR1R7	 VVR1R7	Shunt
 HVR1R8	 VVR1R8	Variable Resistor with Carbon Disks
 HDI1	 VDI1	Diode
 HDI1R	 VDI1R	Diode 180
 HDI1B4	 VDI1B4	Diode Photosensitive
 HDI1B5	 VDI1B5	Diode Photosensitive 2
 HDI1V2	 VDI1V2	Zener Diode - One Way
 HDI1V3	 VDI1V3	Diac Diode - Two Way











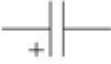
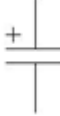
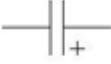
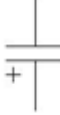
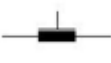

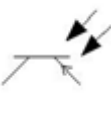

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		Bridge rectifier
HDI1BR	VDI1BR	
		3 Phase Bridge Rectifier
HDI1V5	VDI1V5	
		SCR
HDI1V4	VDI1V4	
		Capacitor
HCA1	VCA1	
		Electrolytic
HCA1EL	VCA1EL	
		Electrolytic 180
HCA1ELR	VCA1ELR	
		Feedthrough Capacitor
HCA1C2	VCA1C2	
		Photosensitive PNP Transistor
HDV1B6	VDV1B6	



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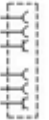
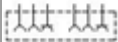
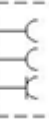



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CABLE MARKERS

Horizontal Symbol	Vertical Symbol	Description
 HW01	 VW01	Cable Marker
 HW02	 VW02	2nd+ Child Marker
 HT0_CABLE	 VT0_CABLE	Extra Marker
 HT0_TW	 VT0_TW	Twisted Pair

POWER RECEPTACLES

Horizontal Symbol	Vertical Symbol	Description
 HCN1RDUP	 VCN1RDUP	Duplex Receptacle
 HCN1RSGL	 VCN1RSGL	Single Receptacle

GENERIC DEVICE BOXES

Horizontal Symbol	Vertical Symbol	Description
 HDV1TFL	 VDV1TFL	4 Terminals
 HDV1TC	 VDV1TC	3 Terminals
 HDV1TB	 VDV1TB	3 Terminals
 HDV1T6	 VDV1T6	2 Terminals
 HDV1TF	 VDV1TF	4 Terminals
 HDV1TE	 VDV1TE	3 Terminals
 HDV1T7	 VDV1T7	3 Terminals



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STAND-ALONE CROSS-REFERENCE SYMBOLS

Symbol	Description	
 HA2S1_REF	Source Rectangle	
 HA3S1_REF	Source Hexagon	
 HA5S1_REF	Source Ellipse	
 HA2D1_REF	Destination Rectangle	
 HA3D1_REF	Destination Hexagon	
 HA5D1_REF	Destination Ellipse	



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WIRE ARROWS - REFERENCE ONLY

Symbol	Description	
 HA1X1	Generic Arrow - Left	
 HA1X2	Generic Arrow - Up	
 HA1X3	Generic Arrow - Right	
 HA1X4	Generic Arrow - Down	
 HA1X1Y	Arrow Tail - Left	
 HA1X2Y	Arrow Tail - Up	
 HA1X3Y	Arrow Tail - Right	
 HA1X4Y	Arrow Tail - Down	



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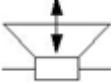





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SPLICE SYMBOLS

Horizontal Symbol	Vertical Symbol	Description
 HSP1001	 VSP1001	Splice

ANNUNCIATIONS

Horizontal Symbol	Vertical Symbol	Description
 HAN1B7	 VAN1B7	Loudspeaker
 HAN1B8	 VAN1B8	Loudspeaker - Microphone
 HAN1B9	 VAN1B9	Microphone



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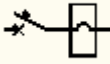

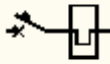

















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ONE-LINE CONNECTOR





Horizontal Symbol	Vertical Symbol	Description
 HC01PJ_1-	 VC01PJ_1-	Jack/Plug

ONE-LINE MOTOR CONTROL





Horizontal Symbol	Vertical Symbol	Description
 HCB11_1-	 VCB11_1-	Circuit breaker
 HCB11_1M-	 VCB11_1M-	Motor circuit protector
 HCB11TH_1-	 VCB11TH_1-	Thermal circuit breaker
 HDS11_1-	 VDS11_1-	Disconnect
 HDS11F_1-	 VDS11F_1-	Fused disconnect
 HFU1_1-	 VFU1_1-	Fuse
 HMO13_1-	 VMO13_1-	Motor
 HMS11_1-	 VMS11_1-	Motor starter
 HMS11_1-	 VMS11_1-	Overload

HOL1_1-	VOL1_1-	
		Capacitor
HCA113_1-	VCA113_1-	



ONE-LINE TRANSFORMER

Horizontal Symbol	Vertical Symbol	Description
		Transformer 1
HXF1_1-	VXF1_1-	
		Transformer 2
HXF2_1-	VXF2_1-	

ONE-LINE TERMINAL







Horizontal Symbol	Vertical Symbol	Description
		Square terminal
HT0001_1-	VT0001_1-	
		Round terminal
HT0002_1-	VT0002_1-	

ONE-LINE CABLE MARKER





Horizontal Symbol	Vertical Symbol	Description
		Cable marker
HW01_1-	VW01_1-	



ONE-LINE BUS-TAP

Horizontal Symbol	Vertical Symbol	Description
 HDV1_BT_1-	 VDV1_BT_1-	Bus-tap - main/dot
 HDV1_BTT_1-	 VDV1_BTT_1-	Bus-tap - dual/tee
 HDV1_BTL_1-	 VDV1_BTL_1-	Bus-tap - dual/corner

ONE-LINE MISCELLANEOUS

Horizontal Symbol	Vertical Symbol	Description
 HC01WR_1-	 VC01WR_1-	Power receptacle
 HDV1_1-	 VDV1_1-	Generic load