

TORIN SYSTEM USER MANUAL



Version 1.03

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Introduction

The TORIN System is a general-purpose power distribution industrial control panel which can control both AC & DC power to multiple devices/systems in a variety of industrial control applications.

The TORIN system features an Automation Direct CLICK Ethernet series PLC inside. This PLC can be programmed using the free [CLICK Programming Software](#).

The TORIN system is fully connectorized to allow for quick and fast on-site installation. A total of 17 Amphenol industrial circular connectors are used to interface with the 70 different I/O channels. Corresponding plugs, cable claps, pins, and circular metal dust caps included with the system.

Additional connectors include (x2) Cat6a RJ45 inline coupling connectors for Ethernet TCP/IP interfacing. These ports allow for interfacing with the CLICK Ethernet PLC, the 15.6" Advantech PC HMI (optional), the Antaira Industrial IEEE 2.4GHz wireless repeater/bridge (optional), and the STRIDE 5-port industrial smart ethernet switch.

The TORIN system features an optional APC 325W / 500VA UPS. This allows the TORIN system to operate under maximum load for 15 minutes uninterrupted. This UPS features simple battery replacement technology that allows replacement even while the UPS is operating on utility power. The UPS is internally connected to the 15.6" Advantech PC HMI through RS232 communication.

The optional 15.6" Advantech PC HMI features Multi-touch screen, Intel N4200 Quad-Core, an SQF mSATA 640 256G MLC (-40~85°C) SSD, 8GB (1 x 8GB) DDR3L-1600MHz 204PIN 512x8 Memory, and full Microsoft® Windows® 10 IoT Enterprise LTSC Entry EPKEA. An optional Amphenol USB 3.0 circular coupler is included for USB connectivity.

For inquiries or technical support please contact us directly at info@valkyriecontrols.com

Technical Specifications

The TORIN System's technical specifications may vary from version to version. The Premium TORIN System's specifications are listed in the following table. The following specifications are for the range of -15 °C to 45 °C unless otherwise noted.

Table 1. TORIN System's Technical Specifications

Digital Outputs	(x24) Dry Contact Relay Outputs rated for 7A/Point (x6) Fused 24VDC Powered Outputs rated for 0.5A/Point
Digital Inputs	(x4) High Speed (100Hz) 24VDC Fused Sourcing Inputs (x36) 24VDC Fused Sourcing Inputs
Ethernet Connectivity	(x2) RJ45 GbE (Fiber Option available)
USB Connectivity	(x1) USB 3.0 Superspeed, Type A Connector
UPS Output Capacity	500 VA/ 325 W (15 minutes at max load)
Power Input	82-144VAC 120VAC Nominal 45 – 65Hz; Auto-Selecting
PLC Configuration	(x1) Automation Direct CLICK Koyo Ethernet Standard PLC; C0-11DRE-D (x6) 4-Point Relay Output Module; C0-04TRS (x2) 16-Point Sink/Source DC Input Module; C0-16ND3

HMI Touch Panel	Advantech 15.6" Fanless Touch Panel PC; PPC-3150SW-PN4A
Antenna	One External SMA Antenna, 5dBi for 2.4GHz (SISO)
Operating Temperature	+32 to 104 °F (0 to 40 °C)
Storage Temperature	+5 to 113 °F (-15 to 45 °C)
Physical Dimensions	30" x 24" x 10"
I/O Interface	Amphenol Circular Connectors; (x10) MS3470L16-8SW (x1) MS3470L20-16SX (x6) MS3470L22-12SX

Hardware List

(x1) Automation Direct CLICK Koyo Ethernet Standard PLC; C0-11DRE-D



(x6) 12-pin circular MIL Spec connector; MS3470L22-12SX



(x10) 8-pin circular MIL Spec connector; MS3470L16-8SX



(x6) 4-Point Relay Output Module; C0-04TRS



(x1) 16-pin circular MIL Spec connector; MS3470L20-16SX



(x2) 16-Point Sink/Source DC Input Module; C0-16ND3



(x1) APC DIN rail-control panel UPS 500 VA / 325W



(x1) External SMA antenna, 5dBi for 2.4GHz



(x1) Advantech 15.6" Fanless Touch Panel PC; PPC-3150SW-PN4A



(x1) Automation Direct Stride Industrial Ethernet Switch; SE2-SW5UG-T



(x1) Hubbell-Wiegmann Ultimate series enclosure, NEMA 4/12/13, 24 x 30 x 10in (HxWxD), wall mount, carbon steel



(x2) CONEC Series Cat6a RJ45 Inline Coupler; 17-150134



(x6) Shell Size 22 Amphenol Standard Plug Assembly; MS3476L22-12PX



(x1) Amphenol USB 3.0 Circular Coupler; UA-30PMF-LD7B20



(x10) Shell Size 16 Amphenol Standard Plug Assembly; MS3476L16-08PX



(x1) Antaira Industrial IEEE 802.11, 2.4GHz Wireless Repeater/Bridge; AMS-2111 Series



(x1) Shell Size 20 Amphenol Standard Plug Assembly; MS3476L20-16PX



PLC Module Configuration & Interfacing

The following tables and associated figures describe the PLC module configuration for the TORIN System. The module slot order & module wiring details are described in this section.

The following table describes the PLC module configuration of the TORIN System:

Table 2. TORIN System - PLC Module Configuration Summary

Chassis 1			
Chassis	# of Slots Used	Channel Count (Chassis I/O)	Associated Circular Connectors
C0-11DRE-D	8	14	7, 8, 17
Chassis 1 Modules			
Module	Slot #	Channel Count	Associated Circular Connectors
C0-04TRS	1	4	1
C0-04TRS	2	4	2
C0-04TRS	3	4	3
C0-04TRS	4	4	4
C0-04TRS	5	4	5
C0-04TRS	6	4	6
C0-16ND3	7	16	9, 10, 11, 12
C0-16ND3	8	16	13, 14, 15, 16

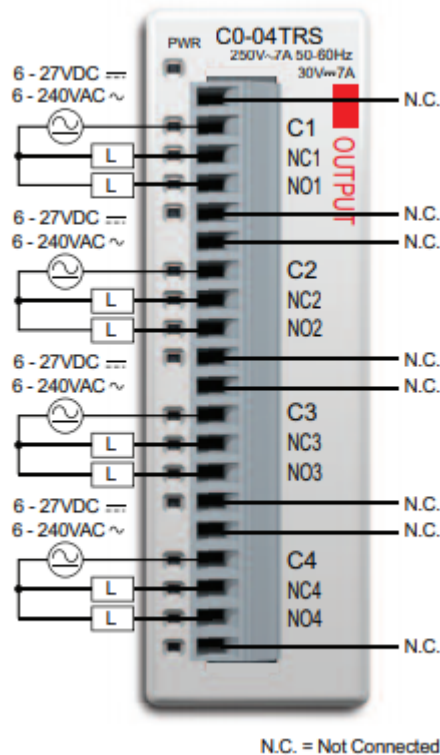
Digital Outputs Channel Pinout

4-Point Relay Output Module (C0-04TRS):

The CO-04TRS is a 4-pt 6-240 VAC/6-27 VDC Isolated relay output module, 4 Form C (SPDT) relays, 4 isolated commons, 7 A/point, removable terminal block included (replacement ADC p/n C0-16TB).

The following figure shows the wiring pinout & specifications for the Automation Direct C0-04TRS module:

Figure 1. Wiring Diagram & Specifications for C0-04TRS Module



Output Specifications	
Outputs per module	4
Operating voltage range	6-27 VDC / 6-240 VAC
Output voltage range	5-30 VDC / 5-264 VAC
Output type	Relay, form C (SPDT)
AC frequency	47-63 Hz
Maximum current	7 A/point, 7 A/common
Minimum load current	100 mA @ 5 VDC
Maximum leakage current	0.1 mA @ 264 VAC
Maximum inrush current	12 A
OFF to ON response	< 15 ms
ON to OFF response	< 15 ms
Status indicators	Logic side (4 points, red LED); Power indicator (green LED)
Commons	4 (1 point/common) isolated
Bus power required (24 VDC)	Maximum 100 mA (all outputs ON)
Protection circuit	None
Terminal block replacement	ADC p/n C0-16TB
Weight	44.4 oz (125g)

For additional information & specifications on the C0-04TRS module see [C0-04TRS 4-Point Relay Output.pdf](#)

The following table shows the associated pinout labels for all dry contact relay outputs channels for slots 1-6 of chassis 1:

Table 3. C0-04TRS Module Pinout Labels

C0-04TRS Modules			
Slot #	Channel #	Module Pinout Labels	Associated Circular Connector
1	1	Slot 1-C1 Slot 1-NC1 Slot 1-NO1	1 (Pins A & B & C)
1	2	Slot 1-C2 Slot 1-NC2 Slot 1-NO2	1 (Pins D & E & F)
1	3	Slot 1-C2 Slot 1-NC2 Slot 1-NO2	1 (Pins G & H & J)
1	4	Slot 1-C2 Slot 1-NC2 Slot 1-NO2	1 (Pins K & L & M)
2	1	Slot 2-C1 Slot 2-NC1 Slot 2-NO1	2 (Pins A & B & C)
2	2	Slot 2-C2 Slot 2-NC2 Slot 2-NO2	2 (Pins D & E & F)
2	3	Slot 2-C2 Slot 2-NC2 Slot 2-NO2	2 (Pins G & H & J)
2	4	Slot 2-C2 Slot 2-NC2 Slot 2-NO2	2 (Pins K & L & M)
3	1	Slot 3-C1 Slot 3-NC1 Slot 3-NO1	3 (Pins A & B & C)

C0-04TRS Modules (Continued)			
Slot #	Channel #	Module Pinout Labels	Associated Circular Connector
3	2	Slot 3-C2 Slot 3-NC2 Slot 3-NO2	3 (Pins D & E & F)
3	3	Slot 3-C2 Slot 3-NC2 Slot 3-NO2	3 (Pins G & H & J)
3	4	Slot 3-C2 Slot 3-NC2 Slot 3-NO2	3 (Pins K & L & M)
4	1	Slot 4-C1 Slot 4-NC1 Slot 4-NO1	4 (Pins A & B & C)
4	2	Slot 4-C2 Slot 4-NC2 Slot 4-NO2	4 (Pins D & E & F)
4	3	Slot 4-C2 Slot 4-NC2 Slot 4-NO2	4 (Pins G & H & J)
4	4	Slot 4-C2 Slot 4-NC2 Slot 4-NO2	4 (Pins K & L & M)
5	1	Slot 5-C1 Slot 5-NC1 Slot 5-NO1	5 (Pins A & B & C)
5	2	Slot 5-C2 Slot 5-NC2 Slot 5-NO2	5 (Pins D & E & F)
5	3	Slot 5-C2 Slot 5-NC2 Slot 5-NO2	5 (Pins G & H & J)
5	4	Slot 5-C2 Slot 5-NC2 Slot 5-NO2	5 (Pins K & L & M)

C0-04TRS Modules (Continued)			
Slot #	Channel #	Module Pinout Labels	Associated Circular Connector
6	1	Slot 6-C1 Slot 6-NC1 Slot 6-NO1	6 (Pins A & B & C)
6	2	Slot 6-C2 Slot 6-NC2 Slot 6-NO2	6 (Pins D & E & F)
6	3	Slot 6-C2 Slot 6-NC2 Slot 6-NO2	6 (Pins G & H & J)
6	4	Slot 6-C2 Slot 6-NC2 Slot 6-NO2	6 (Pins K & L & M)

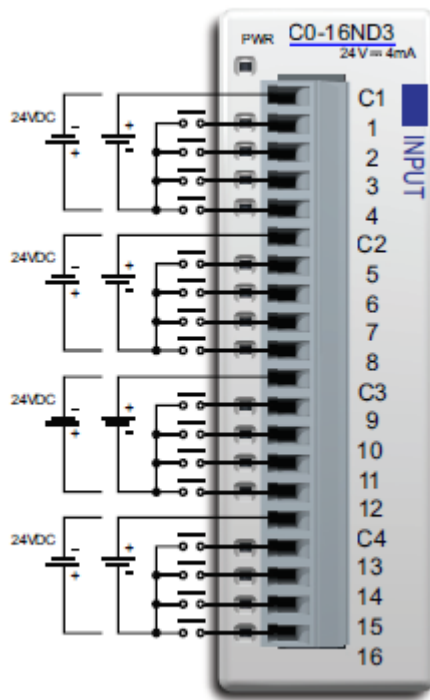
Digital Inputs Channel Pinout

16-Point Sink/Source DC Input Module (C0-16ND3):

16-pt 24VDC current sinking or sourcing input module, 4 commons, isolated, removable terminal block included (replacement ADC p/n C0-16TB).

The following figure shows the wiring pinout & specifications for the Automation Direct C0-16ND3 module:

Figure 2. Wiring Diagram & Specifications for C0-16ND3 Module



Input Specifications	
Inputs per module	16 (Sink/Source)
Input Voltage Range	21.6–26.4 VDC
Operating Voltage Range	24VDC
Input Current	Typ 4.0 mA @ 24VDC
Maximum Input Current	47-63 Hz
Input Impedance	6.8 k Ω @ 24VDC
ON Voltage Level	> 19VDC
OFF Voltage Level	< 7VDC
Minimum ON Current	3.5mA
Maximum OFF Current	0.5 mA
OFF to ON Response	Max. 10ms Typ. 2ms
ON to OFF Response	Max. 10ms Typ. 3ms
Status Indicators	Logic Side (16 points, green LED) Power Indicator (green LED)
Commons	4 (4 points/common) Isolated
Bus Power Required (24VDC)	Max. 40mA (All Inputs On)
Terminal Block Replacement	ADC p/n C0-16TB
Weight	3.2 oz (90g)

For additional information & specifications on the C0-16ND3 module see [C0-16ND3 16-Point Sink/Source DC Input Module.pdf](#)

The following table shows the associated pinout labels for all **sourcing** 24VDC digital input channels for slots 7 & 8 of chassis 1:

Table 4. C0-16ND3 Module Pinout Labels

C0-16ND3 Modules			
Slot #	Channel #	Module Pinout Labels	Associated Circular Connector
7	1	Slot 7-1 Slot 7-C1	9 (Pins A & B)
7	2	Slot 7-2 Slot 7-C1	9 (Pins C & D)
7	3	Slot 7-3 Slot 7-C1	9 (Pins E & F)
7	4	Slot 7-4 Slot 7-C1	9 (Pins G & H)
7	5	Slot 7-5 Slot 7-C2	10 (Pins A & B)
7	6	Slot 7-6 Slot 7-C2	10 (Pins C & D)
7	7	Slot 7-7 Slot 7-C2	10 (Pins E & F)
7	8	Slot 7-8 Slot 7-C2	10 (Pins G & H)
7	9	Slot 7-9 Slot 7-C3	11 (Pins A & B)
7	10	Slot 7-10 Slot 7-C3	11 (Pins C & D)
7	11	Slot 7-11 Slot 7-C3	11 (Pins E & F)
7	12	Slot 7-12 Slot 7-C3	11 (Pins G & H)

C0-16ND3 Modules (Continued)			
Slot #	Channel #	Module Pinout Labels	Associated Circular Connector
7	13	Slot 7-13 Slot 7-C4	12 (Pins A & B)
7	14	Slot 7-14 Slot 7-C4	12 (Pins C & D)
7	15	Slot 7-15 Slot 7-C4	12 (Pins E & F)
7	16	Slot 7-16 Slot 7-C4	12 (Pins G & H)
8	1	Slot 8-1 Slot 8-C1	13 (Pins A & B)
8	2	Slot 8-2 Slot 8-C1	13 (Pins C & D)
8	3	Slot 8-3 Slot 8-C1	13 (Pins E & F)
8	4	Slot 8-4 Slot 8-C1	13 (Pins G & H)
8	5	Slot 8-5 Slot 8-C2	14 (Pins A & B)
8	6	Slot 8-6 Slot 8-C2	14 (Pins C & D)
8	7	Slot 8-7 Slot 8-C2	14 (Pins E & F)
8	8	Slot 8-8 Slot 8-C2	14 (Pins G & H)
8	9	Slot 8-9 Slot 8-C3	15 (Pins A & B)
8	10	Slot 8-10 Slot 8-C3	15 (Pins C & D)
8	11	Slot 8-11 Slot 8-C3	15 (Pins E & F)

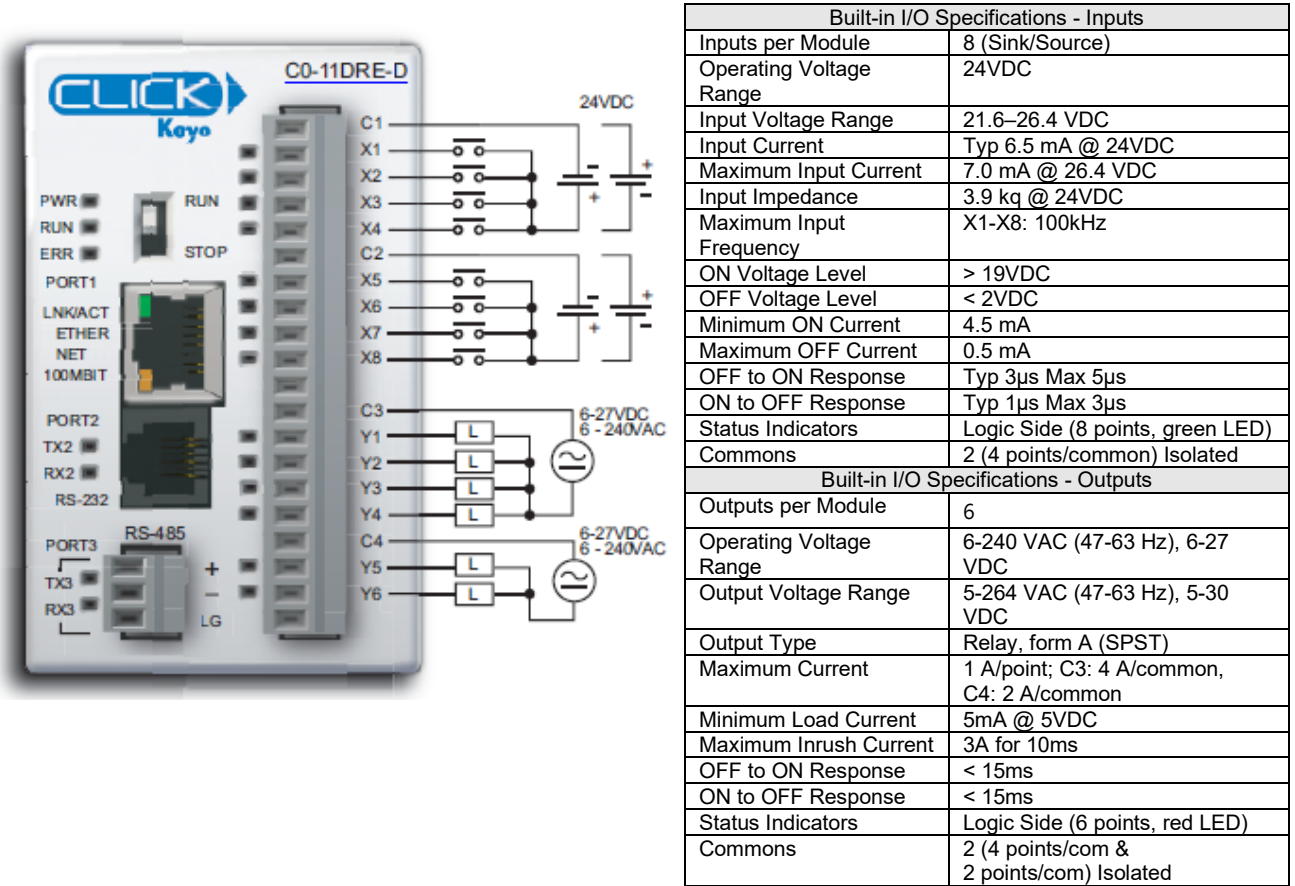
C0-16ND3 Modules (Continued)			
Slot #	Channel #	Module Pinout Labels	Associated Circular Connector
8	12	Slot 8-12 Slot 8-C3	15 (Pins G & H)
8	13	Slot 8-13 Slot 8-C4	16 (Pins A & B)
8	14	Slot 8-14 Slot 8-C4	16 (Pins C & D)
8	15	Slot 8-15 Slot 8-C4	16 (Pins E & F)
8	16	Slot 8-16 Slot 8-C4	16 (Pins G & H)

Chassis Inputs & Outputs Channel Pinout

8 DC Input / 6 Relay Output CLICK Ethernet Standard PLC (C0-11DRE-D):

The following figure shows the wiring pinout & specifications for the Automation Direct C0-11DRE-D PLC:

Figure 3. Wiring Diagram & Specifications for CO-11DRE-D PLC



For additional information & specifications on the C0-11DRE-D PLC see [C0-11DRE-D 8 DC Input / 6 Relay Output PLC.pdf](#)

The following table shows the associated pinout labels for all **Built-In I/O** channels for chassis 1 (C0-11DRE-D PLC):

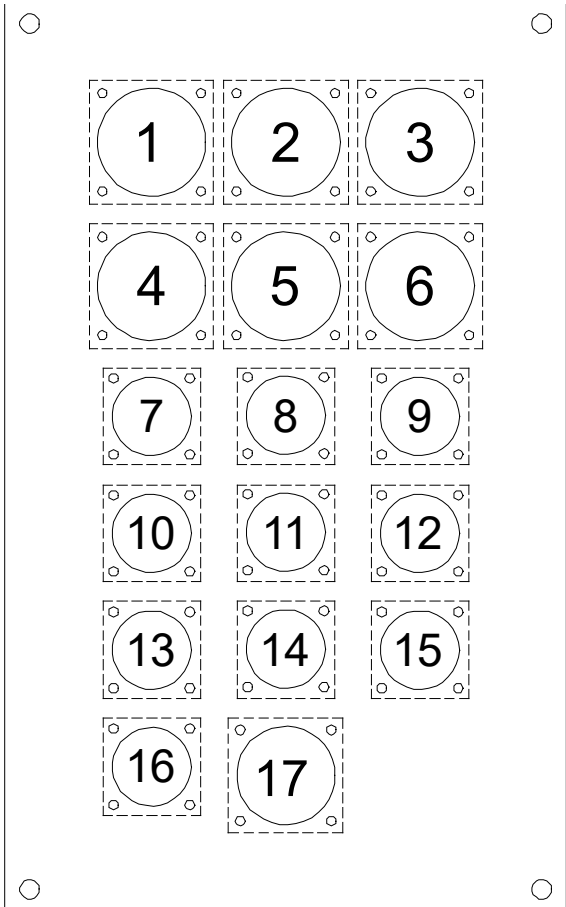
Table 5. C0-11DRE-D PLC Built-In I/O Pinout Labels

C0-11DRE-D PLC I/O (Sourcing Inputs)			
Chassis #	Channel #	Module Pinout Labels	Associated Circular Connector
1	1	Chas. 1-X1 Chas. 1-C1	7 (Pins A & B)
1	2	Chas. 1-X2 Chas. 1-C1	7 (Pins C & D)
1	3	Chas. 1-X3 Chas. 1-C1	7 (Pins E & F)
1	4	Chas. 1-X4 Chas. 1-C1	7 (Pins G & H)
1	5	Chas. 1-X5 Chas. 1-C2	8 (Pins A & B)
1	6	Chas. 1-X6 Chas. 1-C2	8 (Pins C & D)
1	7	Chas. 1-X7 Chas. 1-C2	8 (Pins E & F)
1	8	Chas. 1-X8 Chas. 1-C2	8 (Pins G & H)
C0-11DRE-D PLC I/O (Sourcing Outputs)			
1	1	Chas. 1-Y1 Chas. 1-C3	17 (Pins A & B)
1	2	Chas. 1-Y2 Chas. 1-C3	17 (Pins C & D)
1	3	Chas. 1-Y3 Chas. 1-C3	17 (Pins E & F)
1	4	Chas. 1-Y4 Chas. 1-C3	17 (Pins G & H)
1	5	Chas. 1-Y5 Chas. 1-C4	17 (Pins J & K)
1	6	Chas. 1-Y6 Chas. 1-C4	17 (Pins L & M)

Circular Connector Diagram

The TORIN System’s digital outputs are comprised of Amphenol circular connectors with an aluminum shell. The following layout illustrated in [Figure 4](#) will be referred to throughout the documentation. There are 6x 12-pin connectors (labelled 1 through 6), 10x 8-pin connectors (labelled 7 through 16), and 1x 16-pin connector (labelled 17).

Figure 4. Circular Connector layout on the TORIN System



Each connector has its pins labelled according to [Figure 5](#). Further details on the wiring for individual pins are provided in [Table 6](#).

Figure 5. Labelling convention for 8, 12, and 16-pin connectors

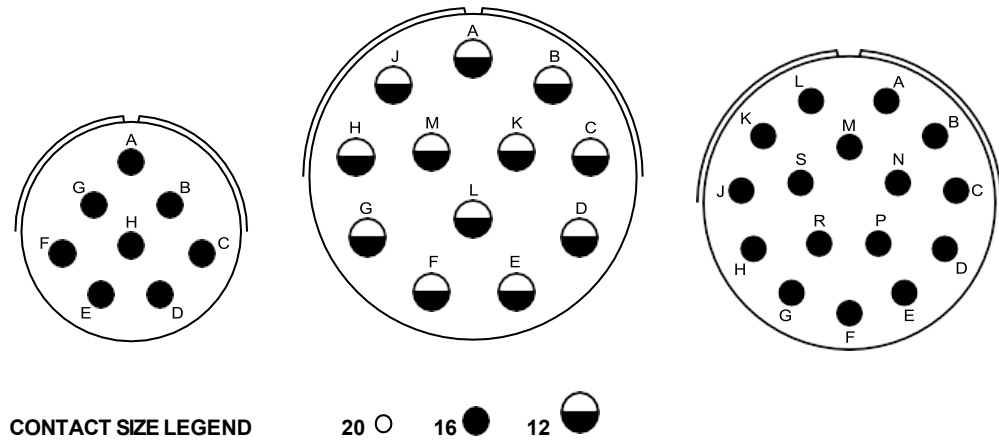


Table 6. Pinout for Connectors 1 through 6

Pin	Connector #					
	1	2	3	4	5	6
A	Slot 1-C1	Slot 2-C1	Slot 3-C1	Slot 4-C1	Slot 5-C1	Slot 6-C1
B	Slot 1-NC1	Slot 2-NC1	Slot 3-NC1	Slot 4-NC1	Slot 5-NC1	Slot 6-NC1
C	Slot 1-NO1	Slot 2-NO1	Slot 3-NO1	Slot 4-NO1	Slot 5-NO1	Slot 6-NO1
D	Slot 1-C2	Slot 2-C2	Slot 3-C2	Slot 4-C2	Slot 5-C2	Slot 6-C2
E	Slot 1-NC2	Slot 2-NC2	Slot 3-NC2	Slot 4-NC2	Slot 5-NC2	Slot 6-NC2
F	Slot 1-NO2	Slot 2-NO2	Slot 3-NO2	Slot 4-NO2	Slot 5-NO2	Slot 6-NO2
G	Slot 1-C3	Slot 2-C3	Slot 3-C3	Slot 4-C3	Slot 5-C3	Slot 6-C3
H	Slot 1-NC3	Slot 2-NC3	Slot 3-NC3	Slot 4-NC3	Slot 5-NC3	Slot 6-NC3
J	Slot 1-NO3	Slot 2-NO3	Slot 3-NO3	Slot 4-NO3	Slot 5-NO3	Slot 6-NO3
K	Slot 1-C4	Slot 2-C4	Slot 3-C4	Slot 4-C4	Slot 5-C4	Slot 6-C4
L	Slot 1-NC4	Slot 2-NC4	Slot 3-NC4	Slot 4-NC4	Slot 5-NC4	Slot 6-NC4
M	Slot 1-NO4	Slot 2-NO4	Slot 3-NO4	Slot 4-NO4	Slot 5-NO4	Slot 6-NO4

Table 7. Pinout for connectors 7 through 11

Pin	Connector #				
	7	8	9	10	11
A	Chas. 1-X1	Chas. 1-X5	Slot 7-1	Slot 7-5	Slot 7-9
B	Chas. 1-C1	Chas. 1-C2	Slot 7-C1	Slot 7-C2	Slot 7-C3
C	Chas. 1-X2	Chas. 1-X6	Slot 7-2	Slot 7-6	Slot 7-10
D	Chas. 1-C1	Chas. 1-C2	Slot 7-C1	Slot 7-C2	Slot 7-C3
E	Chas. 1-X3	Chas. 1-X7	Slot 7-3	Slot 7-7	Slot 7-11
F	Chas. 1-C1	Chas. 1-C2	Slot 7-C1	Slot 7-C2	Slot 7-C3
G	Chas. 1-X4	Chas. 1-X8	Slot 7-4	Slot 7-8	Slot 7-12
H	Chas. 1-C1	Chas. 1-C2	Slot 7-C1	Slot 7-C2	Slot 7-C3

Table 8. Pin out for connectors 12 through 16

Pin	Connector #				
	12	13	14	15	16
A	Slot 7-13	Slot 8-1	Slot 8-5	Slot 8-9	Slot 8-13
B	Slot 7-C4	Slot 8-C1	Slot 8-C2	Slot 8-C3	Slot 8-C4
C	Slot 7-14	Slot 8-2	Slot 8-6	Slot 8-10	Slot 8-14
D	Slot 7-C4	Slot 8-C1	Slot 8-C2	Slot 8-C3	Slot 8-C4
E	Slot 7-15	Slot 8-3	Slot 8-7	Slot 8-11	Slot 8-15
F	Slot 7-C4	Slot 8-C1	Slot 8-C2	Slot 8-C3	Slot 8-C4
G	Slot 7-16	Slot 8-4	Slot 8-8	Slot 8-12	Slot 8-16
H	Slot 7-C4	Slot 8-C1	Slot 8-C2	Slot 8-C3	Slot 8-C4

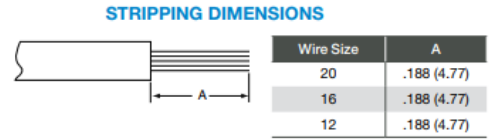
Table 9. Pinout for connector 17

Pin	Connector #
	17
A	Chas. 1-Y1
B	Chas. 1-C3
C	Chas. 1-Y2
D	Chas. 1-C3
E	Chas. 1-Y3
F	Chas. 1-C3
G	Chas. 1-Y4
H	Chas. 1-C3
J	Chas. 1-Y5
K	Chas. 1-C4
L	Chas. 1-Y6
M	Chas. 1-C4
N	—
P	—
R	—
S	—

Assembly Instructions Military (MS3476)

WIRE STRIPPING

- Strip wire to required length. (See Figure at right). When using hot wire stripping do not wipe melted insulation material on wire strands; with mechanical strippers do not cut or nick strands.
- See Table 10 for proper finished outside wire dimensions.
- Twist strands together to form a firm bundle.
- Insert stripped wire into contact applying slight pressure until wire insulation butts against wire well. Check inspection hole to see that wire strands are visible. If there are strayed wire strands, entire wire end should be re-twisted. When wire is stripped and properly installed into contact, the next step is to crimp the wire inside the contact by using the proper crimping tool.



For additional information & specifications on the wire crimping see pages 11-13 of [26482_2016.pdf](#)

Table 10. Wire crimping

Contact size	Wire range		Finished wire diameter range		Finished wire length		Crimping tool part number	Turret or positioner part number
	AWG	mm ²	Inch	mm	Inch	mm		
20	24-20	0.2-0.6	0.040-0.083	1.02-2.11	4.77	0.188	M22520/1-01 M22520/2-01	M22520/1-02 M22520/2-02
16	20-16	0.5-1.4	0.053-0.103	1.34-2.62	4.77	0.188	M22520/1-01	M22520/1-02
12	14-12	2-3	0.097-0.158	2.46-4.01	4.77	0.188	M22520/1-01	M22520/1-02

Additional Technical Documentation

Additional technical documentation for smart hardware components used in the TORIN System can be found and downloaded from the following table:

Table 11. TORIN System - Additional Technical Documentation

Hardware	OEM Part #	Technical Document
Automation Direct CLICK Koyo Ethernet Standard PLC	C0-11DRE-D	View Datasheet
4-Point Relay Output Module	C0-04TRS	View Datasheet
16-Point Sink/Source DC Input Module	C0-16ND3	View Datasheet
APC DIN rail-control panel UPS 500 VA / 325W	SUA500PDR-H	View Datasheet
Advantech 15.6" Fanless Touch Panel PC	PPC-3150SW	View Datasheet
Automation Direct Stride Industrial Ethernet Switch	SE2-SW5UG-T	View Datasheet
Antaira Industrial IEEE 802.11, 2.4GHz Wireless Repeater/Bridge	AMS-2111	View Datasheet
Amphenol Circular Connector Catalog	MIL-DTL-26482, Series 2, Matrix	View Catalog
CONEC Series Cat6a RJ45 Inline Coupler	17-150134	View Datasheet
Amphenol USB 3.0 Circular Coupler	UA-30PMF-LD7B20	View Datasheet

Valkyrie Warranty & Support

The TORIN System comes with a 1-year replacement warranty that covers any defective hardware as specified by the original OEM. All control panels including the TORIN system undergo an extensive quality control & assurance process. All panels are UL508A certified (Standard). CSA General purpose certification is available upon request.

Our Engineers are available to answer any technical or troubleshooting questions regarding products, installation and future design updates. Contact us directly at info@valkyriecontrols.com or through LinkedIn at www.linkedin.com/in/valkyrie-controls.

You can learn more about our other pre-engineered systems or request a free industrial panel design at www.valkyriecontrols.com

Valkyrie is committed to designing and manufacturing products in an environmentally responsible manner. Valkyrie recognizes that eliminating certain hazardous substances from our products is beneficial to the environment and to Valkyrie customers. Valkyrie Systems Inc. makes no express or implied warranties as to the accuracy of the OEM information contained herein and shall not be liable for any errors. U.S. Government Customers: The data contained in this manual was developed at private expense and is subject to the applicable limited rights and restricted data rights as set forth in FAR 52.227-14, DFAR 252.227-7014, and DFAR 252.227-7015.