Compact 4.3" HMI Configuration

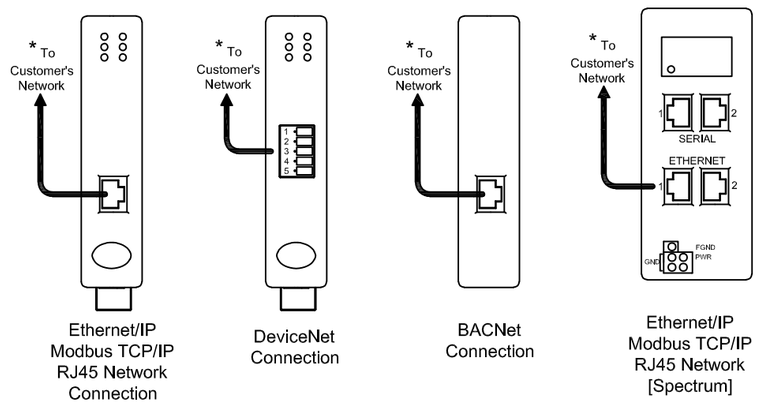
Table 1.1
Display Interface PCB

Terminal	Pin	Description	Label	Rated Load
J1	1	HMI Display	For factory use	N/A
J2	1	RS485	Ground	N/A
	2		Data + (B)	
	3		Ground	
	4		Data - (A)	
	5		Not Connected	
J3	1	Input Power	Neutral	120 VAC 250mA
	2		Line	
J5	1	Run	Normally Closed	2A @ 250VAC
	2		Common	
	3		Normally Open	
J6	1	Power On	Normally Closed	2A @ 250VAC
	2		Common	
	3		Normally Open	
J7	1	Fault	Normally Closed	2A @ 250VAC
	2		Common	
	3		Normally Open	
J12	1	At Capacity	Normally Closed	2A @ 250VAC
	2		Common	
	3		Normally Open	
J19	1	HMI Power Supply	24 VDC	24 VDC
	2		Common	
	3		Not Connected	
J20	1	Gateway Power Supply	24 VDC	24 VDC
	2		Common	
	3		Not Connected	
J22	1	Start Command	24 VDC	Contact Closure
	2		Start	
	3		Not Connected	

Table 1.2
HMI Display

Terminal	Pin	Description		
Com 1 / Com 2	N/A	Connection to Terminal Block TBHMI		
		Description	Label	Rated Load
Power Terminal	Pos	Input Power	Positive Sign	24 Volt DC
	Neg		Negative Sign	
	Com		Common Sign	

Optional Gateways
Front View



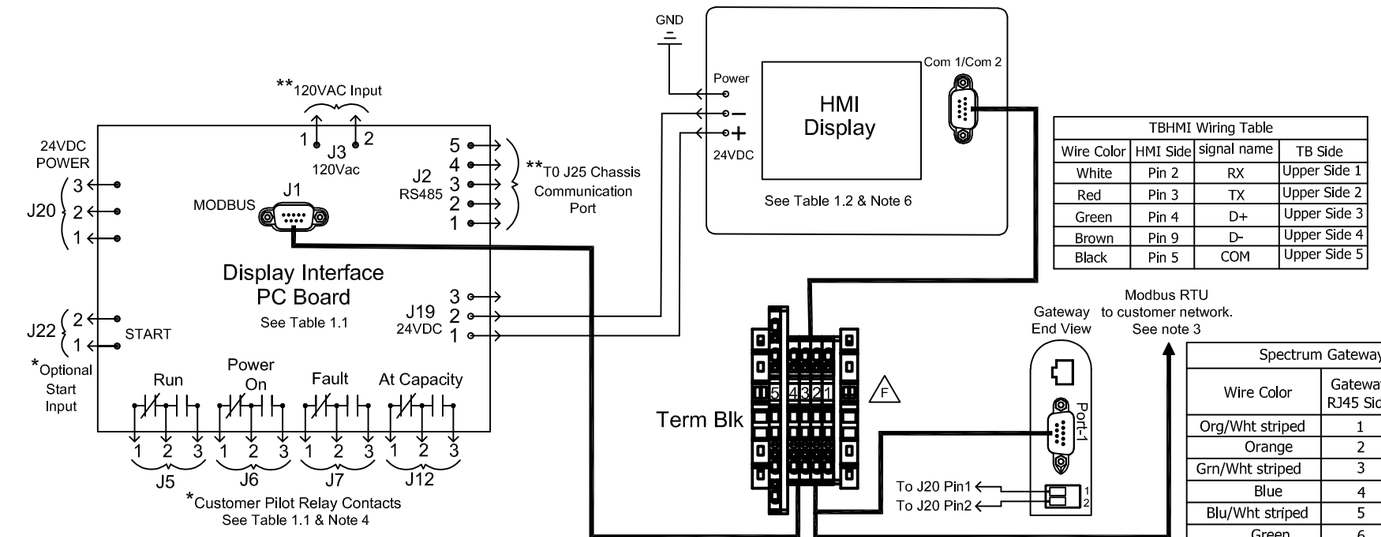
For Part Numbers:
ALC___X__X___0,
ALC300X__X___S, ALC350X__X___S
ALC600X__X___S, ALC700X__X___S
excluding Type 3R versions (See Page 3)

See Page 2 for Part Numbers:
ALC030X__X___S and ALC050X__X___S
(All Versions)

This diagram is for the Compact 4.3" HMI.
For the 7" HMI Configuration, see Page 3.

Table 1.3
TermInal Block TBHMI

Terminal	Pin	Description	Label	Rated Load
TBHMI	1	Connection to Display Interface Board	RX	RS232
	2		TX	
	3	Connection to Customer Network or Gateway	D+	RS485
	4		D-	
	5	Com./GND	Com. GND	N/A



TBHMI Wiring Table			
Wire Color	HMI Side	signal name	TB Side
White	Pin 2	RX	Upper Side 1
Red	Pin 3	TX	Upper Side 2
Green	Pin 4	D+	Upper Side 3
Brown	Pin 9	D-	Upper Side 4
Black	Pin 5	COM	Upper Side 5

Spectrum Gateway Wiring Table			
Wire Color	Gateway RJ45 Side	signal name	TB Side
Org/Wht striped	1		N/C
Orange	2		N/C
Grn/Wht striped	3		N/C
Blue	4	COM	Lower side 5
Blu/Wht striped	5		N/C
Green	6	D-	Lower side 4
Brn/Wht striped	7		N/C
Brown	8	D+	Lower side 3

HMS Gateway Wiring Table			
Wire Color	Gateway Side	signal name	TB Side
White	8	D+	Lower side 3
Red	9	D-	Lower side 4
Black	5	COM	Lower side 5

Notes:
1.) Typical customer connections noted with (*).
2.) Customer connections if mounting a HMI panel noted with (**).
3.) Available when Gateway isn't present.
4.) Display interface PCB J5, J6, J7 & J12 wire range and tightening torque is 28-14 Awg at 4.4 in-lb (.5 Nm).
5.) TBHMI wire range is 26-14 Awg (spring clamp / push in type).
6.) HMI display power terminal wire range and tightening torque is 24-12 Awg at 4.3 in-lb (.49 Nm).
7.) 120V Power J3, wire range and tightening torque is 30-12 Awg at 7 in-lb (.8 Nm).

NO	REVISION	DATE	BY
I	Added Gateways Table, Page 2	12/10/24	AWS
J	Add Pg3 Gen 2 diagram	10/23/24	MJS
H	Add Spectrum Front View (pg2)	5/21/24	MJS
G	Replaced ELC terminology w/ HMI	5/17/23	MJS
F	Labeled HMI Term. Block Connections	7/24/20	MJS
E	Added pg 2 Compact HMI	7/24/20	MJS

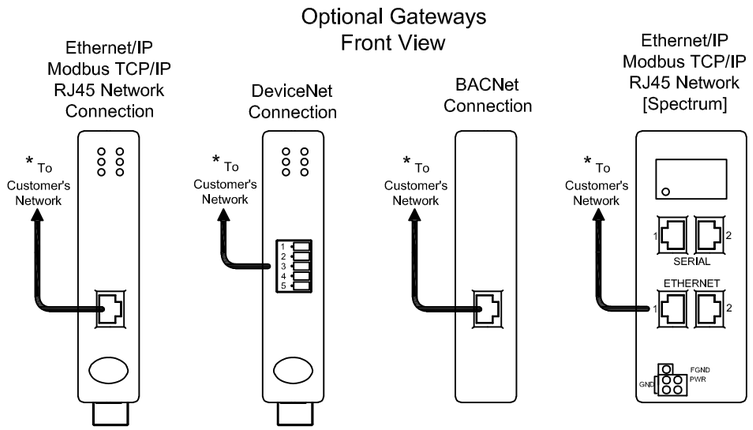
TOLERANCES (EXCEPT AS NOTED)
DECIMAL
.XX ± .05
.XXX± .025
FRACTIONAL
± 1/16
ANGULAR
± 1°

TCI® An Allied Motion Company
W132 N10611 Grant Drive
Germantown, WI 53022

HMI, Network Communications Connection Diagram

DRN. BY	DATE	DWG. NO.
MJS	12/05/13	28283-1
SCALE N/A	SIZE B	SHT. 1 OF 3

Compact 4.3" Direct Connect
HMI Configuration



For Part Numbers:
ALC030X__X___S and ALC050X__X___S
(All Versions)

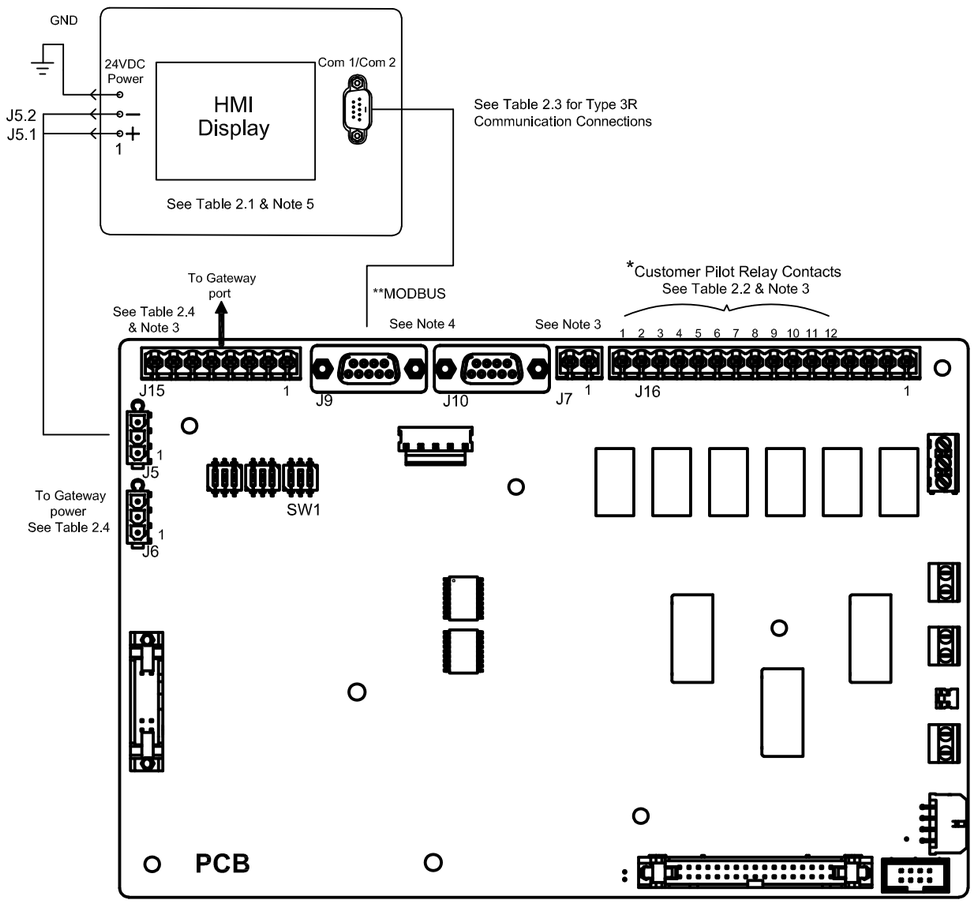


Table 2.1
HMI Display Connections

Terminal	Pin	Description		
Com 1 / Com 2	N/A	Male-Male DB9 Cable Assembly		
		Description	Label	Rated Load
Power Terminal	Pos	Input Power	J5.1	24 Volt DC
	Neg		J5.2	
	GND		GND	

Table 2.2
Customer Pilot Relay Contacts

Terminal	Position	Description	Label	Rated Load
J16	1	Run	Normally Closed	General Use Rating 6A @ 250VAC
	2		Common	
	3		Normally Open	
	4	Power On	Normally Closed	
	5		Common	
	6		Normally Open	
	7	Fault	Normally Closed	
	8		Common	
	9		Normally Open	
	10	At Capacity	Normally Closed	
	11		Common	
	12		Normally Open	

Table 2.3
Type 3R Connections

Device	Connection 1	D+	D-	Com	Connection 2	+24V	0V
ALC (PCB)	J9	1	6	5	J5	1	2
Port		3	2	5		9	6

Table 2.4
Gateway Connections

Option	Device	Connection 1	D+	D-	Com	Connection 2	+24V	0V	GND
ALC (PCB)		J15	2	4	3	J6	1	2	
EtherNet/IP	WP-G-222-P1	Serial 1	8	6	4	4-Pos	PWR	GND	FGND
EtherNet/IP	AB7007-C	DE-9	8	9	5	2-Pos	1	2	
PROFINET RT	ABC3013	7-Pos	2	3	4	3-Pos	1	2	3
BACnet/IP	BASGLX-M1	5-Pos	+	-	SC	4-Pos	HI	COM	GND
DeviceNet	AB7001-C	DE-9	8	9	5	2-Pos	1	2	

Notes:
1.) Typical customer connections noted with (*).
2.) Customer connections if mounting a HMI panel noted with (**).
3.) Interface PCB J7, J15 & J16 wire range and tightening torque is 28-14 Awg at 4.4 in-lb (.5 Nm).
4.) J9 and J10, DB9 hardware tightening torque is 28-14 Awg at 4.4 in-lb (.5 Nm).
5.) HMI display power terminal wire range and tightening torque is 24-12 Awg at 4.3 in-lb (.49 Nm).

NO	REVISION	DATE	BY
	See Page 1 for Revision		

TOLERANCES (EXCEPT AS NOTED)
DECIMAL
.XX ± .05
.XXX± .025
FRACTIONAL
± 1/16
ANGULAR
± 1°

TCI An Allied Motion Company
W132 N10611 Grant Drive
Germantown, WI 53022

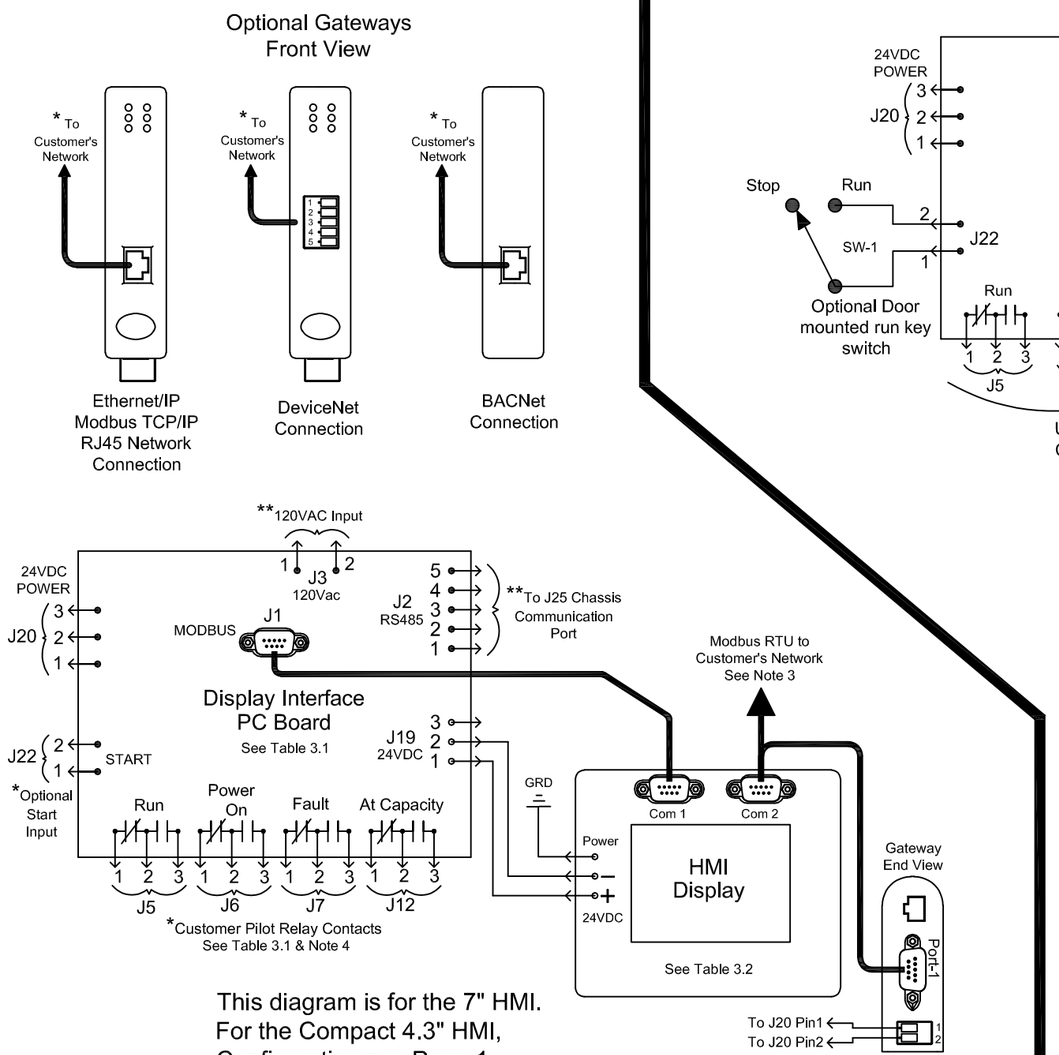
HMI, Network Communications Connection Diagram

DRN. BY	DATE	DWG. NO.
MJS	12/05/13	28283-1
SCALE N/A	SIZE B	SHT. 2 OF 3

Standard HMI Configurations (7")

Table 3.1 Display Interface PCB				
Terminal	**Pin**	**Description**	**Label**	**Rated Load**
J1	1	HMI Display	For factory use	N/A
J2	1	RS485	Ground	N/A
	2		Data + (B)	
	3		Ground	
	4		Data - (A)	
	5		Not Connected	
J3	1	Input Power	Neutral	120 VAC 250mA
	2		Line	
J5	1	Run	Normally Closed	2A @ 250VAC
	2		Common	
	3		Normally Open	
J6	1	Power On	Normally Closed	2A @ 250VAC
	2		Common	
	3		Normally Open	
J7	1	Fault	Normally Closed	2A @ 250VAC
	2		Common	
	3		Normally Open	
J12	1	At Capacity	Normally Closed	2A @ 250VAC
	2		Common	
	3		Normally Open	
J19	1	HMI Power Supply	24 VDC	24 VDC
	2		Common	
	3		Not Connected	
J20	1	Gateway Power Supply	24 VDC	24 VDC
	2		Common	
	3		Not Connected	
J22	1	Start Command	24 VDC	Contact Closure
	2		Start	
	3		Not Connected	

Table 3.2 HMI Display				
Terminal	Pin	Description		
Com 1	N/A	Communication Input from Display Interface PCB (DB-9)		
Com 2	N/A	Output to Customer's Network (DB-9)		
		Description	Label	Rated Load
Power Terminal	Pos	Input Power	Positive Sign	24 Volt DC
	Neg		Negative Sign	
	Com		Common Sign	



This diagram is for the 7" HMI.
For the Compact 4.3" HMI, Configuration see Page 1.

Type 3R & ETO Configuration

Excluding Part Numbers:
ALC030X__X___S and ALC050X__X___S
(All Versions)

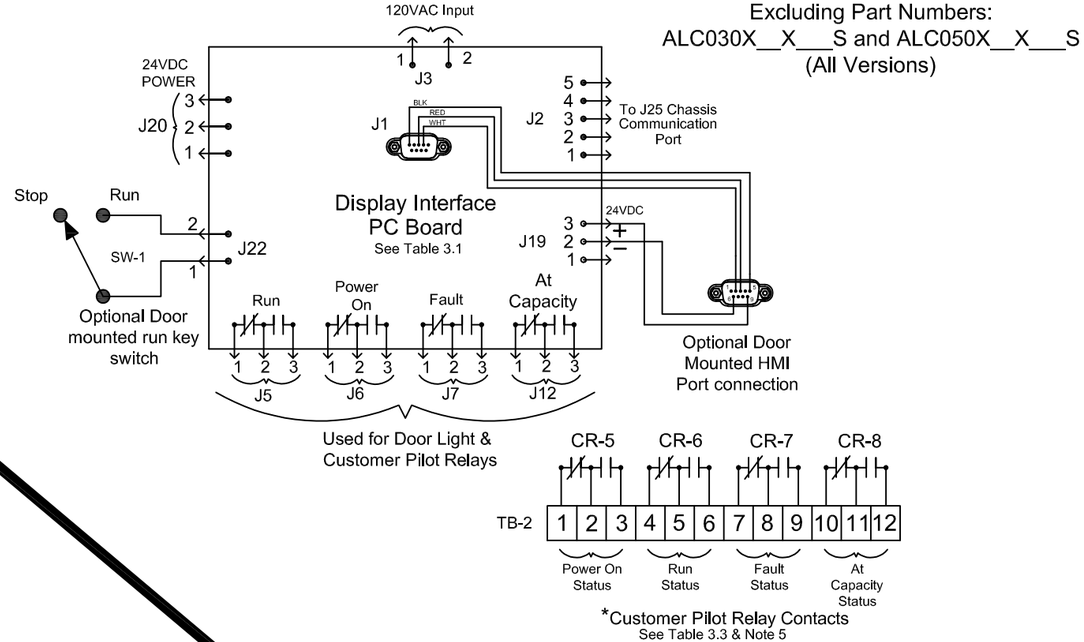


Table 3.3 Customer Pilot Relay Contacts				
Terminal	**Position**	**Description**	**Label**	**Rated Load**
TB-2	1	Run	Normally Closed	General Use Rating 6A @ 250VAC
	2		Common	
	3		Normally Open	
	4	Power On	Normally Closed	
	5		Common	
	6		Normally Open	
	7	Fault	Normally Closed	
	8		Common	
	9		Normally Open	
	10	At Capacity	Normally Closed	
	11		Common	
	12		Normally Open	

Notes:
1.) Typical customer connections noted with (*).
2.) Customer connections if mounting a HMI panel noted with (**).
3.) Available when Gateway isn't present.
4.) Display interface PCB J5, J6, J7 & J12 wire range and tightening torque is 28-14 Awg at 4.4 in-lb (.5 Nm).
5.) TB-2 wire range and tightening torque is 28-14 Awg at 4.4 in-lb (.5 Nm).
6.) HMI display power terminal wire range and tightening torque is 30-12 Awg at 4.3 in-lb (.49 Nm).
7.) 120V Power J3, wire range and tightening torque is 30-12 Awg at 7 in-lb (.8 Nm).

NO	REVISION	DATE	BY
	See Page 1 for Revision		

TOLERANCES (EXCEPT AS NOTED)
DECIMAL
.XX ± .05
.XXX± .025
FRACTIONAL
± 1/16
ANGULAR
± 1°

TCI® An Allied Motion Company
W132 N10611 Grant Drive
Germantown, WI 53022

HMI, Network Communications Connection Diagram

DRN. BY MJS | DATE 12/05/13 | DWG. NO. 28283-1
SCALE N/A | SIZE B | SHT. 3 OF 3