

WELKER VFD PANEL BOXES

NOTE: CUSTOMER SUPPLIED VFD MUST HAVE A MINIMUM OF FOUR (4) INPUTS. FOR PROPER FUNCTION, BOTH DECELERATION SWITCHES AND BOTH IN-POSITION SWITCHES MUST BE WIRED DIRECTLY TO THE DRIVE, NOT THROUGH A COMMUNICATION BLOCK.

SWITCHES: VERIFY YOUR VFD REQUIREMENT PNP (OPEN) OR PNP (CLOSED) ON THE APPLICATION TEMPLATE

Features:

- Fully connectorized = no field wiring required.
- Switches (6) wired directly to drive for best repeatability and safety.
- Sealed panel with no fans or filters.
- Basic program installed in drive.

Installed program conventions:

- Forward is away from motor.
- All prox cables must be active to run shuttle.
- Use extreme caution and slow speed when using laptop controlled jog mode.
The switches will be disabled and over-travel crash is possible.

ETHERNET SAFETY PLC PANEL BOXES <i>NOTE: WILL ONLY FUNCTION WITH ETHERNET SAFETY PLC</i>		
<i>Application</i>	<i>Welker Part number</i>	<i>Customer Part Number, per Spec</i>
Single axis 1HP	S02102	FCA PPSL# SO2102-WELKER-PF525-SINGLE-1HP 150629
	S02498	Ford Spec
Double axis 1HP	S02103	FCA PPSL#SO2103-WELKER-PF525-DBL 1HP 150625
	S02499	Ford Spec
Single axis 3HP	S02104	FCA PPSL#SO2104-WELKER-PF525-SINGLE-3HP 150629
	S02498	Ford Spec
Double axis 3HP	S02105	FCA PPSL#SO2105-WELKER-PF525-DBL-3HP 150625
	S02499	Ford Spec
Single axis 5HP	S02242	
ETHERNET STANDARD PLC PANEL BOXES		
Safety inputs, outputs and other safety hardware are not included. The VFD has built-in Safe-Torque-Off inputs that are ready for connection to external safety relays and other components that can be wired to this panel or added to this panel to achieve a desired Safety Category.		
<i>Application</i>	<i>Part number</i>	
Single axis 1HP	S02165	
Double axis 1HP	S02166	
Single axis 3HP	S02167	
Double axis 3HP	S02168	
Single axis 5HP	S02243	

RELEASED 6/15/18

WELKER VFD PANEL BOX COMPONENTS & CABLES

	ETHERNET SAFETY PLC PANEL BOXES		ETHERNET STANDARD PLC PANEL BOXES	
	S02102 S02104 S02242	S02103 S02105	S02165 S02167 S02243	S02166 S02168
Box Components				
Enclosure, 20x32x10, w/ galvanized subplate	X	X	X	X
Circuit breaker, 3-pole, 30amp	X	X	X	X
Rotary handle, yellow/red, 12" rod, CB mechanism	X	X	X	X
Motor protector, 3-pole	X	X	X	X
Circuit breakers, 2-pole, 3amp (brake)	X	X	X	X
Powerflex 525 VFDs, 480VAC (no EMC filter) w/extended temp range piggy-back fan	X	X	X	X
Contactors, 3-pole, 24VDC for VFD motor output	X	X		
Contactors, 3-pole, 24VDC for brake	X	X	X	X
Safety relays, 24VDC 2DPDT (interposing between VFD & input relays)	X	X		
Relays, 24VDC, 2NO/2NC (steering contacts for VFD inputs)	X	X	X	X
Power supply, 24VDC 5amp out, 480VAC-2ph in	X	X	X	X
Ethernet switch, 5-port, unmanaged	X	X	X	X
Point I/O ethernet adapter. dual port	X	X		
1 point I/O safety input module - 8pt	X	X		
2 point I/O safety output modules - 8pt	X	X		
Point I/O terminal bases	X	X		
Terminals	X	X	X	X
(12) M12 4-pin receptacles for slide prox sensors	X	X	X	X
M35, 3-phase power male receptacle for incoming 480VAC	X	X	X	X
M35, 3-phase power female receptacles for outgoing power to motors	X	X	X	X
4-pin mini female receptacles, 16AWG, 1/2"-14 NPT for brake on motors	X	X	X	X
3-pin mini, female receptacles, 16AWG, 1/2"-14 NPT for dyn. brake option	X	X	X	X
Supplied Cables*				
Motor Brake Cable: 4-pin Mini DE Patchcord, 30ft	1	2	1	2
Motor Power Cable: 4-pin M35 DE Patchcord, 8m	1	2	1	2
Motor Brake Receptacle: 4-pin Mini Male Receptacle (in motor CB)	1	2	1	2
Motor Power Receptacle: 4-pin M35 Male Receptacle (in motor CB)	1	2	1	2
Inductive Prox Sensor Cable: 4-pin DC Micro M12 DE patch cord, 5M	6	12	6	12

*Prox cables can be extended with 4-pin M-12 in field to suit

(DO NOT SCALE DRAWING)



WELKER VFD PANEL BOX FEATURES

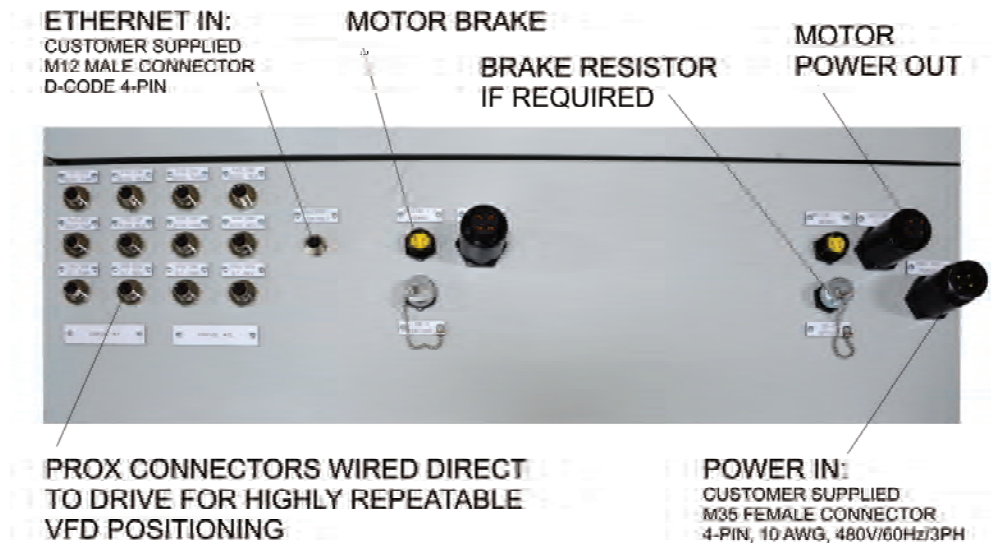
WELKER VFD PANEL

SINGLE OR DOUBLE DRIVE
REPEATABLE POSITIONING USING VFD
NO FANS OR FILTERS, BETTER FOR WELD ENVIRONMENT
COMES WITH PRE-INSTALLED STARTER PROGRAM
WORKS WITH BELT AND SCREW CONFIGURATIONS
SAFETY FEATURES AVAILABLE
ALLEN BRADLEY 525 DRIVES

100% CONNECTORIZED

ETHERNET TO PLC
ALL SWITCHES WIRED DIRECT TO DRIVE UP REPEATABILITY
INCOMING POWER
OUTGOING MOTOR POWER
SWITCH INPUTS
BRAKE RESISTOR IF REQUIRED
MOTOR BRAKE

TYPICAL PANEL LAYOUT:



TYPICAL PANEL BOX:



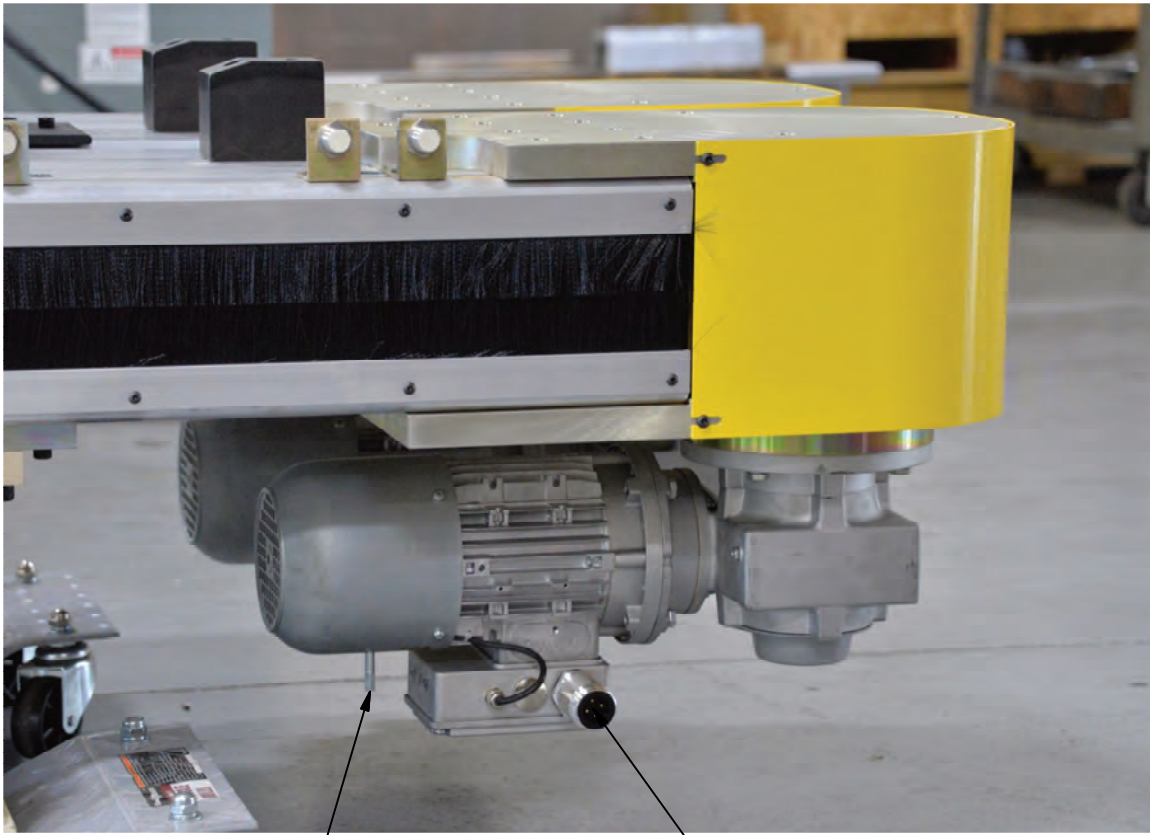
(DO NOT SCALE DRAWING)

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ENGINEERED PRODUCTS

800-229-0890 www.welkerproducts.com

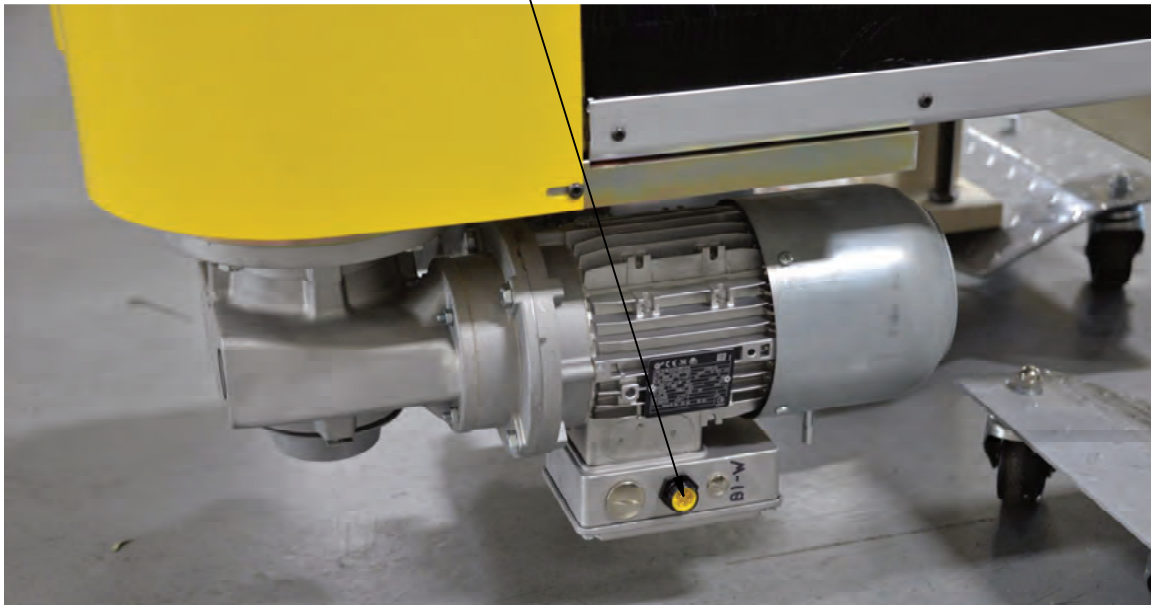
SOME FEATURES PROVIDED IN COMPLETE PLUG & PLAY SYSTEMS FROM WELKER:



MANUAL BRAKE RELEASE

CONNECTORIZED MOTOR POWER

CONNECTORIZED BRAKE CONTROL CABLE



(DO NOT SCALE DRAWING)

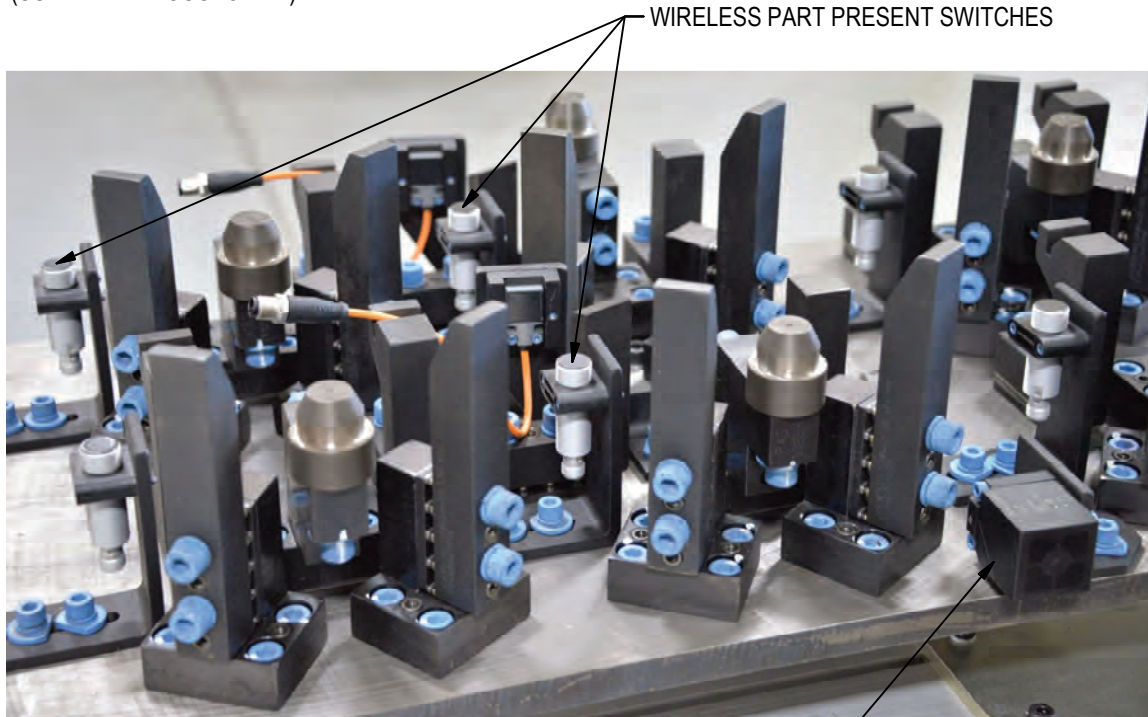


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TYPICAL CONTROLS & PALLET SENSORS:

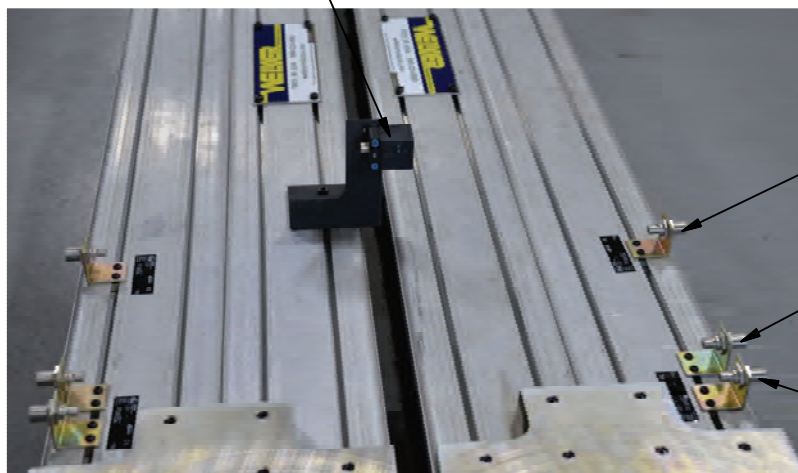
EXAMPLE PART NEST TOOLING
(SUPPLIED BY CUSTOMER)



WIRELESS PART PRESENT SWITCHES

WIRELESS POWER AND
COMMUNICATION BLOCK
(BY CUSTOMER)

CUSTOMER PROVIDED WIRELESS
POWER AND COMMUNICATION
BLOCK TRANSMITTER



DECEL

IN-POSITION STOP

OVER TRAVEL

(DO NOT SCALE DRAWING)



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