



**CENTRALBIDDING**  
FROM CENTRAL AUCTION HOUSE

**5000124838 PURCHASE OF ELECTRICAL STOCK FOR EAST BANK  
WAREHOUSE**  
Jefferson Parish Government

Project documents obtained from [www.CentralBidding.com](http://www.CentralBidding.com)  
19-Nov-2018 03:58:32 PM

INVITATION TO BID  
THIS IS NOT AN ORDER

Page: 1

DATE: 11/13/2018

BID NO.: 50-00124838

**JEFFERSON PARISH**  
PURCHASING DEPARTMENT  
P.O. BOX 9  
GRETN, LA. 70054-0009  
504-364-2678

VENDOR:

BUYER: MBUTTERY@jeffparish.net

Bids will be received until 11:00 AM, 11/20/2018 via online at [www.jeffparishbids.net](http://www.jeffparishbids.net) or by hand delivery, USPS mail or other courier service to Purchasing Department, 200 Derbigny Street (General Government Building), Suite 4400, Gretna, LA 70053. For convenience, bidders may also submit bids in the East Bank Purchasing Department, Suite 404, Jefferson Parish Joseph S. Yenni Building, 1221 Elmwood Park Blvd., Jefferson LA 70123. However, if submitting bids on the day of bid opening, bidders must submit at the West Bank location only.

All bids submitted are subject to these instructions and general conditions and any special conditions and specifications contained herein, all of which are made part of this bid proposal reference. By submitting a bid, vendor agrees to comply with all provisions of Louisiana Law, as well be in compliance with the Jefferson Parish Code of Ordinances, Louisiana Code of Ethics, applicable Jefferson Parish ethical standards and Jefferson Parish Resolution No. 113646 and/or Resolution No. 113647. A copy of these resolutions may be obtained from the Office of the Parish Clerk, Suite 6700, Jefferson Parish General Government Building, 200 Derbigny Street, Gretna, LA 70053. You may also obtain a copy by visiting the Purchasing Department webpage at [purchasing.jeffparish.net](http://purchasing.jeffparish.net) and clicking on On-line forms.

All vendors submitting bids should register as a Jefferson Parish vendor if not already yet registered. Registration forms may be downloaded from <http://purchasing.jeffparish.net> and by clicking on Vendor Information. Current W-9 forms with respective Tax Identification numbers and vendor applications may be submitted at any time; however, if your company is not registered and/or a current W-9 form is not on file, vendor registration is mandatory. Further, a current W-9 form and respective Tax Identification number must be supplied upon contract execution, should you be awarded a contract and/or issued purchase order. Failure to do so may result in delay of payment.

As per LSA-RS 47:301 et seq., all governmental bodies are excluded from payment of sales taxes to any Louisiana taxing body. Quotations shall be based on F.O.B. Delivered, anywhere within the Parish as designated by the Purchasing Department. JEFFERSON PARISH WILL ACCEPT ONE BID ONLY FROM EACH VENDOR. Items bid must meet specifications. JEFFERSON PARISH will accept one price for each item unless otherwise indicated. Two or more prices for one item will result in bid rejection. Bidders are required to complete, sign and return the bid form and/or complete and return the associated line item pricing forms as indicated. The price quoted for work shall be stated in figures. In the event there is a difference in unit prices and totals, the unit prices shall prevail.

JEFFERSON PARISH reserves the right to award contracts or place orders on a lump sum or individual item basis, or such combination, as shall in its judgment be in the best interest of JEFFERSON PARISH. Every contract or order shall be awarded to the LOWEST RESPONSIVE and RESPONSIBLE BIDDER, taking into consideration the CONFORMITY WITH THE SPECIFICATIONS and the DELIVERY AND/OR COMPLETION DATE

PROTESTS: Only those vendors that submitted a bid in response to this solicitation may submit a protest in writing to the Director of the Purchasing within 48 hours of bid opening. The Purchasing Director will review it in connection with the Parish Attorney's Office as appropriate and a written response will be provided as soon as possible.

JEFFERSON PARISH reserves the right to cancel all or any part of an order if not shipped promptly. No charges will be allowed for parking or cartage unless specified in the quotation. The order must not be filled at a higher price than quoted. JEFFERSON PARISH reserves the right to cancel at any time and for any reason by issuing a THIRTY (30) day written notice to the contractor.

JEFFERSON PARISH requires all products to be new (current) and all work must be performed according to standard practices for the project. Unless otherwise specified, no aftermarket parts will be accepted. Unless otherwise specified, all workmanship and materials must have at least one (1) year guaranty, in writing, from the date of delivery and/or acceptance of the project. Any deviations or alteration from the specifications must be indicated on the bid form for each item and upon request, product data for same must be submitted by the time specified by the Purchasing Department.

If this bid requires a pre-bid conference (see Additional Requirements section), bidders are advised that such conference will be held to allow bidders the opportunity to identify any discrepancies in the bid specifications and seek further clarification regarding instructions. The Purchasing Department will issue a written response to bidders' questions in the form of an Addendum.

All formal Addenda require written acknowledgment on the bid form by the bidder. Failure to acknowledge an Addendum on the bid form shall cause the bid to be rejected; JEFFERSON PARISH reserves the right to award bid to next lowest responsive and responsible bidder in this event.

USE OF BRAND NAMES AND STOCK NUMBERS: Where brand names and stock numbers are specified, it is for the purpose of establishing certain minimum standards of quality. Bids may be submitted for products of equal quality, provided brand names and stock numbers are specified. Complete product data may be required prior to award.

Quantities listed are for bidding purposes only. Actual requirements may be more or less than quantities listed.

Bidders are not to exclude from participation in, deny the benefits of, or subject to discrimination under any program or activity, any person in the United States on the grounds of race, color, national origin, or sex; nor discriminate on the basis of age under the Age Discrimination Act of 1975, or with respect to an otherwise qualified handicapped individual as provided in Section 504 of the Rehabilitation Act of 1973, or on the basis of religion, except that any exemption from such prohibition against discrimination on the basis of religion as provided in the Civil Rights Act of 1964, or Title VI and VII of the Act of April 11, 1968, shall also apply. This assurance includes compliance with the administrative requirements of the Revenue Sharing final handicapped discrimination provisions contained in Section 51.55 (c), (d), (e), and (k)(5) of the Regulations. New construction or renovation projects must comply with Section 504 of the 1973 Rehabilitation Act, as amended, in accordance with the American National Standard Institute's specifications (ANSI A117.1-1961).

Jefferson Parish and its partners as the recipients of federal funds are fully committed to awarding a contract(s) to firm(s) that will provide high quality services and that are dedicated to diversity and to containing costs. Thus, Jefferson Parish strongly encourages the involvement of minority and/or woman-owned business enterprises (DBE's, including MBE's, WBE's and SBE's) to stimulate participation in procurement and assistance programs.

**INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS**

**IN ACCORDANCE WITH STATE REGULATIONS JEFFERSON PARISH OFFERS ELECTRONIC PROCUREMENT TO ALL VENDORS**

This electronic procurement system allows vendors the convenience of reviewing and submitting bids online. This is a secure site and authorized personnel have limited read access only. Bidders are encouraged to submit electronically using this free service; while the website accepts various file types, one single PDF file containing all appropriate and required bid documents is preferred. Bidders submitting uploaded images of bid responses are solely responsible for clarity. If uploaded images/documents are not legible, then bidder's submission will be rejected. Please note all requirements contained in this bid package for electronic bid submission.

Please visit our E-Procurement Page at [www.jeffparishbids.net](http://www.jeffparishbids.net) to register and view Jefferson Parish solicitations. For more information, please visit the Purchasing Department page at <http://purchasing.jeffparish.net>.

**ADDITIONAL REQUIREMENTS FOR THIS BID**

PLEASE MATCH THE NUMBERS PRINTED IN THIS BOX WITH THE CORRESPONDING INSTRUCTIONS BELOW.

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1. All bidders must attend the MANDATORY pre-bid conference and will be required to sign in and out as evidence of attendance. In accordance with LSA R.S. 38:2212(I), all prospective bidders shall be present at the beginning of the MANDATORY pre-bid conference and shall remain in attendance for the duration of the conference. Any prospective bidder who fails to attend the conference or remain for the duration shall be prohibited from submitting a bid for the project.
2. Attendance to this pre-bid conference is optional. However, failure to attend the pre-bid conference shall not relieve the bidder of responsibility for information discussed at the conference. Furthermore, failure to attend the pre-bid conference and inspection does not relieve the successful bidder from the necessity of furnishing materials or performing any work that may be required to complete the work in accordance with the specification with no additional cost to the owner.
3. Contractor must hold current applicable JEFFERSON PARISH licenses with the Department of Inspection and Code Enforcement. Contractor shall obtain any and all permits required by the JEFFERSON PARISH Department of Inspection and Code Enforcement. The contractor shall be responsible for the payment of these permits. All permits must be obtained prior to the start of the project. Contractor must also hold any and all applicable Federal and State licenses. Contractor shall be responsible for the payment of these permits and shall obtain them prior to the start of the project.
4. A LA State Contractor's License will be required in accordance with LSA R.S. 37-2150 et. seq. and such license number will be shown on the outside of the bid envelope. Failure to comply will cause the bid to be rejected. Additionally if submitting the bid electronically, then the license number must be entered in the appropriate field in the Electronic Procurement system. Failure to comply will cause the bid to be rejected.
5. It is the bidder's responsibility to visit the job site and evaluate the job before submitting a bid.
6. Job site must be clean and free of all litter and debris daily and upon completion of the contract. Passageways must be kept clean and free of material, equipment, and debris at all times. Flammable material must be removed from the job site daily because storage will not be permitted on the premises. Precautions must be exercised at all times to safeguard the welfare of JEFFERSON PARISH and the general public.

**INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS**

7. **PUBLIC WORKS BIDS:** All awards for public works in excess of \$5,000.00 will be reduced to a formal contract which shall be recorded at the contractor's expense with the Clerk of Court and Ex-Officio Recorder of Mortgages for the Parish of Jefferson. A price list of recordation costs may be obtained from the Clerk of Court and Ex-Officio Recorder of Mortgages for the Parish of Jefferson. All awards in excess of \$25,000.00 will require both a performance and a payment bond. Unless otherwise stated in the bid specifications, the performance bond requirements shall be 100% of the contract price. Unless otherwise state in the bid specifications, the payment bond requirements shall be 100% of the contract price. Both bonds shall be supplied at the signing of the contract.
8. **NON-PUBLIC WORKS BIDS:** A performance bond will be required for this bid. The amount of the bond will be 100% of the contract price unless otherwise indicated in the specifications. The performance bond shall be supplied at the signing of the contract.
9. **NON-PUBLIC WORKS BIDS:** A payment bond will be required for this bid. The amount of the bond will be 100% of the contract price unless otherwise indicated in the specifications. The payment bond shall be supplied at the signing of the contract.
10. All bidders must comply with the requirements stated in the attached "Standard Insurance Requirements" sheet attached to this bid solicitation. Prior to contract executions/purchase order issuance, the successful bidder will be required to provide final insurance certificates which shall name Jefferson Parish as an additional insured in accordance with the instructions in the aforementioned "Standard Insurance Requirements" sheet.
11. A bid bond will be required with bid submission in the amount of 5% of the total bid, unless otherwise stated in the bid specifications. Acceptable forms shall be limited to cashier's check, certified check, or surety bid bond. All sureties must be in original format (no copies). If submitting a bid online, vendors must submit an electronic bid bond through the respective online clearinghouse bond management system(s) as indicated in the electronic bid solicitation on Central Auction House. No scanned paper copies of any bid bond will be accepted as part of the electronic bid submission.
12. This is a requirements contract to be provided on an as needed basis. JEFFERSON PARISH makes no representations on warranties with regard to minimum guaranteed quantities unless otherwise stated in the bid specifications.
13. Freight charges should be included in total cost when quoting. If not quoted FOB DELIVERED, freight must be quoted as a separate item. Bid may be rejected if not quoted FOB DELIVERED or if freight charges are not indicated on bid form.
14. **PUBLIC WORKS BIDS - Completed, Signed and Properly Notarized Affidavits Required;** This applies to all solicitations for construction, alteration or demolition of public buildings or projects, in conformity with the provisions contained in LSA-RS 38:2212.9, LSA-RS 38:2212.10, LSA-RS 38:2224, and Sec 2-923.1 of the Jefferson Parish Code of Ordinances. For bidding purposes, all bidders must submit with bid submission COMPLETED, SIGNED and PROPERLY NOTARIZED Affidavits, including: Non-Conviction Affidavit, Non-Collusion Affidavit, Campaign Contribution Affidavit, Debt Disclosures Affidavit and E-Verify Affidavit. For the convenience of vendors, all affidavits have been combined into one form entitled PUBLIC WORKS BID AFFIDAVIT. This affidavit must be submitted in its original format, and without material alteration, in order to be compliant and for the bid to be considered responsive. A scanned copy of the completed, signed and properly notarized affidavit may be submitted with the bid, however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.
15. **NON PUBLIC WORK BIDS - Completed, Signed and Properly Notarized Affidavits Required** in conformity with the provisions contained in LSA – RS 38:2224 and Sec 2-923.1 of the Jefferson Parish Code of Ordinances. For bidding purposes, all bidders must submit with bid submission COMPLETED, SIGNED and PROPERLY NOTARIZED Affidavits, including: Non-Collusion Affidavit, Debt Disclosures Affidavit and Campaign Contribution Affidavit. For the convenience of vendors, all affidavits have been combined into one form entitled NON PUBLIC WORKS BID AFFIDAVIT. This affidavit must be submitted in its original format, and without material alteration, in order to be compliant and for the bid to be considered responsive. A scanned copy of the completed, signed and properly notarized affidavit may be submitted with the bid, however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.
16. The ensuing contract for this bid solicitation may be eligible for FEMA reimbursement and/or Federal funding/reimbursement. As such, the referenced appendix will be applicable accordingly and shall be considered a part of the bid documents. All applicable certifications must be duly completed, signed and submitted with bid submission. Failure to submit applicable certifications with bid submission will result in bid rejection.

It shall be the duty of every parish officer, employee, department, agency, special district, board, and commission; and the duty of every contractor, subcontractor, and licensee of the parish, and the duty of every applicant for certification of eligibility for a parish contract or program, to cooperate with the Inspector General in any investigation, audit, inspection, performance review, or hearing pursuant to Jefferson Parish Code of Ordinances Section 2-155.10(19). By submitting a bid, vendor acknowledges this and will abide by all provisions of the referenced Jefferson Parish Code of Ordinances.

DATE: 11/13/2018

INVITATION TO BID  
THIS IS NOT AN ORDER

Page: 4

BID NO.: 50-00124838

**JEFFERSON PARISH**

PURCHASING DEPARTMENT  
P.O. BOX 9  
GRETN, LA. 70054-0009  
504-364-2678

VENDOR:

BUYER: MBUTTERY

As per LSA-RS 47:301 et seq., all governmental bodies are excluded from payment of sales taxes to any Louisiana taxing body. Quotations shall be based on F.O.B. Agency warehouse or jobsite, anywhere within the Parish as designated by the Purchasing Department.

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JEFFERSON PARISH is expecting all products to be new and all work to be done in workman-like manner, according to standard practices. Any deviations or alteration from the specifications must be indicated on the bid form for each item and upon request, product data for same must be submitted by the time specified by the Purchasing Department.

**DELIVERY: FOB JEFFERSON PARISH**

INDICATE DELIVERY DATE ON EQUIPMENT AND SUPPLIES

**3-4 weeks ARO**

INDICATE STARTING TIME (IN DAYS) FOR CONSTRUCTION WORK

INDICATE COMPLETION TIME (IN DAYS) FOR CONSTRUCTION WORK

In the event that addenda are issued with this bid, bidders MUST acknowledge all addenda on the bid form. Bidder must acknowledge receipt of an addendum on the bid form as indicated. Failure to acknowledge any addendum on the bid form will result in bid rejection.

Acknowledge Receipt of Addenda: NUMBER: \_\_\_\_\_  
NUMBER: \_\_\_\_\_  
NUMBER: \_\_\_\_\_  
NUMBER: \_\_\_\_\_

LOUISIANA CONTRACTOR'S LICENSE NO.: (if applicable) \_\_\_\_\_

<b>*** ALL BIDDERS MUST COMPLETE SECTION BELOW ***</b>	
FIRM NAME: <b>MG Automation &amp; Controls</b>	
SIGNATURE: (Must be signed here)	TITLE: <b>Sales</b>
PRINT OR TYPE NAME: <b>Keith Lunsford</b>	
ADDRESS: <b>1412 Edwards Ave</b>	
CITY, STATE: <b>Harahan, LA</b>	ZIP: <b>70123</b>
TELEPHONE: <b>504 733 0070</b>	FAX: <b>504 734 8606</b>
EMAIL ADDRESS: <b>lunsford@mgautocon.com</b>	

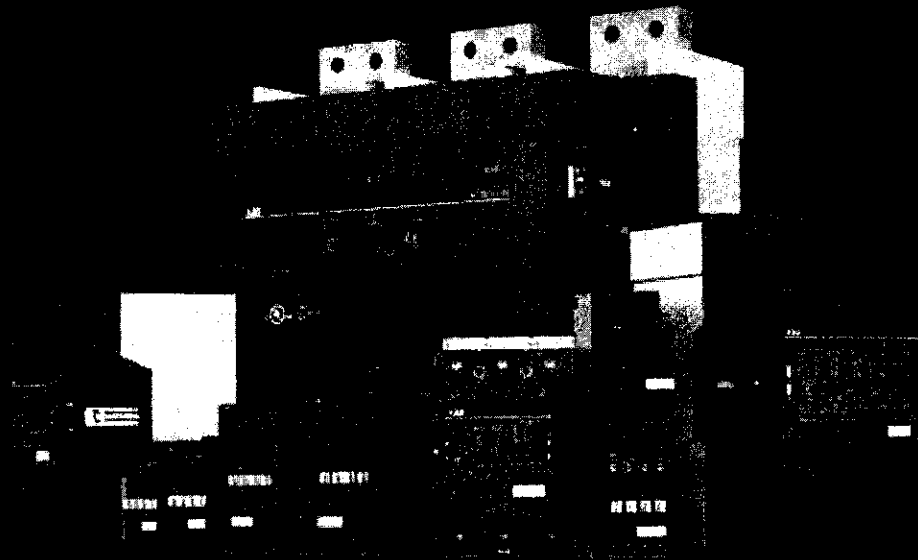
TOTAL PRICE OF ALL BID ITEMS: \$ **5,071.84** With AF80N3-30-11-13 **\$5,588.00** With A75N3-30-11-84

## INVITATION TO BID FROM JEFFERSON PARISH - continued

BID NO.: 50-00124838

SEALED BID

ITEM NUMBER	QUANTITY	U/M	DESCRIPTION OF ARTICLES	UNIT PRICE QUOTED	TOTALS
				<u>AF80N3-30-11-13</u>	<u>AF80N3-30-11-13</u>
				\$159.50 each	\$2,552.00
1	16.00	EA	PURCHASE OF ELECTRICAL STOCK FOR EAST BANK WAREHOUSE  0001 - Contactor, size 3, 120 volt, new in factory box,  ABB brand no. A75N3-30-11-84 (0860930)	<u>A75N3-30-11-84</u> \$191.76 each	<u>A75N3-30-11-84</u> \$3,068.16
			<u>Also quoting factory recommended replacement for A75N3-30-11-84. Documentation is attached.</u>	<u>800T-XA2</u>	
2	16.00	EA	0002 - Block, contact, 2 normally open, Allen Bradley no. 800T-XA2  (087129D)	\$29.24 each	\$467.84
				<u>DH1-A80SS</u>	
3	12.00	EA	0003 - Switch, pressure, adjustable range 5-80 PSI,  Barksdale model no. D1H-A80 (0872630)	<u>Slight discrepancy in regard to part number. Documentation attached. Quoting DH1-A80SS.</u> \$171.00 each	\$2,052.00
4	20.00	EA	0004 - Box, outlet, 4 in square x 1-1/2 in deep,  12 side and 5 bottom 1/2 in knockouts Raco no. 190 (0873790)	NO BID	
5	1,000.00	LF	0005 - Wire, electrical, no. 16 solid tfn, orange insulation, 500 ft spool,  copper, Graybar no. 90005827 (088271C)	NO BID	
6	2.00	EA	0006 - Motor, electric, 1/2 HP - 1/4 HP, 1725-1140 RPM, 2 speed, 115 VAC,  1 Phase, NEMA 56, open dripproof enclosure, A.O. Smith no. F391, Graniger no. 4UE94 (0890450)	NO BID	
7	1.00	EA	0007 - Motor, electric, 3/4 HP, 1725 RPM, 3 Phase, 208-230/460 VAC,  NEMA frame 56, dripproof enclosure, GE No. 5K46KN4071 (0890630)	NO BID	
8	1.00	EA	0008 - Breaker, circuit, 2500 amperes, 600 volt, 3 pole, with digitrip 310 trip unit, new in factory box Westinghouse No. RD 65KMCD. Must have warranty. (0841220)	NO BID	



US Catalog

# Motor protection and control AF Range contactors & overload relays

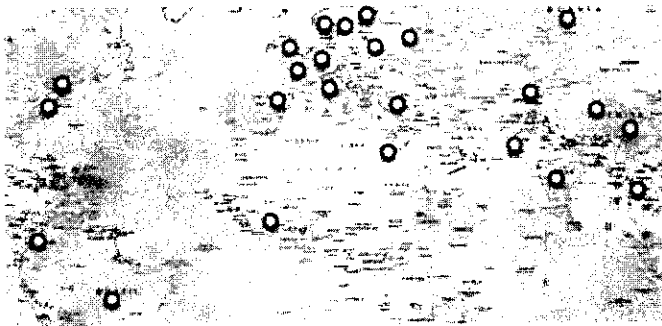
Power and productivity  
for a better world™

**ABB**

# ABB sets a new standard in motor control and power switching

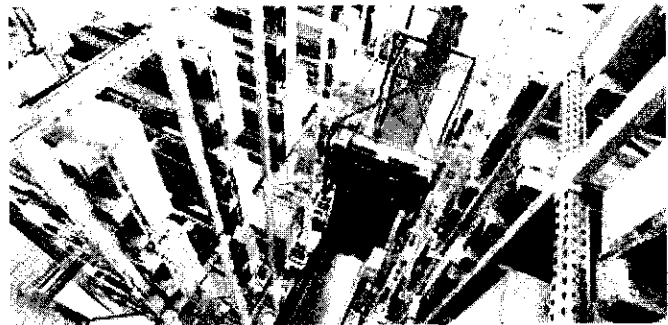
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Featuring AF technology as standard, the latest range of ABB's contactors establishes a new industry benchmark. The electronically controlled coil offers multiple benefits over conventional alternatives, and together with ABB's wide product offering – an optimal configuration, every time.



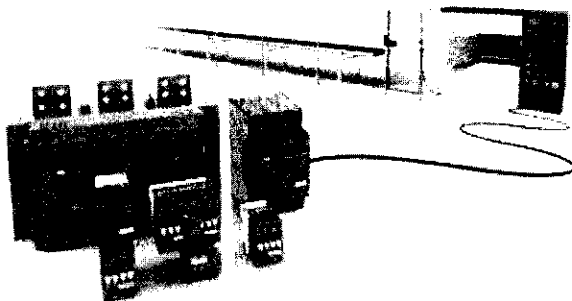
## Access Global Support

The contactor and motor protection range from ABB is compatible with all major national and international standards and is available worldwide via a global distribution network. One contactor coil now handles 100 V – 250 V, AC/DC for use in Europe or Asia as well as North America.



## Optimize logistics

With its contactor and motor protection range, ABB has managed to reduce the number of contactor coils to just four. The total number of product variants has been reduced by up to 90%. This simplifies the customers' logistics and cuts administration costs.



## Simplify design

By reducing contactor coil energy consumption by up to 80%, panels can be built smaller and transformers more compact. All the features of the AF technology, along with access to drawings and coordination tables online, simplifies your design and assembly process.

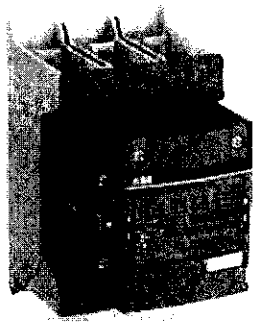


## Secure uptime

Time to prevent stoppages caused by voltage fluctuations. The AF contactor ensures distinct operation in unstable networks and signifies a major advance in motor control and power switching. Voltage sags, dips and surges pose no threat. The AF contactor secures your uptime.

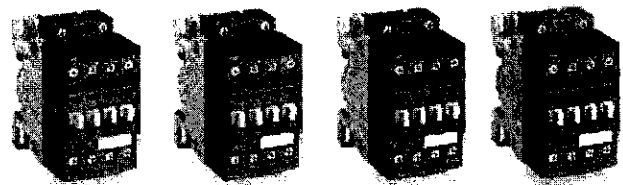


# AF technology Benefits



## Reliable in all networks

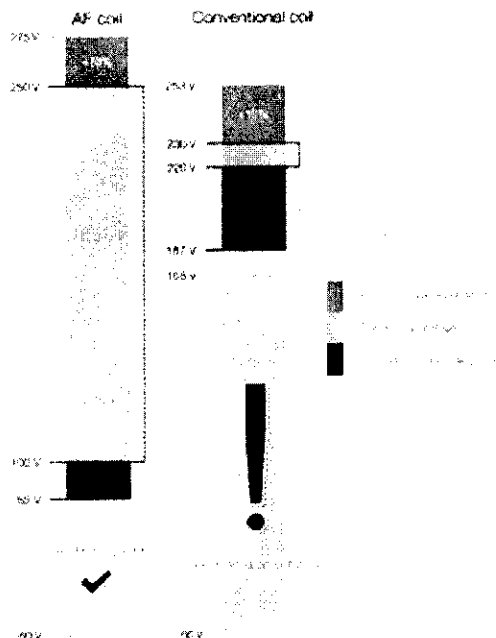
The electronic system within the AF contactor rectifies the AC or DC control circuit voltage to a DC control voltage that is applied on the coil. The contactor is safely operated in an always optimized condition making it virtually noise free.



1

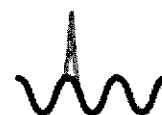
## Four coils for the entire voltage range

The AF contactor features both AC and DC support. With the complete AF contactor range, functionality is improved. Still, the total number of product variants compared to a conventional range is reduced by 90%. Only four coils are required to cover 24 V AC, 20 V DC - 500 V AC/DC.



## Wide control voltage range

With conventional contactor technology, different contactors were needed for different network voltages. Thanks to the wide operating range of the AF contactor it can operate just as well in Europe as in Asia or North America. The core coil of the AF contactor range covers 100-250 V AC/DC 50/60 Hz.



## Built-in surge suppression

With conventional contactor technology it is recommended to use an external surge suppressor, an accessory that could cost as much as half the contactor itself. With the AF technology the surges are handled by the contactor itself and the surge never reaches the control circuit. Neither the surge suppressor nor the actual surge has to be considered anymore. One less product and one less complication to worry about.

# AF40N2 & AF80N3 3-pole NEMA rated contactors

## Sizes 2 & 3

### AC / DC operated with 1 N.O. + 1 N.C. auxiliary contacts

2



AF40N2-30-11



AF80N3-30-11

#### Description

- AF40N2 and AF80N3 NEMA rated contactors are mainly used for controlling 3-phase motor circuits up to 575V AC. These contactors are of the block type design with 3 main poles.
- Control circuit: AC or DC operated with electronic coil interface accepting a wide control voltage range (e.g. 100...250 V AC and DC), only 4 control voltage ranges covering 24...500V 50/60 Hz and 20...500 V DC
- can manage large control voltage variations
- reduced panel energy consumption
- very distinct closing and opening.
- Built-in surge suppression
- Add-on auxiliary contact blocks for front or side mounting and a wide range of accessories.

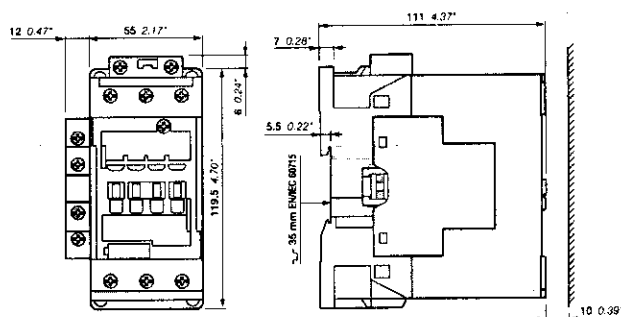
#### Ordering details

NEMA		3-phase motor rating		Rated control circuit voltage Uc min. ... Uc max.		Auxiliary contacts fitted	Catalog number	Global reference code (2)	Weight Pkg (1 pce)  kg
Size	Continuous current  A	230 V hp	460/ 575V hp	V 50/60 Hz	V DC				
2	45	15	25	24...60	-	1 1	AF40N2-30-11-41		1.010
				24...60	20...60 (1)	1 1	AF40N2-30-11-11		1.010
				48...130	48...130	1 1	AF40N2-30-11-12		1.010
				100...250	100...250	1 1	AF40N2-30-11-13		1.000
				250...500	250...500	1 1	AF40N2-30-11-14		1.000
3	90	30	50	24...60	-	1 1	AF80N3-30-11-41		1.260
				24...60	20...60 (1)	1 1	AF80N3-30-11-11		1.260
				48...130	48...130	1 1	AF80N3-30-11-12		1.260
				100...250	100...250	1 1	AF80N3-30-11-13		1.210
				250...500	250...500	1 1	AF80N3-30-11-14		1.210

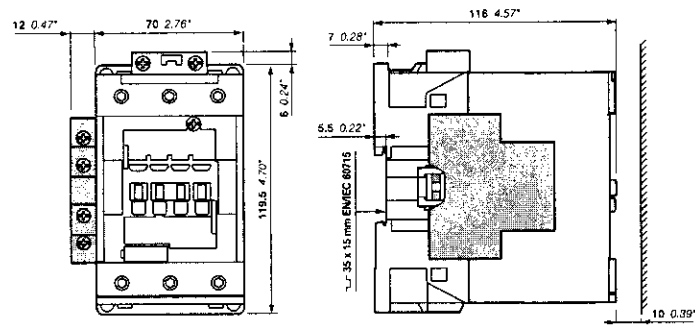
(1) AF...30-...-11 not suitable for direct control by PLC-output.

(2) Available in the US and Canada only.

#### Main dimensions mm, inches



AF40N2



AF80N3

# BARKSDALE INFO

## Diaphragm Switch

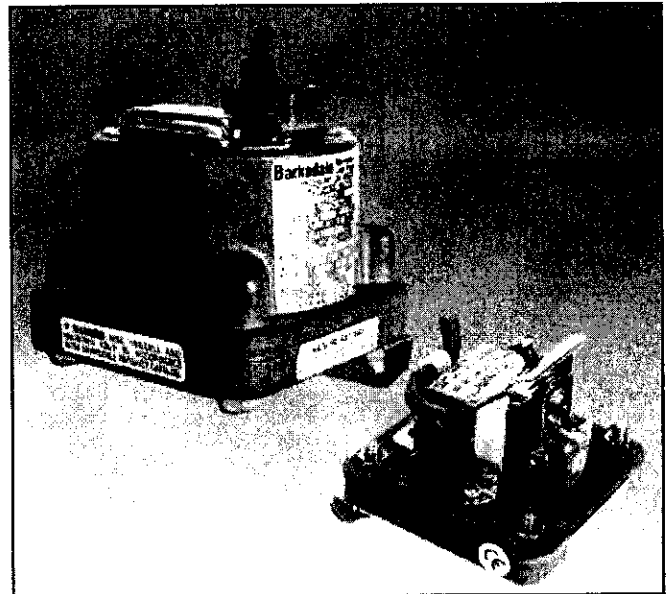
## D1S, D2S, D1H, D2H Series

### Features

- ▶ Stripped and housed versions available
- ▶ High accuracy
- ▶ Ideal for pressure or vacuum
- ▶ Easy setpoint adjustment
- ▶ NEMA 4 (Housed Models)
- ▶ Up to 3 setpoints available in one switch

### Applications

- ▶ Pump & compressor monitoring
- ▶ Engine monitoring
- ▶ Machine tools
- ▶ Hydraulic power units
- ▶ Medical equipment
- ▶ Waste management
- ▶ Food & beverage
- ▶ Factory automation
- ▶ Metal working



### General Specifications\*

<b>Accuracy:</b>	± 0.5% of the adjustable range
<b>Switch:</b>	
Type:	Single pole double throw (SPDT) Snap Action; single or dual circuit
Rating:	10 amps @ 125/250 VAC; 3 amps @ 480 VAC (Class A or H limit switch). Consult sales drawing for ratings of optional limit switches.
<b>Wetted Parts:</b>	
Process Fitting:	304 stainless steel
Diaphragm:	17-7 PH stainless steel
Enclosure:	Anodized aluminum (housed models)
<b>Electrical Connection:</b>	Free leads approximately 18" long, #16 AWG and 1/2" NPT conduit connection for housed models
<b>Enclosure Ratings:</b>	Housed Models: NEMA 4 Stripped Models: NEMA 1
<b>Pressure Connection:</b>	1/4" NPT Female
<b>Approvals:</b>	
UL (optional):	Stripped (D1S and D2S) models may be ordered as UL Recognized components (UR) on request. Housed (D1H and D2H) models may be ordered as UL Listed on request (UL File No. E42816).

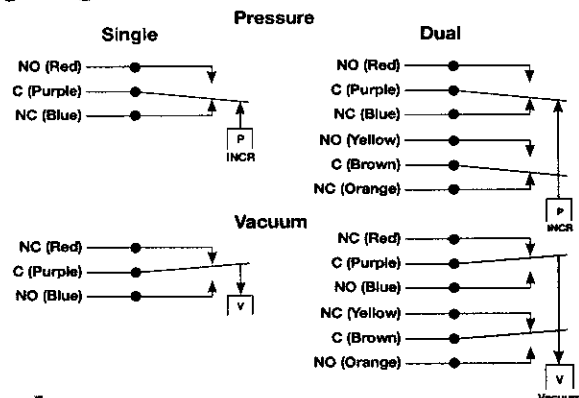
\* See product configurator for additional options.

<b>Approvals (cont.):</b>	
CSA (optional):	All models may be ordered as CSA listed under Class 3231 02, File LR22355 on request.
PED (European):	Compliant to PED 97/23/EC
<b>Temperature Range:</b>	
Operating:	-65° to +165°F (-54° to +74°C)
Storage:	-65° to +200°F (-54° to 93°C)
<b>Adjustment Instructions:</b>	
Pressure:	Turn adjustment screw counterclockwise to raise actuation point.
Vacuum:	Turn adjustment screw clockwise to increase setpoint (higher vacuum).
<b>Options:</b>	- NEMA 4X enclosure (housed models only) - Cleaned for oxygen service - Factory pre-set
<b>Shipping Weight:</b>	Stripped Versions: 1.5 lbs. approximate Housed Versions: 1.75 lbs. approximate

### Wiring Code

Lead	Circuit #1		Circuit #2	
	Pressure	Vacuum	Pressure	Vacuum
Normally Closed	Blue	Red	Orange	Yellow
Common	Purple	Purple	Brown	Brown
Normally Open	Red	Blue	Yellow	Orange

### Wiring Diagram



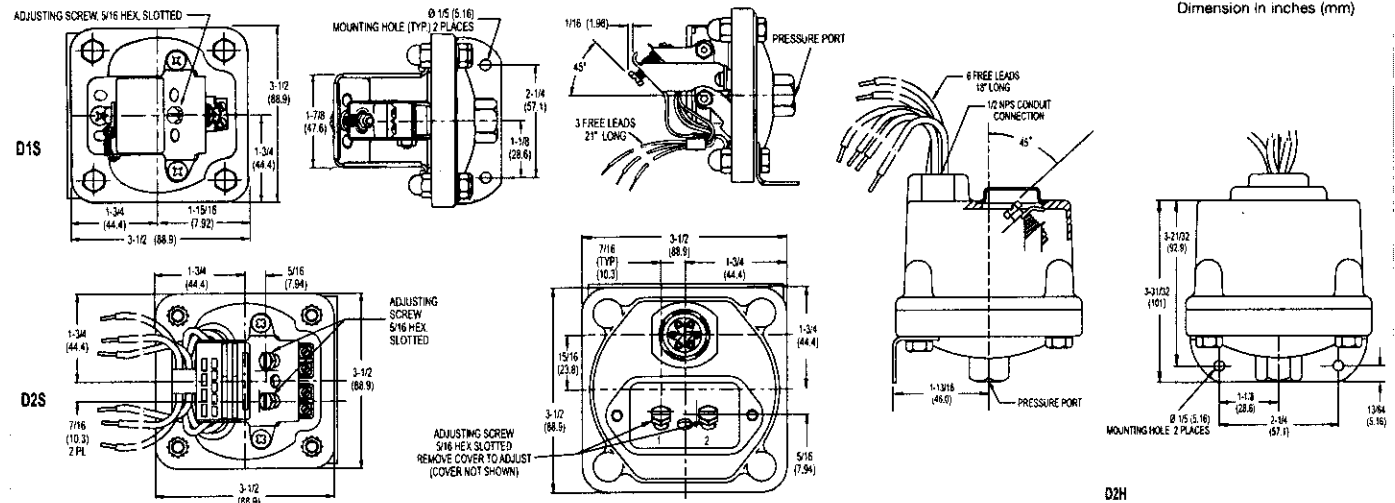
**Barksdale**  
CONTROL PRODUCTS  
CRANE Barksdale, Inc./Barksdale GmbH  
A Subsidiary of Crane Co.

# BARKSDALE PART NUMBER

## Diaphragm Switch

## D1S, D2S, D1H, D2H Series

### Technical Drawing



### Product Configurator

Example      D1H      -A      80SS      -CS

**H** Hermetically sealed limit switch option - Class I, Division II (requires AA, CC, GH or HH limit switch, Not available on vacuum models)

#### Base Configuration

**D1H** Single setpoint housed version  
**D1S** Single setpoint stripped version  
**D2H** Dual setpoint housed version  
**D2S** Dual setpoint stripped version  
**D3H**<sup>4</sup> Triple setpoint housed version

#### Limit Switch<sup>1</sup>

**-A** 10 amps @ 125/250 VAC; 3 amps @ 480 VAC; (standard for pressure range 3SS, 80SS or 150SS)  
**-B** 10 amps @ 125/250/480 VAC; 2 amps @ 600 VAC; 0.05 amps @ 125 VDC; 0.03 amps @ 250 VDC  
**-C** 10 amps @ 125/250/480 VAC; 2 amps @ 600 VAC; 0.1 amps @ 125 VDC; 0.05 amps @ 250 VDC  
**-H** 10 amps @ 125/250 VAC; 3 amps @ 480 VAC; (standard for pressure range 2SS or 18SS)  
**-M** 10 amps @ 125/250 VAC; 3 amps @ 480 VAC; 0.5 amps @ 125 VDC; 0.25 amps @ 250 VDC (not UL approved)  
**-GH** 1 Amp @ 125 VAC; 1 Amp @ 24 VDC with gold contacts (not UL approved)  
**-AA** Hermetically sealed; 4 amps @ 125/250 VAC (not available on 2SS or vacuum models)  
**-CC** Hermetically sealed; 10 amps @ 125/250 VAC (not available on 2SS or vacuum models)  
**-GH** Hermetically sealed; 1 Amp @ 125 VAC with gold contacts (not available on 2SS or vacuum models)  
**-HH** Hermetically sealed; 5 amps @ 125/250 VAC (not available on 2SS or vacuum models)  
**-AA** Triple setpoint limit switch

#### Options

**-FX** NEMA 4X enclosure  
**-Z1** Oxygen cleaned  
**-U** UL Approved (Industrial Control)  
**-CS** CSA Approved Model  
**-Wxxx** Extra wire length (XXX = inches)  
**-Sxxx** Factory pre-set (consult factory)

#### Pressure Connection

**Blank** Std 1/4" NPT female pressure connection  
**-P2** 1/2" NPT female pressure connection

#### Adjustable Range

	Adjustable Range (PRESSURE)				Approx. Deadband <sup>2</sup> (Actuation Value) psi (bar)	Proof Pressure psi (bar)
	Decreasing - psi (bar)		Increasing - psi (bar)			
	Min	Max	Min	Max		
2SS <sup>3</sup>	0.018 (.0)	1.65 (.1)	0.068 (.0)	1.7 (.1)	.02 - .05 (.0 - .0)	3 (.2)
3SS	.03 (.00)	2.85 (.2)	.18 (.02)	3 (.2)	.07 - .15 (.0 - .01)	10 (.7)
18SS	.4 (.03)	17.74 (1.2)	.66 (.05)	18 (1.2)	.12 - .26 (.01 - .02)	60 (4.1)
80SS	.5 (.03)	76.6 (5.3)	3.9 (.3)	80 (5.5)	1.6 - 3.4 (.1 - .2)	160 (10.9)
150SS	1.5 (.1)	144 (9.9)	7.5 (.5)	150 (10.3)	2.3 - 6 (.2 - .4)	300 (20.4)

	Adjustable Range (VACUUM)				Approx. Deadband <sup>2</sup> (Actuation Value) in. Hg	Proof Pressure in. Hg
	Decreasing - in. Hg		Increasing - in. Hg			
	Min	Max	Min	Max		
3SS	0.06	5.72	0.34	6	.14 - .28	20
18SS	0.8	29.2	1.6	30	.4 - .8	30

#### NOTES:

- Consult Supplemental Guide for specific deadband values
- Deadband values indicated when used with the "standard" limit switch
- Not available with hermetically sealed limit switches
- Available only with AA (not hermetically sealed) limit switch