## CLIENT: AL KARAM TOWEL

## PROJECT: M/S Supply of PANELS FOR AL KARAM TOWEL

COMPONENTS COSTING AS PER PROVIDED DETAILS

S.No DESCRIPTION RATING MAKE  AMP SC  1 SUPPLY OF NEW 3200A BREAKER, COPPER MAIN BUS AND LINKS IN EXISTING PANEL INCOMING FROM K.E 1	E QTY
SUPPLY OF NEW 3200A BREAKER, COPPER MAIN BUS AND LINKS IN EXISTING PANEL INCOMING FROM K.E 1	
ACB TP (ADJ.) 3200A 100kA ABB	3 1
MOTOR MECHANISM 220V AC ABB	3 1
UVT	1
SHUNT OPENING ABB	1
SHUNT CLOSING ABB	3 1
CTs 3200/5A METLE	EX 3
PHASE INDICATION LIGHTS (R/Y/B) S.A./CAM	ISCO 3
CONTROL MCB / FUSE + BASE 2A CAMSCO /	HIMEL 6
BUSBAR PER PHASE + NEUTRAL 1X100 X 5 SERVICES LOVAT	TA 4
BUSBAR EARTH 80 X 05 SERVICES LOVAT	TA 1
SUPPLY OF 3200A AUTO PHASE REVERSAL PANEL	
ACB TP(ADJ.) 3200A 100kA ABB	3 2
UVT 220VAC ABB	2
SHUNT OPENING 220VAC ABB	3 2
SHUNT CLOSING 220VAC ABB	3 2
MOTOR MECHANISM 220VAC ABB	
CTs FICO/MET	
ENERGY ANALYZER 220VAC R/Y/B CIRCUTOR	
PHASE INDICATION LIGHTS (R/Y/B)  2A  CAMSCO /	
CONTROL MCB / FUSE + BASE 3200/5A CAMSCO /	HIMEL 3
CONTROL SECTION:	EQUI .
EVR RELAY INTER/E TIMER WITH BASE AUTONICS	
INDICATION LIGHTS (NORMAL G)         220VAC         CAMSCO /           INDICATION LIGHTS (ABNORMAL R)         220VAC         CAMSCO /	
CONTROL MCB / FUSE + BASE 2A CAMSCO /	
PHASE SEQUENCE RELAY  EMIREL/E	
CONTROL RELAY WITH BASE PHOEN	
THERMOSTATE RELAY IMPORT	
EXHAUST FAN WITH FILTER IMPORT	
SUPPLY OF 2000A CHANGE OVER PANEL	•
ACB TP(ADJ.) 2000A CHANGE OVER PAREL 2000A 100kA ABB	3 1
UVT 220VAC ABB	3 1
SHUNT OPENING 220VAC ABB	3 1
SHUNT CLOSING 220VAC ABB	3 1
MOTOR MECHANISM 220VAC ABB	3 1
CTs FICO/MET	TALEX 3
ENERGY ANALYZER 220VAC R/Y/B CIRCUTOR	
ENERGY ANALYZER         220VAC         R/Y/B         CIRCUTOR           PHASE INDICATION LIGHTS (R/Y/B)         2A         CAMSCO /	HIMEL 3
PHASE INDICATION LIGHTS (R/Y/B) 2A CAMSCO /	
PHASE INDICATION LIGHTS (R/Y/B)         2A         CAMSCO /           CONTROL MCB / FUSE + BASE         3200/5A         CAMSCO /	S/ EQU. 2
PHASE INDICATION LIGHTS (R/Y/B)         2A         CAMSCO /           CONTROL MCB / FUSE + BASE         3200/5A         CAMSCO /           CONTROL SECTION:	
PHASE INDICATION LIGHTS (R/Y/B)         2A         CAMSCO /           CONTROL MCB / FUSE + BASE         3200/5A         CAMSCO /           CONTROL SECTION:         TIMER WITH BASE         AUTONICS	HIMEL 1
PHASE INDICATION LIGHTS (R/Y/B)         2A         CAMSCO /           CONTROL MCB / FUSE + BASE         3200/5A         CAMSCO /           CONTROL SECTION:           TIMER WITH BASE INDICATION LIGHTS (NORMAL G)         AUTONICS           INDICATION LIGHTS (NORMAL G)         220VAC         CAMSCO /	HIMEL 1 HIMEL 1
PHASE INDICATION LIGHTS (R/Y/B)         2A         CAMSCO /           CONTROL MCB / FUSE + BASE         3200/5A         CAMSCO /           CONTROL SECTION:           TIMER WITH BASE         AUTONICS           INDICATION LIGHTS (NORMAL G)         220VAC         CAMSCO /           INDICATION LIGHTS (ABNORMAL R)         220VAC         CAMSCO /           CONTROL RELAY WITH BASE         PHOEN           CONTROL MCB / FUSE + BASE         2A         CAMSCO /	HIMEL 1 HIMEL 1 NIX 1 HIMEL 2
PHASE INDICATION LIGHTS (R/Y/B)         2A         CAMSCO /           CONTROL MCB / FUSE + BASE         3200/5A         CAMSCO /           CONTROL SECTION:           TIMER WITH BASE         AUTONICS           INDICATION LIGHTS (NORMAL G)         220VAC         CAMSCO /           INDICATION LIGHTS (ABNORMAL R)         220VAC         CAMSCO /           CONTROL RELAY WITH BASE         PHOEN           CONTROL MCB / FUSE + BASE         2A         CAMSCO /           M-O-A SELECTOR SWITCH         CAMSCO /	HIMEL 1 HIMEL 1 VIX 1 HIMEL 2
PHASE INDICATION LIGHTS (R/Y/B)         2A         CAMSCO /           CONTROL MCB / FUSE + BASE         3200/5A         CAMSCO /           CONTROL SECTION:           TIMER WITH BASE         AUTONICS           INDICATION LIGHTS (NORMAL G)         220VAC         CAMSCO /           INDICATION LIGHTS (ABNORMAL R)         220VAC         CAMSCO /           CONTROL RELAY WITH BASE         PHOEN           CONTROL MCB / FUSE + BASE         2A         CAMSCO /           M-O-A SELECTOR SWITCH         CAMSCO /         THERMOSTATE RELAY         IMPORT	HIMEL 1 HIMEL 1 NIX 1 HIMEL 2 HIMEL 1 TED 1
PHASE INDICATION LIGHTS (R/Y/B)         2A         CAMSCO /           CONTROL MCB / FUSE + BASE         3200/5A         CAMSCO /           CONTROL SECTION:           TIMER WITH BASE         AUTONICS           INDICATION LIGHTS (NORMAL G)         220VAC         CAMSCO /           INDICATION LIGHTS (ABNORMAL R)         220VAC         CAMSCO /           CONTROL RELAY WITH BASE         PHOEN           CONTROL MCB / FUSE + BASE         2A         CAMSCO /           M-O-A SELECTOR SWITCH         CAMSCO /	HIMEL 1 HIMEL 1 NIX 1 HIMEL 2 HIMEL 1 TED 1
PHASE INDICATION LIGHTS (R/Y/B)         2A         CAMSCO /           CONTROL MCB / FUSE + BASE         3200/5A         CAMSCO /           CONTROL SECTION:           TIMER WITH BASE         AUTONICS           INDICATION LIGHTS (NORMAL G)         220VAC         CAMSCO /           INDICATION LIGHTS (ABNORMAL R)         220VAC         CAMSCO /           CONTROL RELAY WITH BASE         PHOEN           CONTROL MCB / FUSE + BASE         2A         CAMSCO /           M-O-A SELECTOR SWITCH         CAMSCO /           THERMOSTATE RELAY         IMPORT           EXHAUST FAN WITH FILTER         IMPORT	HIMEL 1 HIMEL 1 NIX 1 HIMEL 2 HIMEL 1 TED 1 TED 2
PHASE INDICATION LIGHTS (R/Y/B)         2A         CAMSCO /           CONTROL MCB / FUSE + BASE         3200/5A         CAMSCO /           CONTROL SECTION:           TIMER WITH BASE         AUTONICS           INDICATION LIGHTS (NORMAL G)         220VAC         CAMSCO /           INDICATION LIGHTS (ABNORMAL R)         220VAC         CAMSCO /           CONTROL RELAY WITH BASE         PHOEN         PHOEN           CONTROL MCB / FUSE + BASE         2A         CAMSCO /           M-O-A SELECTOR SWITCH         CAMSCO /         CAMSCO /           THERMOSTATE RELAY         IMPORT           EXHAUST FAN WITH FILTER         IMPORT           SUPPLY & INSTALLATION OF 900KVAR PFI           ACB TP         1600A         100kA         OWNER PRO	HIMEL 1 HIMEL 1 NIX 1 HIMEL 2 HIMEL 1 TED 1 TED 2  OVIDED 1
PHASE INDICATION LIGHTS (R/Y/B)         2A         CAMSCO /           CONTROL MCB / FUSE + BASE         3200/5A         CAMSCO /           CONTROL SECTION:           TIMER WITH BASE         AUTONICS           INDICATION LIGHTS (NORMAL G)         220VAC         CAMSCO /           INDICATION LIGHTS (ABNORMAL R)         220VAC         CAMSCO /           CONTROL RELAY WITH BASE         PHOEN           CONTROL MCB / FUSE + BASE         2A         CAMSCO /           M-O-A SELECTOR SWITCH         CAMSCO /         THERMOSTATE RELAY         IMPORT           EXHAUST FAN WITH FILTER         IMPORT	HIMEL 1 HIMEL 1 NIX 1 HIMEL 2 HIMEL 1 TED 1 TED 2  OVIDED 1 EX 1
PHASE INDICATION LIGHTS (R/Y/B)         2A         CAMSCO /           CONTROL MCB / FUSE + BASE         3200/5A         CAMSCO /           CONTROL SECTION:           TIMER WITH BASE         AUTONICS           INDICATION LIGHTS (NORMAL G)         220VAC         CAMSCO /           INDICATION LIGHTS (ABNORMAL R)         220VAC         CAMSCO /           CONTROL RELAY WITH BASE         PHOEN           CONTROL MCB / FUSE + BASE         2A         CAMSCO /           M-O-A SELECTOR SWITCH         CAMSCO /           THERMOSTATE RELAY         IMPORT           EXHAUST FAN WITH FILTER         IMPORT           SUPPLY & INSTALLATION OF 900KVAR PFI           ACB TP         1600A         100kA         OWNER PRO           CTs         3200/5A         METLE           12 STAGE PFI RELAY         OWNER PRO	HIMEL 1 HIMEL 1 NIX 1 HIMEL 2 HIMEL 1 TED 1 TED 2  OVIDED 1 EX 1
PHASE INDICATION LIGHTS (R/Y/B)         2A         CAMSCO /           CONTROL MCB / FUSE + BASE         3200/5A         CAMSCO /           CONTROL SECTION:           TIMER WITH BASE         AUTONICS           INDICATION LIGHTS (NORMAL G)         220VAC         CAMSCO /           INDICATION LIGHTS (ABNORMAL R)         220VAC         CAMSCO /           CONTROL RELAY WITH BASE         PHOEN           CONTROL MCB / FUSE + BASE         2A         CAMSCO /           M-O-A SELECTOR SWITCH         CAMSCO /         CAMSCO /           THERMOSTATE RELAY         IMPORT         IMPORT           SUPPLY & INSTALLATION OF 900KVAR PFI         1600A         100kA         OWNER PRO           ACB TP         1600A         100kA         OWNER PRO           CTs         3200/5A         METLE           12 STAGE PFI RELAY         OWNER PRO	HIMEL 1 HIMEL 1 HIMEL 1 NIX 1 HIMEL 2 HIMEL 1 TED 1 TED 2  OVIDED 1 EX 1 OVIDED 1
PHASE INDICATION LIGHTS (R/Y/B)         2A         CAMSCO /           CONTROL MCB / FUSE + BASE         3200/5A         CAMSCO /           CONTROL SECTION:           TIMER WITH BASE         AUTONICS           INDICATION LIGHTS (NORMAL G)         220VAC         CAMSCO /           INDICATION LIGHTS (ABNORMAL R)         220VAC         CAMSCO /           CONTROL RELAY WITH BASE         PHOEN           CONTROL MCB / FUSE + BASE         2A         CAMSCO /           M-O-A SELECTOR SWITCH         CAMSCO /         CAMSCO /           THERMOSTATE RELAY         IMPORT           SUPPLY & INSTALLATION OF 900KVAR PFI           ACB TP         1600A         100kA         OWNER PROTECTS           CTS         3200/5A         METLE           12 STAGE PFI RELAY         OWNER PROTECTS           3 X 50KVAR = 150 KVAR (3 VARIABLE STAGE)         POWER FACTOR CAPACITOR @ 415VAC         50KVAR         OWNER PROTECTS	HIMEL 1 HIMEL 1 HIMEL 1 HIMEL 2 HIMEL 1 TED 1 TED 2  OVIDED 1 EX 1 OVIDED 1  OVIDED 1
PHASE INDICATION LIGHTS (R/Y/B)         2A         CAMSCO /           CONTROL MCB / FUSE + BASE         3200/5A         CAMSCO /           CONTROL SECTION:           TIMER WITH BASE         AUTONICS           INDICATION LIGHTS (NORMAL G)         220VAC         CAMSCO /           INDICATION LIGHTS (ABNORMAL R)         220VAC         CAMSCO /           CONTROL RELAY WITH BASE         PHOEN           CONTROL MCB / FUSE + BASE         2A         CAMSCO /           M-O-A SELECTOR SWITCH         CAMSCO /         CAMSCO /           THERMOSTATE RELAY         IMPORT         IMPORT           EXHAUST FAN WITH FILTER         IMPORT         IMPORT           SUPPLY & INSTALLATION OF 900KVAR PFI           ACB TP         1600A         100kA         OWNER PRO           CTs         3200/5A         METLE           12 STAGE PFI RELAY         OWNER PRO           3 X 50KVAR = 150 KVAR (3 VARIABLE STAGE)	HIMEL 1 HIMEL 1 HIMEL 1 HIMEL 2 HIMEL 1 TED 1 TED 2  OVIDED 1 EX 1 OVIDED 1  OVIDED 3 OVIDED 3
PHASE INDICATION LIGHTS (R/Y/B)         2A         CAMSCO /           CONTROL MCB / FUSE + BASE         3200/5A         CAMSCO /           CONTROL SECTION:           TIMER WITH BASE         AUTONICS           INDICATION LIGHTS (NORMAL G)         220VAC         CAMSCO /           INDICATION LIGHTS (ABNORMAL R)         220VAC         CAMSCO /           CONTROL RELAY WITH BASE         PHOEN           CONTROL MCB / FUSE + BASE         2A         CAMSCO /           M-O-A SELECTOR SWITCH         CAMSCO /         CAMSCO /           THERMOSTATE RELAY         IMPORT         IMPORT           SUPPLY & INSTALLATION OF 900KVAR PFI         1600A         100kA         OWNER PRO           ACB TP         1600A         100kA         OWNER PRO           3 X 50KVAR = 150 KVAR (3 VARIABLE STAGE)         OWNER PRO           POWER FACTOR CAPACITOR @ 415VAC         50KVAR         OWNER PRO           MAGNETIC CONTACTOR TP @ AC-3         105A         OWNER PRO	HIMEL 1 HIMEL 1 HIMEL 1 HIMEL 2 HIMEL 1 TED 1 TED 2  OVIDED 1 EX 1 OVIDED 1  OVIDED 3 OVIDED 3
PHASE INDICATION LIGHTS (R/Y/B)	HIMEL 1 HIMEL 1 NIX 1 HIMEL 2 HIMEL 1 TED 1 TED 2  OVIDED 1 EX 1 OVIDED 1 OVIDED 3 OVIDED 3 OVIDED 3 OVIDED 3
PHASE INDICATION LIGHTS (R/Y/B)	HIMEL 1 HIMEL 1 HIMEL 1 HIMEL 2 HIMEL 2 HIMEL 1 TED 1 TED 2  OVIDED 1 EX 1 OVIDED 3
PHASE INDICATION LIGHTS (R/Y/B)	HIMEL 1 HIMEL 1 HIMEL 1 HIMEL 2 HIMEL 2 HIMEL 1 TED 1 TED 2  OVIDED 1 EX 1 OVIDED 3

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## 6x100KVAR=600KVAR (6 VARIABLE STAGE):

POWER FACTOR CAPACITOR @ 415VAC	50KVAR		NOKIAN / EQU.	12
MAGNETIC CONTACTOR TP @ AC-3	105A		FUJI / EQU.	12
MCCB TP	100A	25kA	TERASAKI	12

MANUAL - OFF - AUTO SWITCH		G/R	CAMSCO	12
ON/OFF PUSH BUTTON (G/R)			S.A./CAMSCO	24
ON/OFF INDICATION LIGHT (G/R)	2A	2A/5	CAMSCO / HIMEL	24
CONTROL MCB / FUSE + BASE			EMAS	3