COMPACTOR

SERVICE MANUAL

SERIAL NUMBER:_____

DATE PURCHASED:_____

MANUFACTURED BY:
CONTRACT WELDING & FABRICATING, INC.
P.O. BOX 68
BELLEVILLE, MI. 48112
PHONE: 734-699-5561

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COMPACTOR OPERATION SAFETY RULES

WARNING! IF INCORRECTLY USED, THIS EQUIPMENT CAN CAUSE SEVERE INJURY. COMPACTOR IS TO BE OPERATED ONLY BY AUTHORIZED FULL TRAINED QUALIFIED PERSONNEL 18 YEARS OLD OR OLDER WHO ARE AWARE OF THE DANGER AND FOLLOW THESE SAFETY RULES.

1. ALL SAFETY GUARDS AND COVERS MUST BE IN PLACE PRIOR TO STARTUP OR OPERATION OF THE COMPACTION EQUIPMENT.
2. BE SURE THE CONTAINER IS PROPERLY POSITIONED AND SECURELY LATCHED TO THE COMPACTOR BEFORE STARTING THE COMPACTOR.
3. MAINTAIN DOCK RAMP, POINT OF OPERATION AND THE WORK AREA SURROUNDING THE STATIONARY COMPACTOR CLEAR OF REFUSE, GREASE, OIL OR WATER.
4. DO NOT PUT FLAMMABLE, EXPLOSIVE OR HAZARDOUS MATERIALS IN MACHINE.
5. BE FAMILIAR WITH ALL CONTROLS OF THE MACHINE I.E., KNOW LOCATION, FUNCTION AND OPERATION OF ALL SWITCHES.
6. DO NOT HANDLE OR TOUCH THE CONTROLS WITH WET HANDS OR IN DAMP ENVIRONMENT. IN FREEZING WEATHER, MAKE SURE CONTROLS ARE FREE OF ICE BEFORE OPERATING.
7. BEFORE ACTUATING THE CONTROLS BE CERTAIN THAT ALL INDIVIDUALS ARE CLEAR OF THE CHARGING CHAMBER, HOPPER OR PINCH-POINT AREAS.
8. WEAR SAFETY GLASSES OR GOGGLES WHEN OPERATION COMPACTOR.
9. NEVER REACH INTO OR ENTER THE CHARGING CHAMBER UNLESS THE PRESCRIBED LOCKOUT MEASURES HAVE BEEN TAKEN TO PREVENT ACCIDENTAL STARTUP.
10. TO PREVENT OPERATION BY UNAUTHORIZED PERSONS, REMOVE KEY FROM CONTROL PANEL KEY SWITCH OR PADLOCK THE MASTER DISCONNECT SWITCH WHENEVER THE COMPACTOR IS NOT IN USE.
11. FULLY RETRACT PACKER RAM BEFORE UNLOCKING CONTAINER.
12. STAND CLEAR OF TAILGATE SWING AREA WHEN CONTAINER IS BEING REMOVED.
13. REPORT ANY DAMAGE TO, OR MALFUNCTION OF, THE STATIONARY COMPACTION EQUIPMENT TO THE RESPONSIBLE AUTHORITY, DO NOT CONTINUE OPERATION IF THE DAMAGE OR MALFUNCTION JEOPARDIZES SAFE OPERATION. BE SURE ALL SAFETY DEVICES ARE OPERATING CORRECTLY.

14. BEFORE ANY MAINTENANCE WORK IS BEGUN, TURN MAIN DISCONNECT SWITCH TO "OFF". PADLOCK THE MAIN DISCONNECT AND ATTACH AN APPROPRIATE WARNING TAG, E.G. "WARNING: DO NOT ENERGIZE WITHOUT PERMISSION OF THE SUPERVISOR". NEVER ENTER AREA BEHIND PACKER RAM OR CHARGING CHAMBER WITH ANY POWER SWITCH ON.
15. THE POWER UNIT OPERATES ON HIGH VOLTAGE. REFER ALL SERVICING TO QUALIFIED PERSONNEL.
16. THE HYDRAULIC SYSTEM WHICH POWERS THE COMPACTOR IS HIGHLY PRESSURIZED. NEVER CHECK FOR LEAKS USING YOUR HANDS. IF INJURED BY HYDRAULIC OIL UNDER PRESSURE, SEE A DOCTOR IMMEDIATELY! BEFORE DISCONNECTING HYDRAULIC LINES, RELIEVE HYDRAULIC PRESSURE BY BACKING OFF THE CYLINDER OR ACTUATOR UNTIL THE EXTERNAL LOAD IS RELIEVED. WHEN CONNECTING THE LINES, BE CERTAIN THAT ALL CONNECTIONS ARE TIGHT. DO NOT EXCEED HYDRAULIC PRESSURE SETTINGS.
17. IF EQUIPPED WITH SIDE OR END TIPPER, STAY CLEAR OF ANY MOVING PARTS OR POTENTIAL PINCH-POINTS WHILE UNIT IS IN OPERATION.
18. IN THE EVENT OF FIRE IN THE CONTAINER:
    A. CALL FIRE DEPARTMENT.
    B. RUN PACKER RAM FORWARD (TO CLOSE OPENING INTO BOX)
    C. CLOSE ANY CHUTE DOORS.
    D. TURN OFF POWER AT MASTER DISCONNECT SWITCH.
    E. BE PREPARED TO AID FIRE DEPARTMENT IN REMOVING CONTAINER.

OPERATIONAL REQUIREMENTS

EMPLOYER RESPONSIBILITY FOR STATIONARY COMPACTOR

1. PROVIDE PROPERLY MAINTAINED COMPACTOR

2. PROVIDE EMPLOYEES INSTRUCTION AND TRAINING BEFORE ASSIGNING EMPLOYEES TO OPERATE, CLEAN, SERVICE OR MAINTAIN EQUIPMENT.

3. THE EMPLOYER SHALL MAINTAIN RECORDS AS TO EMPLOYEE NAMES AND TRAINING DATES.

4. REPAIR ANY PROBLEM THAT MAY EFFECT THE SAFE OPERATION OF COMPACTOR.
   A. INCLUDING EMPLOYEES BYPASSING SAFETY SWITCHES ON SAFETY GATES, DOORS ETC.

5. ESTABLISH AND FOLLOW A PROGRAM OF PERIODIC AND REGULAR INSPECTIONS OF STATIONARY COMPACTOR, INCLUDING MALFUNCTION REPORTS, RECORDING INSPECTIONS AND WORK PERFORMED.

6. FOLLOW LOCK OUT/TAG OUT PROCEDURES FOR ELECTRICAL SYSTEM BY AUTHORIZED PERSONNEL ONLY.

7. PROVIDE SURROUNDING AREA TO BE FREE FROM OBSTRUCTIONS AND ACCUMULATION OF WASTE MATTER, GREASE, OIL AND WATER.

8. ENSURING THAT ONLY AUTHORIZED EMPLOYEES (18 YEARS OR OLDER) OPERATE, INSPECT OR MAINTAIN COMPACTING EQUIPMENT.

START UP INSTRUCTIONS

CAUTION: EMPLOYER SHOULD ONLY ALLOW AUTHORIZED PERSONNEL TO OPERATE COMPACTOR.

CHECK POINTS PRIOR TO OPERATION:

1. CHECK FOR CORRECT INPUT LINE VOLTAGE TO CONTROL PANEL. INPUT LINE VOLTAGE SHOULD MATCH THE SELECTED VOLTAGE OF TRANSFORMER. THE INPUT VOLTAGE SHOULD REMAIN WITHIN 10% BETWEEN NO LOAD AND FULL LOAD CONDITIONS.

2. CHECK TO SEE IF OIL LEVEL IS COMPLETELY FULL. CONTRACT WELDING USES DEXRON II TRANSMISSION FLUID.

3. COMPACTOR HAS BEEN CHECKED FOR LEAKS AND OPERATED IN PLANT. PRESSURE IS PRE-SET, IT SHOULD NOT BE CHANGED, OR FIRST YEAR WARRANTY WILL BE VOID.

4. OPERATOR SHOULD BE CERTAIN ALL INDIVIDUALS ARE CLEAR OF THE POINT OF OPERATION BEFORE ACTIVATING CONTROLS.

5. THE UNIT MUST BE PROPERLY CONNECTED TO A LOCKABLE FUSED DISCONNECT SWITCH. AFTER THIS IS DONE, MOTOR MUST BE CHECKED FOR PROPER ROTATION. IF ROTATION IS CORRECT, COMPACTOR SHOULD BE READY FOR OPERATION. IF THE ROTATION IS WRONG, REVERSE TWO OF THE THREE POWER INPUT CONNECTIONS.

6. CHECK FOR DESIRED NUMBER OF STROKES PER OPERATION. SET DIP SWITCHES ON **PLC** COMPUTER BOARD IF NECESSARY. SEE MULTI-STROKE ADJUSTMENT SECTION.

7. THE OUT STROKE TIME HAS BEEN ADJUSTED AT THE FACTORY. CONFIRM OPERATION AND ADJUST AS NEEDED. SEE OUT STROKE ADJUSTMENT SECTION FOR DETAILS.

PRESSURE SETTING PROCEDURE

PRESSURE SWITCHES ARE ADJUSTED TO CUSTOMER SPECIFICATIONS AT FACTORY. CHANGING SETTINGS, UNLESS AUTHORIZED BY CONTRACT WELDING WILL INVALIDATE WARRANTY.

TOOLS REQUIRED FOR PRESSURE ADJUSTMENTS:

1/4" ALLEN WRENCH, 3/4" WRENCH, MEDIUM SIZED PHILLIPS SCREW DRIVER AND SLOTTED SCREW DRIVER.

LOCATE DIP SWITCH, LEFT CENTER OF COMPUTROL CIRCUIT BOARD. TAKE NOTE OF DIP SWITCH NUMBERS 4, 5, & 6. YOU WILL HAVE TO RETURN THESE SWITCHES TO THEIR ORIGINAL POSITION AT THE END OF THIS SETTING PROCEDURE.

1. AFTER CHECKING SWITCH SETTINGS, MOVE 4, 5, & 6 TO THE ON OR UP POSITION. THIS WILL MAKE THE OUTSTROKE TIME LONGER, CAUSING THE RAM TO BOTTOM OUT IN THE FORWARD POSITION. (PRESS RED RESET BUTTON IN THE CENTER OF COMPUTROL BOARD AFTER DIP SWITCH SETTING.)

2. LOCATE RELIEF VALVE ADJUSTMENT MOUNTED UNDER DIRECTIONAL VALVE SUBPLATE (ON MOST POWER UNITS). TURN COUNTERCLOCKWISE ABOUT 1 TURN, LOWERING SYSTEM PRESSURE.

3. LOCATE BARKSDALE PRESSURE SWITCH, REMOVE CAPS, TURN BOTH #1 AND #2 CIRCUIT ADJUSTMENT SCREWS COUNTERCLOCKWISE 3 TO 4 TURNS. THIS WILL ALLOW THE POWER UNIT TO BUILD PRESSURE WITHOUT HAVING ANY FORWARD RAM MOVEMENT. (IF RAM SHIFTS FORWARD, LET RAM COMPLETE CYCLE, THEN TURN CIRCUIT #2 ADJUSTMENT SCREW OUTWARD, CLOCKWISE 3 TO 4 MORE TURNS.)

BEFORE STARTING MACHINE, BE SURE ALL START-UP PROCEDURE INSTRUCTIONS HAVE BEEN FOLLOWED.

4. START MACHINE, RAM SHOULD BE IN RETRACTED POSITION AND SYSTEM PRESSURE WILL BE AT THE LOWERED SETTING.

5. LOOK AT PRESSURE GAUGE, TURN RELIEF VALVE CLOCKWISE TO DESIRED 80% FULL SETTING.

6. SLOWLY TURN 80% FULL, CIRCUIT #1 PRESSURE SWITCH ADJUSTMENT SCREW CLOCKWISE UNTIL INPUT #5 LED LIGHT ON COMPUTROL BOARD TURNS ON.

7. WITH RAM BOTTOMED OUT, SET RELIEF VALVE PRESSURE TO DESIRED 100% FULL PRESSURE.

8. SLOWLY TURN 100% FULL, CIRCUIT #2, PRESSURE SWITCH ADJUSTMENT SCREW CLOCKWISE UNTIL INPUT #6 ON COMPUTROL BOARD COMES ON. APPROXIMATELY 5 SECONDS AFTER INPUT #6 LIGHT COMES ON, THE MACHINE WILL SHUT OFF.

NOTE: EMERGENCY STOP MUST BE PULLED OUT FOR THE MACHINE TO OPERATE.

9. THE SYSTEM BY-PASS PRESSURE MUST BE SET APPROXIMATELY 200 P.S.I. ABOVE CONTAINER 100% FULL PRESSURE. THIS IS TO BE DONE IN THE 5 SECOND PAUSE BETWEEN THE RAM BOTTOMING OUT AND THE MACHINE SHUTTING DOWN. ABOUT 1/4 TURN CLOCKWISE.

IMMEDIATELY AFTER RAM BOTTOMS OUT, INCREASE RELIEF VALVE PRESSURE. REPEAT IF NECESSARY.

WHEN THIS HAS BEEN DONE, THE LIGHTS WILL BE OFF AND THE MACHINE WILL BE ABLE TO START ONCE AGAIN.

10. RETURN DIP SWITCHES TO THE ORIGINAL SETTINGS, PRESS RESET BUTTON ON THE COMPUTROL BOARD, CYCLE MACHINE TO CHECK PROPER OPERATION.

PROBLEM SOLVING

SYMPTOM	POSSIBLE CAUSE	VERIFICATION
UNIT WILL NOT START	IS EMERGENCY STOP BUTTON PULLED OUT	CHECK INPUT #8
	IS HOPPER DOOR CLOSED	CHECK INPUT #2
	IS MAIN POWER ON	ARE LIGHTS BLINKING
	IS CONTAINER FULL	ARE INPUT #6 AND OUTPUT #17 LIGHTS ON
	OVERLOAD TRIPPED	RESET
	ARE FUSES BLOWN	CHECK CONTINUITY
PUMP MAKING ABNORMAL NOISE	OIL LEVEL LOW	CHECK SIGHT GAUGE
	IS PUMP TO MOTOR COUPLING ADJUSTED CORRECTLY	CHECK COUPLINGS
	IS PUMP FUNCTIONING CORRECTLY	CHECK PUMP FOR EXCESSIVE HEAT
PUMP GETTING ABNORMALLY HOT	OIL LEVEL LOW	CHECK SIGHT GAUGE
	IS PUMP FUNCTIONING CORRECTLY	CHECK PUMP FOR EXCESSIVE NOISE

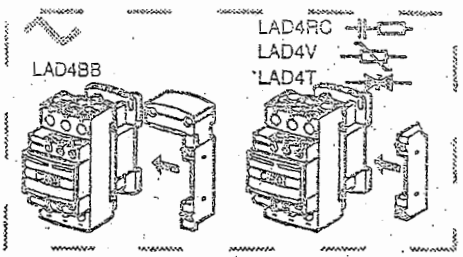
SYMPTOM	POSSIBLE CAUSE	VERIFICATION
UNIT STARTS BUT NO CYCLE	100% FULL SETTING CORRECT	CHECK INPUT #5 AND #6
	IS PRESSURE SET CORRECTLY	CHECK PRESSURE GAUGE
	BAD SOLENOID ON VALVE	CHECK OUTPUT #19 AND #20
100% FULL LIGHT DOESN'T COME ON AND MACHINE DOESN'T SHUT OFF	LIGHT BULB BURNED OUT	CHECK BULB
	IS BOARD RECEIVING 100% FULL SIGNAL	CHECK INPUT #6
	IS BOARD SENDING 100% FULL SIGNAL	CHECK OUTPUT #17
	IS CORRECT LENS AND TAG ON 100% FULL LIGHT	CHECK LIGHT CONNECTED TO WIRE #17
	IS SYSTEM PRESSURE SET CORRECTLY	CHECK PRESSURE GAUGE
	IS PRESSURE SWITCH SET CORRECTLY	CHECK INPUT #6 AND PRESSURE GAUGE

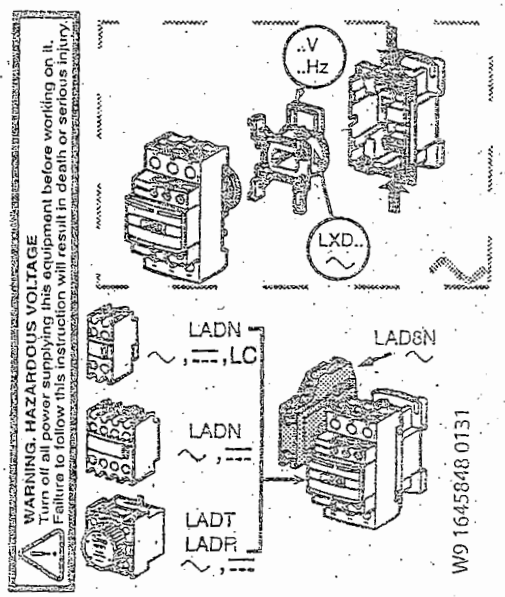
SYMPTOM	POSSIBLE CAUSE	VERIFICATION
80% FULL LIGHT DOESN'T COME ON	LIGHT BULB BURNED OUT	INSPECT BULB
	IS BOARD GETTING 80% FULL SIGNAL	CHECK INPUT #5
	IS BOARD SENDING 80% FULL SIGNAL	CHECK OUTPUT #21
	IS CORRECT LENS AND TAG ON 80% FULL LIGHT	CHECK LIGHT CONNECTED TO WIRE #21
	IS SYSTEM PRESSURE SET CORRECTLY IS PRESSURE SWITCH SET CORRECTLY	CHECK PRESSURE GAUGE CHECK PRESSURE GAUGE AND INPUT #5
UNIT SHUTS OFF PREMATURELY	DOOR OPEN	CHECK INPUT #2 SHOULD BE ON AT ALL TIMES WHEN DOOR IS CLOSED
	IS DOOR PROXIMITY SWITCH OPERATING CORRECTLY	CHECK INPUT #2 SHOULD BE ON AT ALL TIMES WHEN DOOR IS CLOSED
	OVERLOAD TRIPPED IS FULL LIGHT COMING ON	RESET CHECK OUTPUT #17
	IS TRANSFORMER WIRED FOR CORRECT INPUT VOLTAGE	CHECK TRANSFORMER

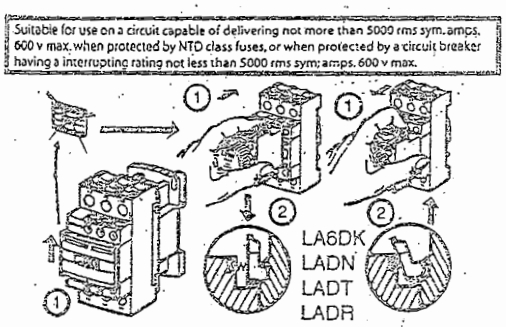
SYMPTOM	POSSIBLE CAUSE	VERIFICATION
RAM DOESN'T GO OUT FAR ENOUGH	STROKE TIMER SET INCORRECTLY	CHECK DIP SWITCH 4, 5, AND 6
RAM MOVES ABNORMALLY	AIR IN SYSTEM	CYCLE MACHINE APPROXIMATELY 6 TIMES
	OIL LEVEL LOW	CHECK SIGHT GAUGE
	CYLINDER LEAK	CONSULT FACTORY
	PUMP FUNCTIONING INCORRECTLY	CHECK PUMP FOR EXCESSIVE NOISE OR HEAT

MOTOR STARTER

LC1D32G7 Telemecanique

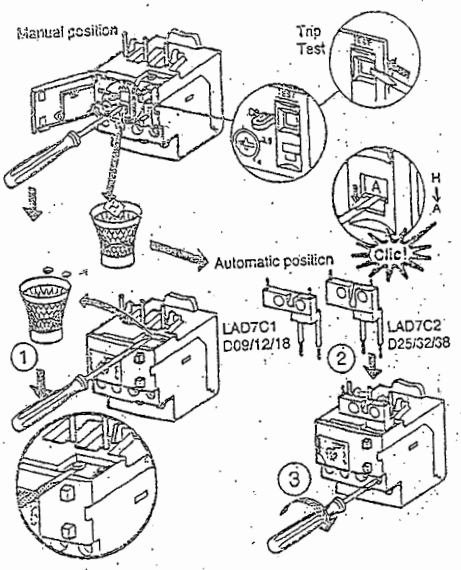


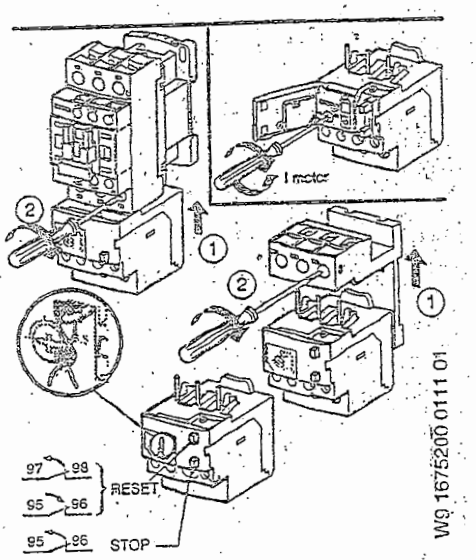




OVERLOAD

LRD32 Telemecanique





HORSEPOWER	VOLTAGE	STARTER	OVERLOAD	REPLACES OLD STYLE
5 HP	240V	LC1D18G7	LRD21	LC1D1810G6 / LR2D1321
	480V	LC1D09G7	LRD12	LC1D0910G6 / LR2D1312
10 HP	240V	LC1D32G7	LRD32	LC1D3210G6 / LR2D2353
	480V	LC1D18G7	LRD21	LC1D1810G6 / LR2D1321
20 HP	240V	LC1D65G7	LRD3359	LC1D6511G6 / LR2D3359
	480V	LC1D32G7	LRD32	LC1D3210G6 / LR2D2353
30 HP	240V	LC1D80G7	LRD3363	LC1D8011G6 / LR2D3363
	480V	LC1D50G7	LRD3355	LC1D5011G6 / LR2D3355

XUE-F10031 / F080319 / F010315 / H10753 / H017535

Environnement / *Environment*

Température ambiante / *Ambient temperature*	Opération / *Operation* : -25 --> +70 °C Stockage / *Storage* : -40 --> +80 °C
Tenue aux vibrations / *Vibration resistance*	7 g (F : 42 --> 150 Hz) (IEC 68-2-6) ± 0,6 mm (F : 10 --> 55 Hz)
Tenue aux chocs / *Shock resistance*	30 g, 11 ms (IEC 68-2-27)
Degré de protection / *Degree of protection*	IP 67 (IEC 529)
Matériaux / *Materials*	Boîtier / *Enclosure* : ABS Lentilles / *Lenses* : PMMA

Caractéristiques électriques / *Electrical characteristics*

XUE	F... / T...	H...
Type de détecteur / *Type of detector*	AC / DC, 5 fils, relais *AC / DC, 5 wires type, relay*	DC, 3 fils, statique *DC, 3 wires, solid state* PNP + NPN
Limites de tension / *Voltage limits*	20 --> 264 V ⎓ 20 --> 264 V ∼ Ondulation comprise / *Ripple included*	10 --> 58 V ⎓ Ondulation comprise / *Ripple included*
Courant commuté / *Switching capacity*	cos φ = 1 --> 2A cos φ = 0,4 --> 0,5A	200 mA protégé court-circuit
Courant consommé sans charge / *Current consumption no-load*	≤ 35 mA	≤ 40 mA
Retards / *Delays* à la disponibilité / *first up* à l'action / *response* au relâchement / *recovery*	 ≤ 60 ms ≤ 16 ms ≤ 16 ms	 15 ms 1,5 ms 1,5 ms
Fréquence maxi de commutation / *Maximum switching frequency*	30 Hz	300 Hz
Tension maxi sur les contacts du relais / *Max voltage on relay's contact*	250 V AC ∼	

Mise en œuvre / *Setting up procedure*

Tableau de fonctionnement / *Function table*

Système de proximité / *Diffuse system*

	Absence d'objet dans le faisceau / *Object absent within the beam*		Présence d'objet dans le faisceau / *Object present within the beam*	
	DEL jaune / *Yellow LED*	Etat de la sortie / *Output state*	DEL jaune / *Yellow LED*	Etat de la sortie / *Output state*
Fonction claire / *Light-on switching*	○	_/‾	●	‾‾‾
Fonction sombre / *Dark-on switching*	●	‾_	○	_/‾

Système reflex / *Reflex system*

	Absence d'objet dans le faisceau / *Object absent within the beam*		Présence d'objet dans le faisceau / *Object present within the beam*	
	DEL jaune / *Yellow LED*	Etat de la sortie / *Output state*	DEL jaune / *Yellow LED*	Etat de la sortie / *Output state*
Fonction claire / *Light-on switching*	●	‾_	○	_/‾
Fonction sombre / *Dark-on switching*	○	_/‾	●	‾‾‾

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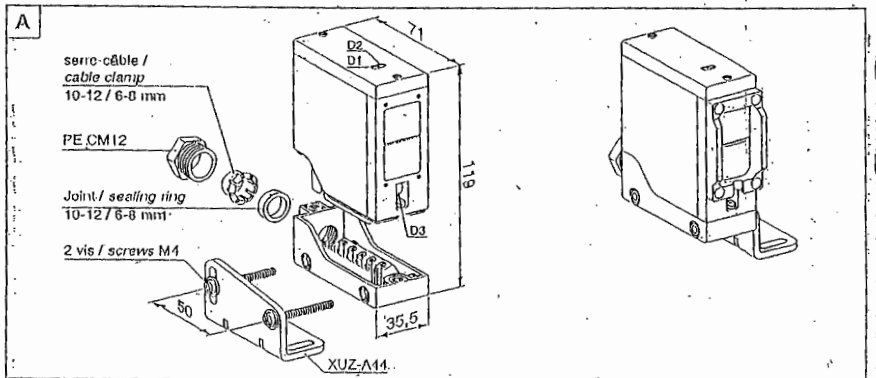
A



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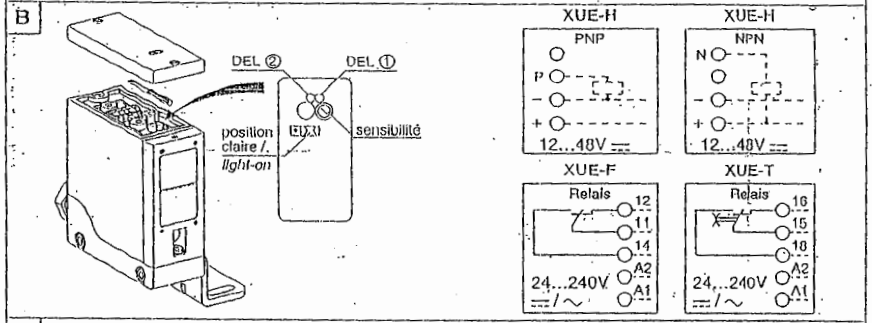
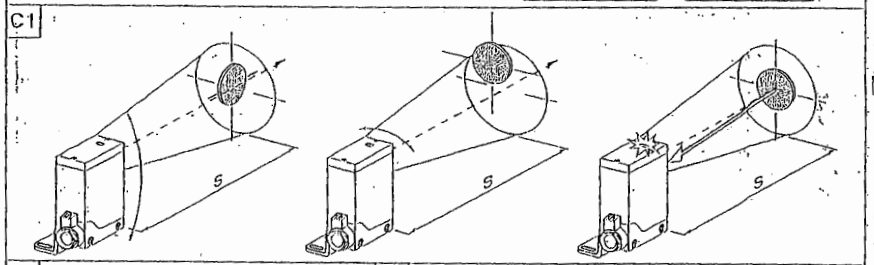
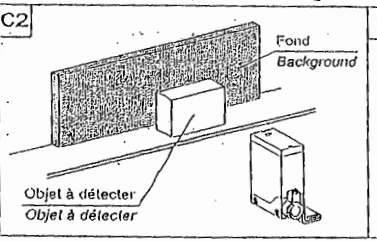


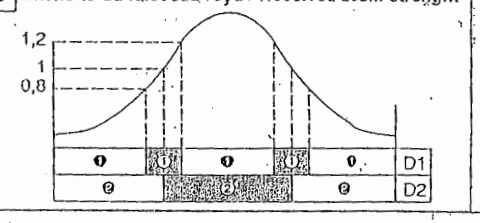
C1



C2



D Intensité du faisceau reçu / *Received beam strenght*



English

Photo-electric detectors: reflex system, polarised reflex system, diffuse system

A Mounting

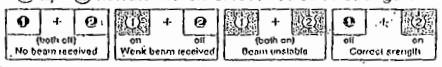
Fixing	Horizontal
Direct	Ø4 + standard nut
On bracket	Ø6 + standard nut

B Connections

- Before making any connections, check that the detector is compatible with the supply (AC or DC) and that the rated voltage indicted on the detector label is adhered to.
Also, check the load current characteristics.
- Programme the switch for light-on or dark-on switching using the selector beneath the cover on top of the switch.

C Adjustments

• The switch incorporates 3 LEDs : 1 yellow ③ for output state, 1 red ① and 1 green ② for assisting alignment (fig. 3 and 4).
• ① and ② indicate 4 levels of received beam strength :



OBTAINING OPTIMUM ALIGNMENT

C1 Setting-up : reflex and polarised reflex systems

Recommended reflector distances :

Reflex system : XUE-F10031 / XUE-H10753
+ XUZ-C00 --> 0.5 < S < 15 m
+ XUZ-C50 --> 0.05 < S < 15 m
+ XUZ-C24 --> 0.05 < S < 8 m

Polarised reflex system : XUE-F080319
+ XUZ-C00 --> 0.5 < S < 10 m
+ XUZ-C50 --> 0.05 < S < 10 m
+ XUZ-C24 --> 0.05 < S < 5 m

- Mount the reflector on the optical axis of the switch.
- Obtain optimal alignment either by adjusting the detector or reflector angles.
- To obtain the maximum operational reliability, rigidly mount both detector and reflector at the central point of the detection zone.

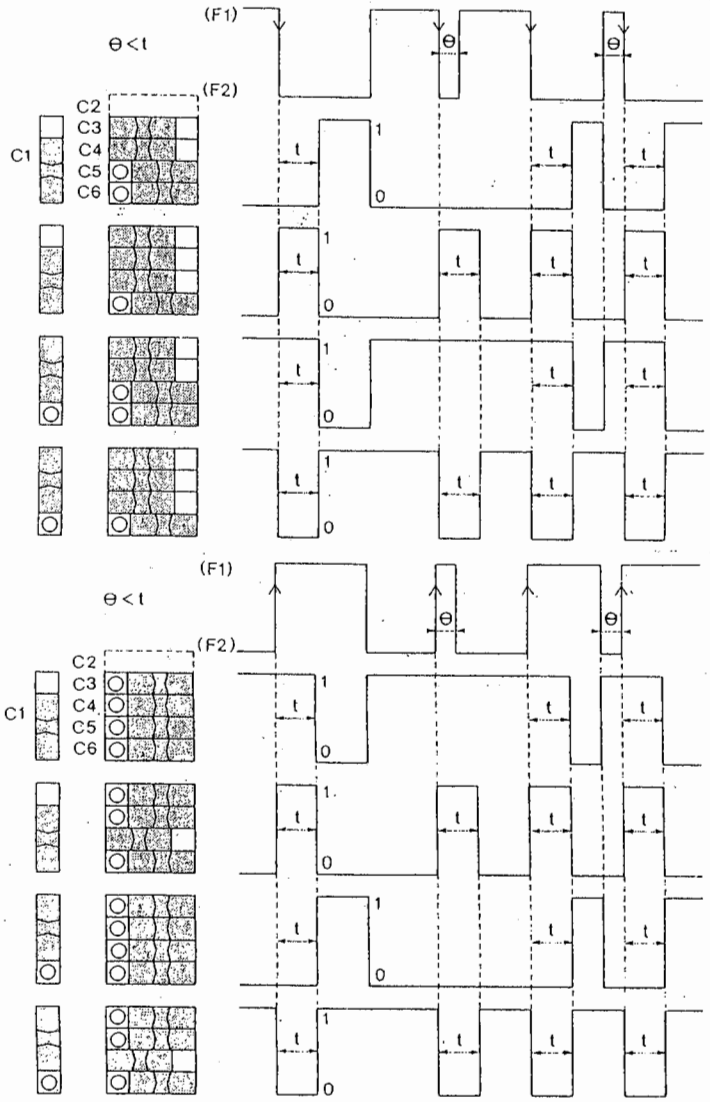
C2 Setting-up : diffuse system

Recommended distance :
XUE-F010315 / XUE-H017535 : --> 0 < S < 2 m (white 90%)
--> 0 < S < 1 m (grey 18%)

- Mount the detector on the same axis as the target object.
- In order to reduce background interference, adjust the sensitivity potentiometer beneath the cover on top of the switch.
- Rigidly mount the detector and its associated support.

Operating precautions

- All fixing supports must be rigid.
- The lenses must be kept clean. Correct operation of any optical system is subject to the cleanliness of the environment in which it is situated. The sensing distance of the detector will be considerably affected by mist, smoke, dust, etc.
- Cleaning the lenses : NEVER USE
base products, aromatics, hydrocarbons or solvents.
- It is recommended that power and control circuit cabling are kept separate.



Telemecanique IS 432959/C Octobre 1985

FRANÇAIS

détecteur photo-électrique embrochable,
reflex, barrage, proximité, XUE-T temporisé

Programmation des sorties temporisées :

• Temporisation sur fronts descendants de lumière :

F1 : faisceau libre — F2 : faisceau occulté
0 : relais non excité — 1 : relais excité

- Commutation sombre avec programmation temporisation, durée : t.
- Commutation sombre avec programmation monostable, durée : t.
- Commutation claire avec programmation temporisation, durée : t.
- Commutation claire avec programmation monostable, durée : t.

• Temporisation sur fronts montants de lumière :

F1 : faisceau libre — F2 : faisceau occulté
0 : relais non excité — 1 : relais excité

- Commutation sombre avec programmation temporisation, durée : t.
- Commutation sombre avec programmation monostable, durée : t.
- Commutation claire avec programmation temporisation, durée : t.
- Commutation claire avec programmation monostable, durée : t.

Réglage des temporisations :

- par potentiomètre P2 (1 tour).
- sélection de gamme par commutateur C2. 0,03...1s 1...60s

A noter : le commutateur C6 en position élimine le circuit temporisateur.
La fonction de sortie devient alors équivalente au modele XUE-F.

ENGLISH

Plug-in photo-electric detecto
reflex (retro-reflective) barrage (thru'beam),
proximity (diffuse) XUE-T with output time delay

Programming of output with time delay:

• Delay when beam is broken:

F1: beam intact — F2: beam broken
0: relay de-energised — 1: relay energised

- Switching when beam is broken, with output delay: t.
- Switching when beam is broken, with monostable period: t.
- Switching when beam is established, with output delay: t.
- Switching when beam is established, with monostable perioc

• Delay when beam is established:

F1: beam intact — F2: beam broken
0: relay de-energised — 1: relay energised

- Switching when beam is broken, with output delay: t.
- Switching when beam is broken, with monostable period: t.
- Switching when beam is established, with output delay: t.
- Switching when beam is established, with monostable perioc

Output delay adjustment:

- by use of potentiometer P2 (1-turn).
- range selection by switch C2. 0,03...1s 1...60s

N.B.: when set to position the switch C6 disables the delay feature,
and the output becomes instaneous. (as XUE-F).

Telemecanique

Caractéristiques / *characteristics*

Température de service / *Operating temperature*	-25 → +70 °C 0 → +50 °C **

2A à l'appel / *2A inrush*		Tension nominale / *Supply voltage*	Courant commuté / *Switching capacity*	Références
2 fils / *2 wires*	AC	24...240V ~	5...500 mA*	XS7/XS8-C40F•260
	AC/DC	24...240V ≂	AC : 5...300 mA DC : 5...200 mA	XS7/XS8-C40M•230
	DC	12...48V ⎓	1,5...100 mA Ⓚ	XS7/XS8-C40D•2130
3 fils/3 wires	DC	12...24V ⎓	0...200 mA Ⓚ	XS7-C40KPM40 (Fe/NFe)**
4 fils/4 wires	DC	12...48V ⎓	0...200 mA Ⓚ	XS7/XS8-C40P•440/449 XS7/XS8-C40N•440/449

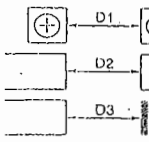
Ⓚ Protection surcharge et courts-circuits / *Overload and short-circuit protection*

Sa1 : standard Sa2 : portée augmentée		Tension de déchet / *Voltage drop*	Courant résiduel / *Residual current*	Fréquence maxi / *Max. frequency*	
				XS7-C	XS8-C
2 fils / *2 wires*	AC	≤ 6,5V	≤ 1,5mA	25Hz	25Hz
	AC/DC	≤ 5,5V	≤ 1,5mA	25Hz	25Hz
	DC	≤ 5,2V	≤ 0,6mA	150Hz	100Hz
3/4 fils / *3/4 wires*	DC	Sa1 ≤ 2V Sa2	—	Sa1:1000Hz Sa2:500Hz	Sa1:1000Hz Sa2 :500Hz

Mise en oeuvre / *Setting up procedure*

	XS7-C	XS8-C
Portée nominale / *Nominal sensing distance*	Sa1 = 15 mm Sa2 = 20 mm	Sa1 = 20 mm Sa2 = 40 mm
Cible / *Target* (Fe 360)	Sa1 = 45x45 mm Sa2 = 60x60 mm	Sa1 = 60x60 mm Sa2 = 120x120 mm
Dom. de fonctionnement / *Operating zone*	Sa1 = 0...12 mm Sa2 = 0...16 mm	Sa1 = 0...16 mm Sa2 = 0...32 mm

Distances à respecter au montage / *Mounting precautions minimum distances*

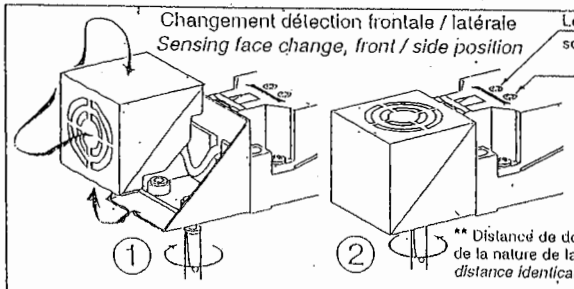


	XS7-C	XS8-C
D1 ≥	Sa1 = 40 Sa2 = 80	Sa1 = 60 Sa2 = 160
D2 ≥	Sa1 = 120 Sa2 = 240	Sa1 = 160 Sa2 = 320
D3 ≥	Sa1 = 45 Sa2 = 60	Sa1 = 60 Sa2 = 120
		H'

H ≥ 40

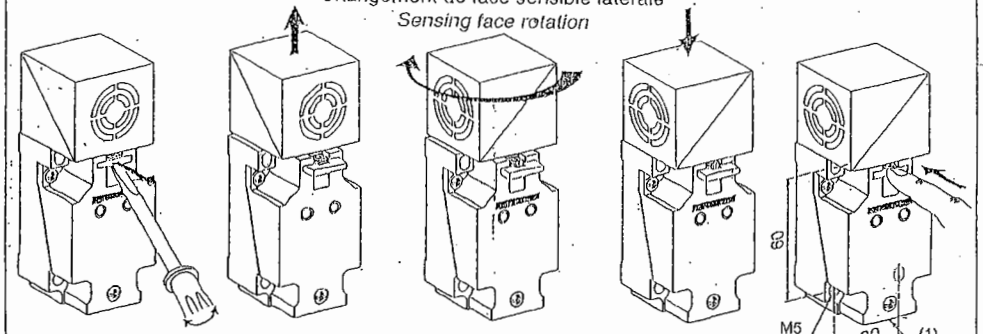
	NO		NC	
	Led jaune *yellow*	sortie/ *output*	Led jaune *yellow*	sortie/ *output*

Changement délection frontale / latérale
Sensing face change, front / side position

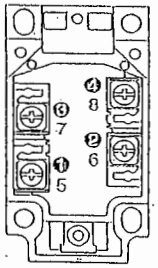


** Distance de délection Sa1 indépendante de la nature de la cible (Fe/NFe) / *Switching distance identical for Fe/NFe metallic target.*

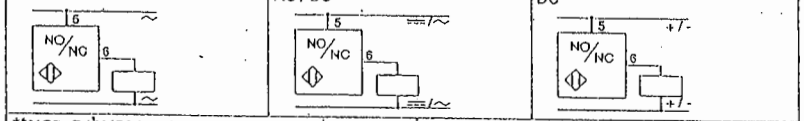
Changement de face sensible latérale
Sensing face rotation



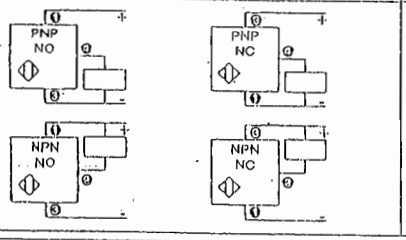
1 trou fileté pour presse-étoupe 13P (XSZ-PE13) / *1 tapped entry for N° 13 cable gland (XSZ-PE13)* (1)



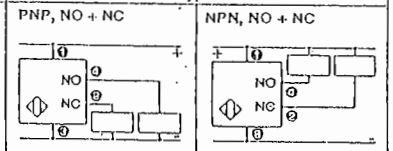
Types 2 fils / *2 wires types*



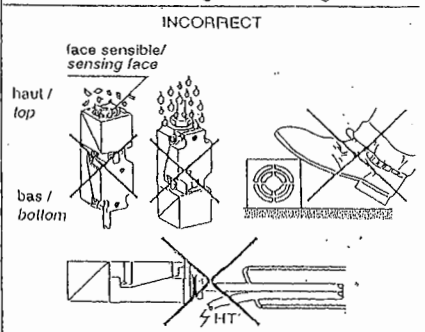
**XS7-C40KPM40 (Fe / NFe)

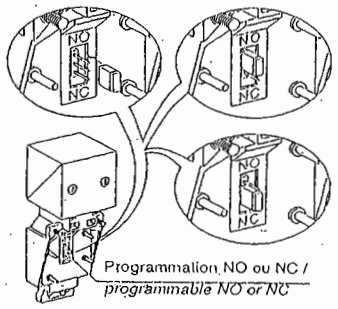


Types 4 fils / *4 wires types*



Conseils de montage / Mounting advice





Programmation NO ou NC / *programmable NO or NC*

RTE-P1, -P2, -B1, -B2 ALL MULTI-TIMERS INSTRUCTION SHEET

Read this instruction sheet to make sure of correct operation before starting installation, operation, maintenance, and inspection of the RTE series timers. The end user should keep this instruction sheet for future reference.

TIME RANGE Determined by Time Range Selector and Dial Selector

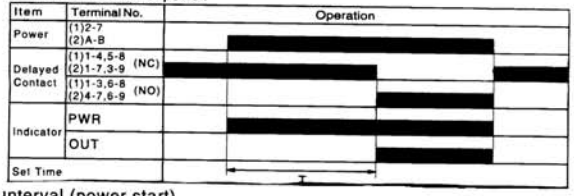
(hr: hours)

Range \ Dial	0-1	0-3	0-10	0-30	0-60
s	0.1sec - 1sec	0.1sec - 3sec	0.2sec - 10sec	0.6sec - 30sec	1.2sec - 60sec
min	1.2sec - 1min	3.6sec - 30min	12sec - 10min	36sec - 30min	1.2min - 60min
h	1.2min - 1hr	3.6min - 3hr	12min - 10hr	36min - 30hr	1.2hr - 60hr
10h	12min - 10hr	36min - 30hr	2hr - 100hr	6hr -300hr	12hr -600hr

OPERATION CHART

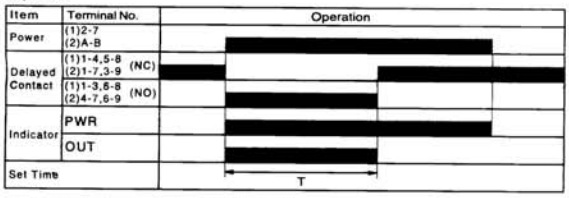
A: ON-Delay 1 (power start)

Set timer for desired delay, apply power to coil. Contacts transfer after preset time has elapsed, and remain in transferred position until timer is reset. Reset occurs with removal of power.



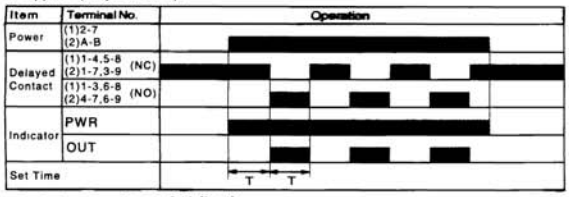
B: Interval (power start)

Set timer for desired delay, apply power to coil. Contacts transfer immediately, and return to original position after preset time has elapsed. Reset occurs with removal of power.



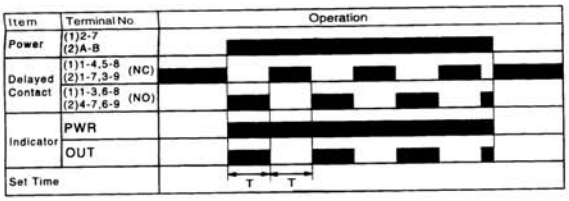
C: Cycle 1 (power start, OFF first)

Set timer for desired delay, apply power to coil. First transfer of contacts occurs after preset delay has elapsed, after the next elapse of preset delay contacts return to original position. The timer now cycles between on and off as long as power is applied (duty ratio 1:1).



D: Cycle 3 (power start, ON first)

Functions in same manner as Mode C, with the exception that first transfer of contacts occurs as soon as power is applied. The ratio is 1:1. Time On = Time Off



TYPES

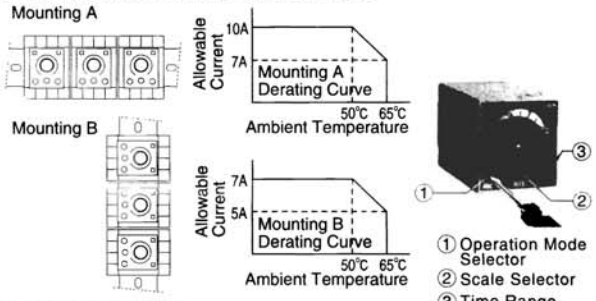
RTE-P1AF20

- Power Voltage
  - AF20: 100 to 240V AC(50/60Hz)
  - AD24: 24V AC(50/60Hz)/24V DC
  - D12: 12V DC
- Connection type
  - P: Pin
  - B: Blade
- Operation Mode
  - 1: No Control Signal
    - A: ON-Delay 1
    - B: Interval
    - C: Cycle 1
    - D: Cycle 3
  - 2: Control Signal
    - A: ON-Delay 2
    - B: Cycle 2
    - C: Cycle 4
    - D: Signal ON/OFF-Delay
    - E: Signal OFF-Delay
    - F: One-Shot

CONTACT RATINGS

Contact Configuration		2 Form C, DPDT (Delay output)
Allowable Voltage / Allowable Current		240V AC, 30V DC / 10A
Maximum Permissible Operating Frequency		1800 cycles per hour
Rated Load	Resistive	10A 240V AC, 30V DC
	Inductive	7A 240V AC, 30V DC
	Horse Power Rating	1/6 HP 120V AC, 1/3 HP 240V AC
Conditional Short Circuit		Fuse 10A, 240V
Life	Electrical	500,000 op. minimum (Resistive)
	Mechanical	50,000,000 op. minimum

TEMPERATURE DERATING CURVES

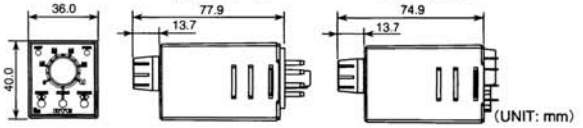


SWITCH SETTING

(1)Turn the selectors securely using a flat screwdriver 4mm wide maximum. Note that incomplete setting may cause malfunction. Do not turn the selectors beyond the limits.

(2)Since changing the setting during timer operation may cause malfunction, turn power off before changing the setting.

DIMENSIONS



Safety Precautions

Special expertise is required to use the Electronic Timer.

- All Electronic Timers are manufactured under IDEC's rigorous quality control system, but users must add a backup or fail safe provision to the control system using the Electronic Timer in applications where heavy damage or personal injury may be caused in case the Electronic Timer should fail.
- Install the Electronic Timer according to instructions described in this instruction sheet and the catalog.
- Make sure that the operating conditions are as described in the catalog. If you are uncertain about the specifications, contact IDEC in advance.
- In this instruction sheet, safety precautions are categorized in order of importance to Warning and Caution.

Warning Warning notices are used to emphasize that improper operation may cause severe personal injury or death.

- Turn power off to the Electronic timer before starting installation, removal, wiring, maintenance, and inspection on the Electronic Timer. Failure to turn power off may cause electrical shocks or fire hazard.
- Do not use the Electronic Timer for an emergency stop circuit or interlocking circuit. If the Electronic Timer should fail, a machine disorder, breakdown, or accident may occur.

Caution Caution notices are used where inattention might cause personal injury or damage to equipment.

- The Electronic Timer is designed for installation in equipment. Do not install the Electronic Timer outside equipment.
- Install the Electronic Timer in environments described in this instruction sheet and the catalog. If the Electronic Timer is used in places where the Electronic Timer is subjected to high-temperature, high-humidity, condensation, corrosive gases, excessive vibrations, and excessive shocks, then electrical shocks, fire hazard, or malfunction will result.
- Use an IEC60127-approved fuse and circuit breaker on the power and output line outside the Electronic Timer.
- Do not disassemble, repair, or modify the Electronic Timer.
- When disposing of the Electronic Timer, do so as an industrial waste.

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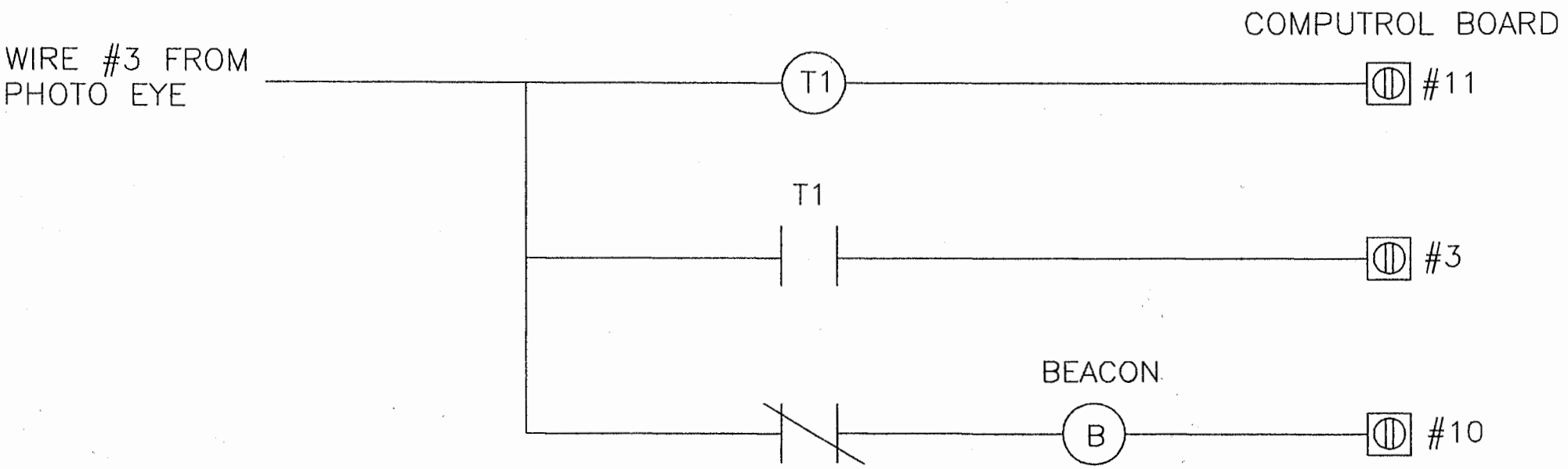
Instruction Sheet B-766-0 June 2003

PHOTO EYE ALARM
WITH EXTERNAL TIMER

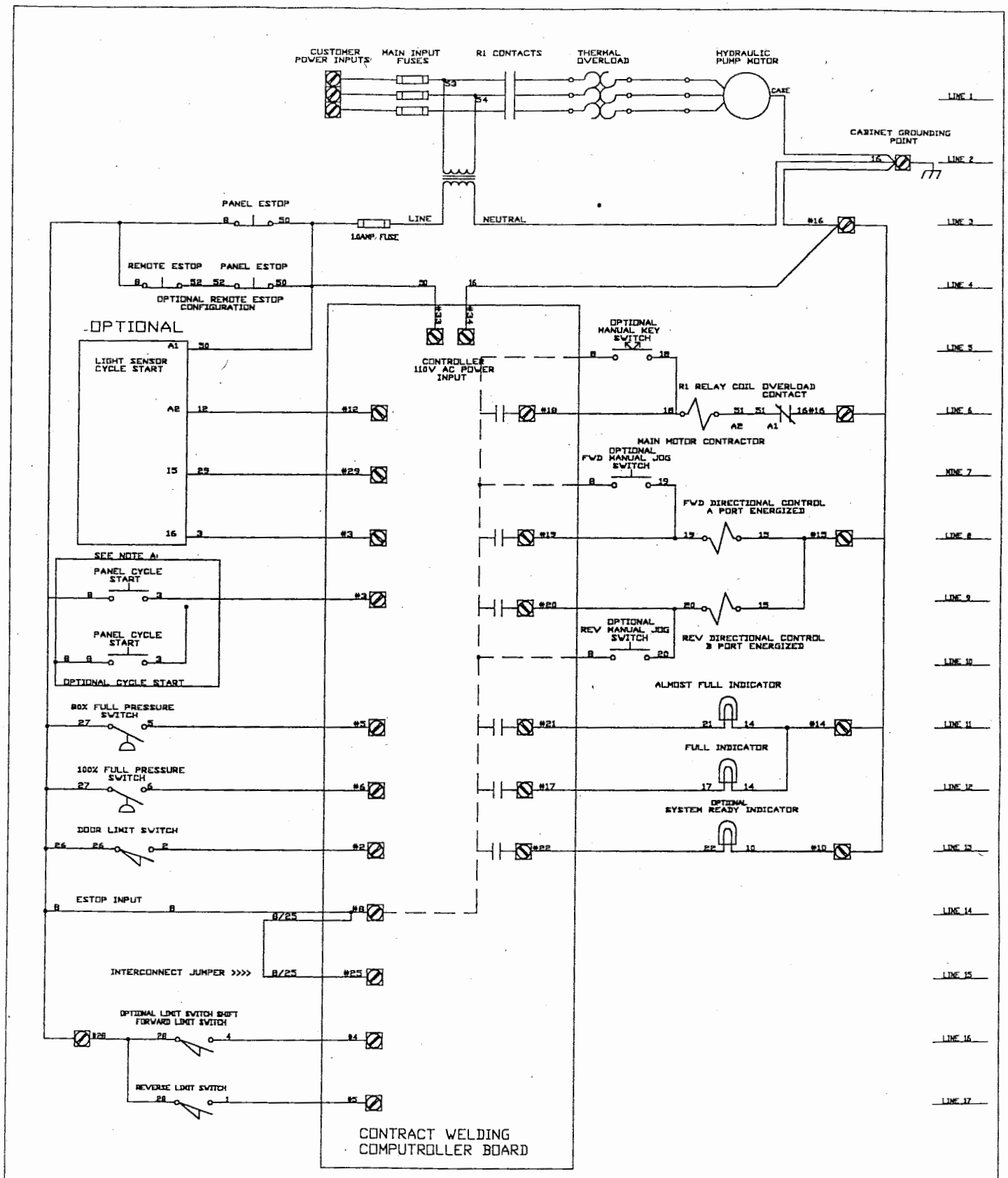


TIMER # RTE-P1AF20

TIMERSET TO ON DELAY 1 (POWER START) MODE A

RANGE SET ON SECONDS

DIAL POSITION SET @ 15 SECONDS



NOTE: TERMINALS #9, #10, #11, #12, #13, #14, #15, #16 ARE CONNECTED INTERNALLY
NOTE: TERMINALS #25, #26, #27, #28, #29, #30, #31, #32 ARE CONNECTED INTERNALLY

NOTE A:
CYCLE START CIRCUIT WITH OPTIONAL PINOUT JOG REMOTE CONTROL. SEE OPTIONAL CONTROL WIRING FOR PINOUT.

CONTRACT WELDING
(313) 699-5561
385 SUMPTER ROAD
BELLEVILLE, MI 48111

Title	CUTOMER OUTPUTS /OPTIONAL INPUTS	
Size A	Document Number HORIZONTAL COMPACTOR	REV C
Date: JANUARY 16, 1997	Sheet 1 of 2	

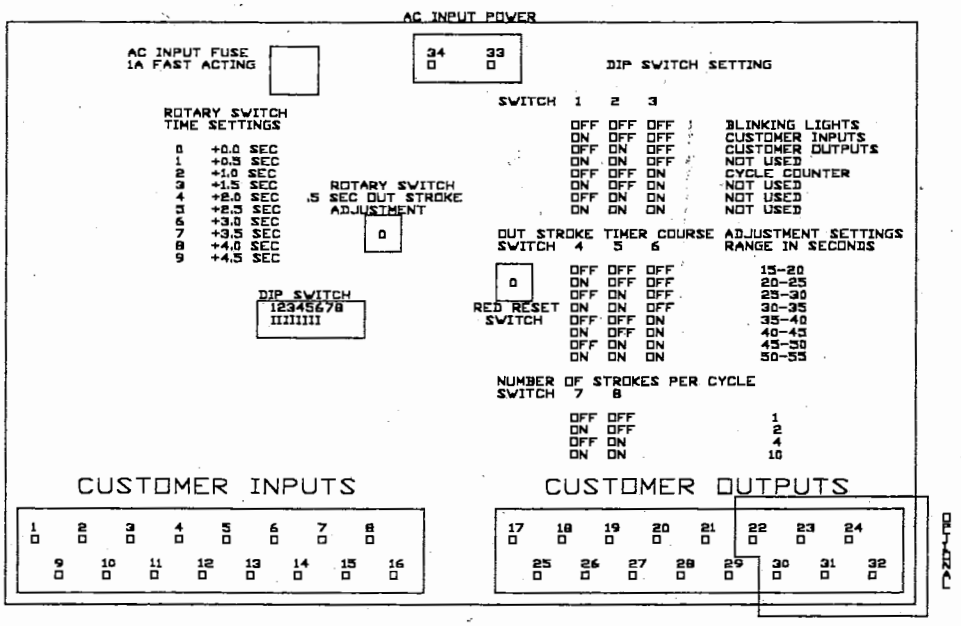
WIRE DIAGRAM FOR ELECTRICAL QUICK DISCONNECT WITH ELECTRIC DOOR LOCK

	BOARD WIRE#	PLUG TERMINAL#
WHITE	12	1
BLACK	2	2
	UNUSED	3
ORANGE	UNUSED	4
BLUE	55	5
RED	26	6
GREEN	GROUND	GROUND

PART NUMBER

CN101900	MALE INSERT
CN101910	FEMALE INSERT
CN100210	HOOD
CN100040	BASE MOUNT

CONTROLLER CIRCUIT BOARD



BOARD CONNECTION SUMMARY
HORIZONTAL

INPUTS

#1	OPTIONAL PADLOC START INPUT
#2	DOOR ENTRY LIMIT SWITCH
#3	CYCLE START PUSH BUTTON SWITCH
#4	OPTIONAL FORWARD LIMIT SWITCH
#5	80% FULL PRESSURE SWITCH
#6	100% FULL PRESSURE SWITCH INPUT
#7	AUTO MAUNAL INPUT SWITCH
#8	EMERGENCY STOP SWITCH
#9	NEUTRAL RETURN FOR OUTPUTS
#10	NEUTRAL RETURN FOR OUTPUTS
#11	NEUTRAL RETURN FOR OUTPUTS
#12	NEUTRAL RETURN FOR OUTPUTS
#13	NEUTRAL RETURN FOR OUTPUTS
#14	NEUTRAL RETURN FOR OUTPUTS
#15	NEUTRAL RETURN FOR OUTPUTS
#16	NEUTRAL RETURN FOR OUTPUTS

OUTPUTS

#17	FULL INDICATOR
#18	R1 RELAY COIL (MOTOR CONTROL)
#19	FORWARD DIRECTION CONTROL
#20	REVERSE DIRECTION CONTROL
#21	ALMOST FULL INDICATOR
#22	OPTIONAL SYSTEM READY INDICATOR
#23	OPTIONAL AC OUTPUT
#24	OPTIONAL AC OUTPUT
#25	LINE INPUT POWER FOR OUTPUTS
#26	LINE VOLTAGE FOR INPUTS
#27	LINE VOLTAGE FOR INPUTS
#28	LINE VOLTAGE FOR INPUTS
#29	LINE VOLTAGE FOR INPUTS
#30	OPTIONAL LINE VOLTAGE
#31	OPTIONAL LINE VOLTAGE
#32	OPTIONAL LINE VOLTAGE

AC INPUT POWER

#33	AC LINE INPUT POWER
#34	AC NEUTRAL RETURN INPUT POWER

CONTRACT WELDING
(313) 699-5561
385 SUMPTER ROAD
BELLEVILLE, MI 48111

Title: CUTOMER OUTPUTS /OPTIONAL INPUTS

Size	Document Number	REV
A	HORIZONTAL COMPACTOR	C

Date: JANUARY 10, 1997 Sheet 2 of 2