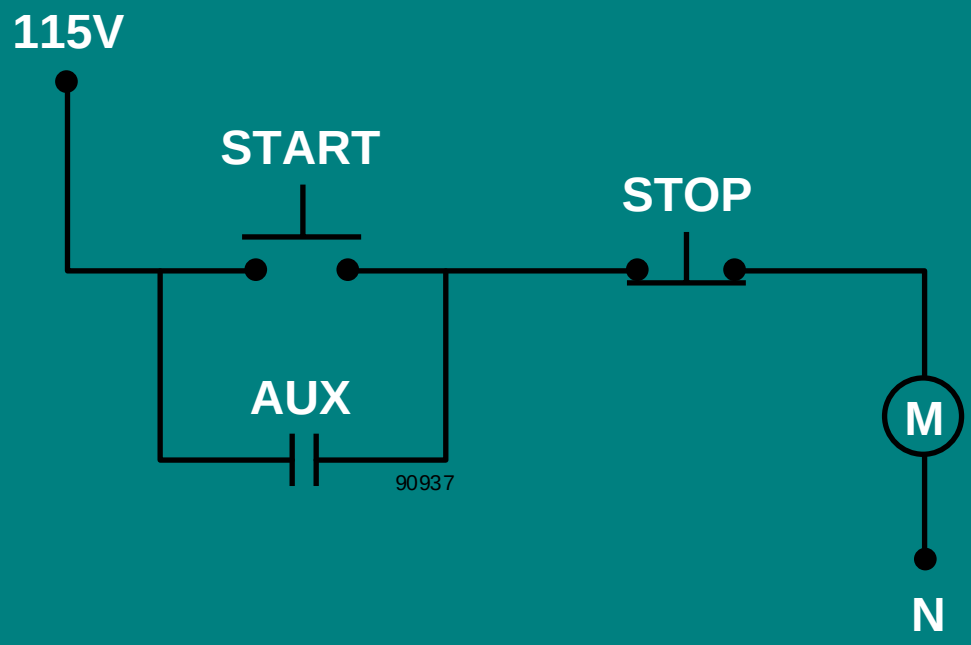
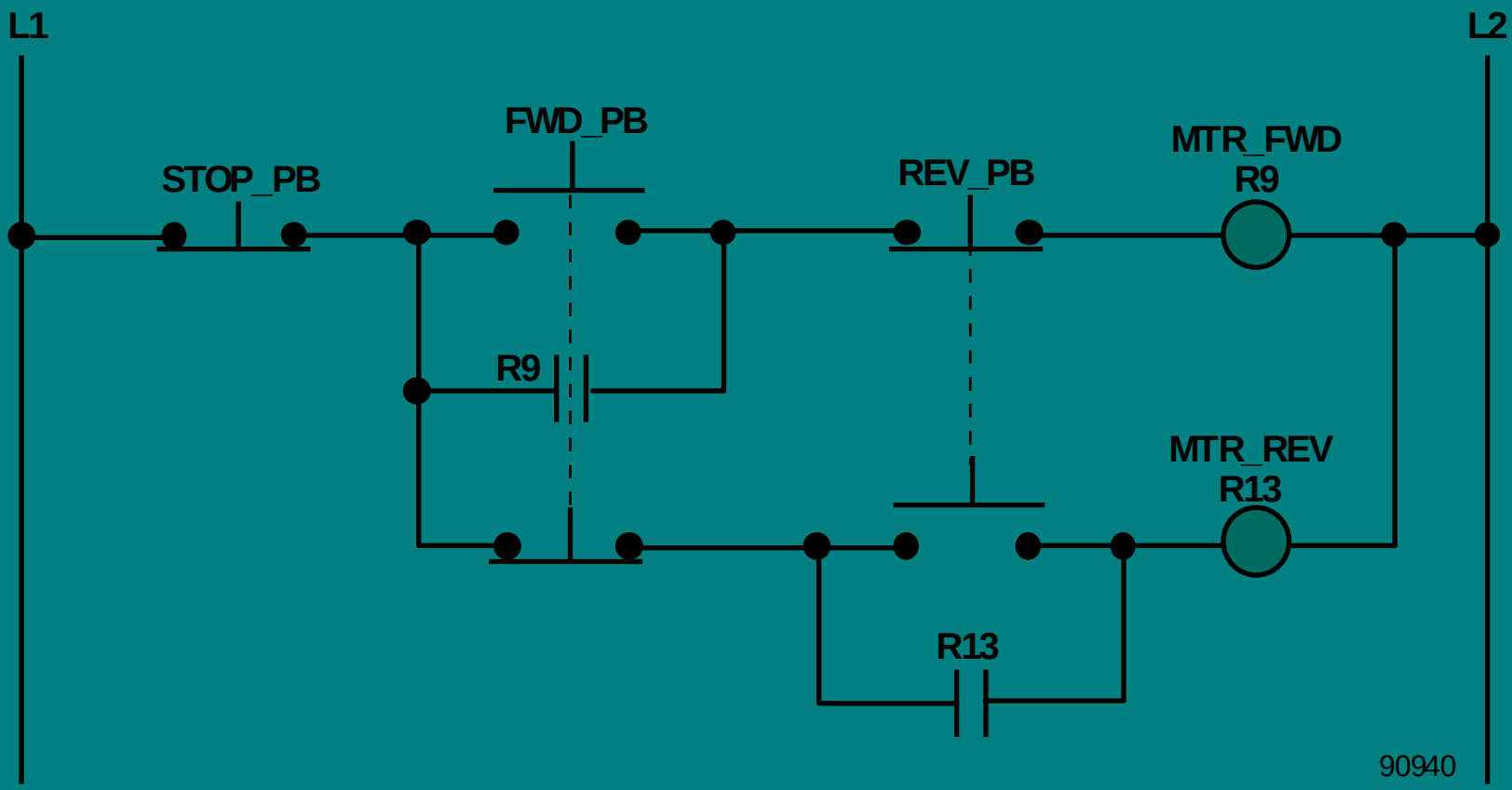
Relay Control

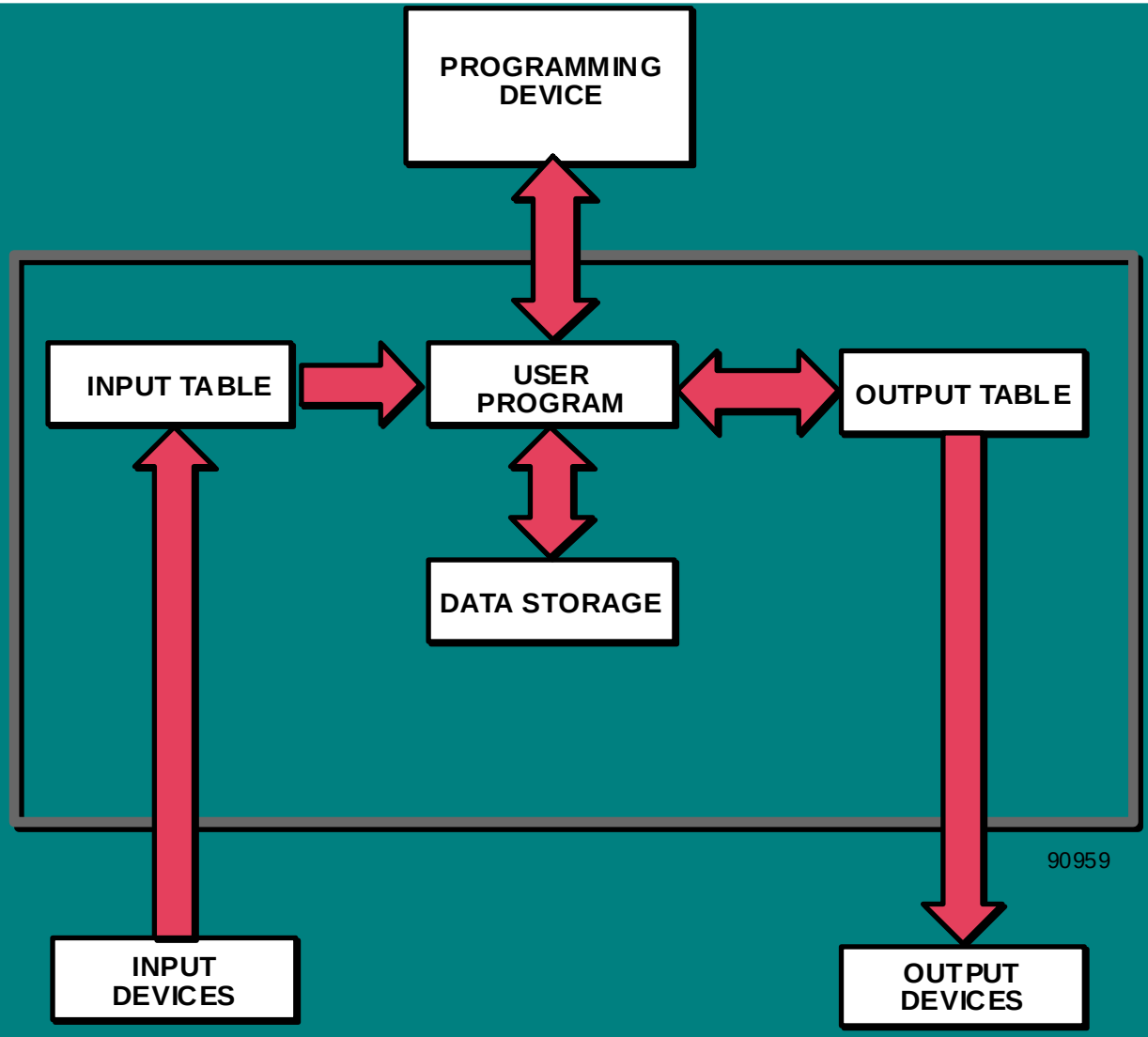
Hardware



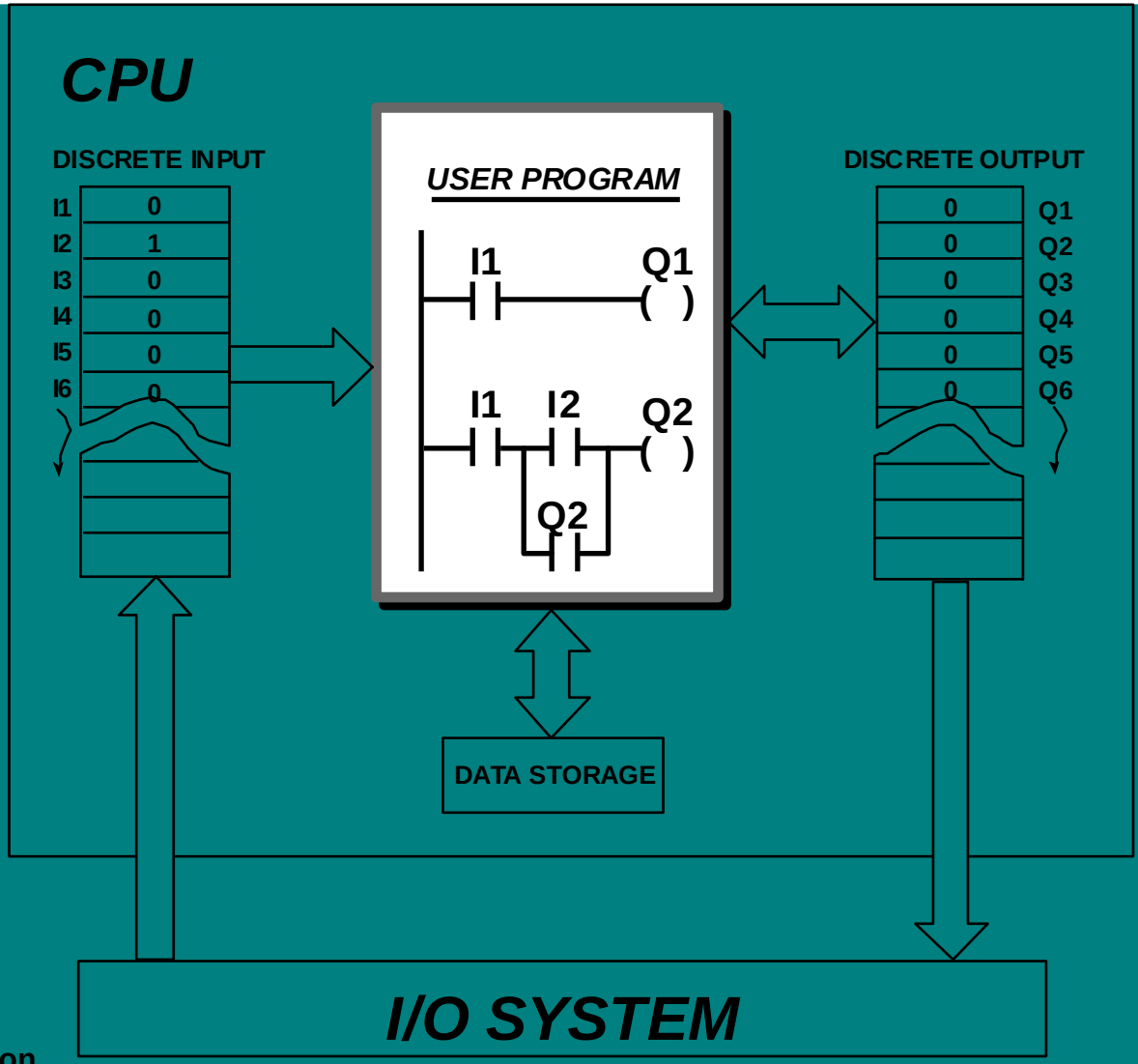
Relay Control



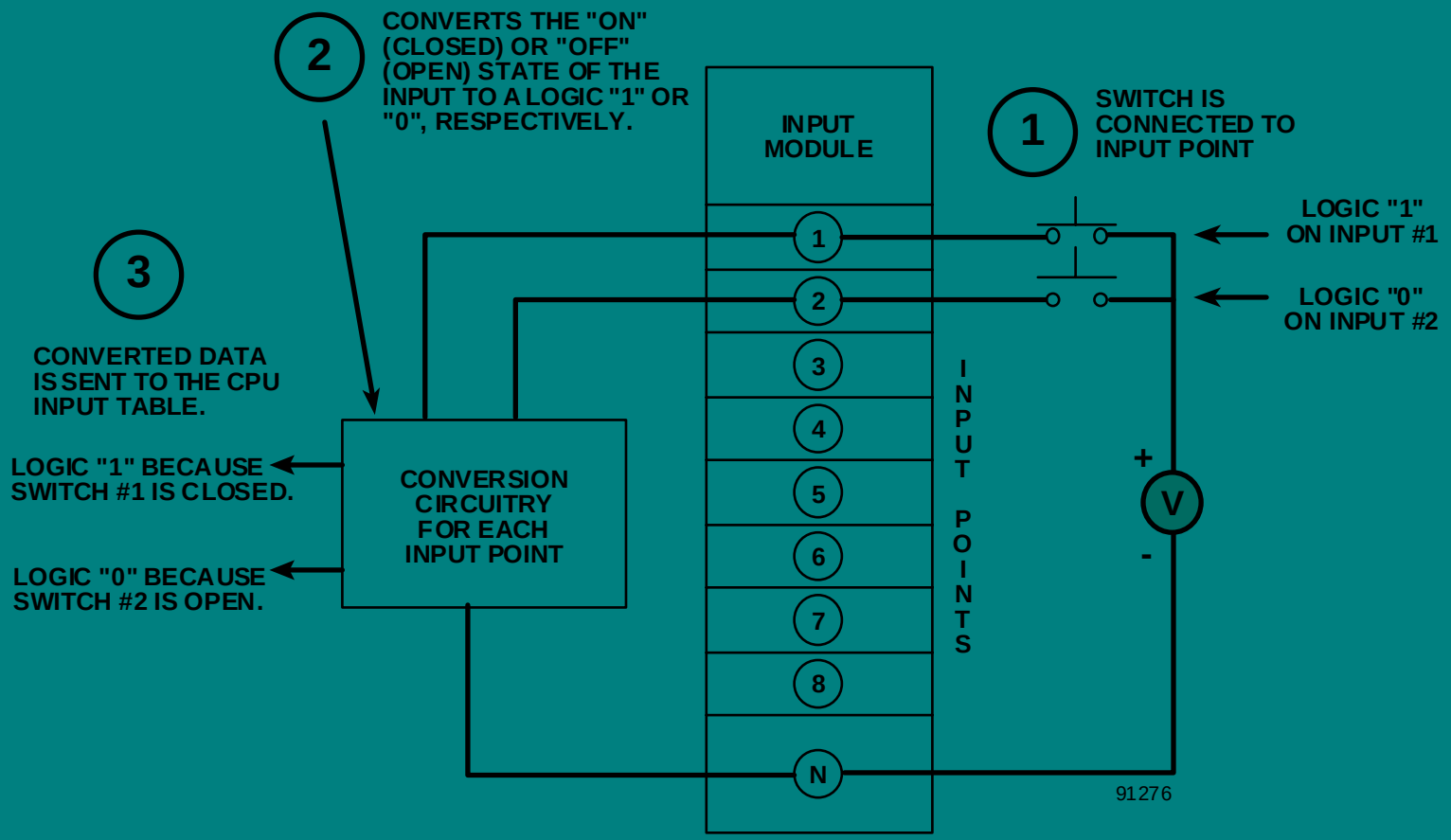
PLC Fundamental



PLC Fundamental

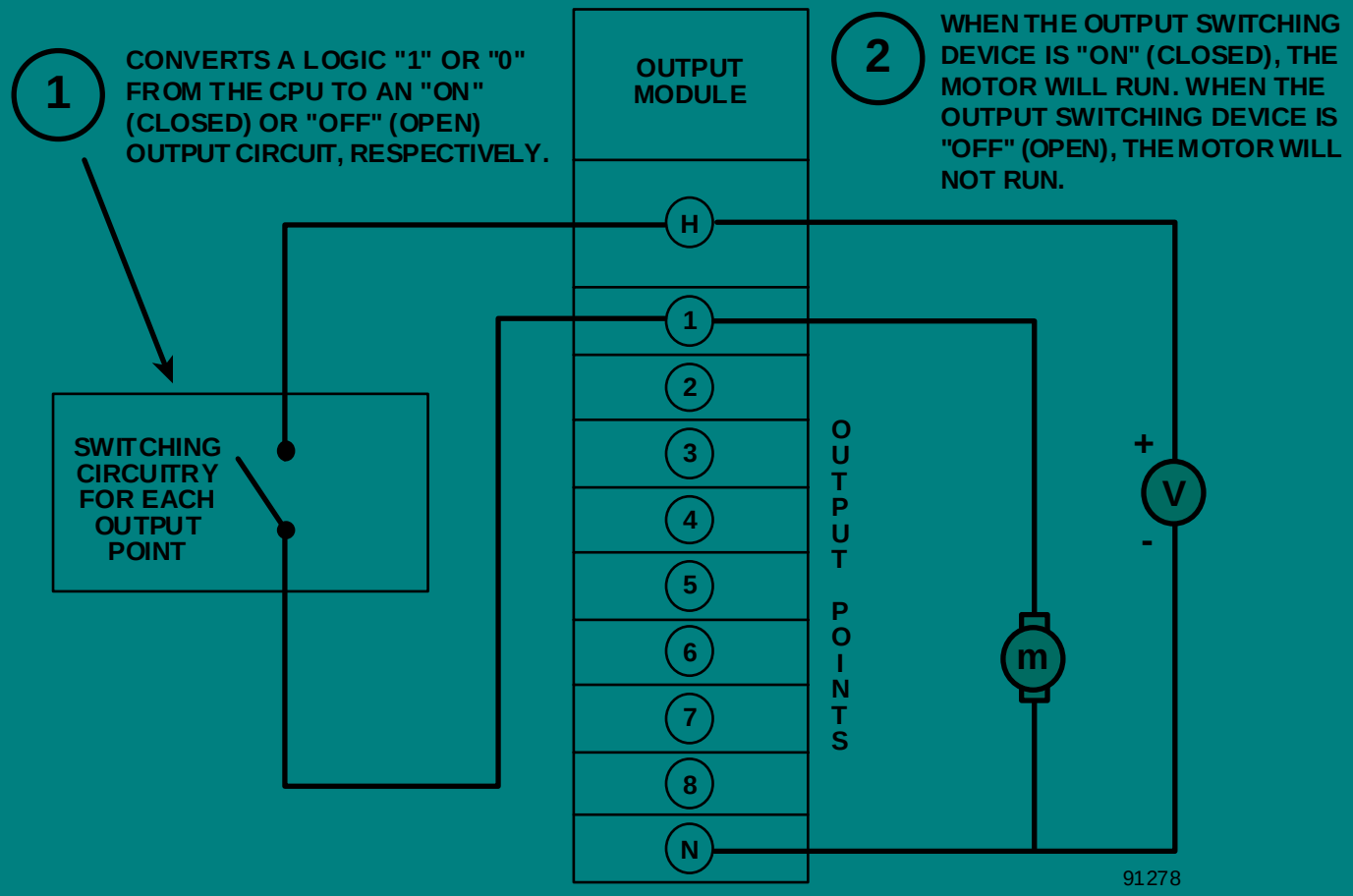


PLC Input



POSITIVE LOGIC:
THE SWITCHING DEVICE CONNECTS THE HIGH SIDE OF THE VOLTAGE SOURCE TO THE MODULE INPUT.

PLC Output

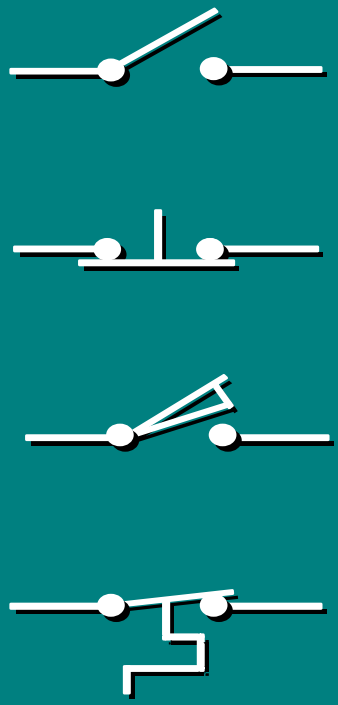


POSITIVE LOGIC:

A LOGIC "1" FROM THE CPU CONNECTS ONE SIDE OF THE LOAD TO THE HIGH SIDE OF THE POWER SOURCE WHILE A LOGIC "0' OPENS THE CIRCUIT.

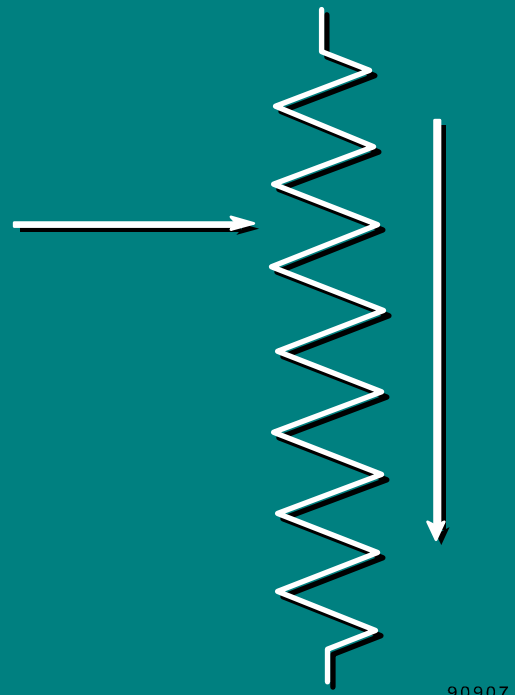
Discrete & Analog

Discrete



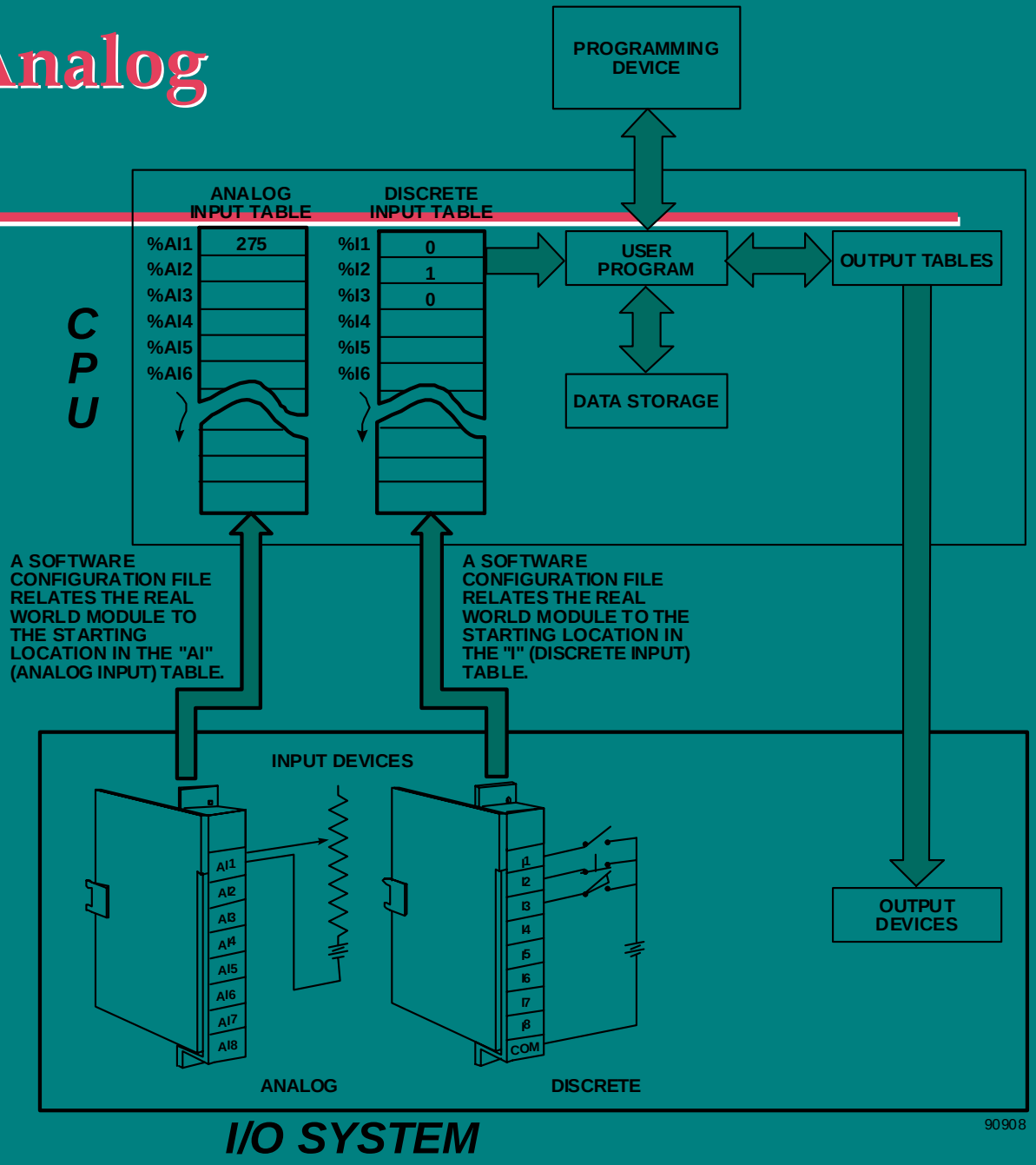
DEVICE HAS 2 STATES:
"ON" OR "OFF"

Analog

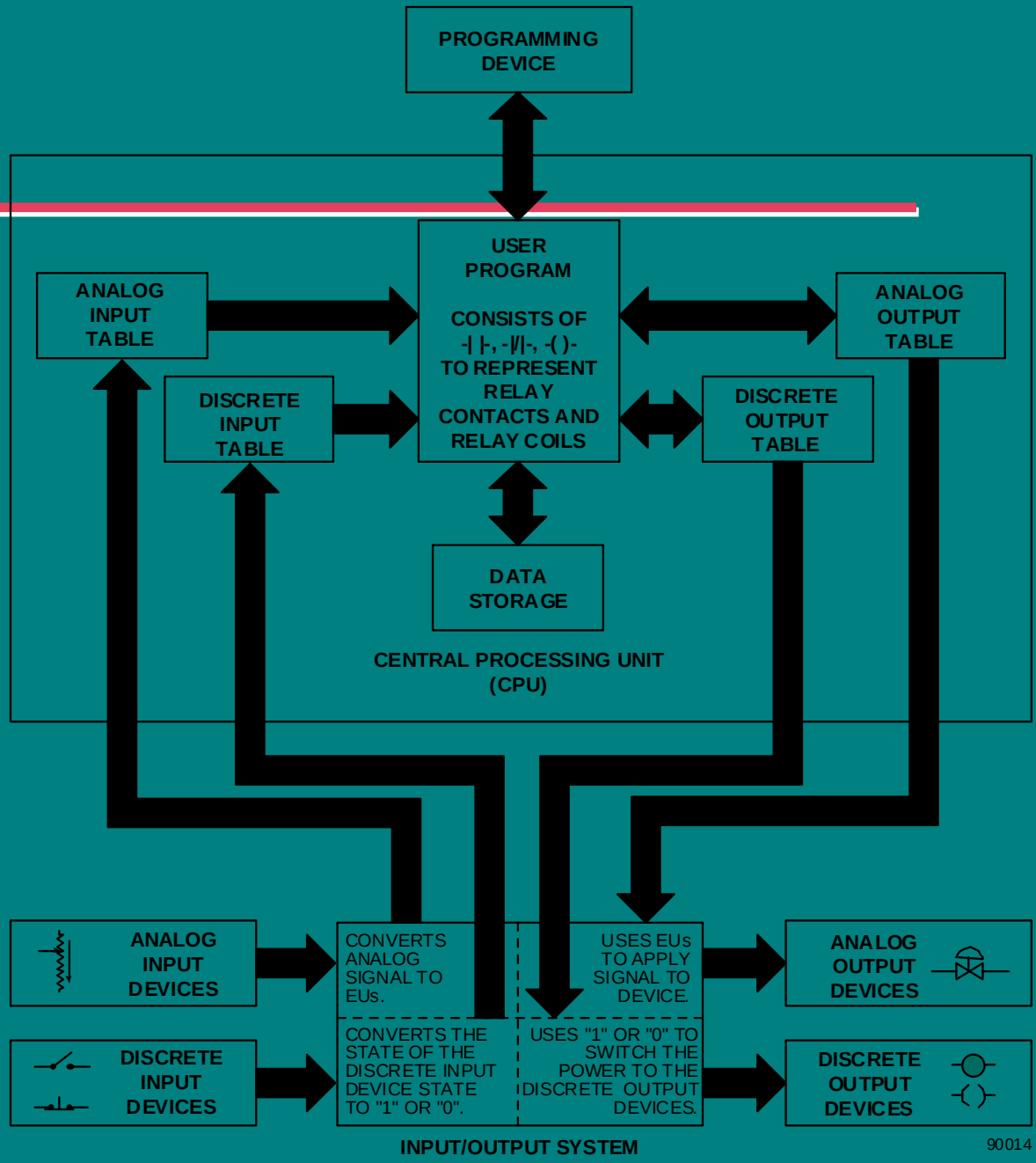


DEVICE HAS AN UNLIMITED NUMBER OF STATES WITHIN THE VOLTAGE OR CURRENT RANGE.

Discrete & Analog

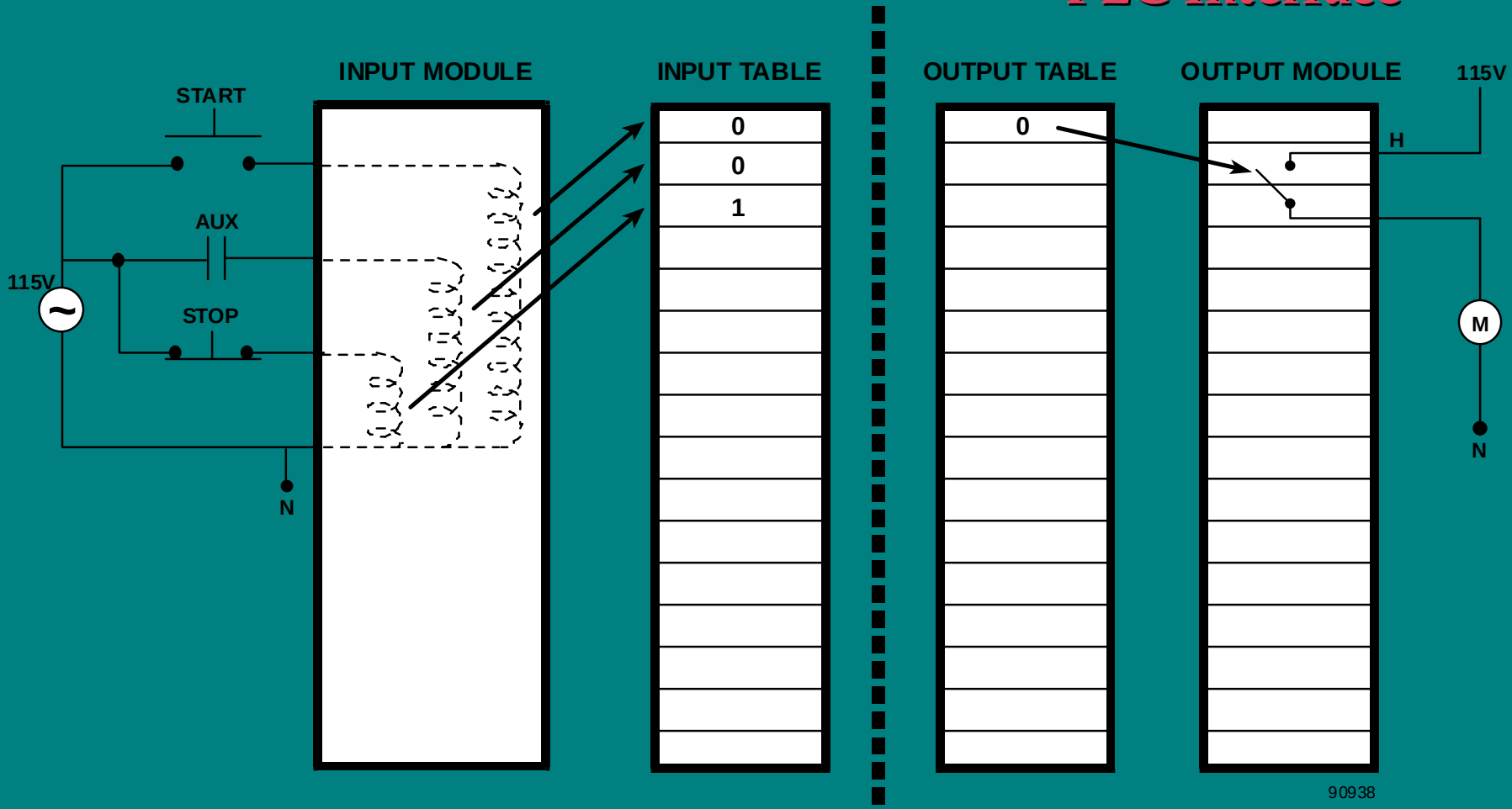


PLC Table


PROGRAMMING DEVICE
USER PROGRAM
CONSISTS OF
-| |-, -|/|-, -( )-
TO REPRESENT RELAY CONTACTS AND RELAY COILS
ANALOG INPUT TABLE
DISCRETE INPUT TABLE
ANALOG OUTPUT TABLE
DISCRETE OUTPUT TABLE
DATA STORAGE
CENTRAL PROCESSING UNIT (CPU)
ANALOG INPUT DEVICES
DISCRETE INPUT DEVICES
CONVERTS ANALOG SIGNAL TO EUs.
CONVERTS THE STATE OF THE DISCRETE INPUT DEVICE STATE TO "1" OR "0".
USES EUs TO APPLY SIGNAL TO DEVICE.
USES "1" OR "0" TO SWITCH THE POWER TO THE DISCRETE OUTPUT DEVICES.
ANALOG OUTPUT DEVICES
DISCRETE OUTPUT DEVICES
INPUT/OUTPUT SYSTEM
90014

Motor Starter

PLC Interface



Allowable References

Discrete References (1-Bit)	*Word References)16-Bit)*
%I	%AI
%Q	%AQ
%T	%R
%S	%P
%M	%L
%G	%UR
%U	

%S References

Reference	Nickname	Definition
%S0001	FST_SCN	Set to 1 when the current sweep is the first sweep.
%S0002	LST_SCN	Reset from 1 to 0 when the current sweep is the last sweep.
%S0003	T_10MS	0.01 second timer contact.
%S0004	T_100MS	0.1 second timer contact.
%S0005	T_SEC	1.0 second timer contact.
%S0006	T_MIN	1.0 minute timer contact.
%S0007	ALW_ON	Always ON.
%S0008	ALW_OFF	Always OFF.
%S0009	SY_FULL	Set when the PLC fault table fills up. Cleared when an entry is removed from the PLC fault table and when the PLC fault table is cleared.
%S0010	IO_FULL	Set when the I/O fault table fills up. Cleared when an entry is removed from the I/O fault table and when the I/O fault table is cleared.
%S0011	OVR_PRE	Set when an override exists in %I, %Q, %M, or %G memory.
%S0013	PRG_CHK	Set when background program check is active.
%S0014	PLC_BAT	Set to indicate a bad battery in a Release 4 or later CPU. The contact reference is updated once per sweep.

Password

Privilege Level	Description
Level 1	Any data, except passwords may be read. This includes all data memories (%I, %Q, %AQ, %R, etc.), fault tables, and all program block types (data, value, and constant). No values may be changed in the PLC.
Level 2	This level allows write access to the data memories (%I, %R, etc.).
Level 3	This level allows write access to the application program in **STOP** mode only.
Level 4	This is the default level for systems which have no passwords set. The default level for a system with passwords is to the highest unprotected level. This level, the highest, allows read and write access to all memories as well as passwords in both **RUN** and **STOP** mode. (Configuration data cannot be changed in **RUN** mode.)

OEM Key: Protect OEM program from viewing or copy

Clock

Real Time Clock: CPU331 or above 90-30, 90-70