SR35-AUX-IO INSTALLATION GUIDE

SR35-AUX-IO EXPANSION MODULE

INTRODUCTION

The SR35-AUX-IO expansion module can be used to provide additional I/O to the SR35 family of soft starters. The module is self-powered, so there is no need for an additional supply to power it.

The expansion module provides the following additional I/O:

- *2 x Digital Inputs.*
- *2 x Digital Outputs.*
- *1 x PTC Thermistor Input.*

INSTALLATION

The SR35-AUX-IO expansion module is DIN rail mounted for easy installation.

The supplied ribbon cable connects the expansion module to the adapter module. The adapter module then connects to the SR35 soft starter edge connector as shown below.
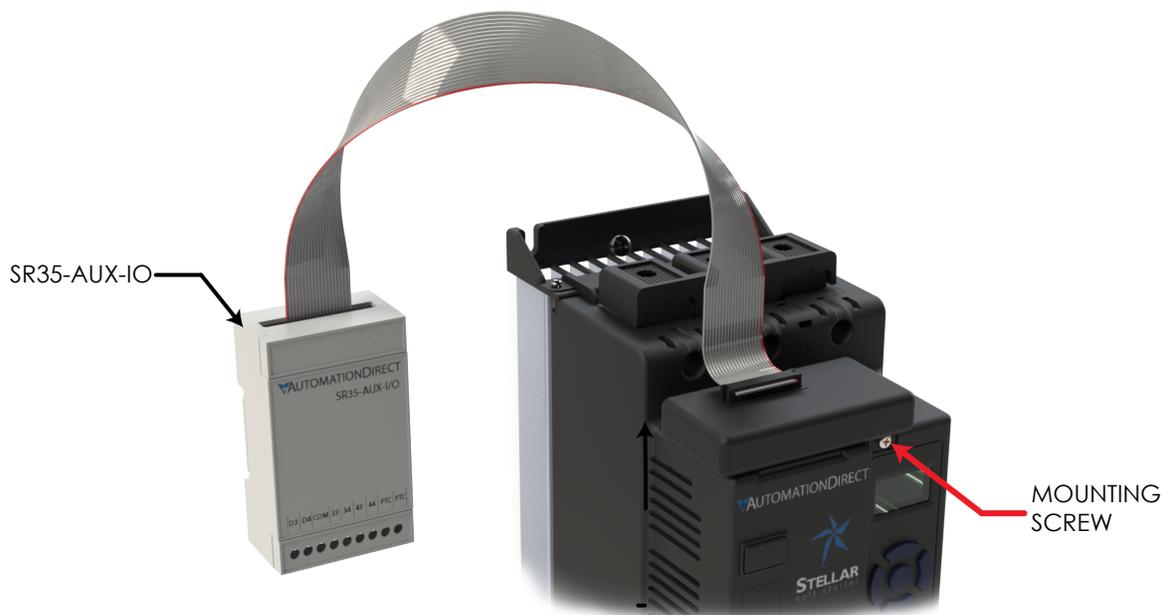
*NOTE: Fit screw and nylon washer (supplied). DO NOT over-tighten (Max 40 cN.m)*

SR35-AUX-IO DIMENSIONS:

1.27 in
[32.2 mm]

0.17 in
[4.3 mm]

1.38 in
[35.0 mm]

2.1 in
[53.3 mm]

TOP   TOP

IM01

3.54 in
[90.0 mm]
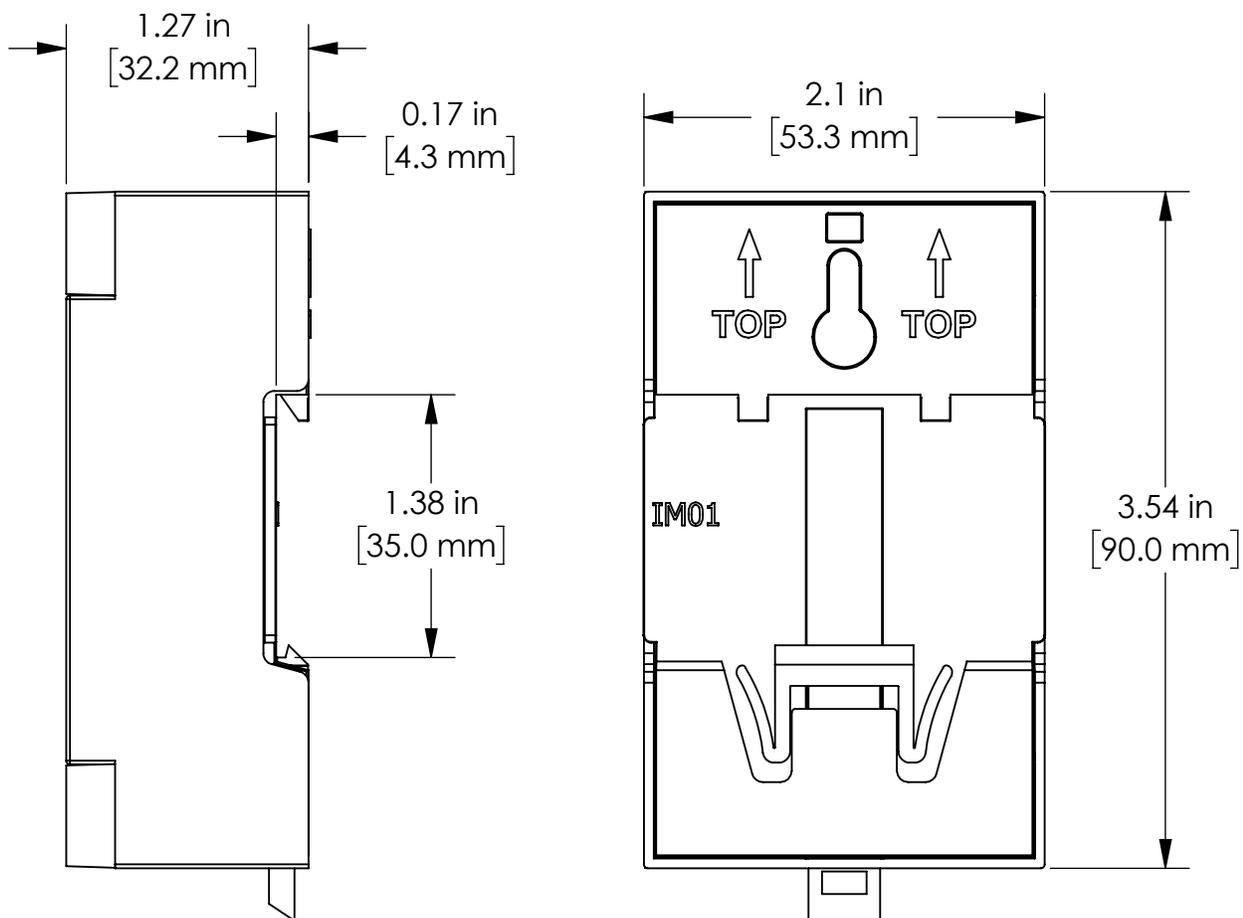
Weight: 0.14 kg (0.31 lb)

General Specification			
Rated Insulation Voltage	U_i	230VAC r.m.s.	
Rated Impulse Withstand Voltage	U_{imp}	4 kV	
IP Code	-	IP20	
Overvoltage Category/Pollution Degree	-	III/3	
Control Circuit	Programmable Opto-Isolated Inputs	D3, D4	Must be supplied by class 2, limited voltage current, or Protected with a UL248 listed fuse rated Max 4A
	Common Input, Marking	COM	
	Kind Of Current, Rated Frequency	'DC' or 'AC, 50 – 60Hz ± 5Hz'	
	Rated Voltage U_c	'24VDC' or '110V – 230VAC	
Auxiliary Circuit	Form A – Single Gap Make -Contact (Normally Open)	'33, 44' and '43,44'	
	Utilization Category, Voltage Rating, Current Rating	Resistive load, 250Vac, 2A	
		250Vac, 0.75A (AC-15 / C300)	
PTC Circuit	Trip Level	3.6kΩ	-
	Reset Level	1.6kΩ	-

Wire Sizes and Torques				
Terminal	**Wire/Busbar Size**		**Torque**	
	Metric	**Imperial**	**Nm**	**lb-in**
Control Terminals	0.2–1.5mm2	24-16AWG	0.5	4.5

SR35-AUX-IO Connections
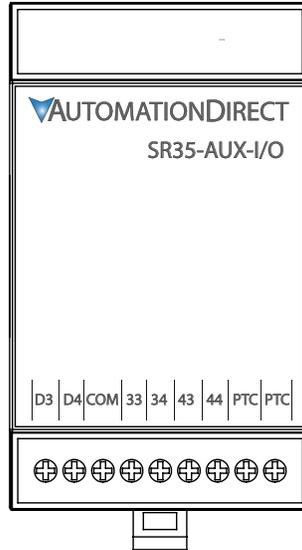
Terminal	Description	Function Selectable	Parameter options (When used with SR35)
D3	Digital Input A	Yes (Via Cntrl Funct)	0– Three Wire (D3 Start / D4 Stop)
D4	Digital Input B		1– Two Wire (D3 Start, Stop and Reset / D4 No function)
			2– DI-Prog Reset (D3 Start, Stop)
			3– DI-Prog Hold (D3 Start, Stop and Reset)
			4– DI-Prog Enable (D3 Start, Stop and Reset)
			5– DI-Prog Fire (D3 Start, Stop and Reset)
COM	Digital Inputs Common	No	-
33/34	Digital Output A	Yes	0– End of Start (At Speed)
			1– Fault
			2– Run
			3– Pending
			4– Exceeded
			5– Breaker
			6– Ph/SCR
			DEFAULT - Run
43/44	Digital Output B	Yes	0– End of Start
			1– Fault
			2– Run
			3– Pending (Auto Reset)
			4– Exceeded (Auto Reset)
			5– Breaker
			6– Ph/SCR
			DEFAULT - End of Start
***PTC +**	PTC Thermistor +	Yes	0– ON (The Unit will trip if the motor thermistor exceeds its response temperature or the PTC input is open circuit)
***PTC -**	PTC Thermistor -		1– OFF (The Unit will continue to operate regardless of the PTC value)
			DEFAULT - OFF
*PTC: A single PTC motor thermistor or set of PTC motor thermistors can be connected to the PTC terminals. • Trip level = 3.6 kΩ • Reset Level = 1.6 kΩ			

### THREE WIRE CONTROL USING SR35-AUX-IO:
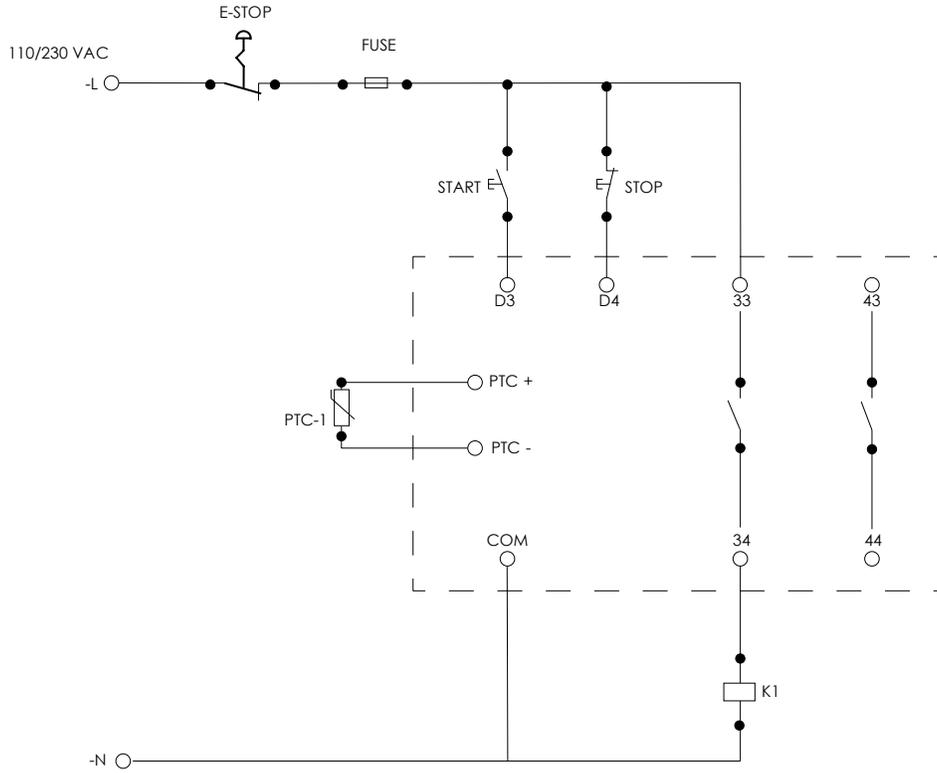
TWO WIRE CONTROL USING SR35-AUX-IO:
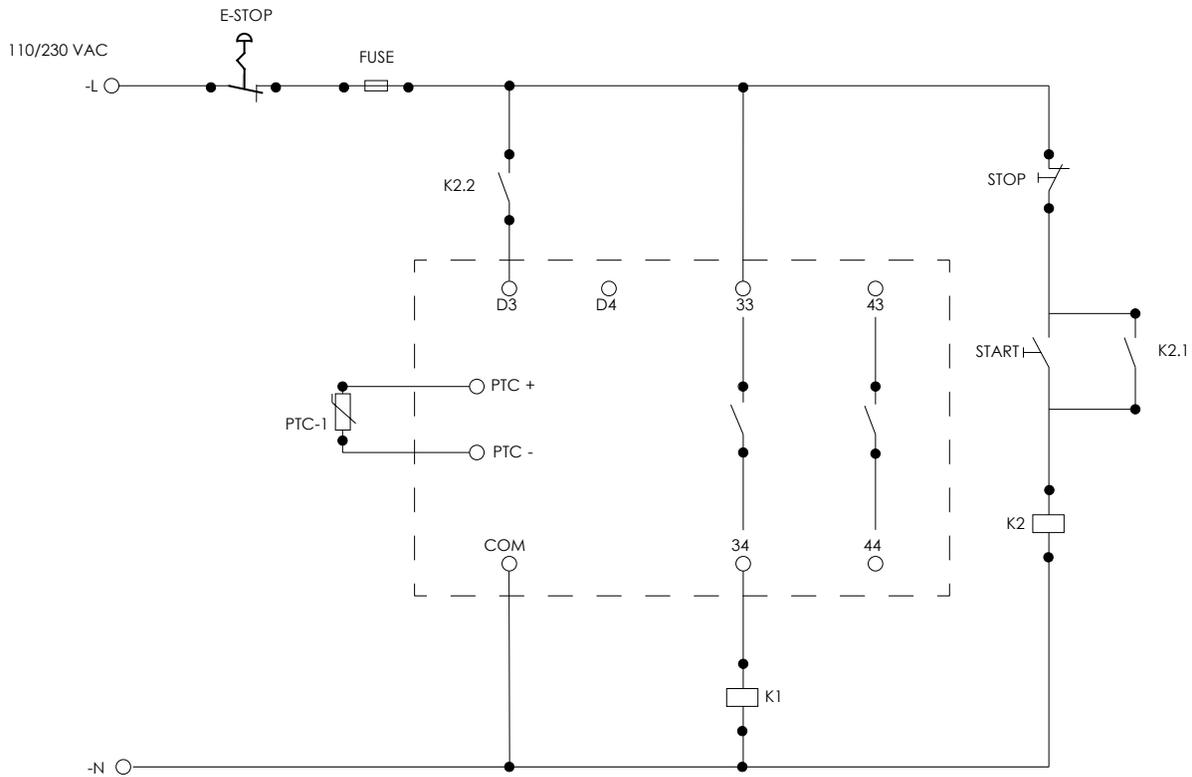
PROGRAMMING (FOR USE WITH SR35 MODELS)

DIGITAL INPUT PROGRAMMING

SETTING THE CONTROL MODE TO "EXPANSION":

READY / Local (x2)	Auto Setup (x1)	Application / Default (x2)
Cntrl Mode / Expansion (x1)	Cntrl Mode / Local (x2)	Cntrl Mode / Local (x1)
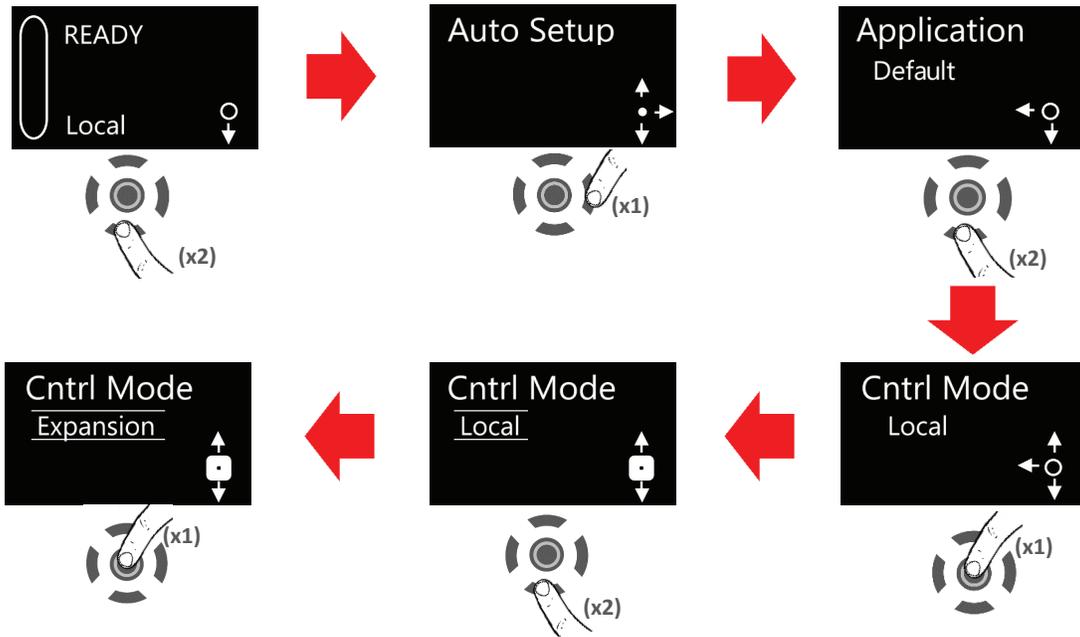
SETTING THE CONTROL INPUTS TO 24VDC (OFF =240V / ON = 24VDC):

READY / Expansion (x3)	Advanced (x1)	Start Param (x6)	Expansion (x1)
EXP 24V Inputs / Off (x1)	EXP 24V Inputs / Off (x1)	Input (x1)	PTC TripEN / Trip Off (x1)

EXP 24V Inputs / On (x1)
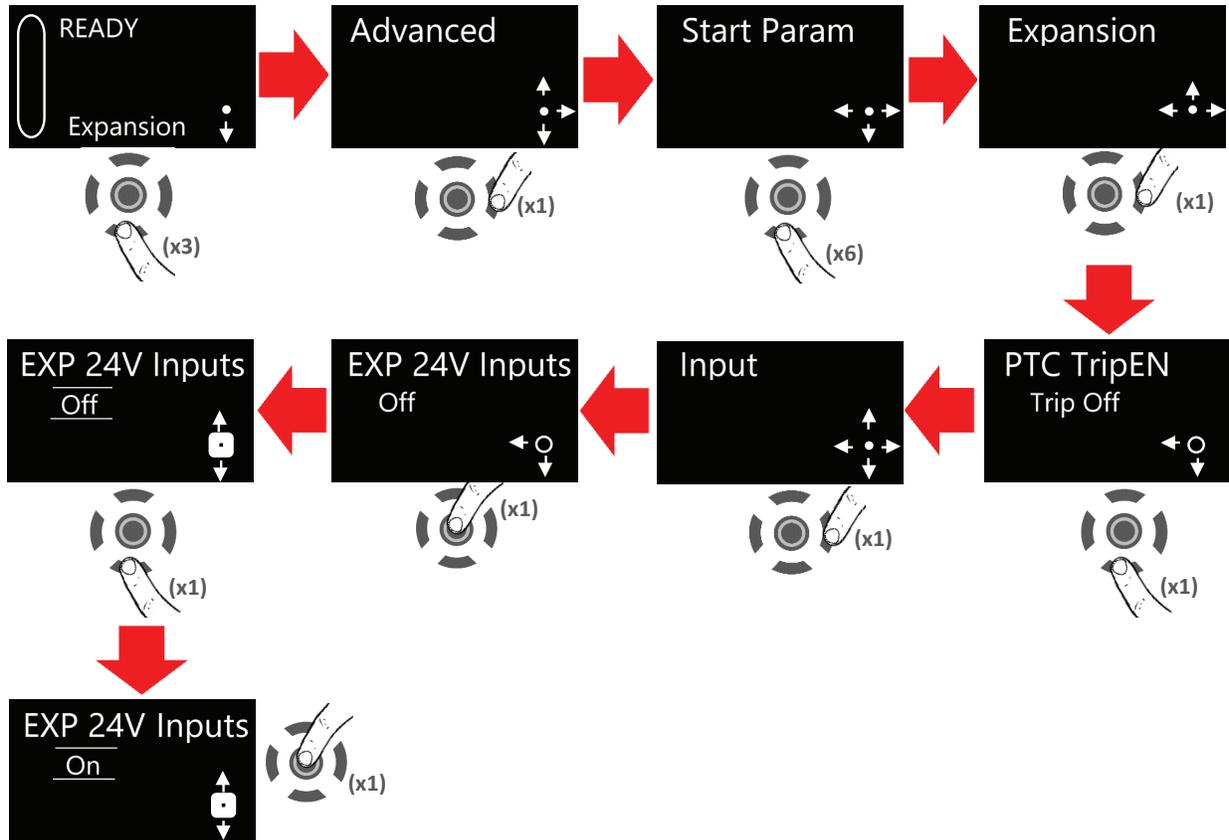
Setting the control Input Function

READY

Expansion

(x3)

Advanced

(x1)

Start Param

(x6)

Expansion

(x1)

PTC TripEN
Trip Off

(x1)

Input

(x1)

EXP 24V Inputs
Off

(x1)

Cntrl Funct
Three Wire

(x1)

Cntrl Funct
Three Wire

Cntrl Funct
Two Wire

Cntrl Funct
DI-Prog Reset

Cntrl Funct
DI-Prog Hold

Cntrl Funct
DI-Prog Enable

Cntrl Funct
DI-Prog Fire

(x1)
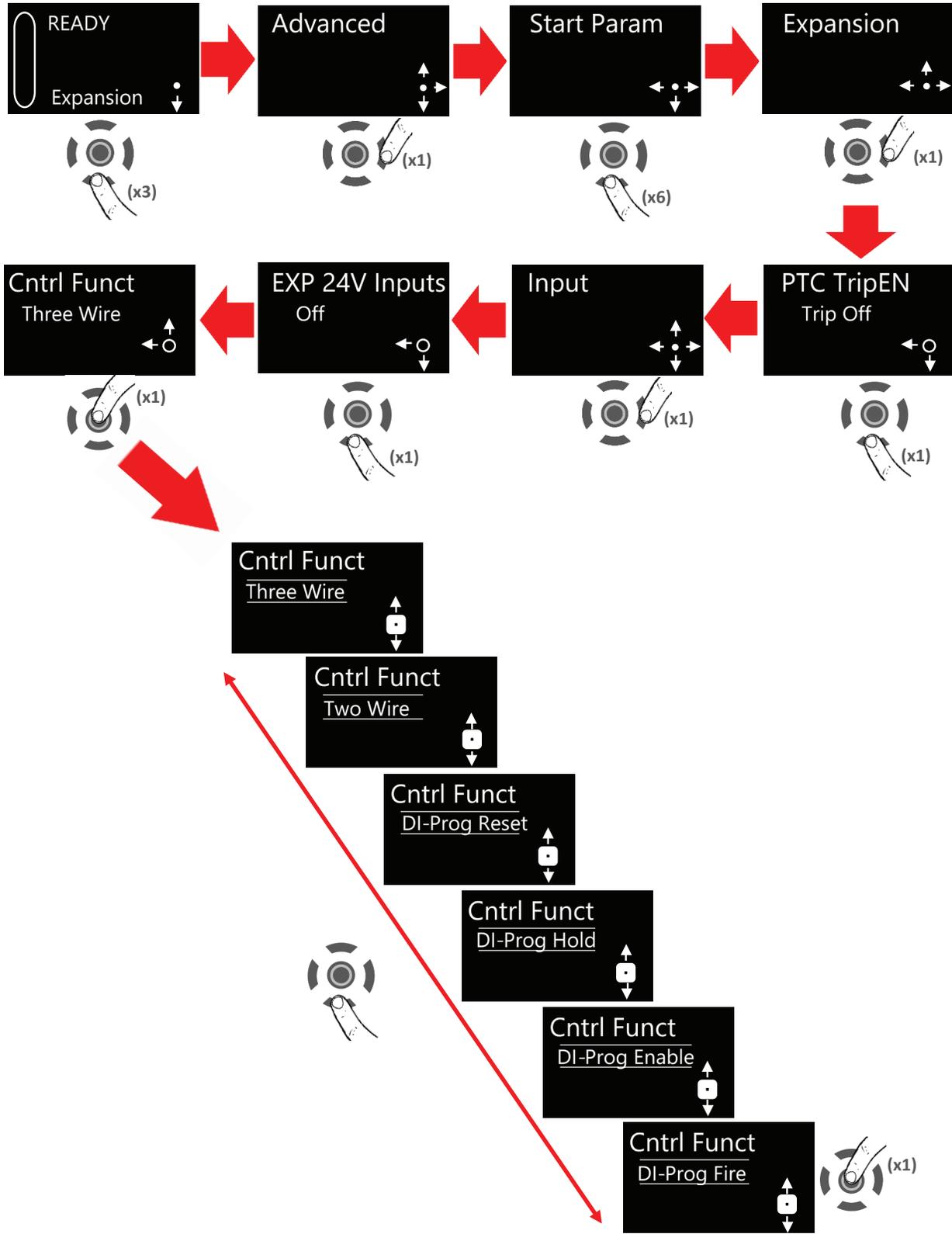
SETTING THE DIGITAL OUTPUT FUNCTION

READY	Advanced	Start Param	Expansion
Expansion			

(x3) (x1) (x6) (x1)

Relay 33 34	Relay 33 34	Output	PTC TripEN
Fault	Fault		Trip Off

(x1) (x1) (x2)

Relay 33 34
Run

Relay 33 34
Pending

Relay 33 34
Exceeded

Relay 33 34
Breaker

Relay 33 34
PH / SCR

Relay 33 34
End Of Start (x1)
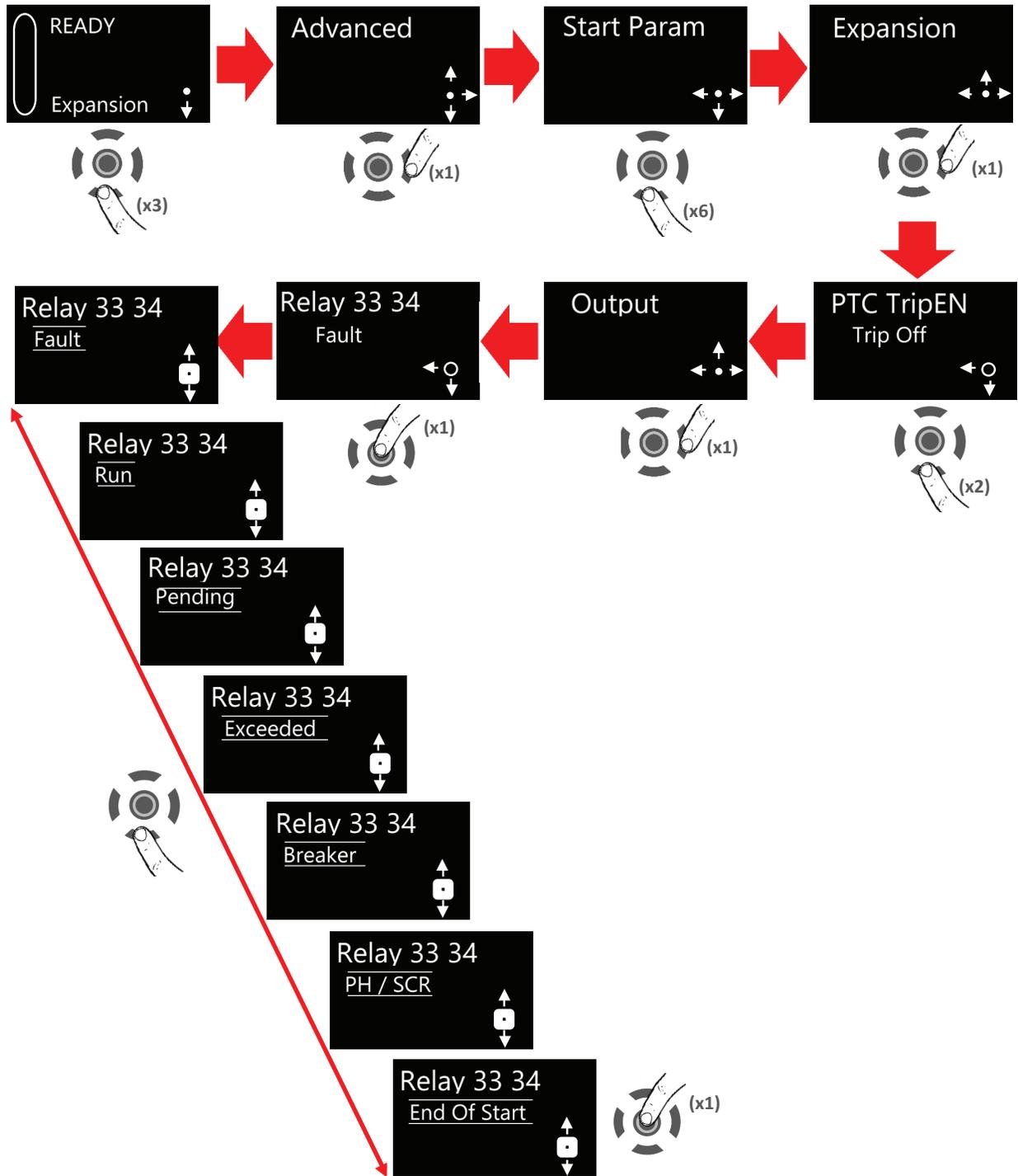
Activate the PTC Thermistor Trip:

READY / Expansion (x3)	Advanced (x1)	Start Param (x6)	Expansion (x1)

| PTC TripEN / Trip On | PTC TripEN / Trip On (x1) | PTC TripEN / Trip Off (x1) | PTC TripEN / Trip Off (x1) |