



## Ranco Refrigeration Cross-Reference Catalog Page

LIT-1900120

2020-04-22

### Description

See the following tables for more information.



# Temperature controls

**Table 1: Temperature controls**

Product	#	Range	Differential	Switch	Capillary	Bulb	Cover
Ranco	ETC111000-000	-30/220F	1/30F ADJ	Single-pole, double-throw (SPDT)	96" Lead	0.5x2	NEMA 1
PENN	A419ABC-1C <sup>1</sup>	-30/212F	1/30F ADJ	SPDT	78" Lead	0.5X2	NEMA 1
Ranco	3130-101	35/45F	12F FXD	Open LO	None	240"	NEMA 1
PENN	A11B-1C	35/45F	12F FXD	Open LO	48"	240"	NEMA 1
Ranco	3130-201	35/45F	Manual	Open LO	None	240"	NEMA 1
PENN	A11A-1C	35/45F	Manual	Open LO	48"	240"	NEMA 1
Ranco	3311-651	37F FXD	Manual	Open LO	180"	0.5x4.25	NEMA 1
PENN	A70BA-17C	35/80F ADJ	Manual	Open LO	72"	3/8x3	NEMA 1
Ranco	3311-701	30F FXD	15F FXD	Open LO	120"	3/8x6.5	NEMA 1
PENN	A70AA-15C	-10/65F ADJ	4/40F ADJ	Open LO	72"	3/8x3	NEMA 1
Ranco	A22-2237	41F FXD	6F FXD	Open HI	None	48"	NEMA 1
PENN	A11E-6C	35/45F	12F FXD	SPDT	48"	240"	NEMA 1
Ranco	O10-1010	0/55F	7/55F ADJ	Open LO	None	48"	NEMA 1
PENN	A11B-1C	35/45F	12F FXD	Open LO	48"	240"	NEMA 1
Ranco	O10-1409	0/55F	3/20F ADJ	Open LO	72"	Yes	NEMA 1
PENN	A19ABA-1C <sup>2</sup>	-30/50F	5/20F ADJ	Open LO	72"	3/8x4	NEMA 1
Ranco	O10-1410	25/75F	3/20F ADJ	Open LO	72"	Yes	NEMA 1
PENN	A19ABA-4C <sup>2</sup>	20/80F	3.5/14F ADJ	Open LO	72"	3/8x5	NEMA 1
Ranco	O10-1416	0/55F	3/20F ADJ	Open LO	None	72"	NEMA 1
PENN	A11B-1C	35/45F	12F FXD	Open LO	48"	240"	NEMA 1
Ranco	O10-1418	0/55F	3/20F ADJ	Open LO	None	Coiled	NEMA 1
PENN	A19BBA-1C <sup>2</sup>	-30/50F	5/20F ADJ	Open LO	None	Coiled	NEMA 1
Ranco	O10-1473	0/55F	7/55F ADJ	Open LO	72"	Yes	NEMA 1
PENN	A19ABA-1C <sup>2</sup>	-30/50F	5/20F ADJ	Open LO	72"	3/8x4	NEMA 1
Ranco	O10-1490	0/55F	2F FXD	Open LO	72"	Yes	NEMA 1
PENN	A19ABA-1C <sup>2</sup>	-30/50F	5/20F ADJ	Open LO	72"	3/8x4	NEMA 1
Ranco	O10-1491	25/75F	2F FXD	Open LO	72"	Yes	NEMA 1
PENN	A19ABA-4C <sup>2</sup>	20/80F	3.5/14F ADJ	Open LO	72"	3/8x5	NEMA 1
Ranco	O10-1802	25/75F	3/20F ADJ	Open LO	None	Coiled	NEMA 1
PENN	A19BAC-1C <sup>2</sup>	30/110F	3.5F FXD	SPDT	None	Coiled	NEMA 1
Ranco	O10-301	30/95F	2F FXD	Open LO	None	Coiled	NEMA 1
PENN	A19BAA-5C <sup>2</sup>	30/110F	3.5F FXD	Open LO	None	Coiled	NEMA 1
Ranco	O16-104	0/55F	3/20F ADJ	SPDT	72"	Yes	NEMA 1
PENN	A19ABC-24C <sup>2</sup>	-30/100F	3/12F ADJ	SPDT	96"	3/8x4	NEMA 1
Ranco	O16-111	0/55F	3/20F ADJ	SPDT	None	72"	NEMA 1
PENN	A11E-6C	35/45F	12F FXD	SPDT	48"	240"	NEMA 1
Ranco	O16-165	30/90F	2.5F FXD	SPDT	None	Coiled	NEMA 1
PENN	A19BAC-1C <sup>2</sup>	30/110F	3.5F FXD	SPDT	None	Coiled	NEMA 1
Ranco	O16-263	0/55F	Manual	SPDT	72"	Yes	NEMA 1
PENN	A19ACC-6C	-30/100F	Manual	SPDT	72"	3/8x4	NEMA 1
PENN	A70BA-17C <sup>3</sup>	35/80F	Manual	Open LO	72"	3/8x3	NEMA 1
Ranco	O16-264	0/55F	Manual	SPDT	None	96"	NEMA 1
PENN	A11D-1C	35/45F	Manual	SPDT	48"	240"	NEMA 1
PENN	A70BA-18C <sup>3</sup>	15/55F	Manual	Open LO	None	240"	NEMA 1
Ranco	O16-588	-15/40F	1.5F FXD	SPDT	None	72"	NEMA 1
PENN	A11E-6C <sup>2</sup>	35/45F	12F FXD	SPDT	48"	240"	NEMA 1
PENN	A70AA-16C	15/55F	5F FXD	Open LO	None	240"	NEMA 1
Ranco	O16-594	0/55F	2F FXD	SPDT	None	Coiled	NEMA 1
PENN	A19BBC-2C <sup>2</sup>	-30/100F	3/12F ADJ	SPDT	None	Coiled	NEMA 1
Ranco	O16-595	50/100F	3/20F ADJ	SPDT	96"	3/8x6	NEMA 1
PENN	A19ABC-4C <sup>2</sup>	50/130F	3.5/14F ADJ	SPDT	96"	3/8x5	NEMA 1

**Table 1: Temperature controls**

Product	#	Range	Differential	Switch	Capillary	Bulb	Cover
Ranco	O16-601	22.5/47.5F	2.5F FXD	SPDT	36"	3/8x6	NEMA 1
PENN	A19ABC-2C <sup>2</sup>	20/80F	3.5/14F ADJ	SPDT	72"	3/8x5	NEMA 1
PENN	A70AA-15C <sup>3</sup>	-10/65F ADJ	10F FXD	Open LO	72"	3/8x3	NEMA 1
Ranco	O20-7041	0/100F	6/20F ADJ	DPST Open LO	96"	3/8x6	NEMA 1
PENN	A72AA-3C	50/90F	ADJ	DPST Open LO	72"	11/16x6 3/4	NEMA 1
PENN	A72AA-2C	15/55F	ADJ	DPST Open LO	72"	3/8x3	NEMA 1
Ranco	O52-6910	30/95F	2F FXD	SPDT	None	Coiled	NEMA 4X
PENN	A19PRC-1C	30/110F	3/12F ADJ	SPDT	None	Coiled	NEMA 4X
Ranco	O60-100	-35/95F	4/50F ADJ	SPDT	96"	3/8x6	NEMA 1
PENN	A19ABC-24C <sup>2</sup>	-30/100F	3/12F ADJ	SPDT	96"	3/8x4	NEMA 1
Ranco	O60-101	-35/95F	4/50F ADJ	SPDT	None	Coiled	NEMA 1
PENN	A19BBC-2C <sup>2</sup>	-30/100F	3/12F ADJ	SPDT	None	Coiled	NEMA 1
Ranco	O60-1072	-15/40F	3/20F ADJ	Open LO	None	Coiled	NEMA 1
PENN	A19BBA-1C <sup>2</sup>	-30/50F	5/20F ADJ	Open LO	None	Coiled	NEMA 1
Ranco	O60-120	-35/95F	4/50F ADJ	SPDT	240"	3/8x6	NEMA 1
PENN	A19ABC-36C <sup>2</sup>	-30/100F	3/12F ADJ	SPDT	240"	3/8x4	NEMA 1
Ranco	O60-1408	-15/40F	3/20F ADJ	Open LO	72"	Yes	NEMA 1
PENN	A19ABA-1C <sup>2</sup>	-30/50F	5/20F ADJ	Open LO	72"	3/8x4	NEMA 1
Ranco	O60-200	95/240F	6/50F ADJ	SPDT	96"	3/8x6	NEMA 1
PENN	A19ABC-12C <sup>2</sup>	100/240F	6/24F ADJ	SPDT	96"	.29x2.5	NEMA 1

- 1 May be extended up to 800 feet
- 2 Can use A419ABC-1, -30/212F range, 1/30F differential, SPDT, 78" lead, 0.25 x 2 PTC sensor, NEMA 1
- 3 Different switch

## Defrost and fan delay temperature controls

**Table 2: Defrost and fan delay temperature controls**

Product	#	Range	Differential	Switch	Capillary	Bulb	Cover
Ranco	F25-107	40/75F	20F FXD	SPDT	60"	3/8x4	Open
PENN	A19ZBC-2C <sup>1</sup>	45/85	25F ADJ	SPDT	72"	0.3x3.125	NEMA 1
Ranco	F25-114	43/73F	24F FXD	SPDT	60"	3/8x4	Open
PENN	A19ZBC-2C <sup>1</sup>	45/85	25F ADJ	SPDT	72"	0.3x3.125	NEMA 1

- 1 Range is Defrost Termination for both

## Pressure controls (Ranco Series 3126-3161, G20-G23, and O10-O20)

**Table 3: Pressure controls (Ranco Series 3126-3161, G20-G23, and O10-O20)**

Product	#	Range	Differential	Switch	Capillary	Connection	Cover
Ranco	3126-116	7/125	25 FXD	SPDT	60"	Sweat	Open
PENN	P20EB-1C <sup>1</sup>	7/150	29/32 FXD	SPDT	36"	Sweat	Open
Ranco	3126-117	7/27	12 FXD	SPDT	60"	Sweat	Open
PENN	P70AB-2C <sup>2, 3</sup>	20"/100	7/50 ADJ	Open LO	36"	w/ Flare	NEMA 1
Ranco	3126-216	7/125	Manual	Open LO	60"	Sweat	Open
PENN	P70BA-1C <sup>2, 3</sup>	20"/100	Manual	Open LO	36"	w/ Flare	NEMA 1
Ranco	3126-412	7/77	23/70	SPDT	60"	Sweat	Open
PENN	P20EB-1C <sup>1</sup>	7/150	29/32 FXD	SPDT	36"	Sweat	Open
Ranco	3127-140	125/450	70 FXD	Open HI	60"	Sweat	Open
PENN	P20EB-2C <sup>1</sup>	100/425	60/77 FXD	SPDT	36"	Sweat	Open

**Table 3: Pressure controls (Ranco Series 3126-3161, G20-G23, and O10-O20)**

Product	#	Range	Differential	Switch	Capillary	Connection	Cover
Ranco	3127-220	125/450	Manual	SPDT	60"	Sweat	Open
PENN	P70DA-1C <sup>2, 3</sup>	50/450	Manual	Open HI	36"	w/ Flare	NEMA 1
Ranco	3127-414	150/450	70/125	SPDT	60"	Sweat	Open
PENN	P20EB-2C <sup>1</sup>	100/425	60/77 FXD	SPDT	36"	Sweat	Open
Ranco	3160-012	5/110	25 FXD	SPDT	60"	Sweat	Open
PENN	P20EB-1C <sup>1</sup>	7/150	29/32 FXD	SPDT	36"	Sweat	Open
Ranco	3160-014	5/125	25 FXD	Open LO	60"	Sweat	Open
PENN	P20EB-1C <sup>1</sup>	7/150	29/32 FXD	SPDT	36"	Sweat	Open
Ranco	3160-212	5/110	Manual	Open LO	60"	Sweat	Open
PENN	P70BA-1C <sup>2, 3</sup>	20"/100	Manual	Open LO	36"	w/ Flare	NEMA 1
Ranco	3160-406	5/125	12/50	SPDT	60"	Sweat	Open
PENN	P20EB-1C <sup>1</sup>	7/150	29/32 FXD	SPDT	36"	Sweat	Open
Ranco	3161-002	200/475	75 FXD	Open HI	60"	Sweat	Open
PENN	P20EB-2C <sup>1</sup>	100/425	60/77 FXD	SPDT	36"	Sweat	Open
Ranco	3161-003	200/475	110 FXD	Open HI	60"	Sweat	Open
PENN	P20EB-2C <sup>1</sup>	100/425	60/77 FXD	SPDT	36"	Sweat	Open
Ranco	3161-004	200/475	50 FXD	Open HI	60"	Sweat	Open
PENN	P20EB-2C <sup>1</sup>	100/425	60/77 FXD	SPDT	36"	Sweat	Open
Ranco	3161-009	125/285	50 FXD	SPDT	60"	Sweat	Open
PENN	P20EB-2C <sup>1</sup>	100/425	60/77 FXD	SPDT	36"	Sweat	Open
Ranco	3161-201	200/475	Manual	SPDT	60"	Sweat	Open
PENN	P70DA-1C <sup>2, 3</sup>	50/450	Manual	Open HI	36"	w/ Flare	NEMA 1
Ranco	3161-205	125/285	Manual	Open HI	60"	w/ Flare	Open
PENN	P70DA-1C <sup>2</sup>	50/450	Manual	Open HI	36"	w/ Flare	NEMA 1
Ranco	3161-403	200/475	50/150	SPDT	60"	Sweat	Open
PENN	P20EB-2C <sup>1</sup>	100/425	60/77 FXD	SPDT	36"	Sweat	Open
Ranco	G20-4050	7/27	12 FXD	Open LO	60"	Sweat	Open
PENN	P70AB-2C <sup>2, 3</sup>	20"/100	7/50 ADJ	Open LO	36"	w/ Flare	NEMA 1
Ranco	G20-4051	7/77	19/70	Open LO	60"	Sweat	Open
PENN	P20EB-1C <sup>1</sup>	7/150	29/32 FXD	SPDT	36"	Sweat	Open
Ranco	G20-4412	7/70	Manual	Open LO	60"	Sweat	Open
PENN	P70BA-1C <sup>2, 3</sup>	20"/100	Manual	Open LO	36"	w/ Flare	NEMA 1
Ranco	G23-5052	150/450	50/125	Open HI	60"	Sweat	Open
PENN	P20EB-2C <sup>1</sup>	100/425	60/77 FXD	SPDT	36"	Sweat	Open
Ranco	G23-5253	50/450	Manual	Open HI	60"	Sweat	Open
PENN	P70DA-1C <sup>2, 3</sup>	50/450	Manual	Open HI	36"	w/ Flare	NEMA 1
Ranco	O10-1093	10"/100	10/40	Open LO	48"	w/ Flare	NEMA 1
PENN	P70AB-2C	20"/100	7/50	Open LO	36"	w/ Flare	NEMA 1
Ranco	O10-1401	12"/50	5/35	Open LO	None	External Flare	NEMA 1
PENN	P170AB-12C	12"/80	5/35	Open LO	None	External Flare	NEMA 1
Ranco	O10-1402	12"/50	5/35	Open LO	36"	w/ Flare	NEMA 1
PENN	P70AB-12C	12"/80	5/35	Open LO	36"	w/ Flare	NEMA 1
Ranco	O10-1483	10"/100	10/40	Open LO	36"	w/ Flare	NEMA 1
PENN	P70AB-2C	20"/100	7/50	Open LO	36"	w/ Flare	NEMA 1
Ranco	O10-1807	100/250	20/100	Open LO	None	External Flare	NEMA 1
PENN	P70AA-151C	50/300	20/120	Open LO	None	External Flare	NEMA 1
Ranco	O10-1831	10"/100	10/40	Open LO	None	External Flare	NEMA 1
PENN	P70AB-12C	12"/80	5/35	Open LO	36"	w/ Flare	NEMA 1
Ranco	O10-1842	12"/50	5/35	Open LO	48"	w/ Flare	NEMA 1
PENN	P70AB-12C	12"/80	5/35	Open LO	36"	w/ Flare	NEMA 1
Ranco	O10-2000	100/250	20/100	Open LO	48"	w/ Flare	NEMA 1
PENN	P70AA-3C	100/300	25/75	Open LO	36"	w/ Flare	NEMA 1
Ranco	O10-2054	100/400	40/150	Open LO	36"	w/ Flare	NEMA 1

**Table 3: Pressure controls (Ranco Series 3126-3161, G20-G23, and O10-O20)**

Product	#	Range	Differential	Switch	Capillary	Connection	Cover
PENN	P70AA-118C	100/400	35/200	Open LO	36"	w/ Flare	NEMA 1
Ranco	O11-1711	150/450	40/150	Open HI	36"	w/ Flare	NEMA 1
PENN	P70CA-3C	50/450	60/150	Open HI	36"	w/ Flare	NEMA 1
Ranco	O11-1713	150/450	40/150	Open HI	None	External Flare	NEMA 1
PENN	P70CA-2C	50/450	60/150	Open HI	None	External Flare	NEMA 1
Ranco	O11-1799	10"/100	10/40	Open HI	None	External Flare	NEMA 1
PENN	P170CA-1C	20"/100	6/70	Open HI	None	External Flare	NEMA 1
Ranco	O11-3099	10"/100	10/40	Open HI	36"	w/ Flare	NEMA 1
PENN	P70CA-1C	20"/100	6/70	Open HI	36"	w/ Flare	NEMA 1
Ranco	O16-107	10"/100	10/40 ADJ	SPDT	None	External Flare	NEMA 1
PENN	P70EA-10C	20"/100	5 FXD	SPDT	None	External Flare	NEMA 1
Ranco	O16-120	12"/50	5/35 ADJ	SPDT	None	External Flare	NEMA 1
PENN	P70EA-10C	20"/100	5 FXD	SPDT	None	External Flare	NEMA 1
Ranco	O16-142	100/400	17 FXD	SPDT	36"	w/ Flare	NEMA 1
PENN	P70EA-6C <sup>3</sup>	100/300	14 FXD	SPDT	36"	Sweat	NEMA 1
Ranco	O16-166	50/150	10/40	SPDT	36"	w/ Flare	NEMA 1
PENN	P70GA-2C <sup>4</sup>	20"/100	7/50	NO/NC	36"	w/ Flare	NEMA 1
Ranco	O16-200	150/450	Manual	SPDT	48"	w/ Flare	NEMA 1
PENN	P70KA-1C <sup>4</sup>	50/450	Manual	NO/NC	36"	w/ Flare	NEMA 1
Ranco	O16-209	150/450	Manual	SPDT	None	External Flare	NEMA 1
PENN	P170KA-1C <sup>4</sup>	50/450	Manual	NO/NC	None	External Flare	NEMA 1
Ranco	O16-261	10"/100	Manual	SPDT	48"	w/ Flare	NEMA 1
PENN	P70HA-2C <sup>4</sup>	20"/100	Manual	NO/NC	36"	w/ Flare	NEMA 1
Ranco	O16-503	150/450	40/150	SPDT	None	External Flare	NEMA 1
PENN	P70JA-18C <sup>4</sup>	50/450	60/150	NO/NC	None	External Flare	NEMA 1
Ranco	O16-527	10"/100	10/40 ADJ	SPDT	36"	w/ Flare	NEMA 1
PENN	P70EA-10C <sup>5</sup>	20"/100	5 FXD	SPDT	None	External Flare	NEMA 1
Ranco	O16-557	12"/50	5/35 ADJ	SPDT	36"	w/ Flare	NEMA 1
PENN	P70EA-10C <sup>5</sup>	20"/100	5 FXD	SPDT	None	External Flare	NEMA 1
Ranco	O16-585	10"/100	Manual	SPDT	None	External Flare	NEMA 1
PENN	P70HA-3C <sup>3, 4</sup>	20"/100	Manual	NO/NC	None	Internal NPT	NEMA 1
Ranco	O20-1894	100/400	40/150	Open LO	None	External Flare	NEMA 1
PENN	P170AA-118C	100/400	35/200	Open LO	None	External Flare	NEMA 1
Ranco	O20-7002	12"/50	5/35	DPST-LO	36"	w/ Flare	NEMA 1
PENN	P72AA-1C	20"/100	7/50	DPST-LO	36"	w/ Flare	NEMA 1
Ranco	O20-7006	100/400	40/150	DPST-LO	36"	w/ Flare	NEMA 1
PENN	P72AA-27C	100/400	35/200	DPST-LO	36"	w/ Flare	NEMA 1

- 1 Differential depends on setting
- 2 Not as compact.
- 3 Different pressure element
- 4 Different switch.
- 5 Add Ecosafe hose

## Pressure controls (Ranco Series 3100, MPF, MPH, and MPL)

**Table 4: Pressure Controls (Ranco Series 3100, MPF, MPH, and MPL)**

Product	#	Cut-Out	Cut-In	Range	Switch	Electrical	Pressure
Ranco	3100-001	15	40	None	Single-pole, single-throw (SPST)	30" Leads	1/4" Sweat
PENN	P100AA-1C	10	40	None	SPST	48" Leads	1/4" Internal Flare
Ranco	3100-002	5	30	None	SPST	72" Leads	1/4" Internal Flare
PENN	P20EB-1C <sup>1, 2, 3, 4, 5</sup>	ADJ.	N/A	7/150	SPDT	Arkles	36" Cap, Sweat
Ranco	3100-003	20	45	None	SPST	72" Leads	1/4" Internal Flare

**Table 4: Pressure Controls (Ranco Series 3100, MPF, MPH, and MPL)**

Product	#	Cut-Out	Cut-In	Range	Switch	Electrical	Pressure
PENN	P20EB-1C <sup>1, 2, 3, 4, 5</sup>	ADJ.	N/A	7/150	SPDT	Arkles	36" Cap, Sweat
Ranco	3100-004	35	60	None	SPST	QC	1/4" Internal Flare
PENN	P100AA-2C <sup>5</sup>	35	60	None	SPST	48" Leads	1/4" Internal Flare
Ranco	3100-005	15" VAC	17.5	None	SPDT	QC	1/4" Internal Flare
PENN	P70AB-1C <sup>1, 2, 4, 5</sup>	ADJ.	N/A	20"/100	SPST	Screw Terms.	1/4" External Flare
Ranco	3100-006	48	80	None	SPDT	36" Leads	1/4" Sweat
PENN	P20EB-1C <sup>1, 2, 3, 4, 5</sup>	ADJ.	N/A	7/150	SPDT	Arkles	36" Cap, Sweat
Ranco	3100-007	15	40	None	SPST	30" Leads	1/4" Internal Flare
PENN	P100AA-1C	10	40	None	SPST	48" Leads	1/4" Internal Flare
Ranco	3100-009	0	20	None	SPST	QC	1/4" Internal Flare
PENN	P70AB-1C <sup>1, 2, 4, 5</sup>	ADJ.	N/A	20"/100	SPST	Screw Terms.	1/4" External Flare
Ranco	3100-010	45	70	None	SPDT	QC	1/4" Internal Flare
PENN	P20EB-1C <sup>1, 2, 3, 4</sup>	ADJ.	N/A	7/150	SPDT	Arkles	36" Cap, Sweat
Ranco	3100-050	10	30	None	SPST	18" Leads	1/4" Internal Flare
PENN	P100AA-1C	10	40	None	SPST	48" Leads	1/4" Internal Flare
Ranco	3100-051	25	80	None	SPST	18" Leads	1/4" Internal Flare
PENN	P20EB-1C <sup>1, 2, 3, 4, 5</sup>	ADJ.	N/A	7/150	SPDT	Arkles	36" Cap, Sweat
Ranco	3100-052	40	80	None	SPST	18" Leads	1/4" Internal Flare
PENN	P100AA-2C	35	60	None	SPST	48" Leads	1/4" Internal Flare
Ranco	3100-075	85	135	None	SPDT	QC	1/4" Internal Flare
PENN	P70AA-119C <sup>2, 4, 5, 6</sup>	ADJ.	N/A	50/300	SPST	Screw Terms.	1/4" Internal Flare
Ranco	3100-076	108	135	None	SPST	QC	1/4" Internal Flare
PENN	P20EB-1C <sup>1, 2, 3, 4, 6</sup>	ADJ.	N/A	7/150	SPDT	Arkles	36" Cap, Sweat
Ranco	3100-077	115	165	None	SPST	QC	1/4" Internal Flare
PENN	P170AA-118C <sup>1, 2, 4, 5</sup>	ADJ.	N/A	100/400	SPST	Screw Terms.	1/4" External Flare
Ranco	3100-078	135	185	None	SPDT	QC	1/4" Internal Flare
PENN	P170AA-118C <sup>1, 2, 4, 5, 6</sup>	ADJ.	N/A	100/400	SPST	Screw Terms.	1/4" External Flare
Ranco	3100-079	165	215	None	SPST	QC	1/4" Internal Flare
PENN	P100AA-4C <sup>5</sup>	170	250	None	SPST	48" Leads	1/4" Internal Flare
Ranco	3100-080	200	240	None	SPDT	QC	1/4" Internal Flare
PENN	P170AA-118C <sup>1, 2, 4, 5, 6</sup>	ADJ.	N/A	100/400	SPST	Screw Terms.	1/4" External Flare
Ranco	3100-081	250	300	None	SPDT	QC	1/4" Internal Flare
PENN	P170AA-118C <sup>1, 2, 4, 5, 6</sup>	ADJ.	N/A	100/400	SPST	Screw Terms.	1/4" External Flare
Ranco	3100-100	425	325	None	SPST	72" Leads	1/4" Internal Flare
PENN	P100CA-2C	425	325	None	SPST	48" Leads	1/4" Internal Flar
Ranco	3100-101	400	300	None	SPST	18" Leads	1/4" Internal Flare
PENN	P100CA-1C	400	300	None	SPST	48" Leads	1/4" Internal Flare
Ranco	3100-102	220	170	None	SPST	QC	1/4" Internal Flare
PENN	P100CA-2C <sup>5</sup>	425	325	None	SPST	48" Leads	1/4" Internal Flare
Ranco	3100-103	410	Manual	None	SPST	42" Leads	1/4" Internal Flare
PENN	P100DA-1C	410	Manual	None	SPST	48" Leads	1/4" Internal Flare
Ranco	3100-104	420	Manual	None	SPST	48" Leads	1/4" Internal Flare
PENN	P70DA-1C <sup>1, 2, 4, 5</sup>	ADJ.	Manual	50/450	SPST	Screw Terms.	36" Cap, Flare
Ranco	3100-105	440	Manual	None	SPST	36" Leads	.093 Cap. Tube
PENN	P70DA-1C <sup>1, 2, 4, 5</sup>	ADJ.	Manual	50/450	SPST	Screw Terms.	36" Cap, Flare
Ranco	3100-106	475	Manual	None	SPST	42" Leads	1/4" Sweat w/ Cap.
PENN	P100DA-2C <sup>1</sup>	475	Manual	None	SPST	48" Leads	1/4" Internal Flare
Ranco	3100-107	232	Manual	None	SPST	84" Leads	1/4" Internal Flare
PENN	P70DA-1C <sup>1, 2, 4, 5</sup>	ADJ.	Manual	50/450	SPST	Screw Terms.	36" Cap, Flare
Ranco	3100-108	280	Manual	None	SPST	12" Leads	1/4" NPTF
PENN	P20EB-2C <sup>1, 2, 3, 4, 5</sup>	ADJ.	N/A	100/425	SPDT	Arkles	36" Cap, Sweat
Ranco	3100-110	375	275	None	SPDT	QC	1/4" Sweat

**Table 4: Pressure Controls (Ranco Series 3100, MPF, MPH, and MPL)**

Product	#	Cut-Out	Cut-In	Range	Switch	Electrical	Pressure
PENN	P20EB-2C <sup>1, 2, 3, 4</sup>	ADJ.	N/A	100/425	SPDT	Arkles	36" Cap, Sweat
Ranco	3100-111	375	275	None	SPST	QC	1/4" Internal Flare
PENN	P20EB-2C <sup>1, 2, 3, 4</sup>	ADJ.	N/A	100/425	SPDT	Arkles	36" Cap, Sweat
Ranco	3100-112	275	175	None	SPST	24" Leads	1/4" Internal Flare
PENN	P20EB-2C <sup>1, 2, 3, 4, 5</sup>	ADJ.	N/A	100/425	SPDT	Arkles	36" Cap, Sweat
Ranco	3100-113	395	295	None	SPST	QC	1/4" Sweat
PENN	P20EB-2C <sup>1, 2, 3, 4</sup>	ADJ.	N/A	100/425	SPDT	Arkles	36" Cap, Sweat
Ranco	3100-115	350	250	None	SPDT	36" Leads	1/4" Sweat
PENN	P20EB-2C <sup>1, 2, 3, 4, 5</sup>	ADJ.	N/A	100/425	SPDT	Arkles	36" Cap, Sweat
Ranco	3100-116	213	113	None	SPST	QC	1/4" Internal Flare
PENN	P20EB-2C <sup>1, 2, 3, 4</sup>	ADJ.	N/A	100/425	SPDT	Arkles	36" Cap, Sweat
Ranco	3100-117	140	190	None	SPST	12" Leads	.093 Cap. Tube
PENN	P20EB-2C <sup>1, 2, 3, 4, 5</sup>	ADJ.	N/A	100/425	SPDT	Arkles	36" Cap, Sweat
Ranco	3100-118	295	395	None	SPST	QC	1/4" Internal Flare
PENN	P20EB-2C <sup>1, 2, 3, 4</sup>	ADJ.	N/A	100/425	SPDT	Arkles	36" Cap, Sweat
Ranco	3100-120	420	320	None	SPST	QC	1/4" Internal Flare
PENN	P20EB-2C <sup>1, 2, 3, 4</sup>	ADJ.	N/A	100/425	SPDT	Arkles	36" Cap, Sweat
Ranco	3100-121	426	272	None	SPST	QC	1/4" Sweat
PENN	P20EB-2C <sup>1, 2, 3, 4</sup>	ADJ.	N/A	100/425	SPDT	Arkles	36" Cap, Sweat
Ranco	3100-150	350	250	None	SPST	18" Leads	1/4" Internal Flare
PENN	P20EB-2C <sup>1, 2, 3, 4, 5</sup>	ADJ.	N/A	100/425	SPDT	Arkles	36" Cap, Sweat
Ranco	3100-151	400	300	None	SPST	18" Leads	1/4" Internal Flare
PENN	P100CA-1C	400	300	None	SPST	48" Leads	1/4" Internal Flare
Ranco	3100-152	400	200	None	SPST	18" Leads	1/4" Internal Flare
PENN	P100CA-1C	400	300	None	SPST	48" Leads	1/4" Internal Flare
Ranco	3100-153	450	250	None	SPST	18" Leads	1/4" Internal Flare
PENN	P20EB-2C <sup>1, 2, 3, 4, 5</sup>	ADJ.	N/A	100/425	SPDT	Arkles	36" Cap, Sweat
Ranco	3100-154	500	400	None	SPST	18" Leads	1/4" Internal Flare
PENN	P70LB-1C <sup>1, 2, 4, 5, 7</sup>	ADJ.	N/A	100/500	SPST	Screw Terms.	36" Cap, Flare
Ranco	3100-155	500	300	None	SPST	18" Leads	1/4" Internal Flare
PENN	P70LB-1C <sup>1, 2, 4, 5, 7</sup>	ADJ.	N/A	100/500	SPST	Screw Terms.	36" Cap, Flare
Ranco	MPF-7006	75	120	None	SPST	18" Leads	1/4" Internal Flare
PENN	P20EB-1C <sup>3, 4, 5</sup>	ADJ.	N/A	7/150	SPDT	Arkles	36" Cap, Sweat
Ranco	MPF-7007	110	170	None	SPST	18" Leads	1/4" Internal Flare
PENN	P20EB-1C <sup>3, 4, 5</sup>	ADJ.	N/A	7/150	SPDT	Arkles	36" Cap, Sweat
Ranco	MPF-7008	150	225	None	SPST	18" Leads	1/4" Internal Flare
PENN	P100AA-3C	150	225	None	SPST	48" Leads	1/4" External Flare
Ranco	MPF-7009	190	275	None	SPST	18" Leads	1/4" Internal Flare
PENN	P20EB-2C <sup>3, 4, 5</sup>	ADJ.	N/A	100/425	SPDT	Arkles	36" Cap, Sweat
Ranco	MPF-7010	300	400	None	SPST	18" Leads	1/4" Internal Flare
PENN	P20EB-2C <sup>3, 4, 5</sup>	ADJ.	N/A	100/425	SPDT	Arkles	36" Cap, Sweat
Ranco	MPH-7101	250	180	None	SPST	18" Leads	1/4" Internal Flare
PENN	P20EB-2C <sup>3, 4, 5</sup>	ADJ.	N/A	100/425	SPDT	Arkles	36" Cap, Sweat
Ranco	MPH-7102	270	200	None	SPST	18" Leads	1/4" Internal Flare
PENN	P20EB-2C <sup>3, 4, 5</sup>	ADJ.	N/A	100/425	SPDT	Arkles	36" Cap, Sweat
Ranco	MPH-7103	300	200	None	SPST	18" Leads	1/4" Internal Flare
PENN	P20EB-2C <sup>3, 4, 5</sup>	ADJ.	N/A	100/425	SPDT	Arkles	36" Cap, Sweat
Ranco	MPH-7104	325	225	None	SPST	18" Leads	1/4" Internal Flare
PENN	P20EB-2C <sup>3, 4, 5</sup>	ADJ.	N/A	100/425	SPDT	Arkles	36" Cap, Sweat
Ranco	MPH-7105	350	250	None	SPST	18" Leads	1/4" Internal Flare
PENN	P20EB-2C <sup>3, 4, 5</sup>	ADJ.	N/A	100/425	SPDT	Arkles	36" Cap, Sweat

**Table 4: Pressure Controls (Ranco Series 3100, MPF, MPH, and MPL)**

Product	#	Cut-Out	Cut-In	Range	Switch	Electrical	Pressure
Ranco	MPH-7106	375	275	None	SPST	18" Leads	1/4" Internal Flare
PENN	P20EB-2C <sup>1, 4, 5</sup>	ADJ.	N/A	100/425	SPDT	Arkles	36" Cap, Sweat
Ranco	MPH-7107	400	300	None	SPST	18" Leads	1/4" Internal Flare
PENN	P100CA-1C	400	300	None	SPST	48" Leads	1/4" External Flare
Ranco	MPH-7108	425	325	None	SPST	18" Leads	1/4" Internal Flare
PENN	P100CA-2C	425	325	None	SPST	48" Leads	1/4" External Flare
Ranco	MPL-7001	5	20	None	SPST	18" Leads	1/4" Internal Flare
PENN	P100AC-1C	5	20	None	SPST	48" Leads	1/4" External Flar
Ranco	MPL-7002	15	35	None	SPST	18" Leads	1/4" Internal Flare
PENN	P100AA-1C	10	40	None	SPST	48" Leads	1/4" External Flare
Ranco	MPL-7003	25	80	None	SPST	18" Leads	1/4" Internal Flare
PENN	P20EB-1C <sup>1, 4, 5</sup>	ADJ.	N/A	7/150	SPDT	Arkles	36" Cap, Sweat
Ranco	MPL-7004	35	60	None	SPST	18" Leads	1/4" Internal Flare
PENN	P100AA-2C	35	60	None	SPST	48" Leads	1/4" External Flare
Ranco	MPL-7005	45	60	None	SPST	18" Leads	1/4" Internal Flare
PENN	P20EB-1C <sup>1, 4, 5</sup>	ADJ.	N/A	7/150	SPDT	Arkles	36" Cap, Sweat
Ranco	MPL-7011	10	25	None	SPST	18" Leads	1/4" Internal Flare
PENN	P20EB-1C <sup>1, 4, 5</sup>	ADJ.	N/A	7/150	SPDT	Arkles	36" Cap, Sweat
Ranco	MPL-7012	20	45	None	SPST	18" Leads	1/4" Internal Flare
PENN	P20EB-1C <sup>1, 4, 5</sup>	ADJ.	N/A	7/150	SPDT	Arkles	36" Cap, Sweat
Ranco	MPL-7014	40	80	None	SPST	18" Leads	1/4" Internal Flare
PENN	P20EB-1C <sup>1, 4, 5</sup>	ADJ.	N/A	7/150	SPDT	Arkles	36" Cap, Sweat

- 1 Different pressure element
- 2 Not as compact
- 3 Differential depends on setting
- 4 Not an encapsulated switch as Ranco's is
- 5 Different electrical connection
- 6 Different switch
- 7 Dual control, ignore lo side

## Dual pressure controls

**Table 5: Dual pressure controls**

Product	#	LO Side	Differential	HI Side	Differential	Capillary	Connection
Ranco	O12-1502	12"/50	5/35	150/450	70 FXD	36"	W/ Flare
PENN	P70LB-6C	12"/80	5/35	100/500	60 FXD	36"	W/ Flare
Ranco	O12-1505	12"/50	5/35	100/250	50 FXD	None	External Flare
PENN	P170LB-6C	12"/80	5/35	100/500	60 FXD	None	External Flare
Ranco	O12-1506	12"/50	5/35	100/250	50 FXD	36"	W/ Flare
PENN	P70LB-6C	12"/80	5/35	100/500	60 FXD	36"	W/ Flare
Ranco	O12-1549	10"/100	10/40	150/450	70 FXD	36"	W/ Flare
PENN	P70LB-1C	20"/100	7/50	100/500	60 FXD	36"	W/ Flare
Ranco	O12-1550	10"/100	10/40	150/450	70 FXD	None	External Flare
PENN	P170LB-1C	20"/100	7/50	100/500	60 FXD	None	External Flare
Ranco	O12-1554	12"/50	5/35	100/250	50 FXD	48"	W/ Flare
PENN	P70LB-6C	12"/80	5/35	100/500	60 FXD	36"	W/ Flare
Ranco	O12-1594	10"/100	Manual	150/450	Manual	36"	W/ Flare
PENN	P70NA-1C	20"/100	Manual	100/500	Manual	36"	W/ Flare
Ranco	O12-4139	12"/50	5/35	150/450	70 FXD	None	External Flare
PENN	P170LB-6C	12"/80	5/35	100/500	60 FXD	None	External Flare
Ranco	O12-4833	12"/50	5/35	150/450	70 FXD/Man	48"	W/ Flare
PENN	P70SA-1C	12"/80	5/35	100/500	60 FXD	36"	W/ Flare
Ranco	O12-4834	10"/100	10/40	150/450	70 FXD/Man	48"	W/ Flare
PENN	P70SA-1C	12"/80	5/35	100/500	60 FXD	36"	W/ Flare
Ranco	O12-4842	12"/50	5/35	150/450	70 FXD/Man	None	External Flare
PENN	P170SA-1C	12"/80	5/35	100/500	60 FXD	None	External Flare
Ranco	O12-4846	10"/100	10/40	150/450	70 FXD/Man	None	External Flare



**Table 5: Dual pressure controls**

Product	#	LO Side	Differential	HI Side	Differential	Capillary	Connection
PENN	P1705A-1C	12"/80	5/35	100/500	60 FXD	None	External Flare
Ranco	O22-7702	12"/50	5/35	100/250	50 FXD/Man	36"	W/ Flare
PENN	P72LB-1C <sup>1</sup>	20"/100	7/50	100/500	60 FXD	36"	W/ Flare
Ranco	O22-7706	10"/100	10/40	150/450	70 FXD	36"	W/ Flare
PENN	P72LB-1C <sup>1</sup>	20"/100	7/50	100/500	60 FXD	36"	W/ Flare

1 Convertible

## Low pressure cutout with time delay

**Table 6: Low pressure cutout with time delay**

Product	#	Range	Differential	Time Delay	Capillary	Connection	Cover
Ranco	3341-161	0/100	5 FXD	120 Secs.	36"	W/ Flare	NEMA 1
PENN	P29NC-38C	20"/100	2.2 FXD	120 Secs.	36"	W/ Flare	NEMA 1

## Lube oil pressure controls

**Table 7: Lube oil pressure controls**

Product	#	Range	Reset	Delay	Capillary	Connection	Cover
Ranco	3321-001	9 FXD	Manual	45, 60, 90, 120	None	External Flare	NEMA 1
PENN	P128AA-**C <sup>1</sup>	8/70 ADJ	Manual	See Table 10	None	External Flare	NEMA 1
Ranco	3321-009	5 FXD	Manual	45, 60, 90, 120	36"	W/ Flare	NEMA 1
PENN	P28AA-**C <sup>1</sup>	8/70 ADJ	Manual	See Table 10	36"	W/ Flare	NEMA 1
Ranco	3321-010	9 FXD	Manual	45, 60, 90, 120	36"	W/ Flare	NEMA 1
PENN	P28AA-**C <sup>1</sup>	8/70 ADJ	Manual	See Table 10	36"	W/ Flare	NEMA 1
Ranco	3321-014	15 FXD	Manual	45, 60, 90, 120	36"	W/ Flare	NEMA 1
PENN	P28AA-**C <sup>1</sup>	8/70 ADJ	Manual	See Table 10	36"	W/ Flare	NEMA 1
Ranco	3321-015	30 FXD	Manual	45, 60, 90, 120	36"	W/ Flare	NEMA 1
PENN	P28AA-**C <sup>1</sup>	8/70 ADJ	Manual	See Table 10	36"	W/ Flare	NEMA 1
Ranco	P30-3601	8/60 ADJ	Manual	60	36"	W/ Flare	NEMA 1
PENN	P28AA-2C	8/70 ADJ	Manual	60	36"	W/ Flare	NEMA 1
Ranco	P30-3701	8/60 ADJ	Manual	90	36"	W/ Flare	NEMA 1
PENN	P28AA-1C	8/70 ADJ	Manual	90	36"	W/ Flare	NEMA 1
Ranco	P30-3801	8/60 ADJ	Manual	120	36"	W/ Flare	NEMA 1
PENN	P28AA-17C	8/70 ADJ	Manual	120	36"	W/ Flare	NEMA 1
Ranco	P30-5826	9 FXD	Manual	120	36"	W/ Flare	NEMA 1
PENN	P45NCA-12C	9 FXD	Manual	120	36"	W/ Flare	NEMA 1
Ranco	P30-5827	9 FXD	Manual	120	None	External Flare	NEMA 1
PENN	P145NCA-12C	9 FXD	Manual	120	None	External Flare	NEMA 1

1 See Table 10

## Lube oil pressure controls without time delay

**Table 8: Lube oil pressure controls without time delay**

Product	#	Range	Differential	Cut-In	Switch	Capillary	Connection
Ranco	3311-101	14 FXD	5 FXD	9 FXD	SPDT	36"	1/4" Internal Flares
PENN	P74AA-1C <sup>1</sup>	8/70 ADJ	8/30 ADJ	ADJ	Open Hi	36"	1/4" Internal Flares
Ranco	3311-103	4/6 ADJ	5/6	9/12	SPDT	24"	W/1/4" Sweats
PENN	P74EA-8C <sup>2</sup>	2/26 ADJ	3.5 FXD	N/A	SPDT	36"	1/4" Internal Flares
Ranco	3311-111	4/6 FXD	5/6	9/12	SPDT	84"	1/4" Internal Flares

**Table 8: Lube oil pressure controls without time delay**

Product	#	Range	Differential	Cut-In	Switch	Capillary	Connection
PENN	P74EA-8C	2/26 ADJ	3.5 FXD	N/A	SPDT	36"	1/4" Internal Flares
Ranco	3311-115	6 FXD	5 FXD	11 FXD	Open LO	24"	1/4" Internal Flares
PENN	P74BA-1C	8/70 ADJ	7/30 ADJ	ADJ	Open LO	36"	1/4" Internal Flares
Ranco	3311-118	40 FXD	5 FXD	45 FXD	Open LO	25" & 24"	W/1/4" Sweats
PENN	P74BA-1C <sup>2</sup>	8/70 ADJ	7/30 ADJ	ADJ	Open LO	36"	1/4" Internal Flares
Ranco	3311-201	7 FXD	Manual	Manual	SPDT	49" & 72"	W/1/4" Sweats
PENN	P74AB-1C <sup>1, 2</sup>	8/70 ADJ	Manual	Manual	Open Hi	None	1/4" Internal NPT
Ranco	3315-101	14 FXD	5 FXD	9 FXD	SPDT	36"	1/4" Internal Flares
PENN	P74AA-1C <sup>1</sup>	8/70 ADJ	8/30 ADJ	ADJ	Open Hi	36"	1/4" Internal Flares
Ranco	3315-801	11/14 ADJ	5 FXD	16/19	SPDT	None	External Flares
PENN	P74BA-1C <sup>1, 2</sup>	8/70 ADJ	7/30 ADJ	ADJ	Open LO	36"	1/4" Internal Flares

- 1 Different switch
- 2 Different pressure element

## Transformers

**Table 9: Transformers**

Product	#	VA	Prim. Volt.	Prim. Lead	Sec. Volt.	Sec. Lead	Mounting
Ranco	620-205	20	120	8" Leads	24	8" Leads	Foot
PENN	Y65A13-0	40	120	8" Leads	24	30" Leads	Foot w/ Hubs
Ranco	620-206	20	208/240	8" Leads	24	8" Leads	Foot
PENN	Y65T31-0 <sup>1</sup>	40	120/208/240	8" Leads	24	3 Terminals	Universal
Ranco	620-403	40	120	8" Leads	24	8" Leads	Universal
PENN	Y65T31-0 <sup>1</sup>	40	120/208/240	8" Leads	24	3 Terminals	Universal
Ranco	620-404	40	208/240	8" Leads	24	8" Leads	Universal
PENN	Y65T31-0 <sup>1</sup>	40	120/208/240	8" Leads	24	3 Terminals	Universal
Ranco	620-405	40	120	8" Leads	24	8" Leads	Foot
PENN	Y65A13-0	40	120	8" Leads	24	30" Leads	Foot w/ Hubs
Ranco	620-406	40	208/240	8" Leads	24	8" Leads	Foot
PENN	Y65T31-0 <sup>1</sup>	40	120/208/240	8" Leads	24	3 Terminals	Universal
Ranco	620-482	40	120/208/240	8" Leads	24	8" Leads	Foot
PENN	Y65A13-0 <sup>2</sup>	40	120	8" Leads	24	30" Leads	Foot w/ Hubs
PENN	Y65T31-0	40	120/208/240	8" Leads	24	3 Terminals	Universal
Ranco	620-502	50	120/208/240	8" Leads	24	8" Leads	Universal
PENN	Y63T22-0 <sup>2</sup>	50	120/208/240	8" Leads	24	8" Leads	Universal
Ranco	620-752	75	120/208/240	8" Leads	24	8" Leads	Foot
PENN	Y66T12-0 <sup>2</sup>	75	120/208/240	8" Leads	24	8" Leads	Foot
Ranco	620-758	75	480	8" Leads	24	8" Leads	Foot
PENN	Y66F12-0	75	277/480	8" Leads	24	8" Leads	Foot

- 1 Different electrical connection
- 2 Choose which transformer based on primary voltage desired

## Products and pressure connections

**Table 10: Products and pressure connections**

Product Code Number	Range	Time	Measurements	Pressure Connection
P28AA-1	8/70	90 Secs.	36"	W/ Flare
P28AA-2	8/70	60 Secs.	36"	W/ Flare
P28AA-17	8/70	120 Secs.	36"	W/ Flare
P28AA-18	8/70	45 Secs.	36"	W/ Flare

**Table 10: Products and pressure connections**

Product Code Number	Range	Time	Measurements	Pressure Connection
P128AA-1	8/70	90 Secs.	None	External Flare
P128AA-2	8/70	60 Secs.	None	External Flare
P128AA-17	8/70	120 Secs.	None	External Flare

## Product warranty

This product is covered by a limited warranty, details of which can be found at [www.johnsoncontrols.com/buildingswarranty](http://www.johnsoncontrols.com/buildingswarranty).

## Single point of contact

APAC	Europe	NA/SA
JOHNSON CONTROLS C/O CONTROLS PRODUCT MANAGEMENT NO. 32 CHANGJIANG RD NEW DISTRICT WUXI JIANGSU PROVINCE 214028 CHINA	JOHNSON CONTROLS WESTENDHOF 3 45143 ESSEN GERMANY	JOHNSON CONTROLS 507 E MICHIGAN ST MILWAUKEE WI 53202 USA

## Contact information

Contact your local branch office:  
[www.johnsoncontrols.com/locations](http://www.johnsoncontrols.com/locations)

Contact Johnson Controls:  
[www.johnsoncontrols.com/contact-us](http://www.johnsoncontrols.com/contact-us)

