

Pyromation Product Catalog Part Number/Application Guide

Part Number	Description	Applications	Catalog Pg. #	CONFIG. CODE	Catalog section
K8C -24-0	Industrial base metal elements	Ovens; furnaces; heat treating; incineration; metals processing; smelting; glass mfg.	IND-1,2	ID01	Industrial
R24R -18-3	Noble metal elements		IND-3	ID02	
8-50 -18-8D16	Industrial standard service protection tubes		IND-4	ID03	
41-75 -18-8E16	Industrial special service protection tubes		IND-5,6	ID04	
17A4 -18-8	Ceramic protection tubes		IND-7	ID11	
K8C-7-50 -24-6E20-34	Industrial thermocouple assemblies - standard service		IND-8	ID05	
K8C-41-75 -24-6E20-34	Industrial thermocouple assemblies - special service		IND-9	ID06	
K8C-13-75 -24-31	Industrial thermocouple assemblies - special service for molten aluminum		IND-10	ID12	
R24R-17BH -18-31	Thermocouple assemblies with ceramic protection tubes		IND-11	ID13	
S24R- 16BH-18J -36-31	Thermocouple assemblies with double protection tubes		IND-12	ID14	
K8A-8-75- 18-18 -8E16-34	Angle industrial thermocouple assemblies - standard service		IND-13	ID07	
K8A- 14-50 -18-18-49	Angle industrial thermocouple assemblies - special service		IND-14	ID08	
K39G- 15-25 -24-36-4	Cerite III assemblies		IND-15,16	ID09	
R24U-403 -24-05A-15-F1A036-4	High temperature assemblies		IND-18,19	ID10	
K48G -012-00- 16-F 1048	Mgo assemblies with lead wire		Heat treating; metal processing; industrial ovens; furnaces; Plastic/rubber molding; laboratories; packaging; bearings; tube skin	Mgo-1,2,3,4,5	
K48G -012-15C- 4	Mgo assemblies with sheath terminations	Mgo-1,2,3		MG02	
J0408U -012-00-16- F 1048-6	Miniature MgO assemblies	Mgo-6,7		MG03	
JP33 -04-13A-F1A012-2	Plastics style general purpose tube & wire thermocouples	Plastics processing; packaging; industrial ovens	PL-1	PL01	Plastics
RBF185 P33 -06-13A-F3B012-2	Plastics style general purpose RTDs		PL-2	PL02	
JBA 3-F3B024-2	Spring adjustable immersion thermocouples & RTDs	Plastics processing; packaging	PL-3,5	PL03	
RBF185 AA 3-F3A012-3	Armor adjustable immersion RTD's & thermocouples		PL-4,6	PL04	
JFMB 23-02-F1A006-4	Melt bolt thermocouple assemblies	Plastic processing melt temperature	PL-7,9	PL05	
RBF1852 MB 23-02-F3A012-4	Melt bolt RTD assemblies		PL-8	PL06	
JNM 32-04-F3B036-3	Nozzle Melt thermocouples		PL-10	PL07	
JTN -F6-F1B024-2	Threaded nozzle thermocouples		PL11	PL08	
RNF1852 TN -F6-F3B012-2	Threaded nozzle RTDs		PL12	PL09	
JRS 1-F3012-8	Ring thermocouples	Plastic processing surface measurement	PL-13	PL10	
RBF1853 RB 2-F3B012-2	Ring RTDs		PL-14	PL11	
JSS -F1B036-3	Spade thermocouples		PL-15	PL12	

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<u>K20-1-S-304</u> -072-4	Wire thermocouples	Plastic processing; packaging; furnace surveys; industrial ovens; laboratories;	PL-16	PL13	Plastics
<u>JE6-F1B036</u> -4	Thermocouple extensions	N/A	PL-17	PL14	
<u>RT3E4-F3B036</u> -2	RTD extensions	N/A	PL-18	PL15	
<u>705-0.88, PCA-075</u>	Plastic industry sensor accessories	N/A	PL-19	NA	
R5 <u>T185L</u> 483-006-01A,304- <u>16-T3</u> 036-4	RTD assemblies with extension lead wire	Industrial ovens; laboratories; plastics processing; packaging; bearings; air temp; gas monitoring; air monitoring; refrigeration	RTD-1,2,3,4,5	RT01	RTD
R5 <u>T185L</u> 483-006-00- <u>4</u>	RTD assemblies with sheath terminations		RTD1,2,3	RT02	
R1T185L483-06-00- <u>C45, T-450</u> -U-S(0-200)F	RTD assemblies with integral 450 series transmitter		RTD-6	RT03	
RT3 <u>E46</u> MS-P3072-2	M-12 extensions		RTD-7	RT04	
RBF185L483-006(1/2)- <u>00-8HN</u> 31	Fixed-element RTD assemblies with connection heads	Process piping; Industrial ovens; laboratories; plastics processing; packaging; bearings; air temp; gas monitoring; air monitoring; refrigeration	GP-1,7	GP01	General purpose Sensors with connection heads
J38U-012-01A- <u>9HP</u> 49	Fixed-element MgO T/C assemblies with connection heads		GP-2,8	GP02	
R1T185L483-S4D0408- <u>SL-8HN</u> 31	Spring-loaded RTD assemblies with or with out thermowells		GP-3,5	GP03	
J48U-S4C00608- <u>SL-8PU</u> 431	Spring-loaded MgO assemblies with or with out thermowells		GP-4,6	GP04	
R1T185L483-012(1/2)- <u>SL-22</u>	Spring-loaded replacement RTD elements		GP-9	GP05	
J48U-012- <u>SL-22</u> (06)	Spring-loaded replacement MgO T/C elements		GP-9	GP06	
RBF185L483-006(1/2)-00-8HP <u>B25</u>	Fixed-sheath RTDs with miniature connection heads		GP-11	GP07	
J38U-012-01A-8HP <u>B17</u>	Fixed-sheath MgOs with miniature connection heads		GP-12	GP08	
<u>XP-R1T185L483-012-00-8HN</u> 74	Explosion-proof RTD fixed-element assemblies	Hazardous location	XP-1	XP01	Explosion proof sensors
<u>XP-K48U-012-00-8HN</u> 72	Explosion-proof thermocouple fixed-element assemblies		XP-2	XP02	
<u>XP-R1T185L483-S4C0608-SC-8HN</u> 75T-642B	Explosion-proof RTD thermowell assemblies		XP-3	XP03	
<u>XP-J48U-H4C0608-SL-8XU</u> 472	Explosion-proof thermocouple thermowell assemblies		XP-4	XP04	
<u>XP-R1T185L483-006-FP-8HN</u> 81	Explosion-proof RTD spring-loaded assemblies		XP-5	XP05	
<u>XP-J48U-012-FP-8HN</u> 71	Explosion-proof thermocouple spring-loaded assemblies		XP-6	XP06	

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<u>S4</u> D0608T2S	Threaded, socket weld, and weld-in thermowells	Process piping	TW-2	TW01	Thermowell
<u>SF</u> 415 <u>R</u> 31208T2C8	Flanged thermowells		TW-3	TW02	
<u>26</u> -48-06-803	Build-up and thermowell element wells		TW-4	TW03	
<u>440</u> -385U-S(50-300)F	Head mounted series 440 programmable RTD transmitter	N/A	TT-2	TM01	Transmitter
<u>441</u> -385U-S(50-300)F	Head mounted series 441 programmable RTD-thermocouple transmitter	N/A	TT-6	TM01	
<u>442</u> -385U-S(50-300)F	Head mounted series 442 HART programmable RTD-thermocouple transmitter	N/A	TT-12	TM01	
<u>642</u> -385U-S(50-300)F	Head mounted series 642 HART programmable RTD-thermocouple transmitter	N/A	TT-22	TM01	
R5T185L484-04- <u>CIP</u> -2-5- <u>45,T-450</u> -U-S(0-200)F	CIP assemblies with 450 series transmitters	Food process piping	FD-2,3	FD01	Food & Dairy
R5T185L483-04- <u>CIP</u> -2-5-63 or <u>HTST</u>	Standard and reduced-tip CIP/HTST assemblies	Food process piping	FD-4,5,6	FD02	
R5T185L483- <u>DW</u> 4250608-SL-8HN63	RTD with CIP-connected wells	Tank monitoring	FD-7	FD03	
R1T185L(156)83-02- <u>CIP-075</u> -5-02-T2T120-3	Miniature CIP RTD assemblies	Pharma Process piping	FD-8	FD04	
R5T185L483-09(1/2)- <u>TR</u> -63	Thermometer replacement RTDs	Tank monitoring	FD-9	FD05	
R1T185L483- <u>W81</u> -18-SL-8PN4-63	Sanitary weld-in thermowell assemblies	Tank monitoring	FD-10	FD06	
RBF185 <u>PGM</u> 3-06-M3120-2	Penetration style pistol-grip sensors	meat processing	FD-11	FD07	
RBF185 <u>MH</u> 2-06-T3120-4, or <u>LH, SH, HD</u>	Penetration style sensors	meat processing	FD-12,13	FD08	
JP38 <u>U</u> -012-00- <u>TI</u> (36)-T3072-4	Teflon-coated thermocouple assemblies	Acid/ plating	SP-1	SP01	Special Purpose
RBF185L383 <u>I</u> -012-00- <u>TI</u> (36)-T3072-4	Teflon-coated RTD assemblies		SP-1	SP02	
J4 <u>TEF</u> -072-4	Chemical-resistant thermocouples		SP-2	SP09	
RBF185L483- <u>HT</u> -0304-18RD-31	Heat tracing sensors	Freeze protection	SP-3	SP03	
J29 <u>GA</u> 1-18-6D12-31	Abrasion-resistant sensors	Aggregate mixing	SP-4	SP04	
J050G- <u>CM</u> -10-31	Rubber compound mixing sensors	Rubber mixing	SP-5	SP05	
<u>2290L</u> 2(23)3-120-8HN47,HT	Averaging RTD assemblies	HVAC air measurement	SP-6	SP06	
<u>2215</u> -RBF185L3	Room temperature sensors		SP-7	SP07	
R1T185L483-12- <u>VCL</u> -T3012-2	Variable-length RTD sensors		SP-8	SP08	
JP48G-06- <u>VCL</u> -T1012-2	Variable-length thermocouple sensors		SP-8	SP10	

Thermocouples

<u>Configuration Code</u>	<u>Description</u>	<u>Catalog Page Numbers</u>
Industrial Thermocouples		
ID01	Industrial base metal elements	IND-1,2
ID02	Noble metal elements	IND-3
ID03	Industrial standard service protection tubes	IND-4
ID04	Industrial special service protection tubes	IND-5,6
ID11	Ceramic Protection Tubes	IND-7
ID05	Industrial thermocouple assemblies - standard service	IND-8
ID06	Industrial thermocouple assemblies - special service	IND-9
ID12	Industrial thermocouple assemblies - special service for Molten Aluminum	IND-10
ID13	Thermocouple assemblies with ceramic protection tubes	IND-11
ID14	Thermocouple assemblies with double protection tubes	IND-12
ID07	Angle industrial thermocouple assemblies - standard service	IND-13
ID08	Angle industrial thermocouple assemblies - special service	IND-14
ID09	Cerite III assemblies	IND-15,16
ID10	High temperature assemblies	IND-18,19
SP04	Abrasion-resistant sensors	SP-4
Plastics, rubber, packaging thermocouples		
PL01	Plastics style general purpose tube & wire thermocouples	PL-1
PL03	Adjustable immersion thermocouples	PL-3,5
PL05	Melt bolt thermocouple assemblies	PL-7,9
PL07	Nozzle melt thermocouples	PL-10
PL09	Threaded nozzle RTDs	PL-12
PL10	Ring thermocouples	PL-13
PL12	Spade Thermocouples	PL-15
PL13	Wire thermocouples	PL-16
PL14	Thermocouple extensions	PL-17
SP05	Rubber compound mixing sensors	SP-5
MgO insulated thermocouples		
MG01	MgO assemblies with lead wire	Mgo-1,2,3,4,5,
MG02	MgO assemblies with sheath terminations	Mgo-1,2,3
MG03	Miniature MgO assemblies	Mgo-6,7
MgO connection head and thermowell assemblies		
GP02	Fixed-element MgO thermocouple assemblies with connection heads	GP-2,8
GP04	Spring-loaded MgO assemblies with or without thermowells	GP-4,6
GP06	Spring-loaded replacement MgO thermocouple elements	GP-9
GP08	Fixed-sheath MgOs with miniature connection heads	GP-12
XP02	Explosion-proof thermocouple fixed-element assemblies	XP-2
XP04	Explosion-proof thermocouple thermowell assemblies	XP-4
XP06	Explosion-proof thermocouple spring-loaded assemblies	XP-6
Special purpose Thermocouples		
SP01	Teflon-coated thermocouple assemblies	SP-1
SP09	Chemical-resistant thermocouples	SP-2
SP03	Heat tracing sensors	SP-3
SP05	Rubber compound mixing sensors	SP-5
SP10	Variable length thermocouple sensors	SP-8
Penetration Style Thermocouples		
FD07	Penetration style pistol-grip sensors	FD-11
FD08	Penetration style sensors	FD-12,13

RTDs

<u>Configuration Code</u>	<u>Description</u>	<u>Catalog Page Numbers</u>
General Purpose RTDs		
RT01	RTD assemblies with extension lead wire	RTD-1,2,3,4,5
RT02	RTD assemblies with sheath terminations	RTD-1,2,3
RT03	RTD assemblies with integral 450 series transmitter	RTD-6
RT04	M-12 extensions	RTD-7
Plastics rubber packaging RTDs		
PL02	Plastics style general purpose RTDs	PL-2
PL04	Adjustable immersion RTDs	PL-4,6
PL06	Melt bolt RTD assemblies	PL-8
PL09	Threaded nozzle RTDs	PL-12
PL11	Ring RTDs	PL-14
PL15	RTD extensions	PL-18
RTD Connection head and thermowell assemblies		
GP01	Fixed-element RTD assemblies with connection heads	GP-1,7
GP03	Spring-loaded RTD Assemblies with or with out thermowells	GP-3,5
GP05	Spring-loaded replacement RTD elements	GP-9
GP07	Fixed-Sheath RTDs with miniature connection heads	GP-11
XP01	Explosion-proof RTD fixed-element assemblies	XP-1
XP03	Explosion-proof RTD thermowell assemblies	XP-3
XP05	Explosion-proof RTD spring-loaded assemblies	XP-5
RTDs for food and dairy		
FD01	CIP assemblies with 450 series transmitters	FD-2,3
FD02	Standard and reduced-tip CIP/HTST assemblies	FD-4,5,6
FD03	RTD with CIP-connected wells	FD-7
FD04	Miniature CIP RTD assemblies	FD-8
FD05	Thermometer replacement RTDs	FD-9
FD06	Sanitary weld-in thermowell assemblies	FD-10
FD07	Penetration style pistol-grip sensors	FD-11
FD08	Penetration style sensors	FD-12,13
Special purpose RTDs		
SP02	Teflon-coated RTD assemblies	SP-1
SP06	Averaging RTD assemblies	SP-6
SP07	Room temperature sensors	SP-7
SP08	Variable length RTD sensors	SP-8
SP03	Heat-tracing sensors	SP-3
Thermowells		
TW01	Threaded, socket weld, and weld-in thermowells	TW-2
TW02	Flanged thermowells	TW-3
TW03	Build-up and thermowell element wells	TW-4
Temperature Transmitters		
TM01	Head-mounted transmitters series 440, 441, 442, 642	TT-2,6,12,22

Pyromation Common Part Number Nomenclature

Material		Sheath Size	
Code	Part Description	Code	Part Description
3	Inconel® 600	1	1/16" - 1/16"
4	310 SST	2	2/16" - 1/8"
5	446 SST	3	3/16" - 3/16"
7	Inconel® 601	4	4/16" - 1/4"
8	316 SST	5	5/16" - 5/16"
9	304 SST	6	6/16" - 3/8"
41	HR-160	8	8/16" - 1/2"
More codes per Gen 11 to 13		(020)	Three digit decimal diameter of sheath
		(032)	Three digit decimal diameter of sheath
		(040)	Three digit decimal diameter of sheath
Pipe Size		Process Thread Connection	
Code	Part Description	Code	Part Description
13	1/8" SCH 40	A	1/8" NPT
25	1/4" SCH 40	B	1/4" NPT
50	1/2" SCH 40	C	1/2" NPT
75	3/4" SCH 40	D	3/4" NPT
100	1" SCH 40	E	1" NPT
125	1 1/4" SCH 40	F	1 1/4" NPT
		G	1 1/2" NPT

Sheath Mounting Fittings				
One-Time Adjustable Compression Fittings				
Code	Type	NPT Size (inches)	Pressure Rated	Available Sheath Diameter (Inches)
01A	303 Stainless Steel	1/8	No	1/16, 1/8, 3/16, 1/4
05A	316 Stainless Steel	1/8	Yes	1/16, 1/8, 3/16, 1/4
05B	316 Stainless Steel	1/4	Yes	1/8, 3/16, 1/4, 3/8
05C	316 Stainless Steel	1/2	Yes	1/8, 1/4, 3/8
15A	Brass	1/8	No	1/8, 3/16, 1/4
15B	Brass	1/4	No	3/16, 1/4, 3/8
15C	Brass	1/2	No	1/4, 3/8
Miscellaneous Sheath mounting options			Sheath bends	
Code	Part Description		Code	Part Description
13A	Spring loaded bayonet fitting		1	Straight
14	Floor flange with compression fitting		2	45° Bend
16A	Compression fitting with bayonet cap		3	90° Bend
17	Weld pad perpendicular			
18	Weld pad horizontal			
17R	Radius weld pad perpendicular			
18R	Radius weld pad horizontal			

Sheath Mounting Fittings

Re-adjustable Compression Fittings

Code	Type	NPT Size (inches)	Available Sheath Diameter (Inches)
10A	303 Stainless Steel	1/8	1/16, 1/8, 3/16
10B	303 Stainless Steel	1/4	1/4, 3/8
10C	303 Stainless Steel	1/2	1/4, 3/8
12A	316 Stainless Steel	1/8	1/16, 1/8, 3/16, 1/4
12B	316 Stainless Steel	1/4	1/8, 3/16, 1/4, 3/8
12C	316 Stainless Steel	1/2	1/8, 1/4, 3/8
11A	Brass	1/8	1/16, 1/8, 3/16, 1/4
11B	Brass	1/4	1/8, 3/16, 1/4, 3/8
11C	Brass	1/2	1/4, 3/8
19C	Spring-loaded SS well fitting	1/2	3/16, 1/4

Teflon[®] gland standard 204 °C [400 °F] max. For lava gland 649 °C [1200 °F] max. opt. 10A and 10B only use letter suffix "L" after compression fitting order code. EXAMPLE:: 10AL for lava gland.

Sheath Terminations		Transitions For Lead Wire	
Code	Part Description	Code	Part Description
4	Standard plug	13	In-line with heat shrink tubing for relief
5	Standard jack	15	3/8" body with relief spring
6	Miniature plug	16	3/8" Body with heat shrink for relief
7	Miniature jack	18	In-line transition
10	2" stripped leads on MgO	19	3/8" body without shrink or spring
14	Ceramic Wafer block	6HN23	1/2 X 1/2 NPT steel hex nipple
22	3" ind. lead with terminal pins	8HN23	1/2 X 1/2 NPT SST hex nipple
45	M 12 water tight, no process thread	9HP23	1/2 NPT SST bushing, (no process thread)
B45	M 12 with 1/4 NPT process thread	8RNDC	3/4 process X 1/2 NPT SST hex nipple
C45	M 12 with 1/2 NPT process thread	Option	
D45	M 12 with 3/4 NPT process thread	HT	High temperature cement

Lead Wire		Lead Wire Terminations	
Code	Part Description	Code	Part Description
T	Teflon [®]	0	Leads not stripped
F	Fiberglass	2	2" split leads, 1/4" stripped
K	Kapton [®]	3	2" split leads with spade lugs
P	PVC	4	Standard plug
C	PVC Coil Cord	5	Standard jack
S	Silicon Rubber	6	Miniature plug
M	Teflon [®] Coated SSOB	7	Miniature jack
Then followed with:		8	2" split leads with 1/4" quick disconnect female terminal lugs
1	Solid Conductor, Standard Limits	9	2" split leads with terminal pins
2	Solid Conductor, Special Limits	Options	
3	Stranded Conductor, Standard Limits	MC	Mating connector
4	Stranded Conductor, Special Limits	CC	Cable clamp
5	Solid Conductor, Extension Grade	MT	Medium Temp connector
7	Stranded Conductor, Extension Grade	HT	High Temp Connector
When followed with optional character:		SP	Solid pins on connector
A	Flexible Armor	BX	1/2 NPT BX connector
T	Teflon-coated Armor	RB	Rubber Boot
P	PVC-coated Armor	CG	Cord Grip
B	SST Over braid		

Head Mounting Options		Connection Heads	
Element Options		General Purpose Connection Heads	
Code	Part Description	Code	Part Description
00	No option or fixed element in head design	22	3" Individual leads with no head
SL	Spring Loaded	23	Lead wire out of fitting with no head
SC	Self contained spring loaded	31	Aluminum screw cover head
SN	Self contained spring loaded with oil seal	34	Cast Iron screw cover head
		49	Flip-Top Aluminum head
Head Mounting Options		53	Gray Delrin [®] screw cover head
Code	Part Description	62	White DIN for B poly head
6HN	1/2 X 1/2 NPT steel hex nipple	63	White poly screw cover head
8HN	1/2 X 1/2 NPT SST hex nipple	91	316L SS head
9HP	1/2 NPT SST bushing, (no process thread)	92	DIN form B 316 SS head
8RNDC	3/4 process X 1/2 NPT SST hex nipple	17	Miniature plastic head
6PN_	1/2 NPT steel pipe nipple extension	25	Miniature nickel plated head
8PN_	1/2 NPT SST pipe nipple extension	Explosion-Proof Connection Heads	
6PU_	1/2 NPT steel union/nipple extension	71	Cast-iron/Al XP head – group C
8PU_	1/2 NPT SST union/nipple extension	72	DIN form B Al XP head – group B
		74	DIN form B Al XP head group A
		81	316L SS XP head
		82	DIN form B 316 SS XP head – group B
		Connection head options	
		I	SST TAG
		SB	ALUMINUM 3/4 X 1/2 REDUCER BUSHING
		NB	NYLON 3/4 X 1/2 REDUCER BUSHING
		GS	GROUND SCREW
		W	WHITE EPOXY COATING (31 ONLY)
		T-440	(4-20) mA RTD transmitter
		T-441	(4-20) mA TC and RTD transmitter,
		T-442	(4-20) mA TC and RTD transmitter, HART [®]