

Datapaq Reflow Tracker® Accessories List









DATA LOGGERS

Datapag DP5 Logger

The Datapaq DP5 data logger is designed for use in a wide range of heat-treatment applications.

- A range of **model sizes**, including narrow and low-height versions (see below), to suit different ovens and applications.
- Six or 12 thermocouple channels (depending on model) for maximum data collection on each run.
- Huge memory capacity for detailed process analysis: a total of 50,000 data-points over each data-channel.
- Can be specified for use with thermocouple types K, N or T.
- Powered by user-replaceable rechargeable NiMH batteries.
- High accuracy for compliance to tight specifications: ±0.5°C/0.9°F for most purposes.
- USB communication and charging.
- Hardwired telemetry and (if specified for use with optional TM21 system) radio telemetry for monitoring in real time both with full analysis functions and alarms to warn the user if the process is out of specification.
- Aluminum case and rugged electronics allow operation in harsh environments of dust, pressure and vacuum.
- Multiple-run capability.

	DP5 Standard	DP5 Narrow	DP5 Super-slim	DP5	
	6-channel	6-channel	6-channel	12-channel	
	DP5x60 ¹	DP5x62	DP5x61	DP5x12	
Height	106 mm 4.2 in.	20 mm 0.8 in.	11.7 mm 0.46 in	20 mm 0.8 in.	
Width		57 mm 2.2 in.	60 mm 2.4 in.	106 mm 4.2 in.	
Length		165 mm 6.5 in.	301 mm 11.9 in.	165 mm 6.5 in.	

¹ Second numeral in part number (x) represents thermocouple type: 2 = type T, 6 = type K, 9 = type N.

DQ1804 Q18 Micro Logger

A reduced-size but powerful four-channel logger, for processes where space is especially limited.

- Capacity for 32,000 data-points over each channel.
- For type K thermocouples.
- Powered by user-replaceable rechargeable NiMH batteries.
- Hardwired telemetry.
- **Dimensions**: $17.3 \times 35 \times 149 \text{ mm}/0.68 \times 1.4 \times 5.9 \text{ in.}$

LOGGER CABLES, CHARGER AND BATTERIES

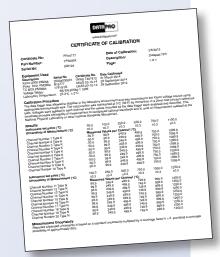
CI1150 USB Communications/Charging Lead for Datapaq DP5 Logger

Connects logger to PC to enable logger reset, data download or display of real-time data-collection. Permits charging from charger CH0080 or from USB port of PC.









CI3029 USB Communications Lead for Q18 Logger

Connects logger to PC to enable logger reset, data download or display of real-time data-collection. NB Charging of Q18 logger is done only by using CH0070 charger, not via communications lead.

CH0080 Charger/Power-supply Unit for Datapaq DP5 logger

Can be used as an alternative to charging the DP5 logger via a PC's USB port. Requires also the Cl1150 USB communications/charging lead.

CH0070B Charger/Power-supply Unit for Q18/TM21

For Q18 logger (p. 1), and TM21 primary receiver (p. 7).

BP1080 Battery-pack for Datapaq DP5 Logger

NiMH rechargeable battery-pack, 2.4 V, 500 mAh. Can be replaced by user. *Only Datapaq battery-packs are suitable for this logger.*

BP1077 Battery-pack for Q18 Micro Logger DQ1804

NiMH rechargeable battery-pack, 2.4 V, 500 mAh. Can be replaced by user. Only Datapaq battery-packs are suitable for this logger.

CALIBRATION AND SERVICE

RC0001 Recalibration of Datapaq DP5 Data Logger

Comprises:

- Electronic calibration and adjustment of logger.
- Issue of calibration certificate traceable to national standards.
- Full test of functionality including battery testing, 14-hr thermal-stress testing and temperature-stability testing.

RC0005 Fixed Standard Recalibration/Service of Datapaq DP5 Data Logger

As RC0001 (above), plus minor repairs such as replacement of electronic components.

RC0006 Fixed ISO 17025 Recalibration/Service of Datapaq DP5 Data Logger

As RC0005 (above), including issue of ISO 17025 accredited calibration certificate.

Scooo2 Service Contract, 12 months, for Datapaq DP5 Data Logger Comprises:

- Use of loan equipment in case of any failure or damage.
- Electronic calibration and adjustment of logger.
- Issue of ISO 17025 accredited calibration certificate if applicable.
- Full test of functionality including battery testing, 14-hr thermal-stress testing and temperature-stability testing.
- Annual full service of equipment.
- Logger firmware and Insight software updates.
- Minor logger repairs.



Thermal barriers to suit an extensive range of applications are available from stock or can be designed and built to order. Contact Fluke Process Instruments directly for guidance on barriers appropriate to the specific needs of your process.

Barriers for Datapaq DP5 Logger Standard, 6-channel, DP5x60

These barriers also fit Q18 standard 6-channel logger, DQ1860.

TB2064 Low-height thermal barrier

Temp. °C	100	150	200	250	280
Duration (mins)	25	12	9	8	6
Dimensions	Height 20 mm 0.8 in.	Width 133 m 5.2 in	nm 210	mm 0	Veight .6 kg .3 lb

TB2015 Most reflow soldering processes including lead-free

Temp. °C	100	150	200	250	280
Duration (mins)	32	16	13	10	9
Dimensions	Height 25 mm 1.0 in.	Width 133 m 5.2 in	nm 210	mm 0	Veight .7 kg .5 lb

TB2065 Increased protection for frequent use or for long-duration processes

Temp. °C	100	150	200	250	280
Duration (mins)	35	18	13	11	10
Dimensions	Height 29 mm 1.1 in.	Width 133 m 5.2 in	nm 210	mm 0	Veight .7 kg .5 lb

Barriers for Datapaq DP5 Logger Super-slim, 6-channel, DP5x61

These barriers also fit Q18 super-slim 6-channel logger, DQ1861.

TB2066 Low-height thermal barrier

Temp. °C	100	150	200	250	280
Duration (mins)	21	11	8	6	6
Dimensions	Height 20 mm 0.8 in.	Width 88 mi 3.5 in	n 334	mm 0	Veight .65 kg .4 lb

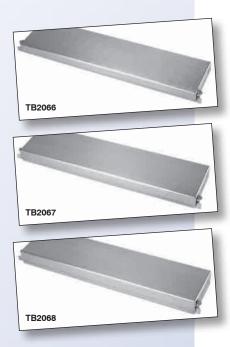
TB2067 Most reflow soldering processes including lead-free

Temp. °C	100	150	200	250	280
Duration (mins)	28	15	11	10	8
Dimensions	Height 25 mm 1.0 in.	Width 88 mr 3.5 in	n 334	mm 0	Veight .75 kg .7 lb

TB2068 Increased protection for frequent use or for long-duration processes

Temp. °C	100	150	200	250	280
Duration (mins)	32	18	13	11	10
Dimensions	Height 29 mm 1.1 in.	Width 88 mi 3.5 in	n 334	mm (Veight).8 kg .8 lb







Barriers for Datapaq DP5 Logger Narrow, 6-channel, DP5x62

These barriers also fit Q18 narrow 6-channel logger, DQ1862.

TB2020 Low-height thermal barrier

Temp. °C	100	150	200	250	280
Duration (mins)	25	13	10	8	7
Dimensions	Height 28 mm 1.1 in.	Width 84 mr 3.3 in	m 241	mm 0	Veight .5 kg .1 lb

TB2021 Most reflow soldering processes including lead-free

Temp. °C	100	150	200	250	280
Duration (mins)	36	18	13	11	10
Dimensions	Height 35 mm 1.4 in.	Width 84 mr 3.3 in	n 241	mm 0	Veight .65 kg .4 lb

Barriers for Datapaq DP5 Logger, 12-channel, DP5x12

TB2100 Low-height thermal barrier

Temp. °C	100	150	200	250	280
Duration (mins)	25	13	10	8	7
Dimensions	Height 28 mm 1.1 in.	Width 133 m 5.2 in	nm 243	mm 0	Veight .69 kg .5 lb

TB2101 Most reflow soldering processes including lead-free

Temp. °C	100	150	200	250	280
Duration (mins)	36	18	13	11	10
Dimensions	Height 35 mm 1.4 in.	Width 133 m 5.2 in	nm 239	mm C	Veight 0.77 kg .7 lb

Barriers for Q18 Micro Logger DQ1804

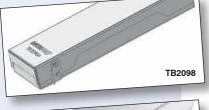
TB2098 Reflow soldering processes Duration 10 mins at 200°C.

Dimensions	Height 27 mm	Width 57 mm	0	Weight 0.4 ka
	27 111111	5/ IIIIII	190 111111	0.4 kg
	1.1 in.	2.2 in.	7.5 in.	0.9 lb

TB3006 Long-duration reflow soldering processes Duration 14 mins at 200°C.

Dimensions	Height	Width	Length	Weight
	32 mm	71 mm	194 mm	0.6 kg
	1.3 in.	2.8 in.	7.6 in.	1.3 lb







THERMOCOUPLES

All thermocouples supplied for use with reflow and wave-solder systems are type K, with green connectors (conforming to IEC 60584-3).

For wave solder thermocouples, see p. 6.

For Surveyor sensors (thermocouples), see p. 6.

PA0210 Fast-response Exposed-junction Thermocouple

The standard thermocouple used throughout the reflow industry. Each conductor is PTFE-insulated and then twisted together to prevent tangling in use. Wire diameter of 0.2 mm/0.008 in provides good compromise between size and strength.

Thermocouple-tip is pre-tinned to ease soldering to PCB; use of activated flux and high-temperature solder recommended.

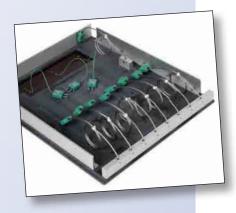
- Conductor material Type K, Special Limits
- Accuracy ±1.1°C or ±0.4%, whichever is greater
- **Length** 800 mm/31.5 in. (other lengths available under different part nos.)
- Conductor diameter 0.2 mm/0.008 in.
- Temperature 265°C maximum











PA0215 High-temperature Glass-fiber-insulated Thermocouple

Exposed-junction thermocouple for continuous use up to 500°C. For best results, attach to PCB using an activated flux and high-temperature solder.

- Conductor material Type K, Special Limits
- Accuracy ±1.1°C or ±0.4%, whichever is greater
- **Length** 800 mm/31.5 in.
- Conductor diameter 0.2 mm/0.008 in.
- **Temperature** 500°C maximum

PA1610 Fast-response Thermocouple fitted with Micro-miniature Plug

PTFE-insulated thermocouple.

- Conductor material Type K, Special Limits
- Accuracy ±1.1°C or ±0.4%, whichever is greater
- **Length** 500 mm/20.0 in.
- Conductor diameter 0.2 mm/0.008 in.
- Temperature 265°C maximum

PA1630 Dip-solder Sensor fitted with Micro-miniature Plug

For use with PA1650 selective-soldering sensor. Wire length 275 mm/10.8 in.

PA1683 Fine-wire Thermocouple for Use on Ball-grid Arrays (BGAs)

Developed specifically for use with BGA and ultra-fine-pitch surface-mount components. The conductors are 0.1 mm/0.004 in. in diameter, each insulated with PTFE, and the two conductors are then over-wrapped with a single outer PTFE sheath to prevent tangling in use. Accepted practice for BGAs is to drill through the PCB, insert the thermocouple-tip until it touches a ball, and then bond in place. For best results, attach using an activated flux and high-temperature solder.

- Conductor material Type K, British Standard Class 1
- Accuracy ±1.5°C or ±0.4%, whichever is greater
- Length 500 mm/19.7 in.
- Conductor diameter 0.1 mm/0.004 in.
- Temperature 265°C maximum

PA1600 Micro-miniature Thermocouple Plugs (Type K) for Q18 Micro Logger

Bag of 8 spare plugs for wiring to customer's own type K thermocouples.

нтооэо High-temperature Adhesive Tape

For holding thermocouple cables in place where they run over the PCB. Pressure-sensitive silicone adhesive. Maximum 400°C. 30-m/98.4-ft reel.

WAVE SOLDER

The Wave Solder system utilizes a pallet which carries the thermal barrier/logger assembly through the process.

Wave-solder Pallet CS5000 fitted with Dummy PCB and Additional Thermocouples

Comprises:

- CS5000 pallet (including fitted CS5000A10 dummy PCB or 'test coupon'; see below).
- Additional thermocouples (fitted) to suit either 6- or 12-channel systems.

Suitable thermal barriers: TB2015, TB2064, TB2065, TB2020, TB2021, TB2100, TB2101.

Dimensions	Height	Width	Length	Weight
	40 mm	300 mm	350 mm	1.80 kg
	1.6 in.	11.8 in.	13.8 in.	4.0 lb

CS5006 Fitted with three additional PA1321 thermocouples, for a 6-channel system.

Fitted with nine additional PA1321 thermocouples, for a 12-channel system (illustrated; see also p. 10).

CS5000 Wave-solder Pallet with Dummy PCB

Pallet fitted with CS5000A10 dummy PCB ('test coupon') assembly (no additional wave-contact thermocouples).

CS5000A10 Dummy PCB for Wave-solder Pallet CS5000

Dummy PCB ('test coupon') assembly with three fixed type-K thermocouples – as fitted to CS5000 pallet.

PA1321 Wave-contact Thermocouple for Wave-solder Pallet Assemblies CS5006, CS5012

Steel-braided thermocouple.

- Accuracy ±1.1°C or ±0.4%, whichever is greater
- Length 420 mm/16.5 in.

SURVEYOR

The Surveyor system monitors an oven's performance in order to assess its stability over time. A standard instrumented frame carrying a thermal barrier/logger assembly gathers data which is analyzed by Insight™ software and compared with results from a previous baseline survey. An operator can thus quickly assess whether adjustment of oven settings is required. (For use with Insight Reflow Tracker Professional only.)

Surveyor Carrier Frame

The frame carries the Datapaq DP5 logger (inside its thermal barrier) and three fixed sensors, and is adjustable in width to adapt easily to your oven's conveyor. The standard frame accommodates both six- and 12-channel DP5 loggers, but no more than six channels can be used.

Dimensions	28 mm	Width 100–350 mm	Length 456–517 mm	Weight 0.93 kg
	1.1 in.	3.95–13.7 in.	18.0–20.4 in.	2.0 lb

PA0878 Surveyor carrier frame without sensors.

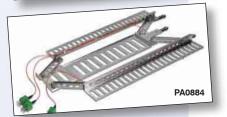
PA0883 Surveyor carrier frame PA0878 fitted with sensors using PA0885 plugs (as below) to

fit standard 6-channel DP5 logger (see also p. 11).

PA0884 Surveyor carrier frame PA0878 fitted with sensors using PA0886 plugs (as below) to

fit narrow 6-channel and standard 12-channel DP5 loggers.





Sensors for Surveyor Carrier Frame PA0878

Each sensor has two thermocouples – on its upper- and underside.

PA0885 Sensor with pair of plugs fixed side-by-side, for standard 6-channel Datapaq

DP5 logger.

PA0886 Sensor with pair of plugs face-to-face, for narrow 6-channel and standard

12-channel DP5 loggers.



PA0866 Sensor for use in all positions on older carrier frames.



RADIO TELEMETRY

TM0100 TM21 Primary Receiver Kit

Complete operating primary receiver. Comprises:

- Primary receiver, region-specific Europe RX4200, USA RX4100, rest of world RX4000.
- Primary-receiver antenna RX1010.
- Terminator TM1060.
- Power supply CH0070.

Contact Datapaq for other country-specific part numbers.





TM21 Primary Receiver

Basic unit without accessories.

RX4200 Europe RX4100 USA

RX4000 Japan and rest of world

Contact Datapaq for other country-specific part numbers.



TM21 Secondary Receiver Kit with Extension Cable

Receiver kit using remote UGEF antenna to extend receiving range for short continuous furnaces. Comprises:

- 1 x TM21 secondary receiver kit TM0200 (see below).
- 1 × RS485 connecting cable.

TM21-ARX-10 With 10-m cable TM1042. **TM21-ARX-45** With 45-m cable TM1045.



TM0200 TM21 Secondary Receiver Kit

Complete operating secondary receiver. Comprises:

- Secondary receiver, region-specific Europe RX4201, USA RX4101, Japan and rest of world RX4001.
- UGEF antenna RX1023.
- Receiver antenna stand RX1020.
- UGEF antenna and receiver-box mounting kit RX2502.

Contact Datapaq for country-specific part numbers.



TM21 Secondary Receiver

Basic unit without accessories.

RX4201 Europe RX4101 USA

RX4001 Japan and rest of world

Contact Datapaq for other country-specific part numbers.



RS485 Cable to Link Primary and Secondary Receivers

Supplied on reel.

TM1042 10 m/32.8 ft TM1045 45 m/147.6 ft TM1046 100 m/328.1 ft



TM1060 TM21 RS485 Terminator

To be connected to last secondary receiver in a chain of receivers; or to primary receiver if it is the only one in the system.



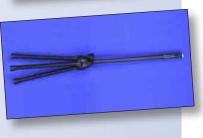
UGEF Antenna, Europe and Japan

Unity-gain end-feed antenna for receiving signal outside the process. Frequency set to for 434.5 MHz for Europe, 429.5 MHz for Japan. Supplied with low-loss coaxial cable as follows.

RX1023 With 1-m/3.3-ft cable.
RX1036 With 10-m/32.8-ft cable.
RX1037 With 20-m/65.6-ft cable.
RX1038 With 40-m/131.2-ft cable.



For use with antenna RX1023, RX1036, RX1037 or RX1038. Must be used with bracket RX2500.

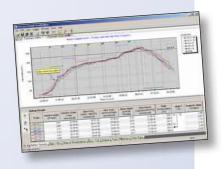












RX2500 UGEF Antenna Mounting Bracket

For mounting UGEF antenna RX1023, etc., on UGEF antenna stand RX10120. Allows antenna to rotate about horizontal axis.

RX2501 TM21 Receiver-box Mounting Assembly

For mounting secondary receiver RX4201, etc., on UGEF antenna stand below antenna.

RX2502 UGEF Antenna and Receiver-box Mounting Kit

Used with antenna stand RX1020 to hold secondary receiver and UGEF antenna. Comprises:

- UGEF antenna mounting bracket RX2500.
- Receiver-box mounting assembly RX2501.

TX2200 Transmitter Antenna

For reflow processes. Maximum temperature 265°C.

TM21 Radio-telemetry System User Manual

Full information on setup and operation of single- and multiple-receiver systems.

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MA5946	Chinese,	MA5940	English	MA5945	Italian	MA5944	Portuguese
	Simplified	MA5942	French	MA5947	Japanese	MA5943	Spanish
MA59411	Chinese,	MA5941	German	MA5948	Korean		
	Traditional						

INSIGHT SOFTWARE

Check www.flukeprocessinstruments.com for latest Insight™ version and features.

Insight Reflow Tracker

A complete software system for monitoring and analyzing the temperature profiles of products in the reflow industry; accurate data acquisition and powerful analysis techniques are combined with flexibility and ease of use; includes Easy Oven Setup to predict the oven settings that will produce a required temperature profile. Available in various languages. Incorporates comprehensive online Help system.

SW5066	Chinese,	SW50610	Czech	SW5067	Italian	SW50612	Russian
	Simplified	SW5060	English	SW5065	Japanese	SW5069	Slovak
SW50611	Chinese,	SW5061	French	SW5068	Korean	SW5063	Spanish
	Traditional	SW5062	German	SW5064	Portuguese	SW50614	Vietnamese

Insight Reflow Tracker Professional

All the functionality of Insight Reflow Tracker, plus Surveyor to monitor your oven's performance (see p. 6).

SW5066P	Chinese,	SW50610P	Czech	SW5067P	Italian	SW50612P	Russian
	Simplified	SW5060P	English	SW5065P	Japanese	SW5069P	Slovak
SW50611P	Chinese,	SW5061P	French	SW5068P	Korean	SW5063P	Spanish
	Traditional	SW5062P	German	SW5064P	Portuguese	SW50614P	Vietnamese

Insight Reflow Tracker Basic

A reduced feature set, but with full analysis options and wizard-driven procedures. Supplied with printed *Quick Reference Guide* (not available in all languages).

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SW5066B	Chinese,	SW50610B	Czech	SW5067B	Italian	SW50612B	Russian
	Simplified	SW5060B	English	SW5065B	Japanese	SW5069B	Slovak
SW50611B	Chinese,	SW5061B	French	SW5068B	Korean	SW5063B	Spanish
	Traditional	SW5062B	German	SW5064B	Portuguese	SW50614B	Vietnamese

Upgrade to current Insight Reflow Tracker from earlier version

UG5066	Chinese,	UG50610	Czech	UG5067	Italian	UG50612	Russian
	Simplified	UG5060	English	UG5065	Japanese	UG5069	Slovak
UG50611	Chinese,	UG5061	French	UG5068	Korean	UG5063	Spanish
	Traditional	UG5062	German	UG5064	Portuguese	UG50614	Vietnamese

Upgrade to Insight Reflow Tracker from Insight Reflow Tracker Basic

UG5166	Chinese,	UG51610	Czech	UG5167	Italian	UG51612	Russian
	Simplified	UG5160	English	UG5165	Japanese	UG5169	Slovak
UG51611	Chinese,	UG5161	French	UG5168	Korean	UG5163	Spanish
	Traditional	UG5162	German	UG5164	Portuguese	UG51614	Vietnamese

Upgrade to Insight Reflow Tracker Professional from Insight Reflow Tracker

UG5266	Chinese,	UG52610	Czech	UG5267	Italian	UG52612	Russian
	Simplified	UG5260	English	UG5265	Japanese	UG5269	Slovak
UG52611	Chinese,	UG5261	French	UG5268	Korean	UG5263	Spanish
	Traditional	UG5262	German	UG5264	Portuguese	UG52614	Vietnamese



For radio telemetry, see p. 8.

User documents in appropriate languages (as available) are provided in printed form with software purchases, full and upgrade. They are also available separately, as follows. (All versions of Insight software also contain a comprehensive online Help system.)

Datapaq DP5 Data Logger User Manual		Q4 & Q18	B Data Loggers	Reflow Tracker User Manual	
		User Man	ual		
MA5740	English	MA5110	English	MA5120	English
MA5741	German	MA5111	German	MA5121	German
MA5742	French	MA5112	French	MA5122	French
MA5743	Spanish	MA5113	Spanish	MA5123	Spanish
MA5745	Italian	MA5115	Italian	MA5125	ltalian -
MA5746	Simplified	MA5116	Simplified	MA5126	Simplified
	Chinese		Chinese		Chinese
MA5747	Japanese	MA5117	Japanese	MA5127	Japanese

EasyReflow [Reflow Tracker Basic]

Quick Reference Guide MA6000 English

MA6006 Simplified Chinese
MA60011 Traditional Chinese



Datapaq[®]

Datapaq DP5 Data Logger

Reflow Tracker

BAGS AND CASES

CC0048 Soft Carry-bag

With shoulder strap, to provide convenient transportability for a complete Reflow Tracker system, including a thermal barrier (shown with system in place; see also p. 12).







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Worldwide Service

Fluke Process Instruments offers services, including repair and calibration. For more information, contact your local office.

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