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IS 8 plus · IGA 8 plus IS 8-GS plus · IS 8-K plus

High-quality, robust series of portable pyrometers

Portable infrared radiation pyrometers for non-contact temperature measurement between 300 and 2500°C

- 4 temperature ranges between 300 and 2500°C
- High accuracy
- View finder with display for temperature or emissivity
- Focusable precision optics
- Small spot sizes min. 0.8 mm
- Digital display on the housing
- Extremely short response time: 1 ms
- Integrated maximum value storage
- Digital interface RS232
- Optional: analysing software PortaWin

The **series 8** pyrometers are highquality, battery driven portables for non-contact temperature measurement between 300 and 2500°C. The aluminium die-cast housing is specially designed for the daily use under rough industrial conditions. The easy focusable precision optics provides small spot sizes for measuring distances between 500 mm and ∞ . The bright, optimized view finder with exact spot indication and built-in temperature display facilitates the accurate aiming on the object. The extremely short response time of 1 ms allows exact measurements of fast moving objects. The maximum temperature can be stored in the built-in peak picker (maximum value storage). The instruments are mainly used in the steel- glass-, forging industry and in foundries.

For high temperatures the **IS 8** *plus* is available in two temperature ranges between 600 and 2500°C, for the medium temperatures the **IGA 8** *plus* with a range from 300 to 1300°C.

The IS 8-GS plus is a special ver-

sion for use in foundries, the **IS 8-K** *plus* is for use in coking plants.

Typical applications for metals:

- preheating, tempering, hardening, normalizing
- forging, brazing
- sintering
- melting
- welding, rolling
- founding

Typical applications for glass:

- molton glass
- glass gob
- glass moulds

IMPAC - Specialist in non-contact thermometry



Technical Data

Temperature ranges:IS 8 plus:MB 16:600 160°CMB 25:900 250°CIGA 8 plus:MB 13:300 1300°CIS 8-GS plus:MB 13:300 160°CSpectral ranges:IS 8 plus; NS 8-K plus:0.60 1.1 µmIGA 8 plus:1.45 1.8 µmSpectral ranges:IS 8 plus; NS 8-K plus:0.60 1.1 µmIGA 8 plus:narrow band in the near infraredAccuracy:1 % of measuring range at correct emissivity setting, + 1 digit.Resolution:1°CTemperature coefficient:0.02 % / K (23°C) of measuring rangeResponse time tag:1 ms (IS 8-GS plus:: 0.5 s; IS 8-K plus:: 0.1 s)Emissivity c:adjustable from 20 100%Objective:Achoromatic, adjustable from a = 500 mm to ∞with close-up lens a = 250 mm to 500 mmAperture D maximum Ø 30 mmSighting system:Optimized thru-lens view finder with dioptry correction -2.5 dpt +3 dpt, view magnification: 3, angle of view 10°Indication circle for measuring spotMode switch:N: Normal temperature measurement t: K adjuting ladditional built-in LED display in the view finderSerial interface:RS232 with 9600 baud, data format: 8 Bit, even parity, 1 stop bitProtection class:IP52 (housing, excluding handle), IP40 (RS 232 connection)Ambient temperature:0 50°CPower supply:6 x 1.5 V alkali-manganese IEC LR6 or 6 x 1.2 V re-chargeable batteries (uninterrupted operating time approx. 35 hours with alkali-manganese batteries)Charging:Connector for battery charging <t< th=""><th></th><th></th></t<>		
IGA 8 plus:MB 13:300 1300°CIS 8-K plus:MB 12:1000 2000°CSpectral ranges:IS 8 plus; IS 8-K plus:0.60 1.1 µmIGA 8 plus:1.45 1.8 µmIS 8-05 plus:narrow band in the near infraredAccuracy:1 % of measuring range at correct emissivity setting, + 1 digit.Resolution:1°CTemperature coefficient:0.02 % / K (23°C) of measuring rangeRepeatability:0.5 % of measuring rangeOptimized thru-lens view finder with dioptry correction -2.5 dpt +3 dpt, view magnification: 3 x, angle of view 10°Indication:3 x, angle of view 10°Indication:1 % Maximum temperature measurementM:Maximum temperature measurementM:Maximum temperature measurementM:Maximum temperature:Brissivity indication and settingDisplay:LED, 4-digitadd	Temperature ranges:	
Is 8-GS plus:MB 20:1000 2000°CIS 8-K plus:MB 16:700 1600°CSpectral ranges:IS 8-JK plus: 1.1 µmIGA 8 plus:1.45 1.8 µmIS 8-GS plus:narrow band in the near infraredAccuracy:1 % of measuring range at correct emissivity setting, + 1 digit.Resolution:1°CTemperature coefficient:0.02 % / K (23°C) of measuring rangeRespeatability:0.5 % of measuring rangeRespeatability:1 ms (IS 8-GS plus: 0.5 s; IS 8-K plus: 0.1 s)Emissivity e:adjustable from 20Objective:Achromatic, adjustable from 2 = 500 mm to ∞ with close-up lens a = 250 mm to 500 mmAperture D maximum Ø 30 mmSighting system:Optimized thru-lens view finder with dioptry correction -2.5 dpt +3 dpt, view magnification: 3 x, angle of view 10° indication circle for measuring spotMode switch:N : Normal temperature measurement κ : Emissivity indication and settingDisplay:LED, 4-digit additional built-in LED display in the view finderSerial interface:RS232 with 9600 baud, data format: 8 Bit, even parity, 1 stop bit Protection class:IPsize through correct for battery charging0 50°CStorage temperature:-0 50°CPower supply:6 x 1.5 V alkali-manganese IEC LR6 or 6 x 1.2 V re-chargeable batteries (uninterrupted operating time approx. 35 hours with alkali-manganese batteries)Charging:Connector for battery chargingThread for tripod:3/8"Housing:Aluminium, side covers and handle		
Spectral ranges:IS 8-K plus:MB 16:700 1600°CSpectral ranges:IS 8 plus, IS 8-K plus:0.45 1.1 µmIGA 8 plus:1.45 1.8 µmResolution:1% of measuring range at correct emissivity setting, +1 digit.Resolution:1% of measuring range at correct emissivity setting, +1 digit.Resolution:1% of measuring rangeRepeatability:0.5 % of measuring rangeResponse time tog:1 ms (IS 8-GS plus: 0.5 s; IS 8-K plus: 0.1 s)Emissivity e:adjustable from 2 0 100%Objective:Achromatic, adjustable from a = 500 mm to ∞ with close-up lens a = 250 mm to 500 mmAperture D maximum Ø 30 mmSighting system:Optimized thru-lens view finder with dioptry correction -2.5 dpt +3 dpt, view magnification: 3 x, angle of view 10° indication circle for measurement M: Maximum temperature measurement M: Maximum temperature measurement E: Emissivity indication and settingDisplay:LED, 4-digit additional built-in LED display in the view finderSerial interface:RS232 with 9600 baud, data format: 8 Bit, even parity, 1 stop bitProtection class:IP52 (housing, excluding handle), IP40 (RS 232 connection)Ambient temperature:-0 50°CPower supply:6 x 1.5 V alkali-manganese IEC LR6 or 6 x 1.2 V re-chargeable batteries (uninterrupted operating time approx. 35 hours with alkali-manganese batteries)Charging:Connector for battery chargingThread for tripod:3/8"Housing:Aluminium, side covers and handle: polyamideWeight:1.2 kg with batteries Dimensions:<		
Spectral ranges:IS 8 plus, IS 8-K plus:0.60 1.1 µm IGA 8 plus:1.45 1.8 µm IS 8-GS plus:1.45 1.8 µm IS 8-GS plus:Accuracy:1 % of measuring range at correct emissivity setting, +1 digit.Resolution:1*CTemperature coefficient:0.02 % / K (23°C) of measuring rangeRepeatability:0.5 % of measuring rangeResponse time t ₉₉ :1 ms (IS 8-GS plus: 0.5 s; IS 8-K plus: 0.1 s)Emissivity ε:adjustable from 20 100%Objective:Achromatic, adjustable from a = 500 mm to ∞ with close-up lens a = 250 mm to 500 mm Aperture D maximum Ø 30 mmSighting system:Optimized thru-lens view finder with dioptry correction -2.5 dpt +3 dpt, view magnification: 3 x, angle of view 10° indication circle for measuring spotMode switch:N : Normal temperature measurement E : Emissivity indication and settingDisplay:LED, 4-digit additional built-in LED display in the view finderStorage temperature: 0 65°CPower supply:6 x 1.5 V alkali-manganese IEC LR6 or 6 x 1.2 V re-chargeable batteries (uninterrupted operating time approx. 35 hours with alkali-manganese batteries)Charging:Connector for battery chargingThread for tripod:3/8"Housing:Aluminium, side covers and handle: polyamideWeight:1.2 kg with batteries Dimensions:210 X 75 X 175 rm (L x W x H)		IS 8-GS <i>plus</i> : MB 20: 1000 2000°C
IGA 8 plus: 1.45 1.8 µm IS 8-GS plus: narrow band in the near infrared Accuracy: 1 % of measuring range at correct emissivity setting, + 1 digit. Resolution: 1°C Temperature coefficient: 0.02 % / K (23°C) of measuring range Repeatability: 0.5 % of measuring range Response time t ₉₀ : 1 ms (IS 8-GS plus: 0.5 s; IS 8-K plus: 0.1 s) Emissivity ε: adjustable from 20 100% Objective: Achromatic, adjustable from a = 500 mm to ∞ with close-up lens a = 250 mm to 500 mm Aperture D maximum Ø 30 mm Aperture D maximum Ø 30 mm Optimized thru-lens view finder with dioptry correction -2.5 dpt +3 dpt, view magnification: 3 x, angle of view 10° indication circle for measuring spot Mode switch: N : Normal temperature measurement ε: Emissivity indication and setting Display: LED, 4-digit additional built-in LED display in the view finder Serial interface: RS:232 with 9600 baud, data format: 8 Bit, even parity, 1 stop bit Protection class: IP52 (housing, excluding handle), IP40 (RS 232 connection) Ambient temperature: -0 65°C Power supply: 6 x 1.5 V alkali-manganese IEC LR6 of 6 x 1.2 V re-chargeable batteries (uninterrupted operating time approx. 35 hours with alkali-mang		IS 8-K <i>plus</i> : MB 16: 700 1600°C
IS 8-GS plus :narrow band in the near infraredAccuracy:1 % of measuring range at correct emissivity setting, + 1 digit.Resolution:1°CTemperature coefficient:0.02 % / K (23°C) of measuring rangeRepeatability:0.5 % of measuring rangeResponse time togo:1 ms (IS 8-GS plus: 0.5 s; IS 8-K plus: 0.1 s)Emissivity ε:adjustable from 20 100%Objective:Achromatic, adjustable from a = 500 mm to ∞ with close-up lens a = 250 mm to 500 mm Aperture D maximum Ø 30 mmSighting system:Optimized thru-lens view finder with dioptry correction -2.5 dpt +3 dpt, view magnification: 3 x, angle of view 10° indication circle for measuring spotMode switch:N : Normal temperature measurement M : Maximum temperature measurement ϵ : Emissivity indication and settingDisplay:LED, 4-digit additional built-in LED display in the view finderStorage temperature:0 50°CPower supply:6 x 1.5 V alkal-manganese IEC LR6 or 6 x 1.2 V re-chargeable batteries (uninterrupted operating time approx. 35 hours with alkali-manganese batteries)Charging:Connector for battery chargingThread for tripod:3/8"Housing:Aluminium, side covers and handle: polyamideWeight:1.2 kg with batteries Dimensions:210 x 75 x 175 mm (L x W x H)	Spectral ranges:	IS 8 plus, IS 8-K plus: 0.60 1.1 µm
Accuracy:1 % of measuring range at correct emissivity setting, + 1 digit.Resolution:1°CTemperature coefficient:0.02 % / K (23°C) of measuring rangeRepeatability:0.5 % of measuring rangeResponse time t ₉₉ :1 ms (IS 8-GS plus: 0.5 s; IS 8-K plus: 0.1 s)Emissivity ε :adjustable from 20 100%Objective:Achromatic, adjustable from a = 500 mm to ∞ with close-up lens a = 250 mm to 500 mm ∞ Aperture D maximum Ø 30 mm ∞ Sighting system:Optimized thru-lens view finder with dioptry correction -2.5 dpt +3 dpt, view magnification: 3 x, angle of view 10°Mode switch:N : Normal temperature measurement ε : Emissivity indication and settingDisplay:LED, 4-digit additional built-in LED display in the view finderSerial interface:RS232 with 9600 baud, data format: 8 Bit, even parity, 1 stop bitProtection class:IP52 (housing, excluding handle), IP40 (RS 232 connection)Ambient temperature: 0 50°CStorage temperature: -10 65°CPower supply: $6 x 1.5 V$ alkali-manganese IEC LR6 or 6 x 1.2 V re-chargeable batteries (uninterrupted operating time approx. 35 hours with alkali-manganese batteries)Charging:Connector for battery chargingThread for tripod: $3/8^{or}$ Housing:Aluminium, side covers and handle: polyamideWeight: 1.2 kg with batteries Dimensions:Dimensions: $210 \times 75 \times 175$ mm (L x W x H)		IGA 8 <i>plus</i> : 1.45 1.8 μm
Resolution: 1°C Temperature coefficient: 0.02 % / K (23°C) of measuring range Repeatability: 0.5 % of measuring range Response time t ₉₀ : 1 ms (IS 8-GS <i>plus</i> : 0.5 s; IS 8-K <i>plus</i> : 0.1 s) Emissivity ε: adjustable from 20 100% Objective: Achromatic, adjustable from a = 500 mm to ∞ with close-up lens a = 250 mm to 500 mm Aperture D maximum Ø 30 mm Sighting system: Optimized thru-lens view finder with dioptry correction -2.5 dpt +3 dpt, view magnification: 3 x, angle of view 10° indication circle for measuring spot Mode switch: N : Normal temperature measurement M : Maximum temperature measurement E : Emissivity indication and setting Display: LED, 4-digit additional built-in LED display in the view finder Serial interface: RS232 with 9600 baud, data format: 8 Bit, even parity, 1 stop bit Protection class: IP52 (housing, excluding handle), IP40 (RS 232 connection) Ambient temperature: 0 50°C Storage temperature: -10 65°C Power supply: 6 x 1.5 V alkali-manganese IEC LR6 or 6 x 1.2 V re-chargeable batteries (uninterrupted operating time approx. 35 hours with		IS 8-GS <i>plus</i> : narrow band in the near infrared
Temperature coefficient: $0.02 \% / K (23^{\circ}C) \text{ of measuring range}$ Repeatability: $0.5 \% \text{ of measuring range}$ Response time tgg:1 ms (IS 8-GS <i>plus:</i> 0.5 s; IS 8-K <i>plus:</i> 0.1 s)Emissivity ε :adjustable from 20 100%Objective:Achromatic, adjustable from a = 500 mm to ∞ with close-up lens a = 250 mm to 500 mm Aperture D maximum Ø 30 mmSighting system:Optimized thru-lens view finder with dioptry correction -2.5 dpt +3 dpt, view magnification: 3 x, angle of view 10° indication circle for measuring spotMode switch:N : Normal temperature measurement κ : Emissivity indication and settingDisplay:LED, 4-digit additional built-in LED display in the view finderSerial interface:IRS22 with 9600 baud, data format: 8 Bit, even parity, 1 stop bitProtection class:IIP52 (housing, excluding handle), IP40 (RS 232 connection)Ambient temperature: $-10 \dots 65^{\circ}C$ Power supply: $6 x 1.5 V$ alkali-manganese IEC LR6 or 6 x 1.2 V re-chargeable batteries (uninterrupted operating time approx. 35 hours with alkali-manganese batteries)Charging:Connector for battery chargingThread for tripod: $3/8^{\circ}$ Housing:Alumininum, side covers and handle: polyamide Weight:Using:L2 with batteries Dimensions:Dimensions:210 x 75 x 175 mm (L x W x H)	Accuracy:	1 % of measuring range at correct emissivity setting, + 1 digit.
Repeatability: 0.5 % of measuring range Response time t ₉₉ : 1 ms (IS 8-GS <i>plus</i> : 0.5 s; IS 8-K <i>plus</i> : 0.1 s) Emissivity ε: adjustable from 20 100% Objective: Achromatic, adjustable from a = 500 mm to ∞ with close-up lens a = 250 mm to 500 mm Aperture D maximum Ø 30 mm Sighting system: Optimized thru-lens view finder with dioptry correction -2.5 dpt +3 dpt, view magnification: 3 x, angle of view 10° indication circle for measuring spot Mode switch: M : Normal temperature measurement M : Maximum temperature measurement M : Maximum temperature measurement EED, 4-digit additional built-in LED display in the view finder Serial interface: RS232 with 9600 baud, data format: 8 Bit, even parity, 1 stop bit Protection class: IP52 (housing, excluding handle), IP40 (RS 232 connection) Arbient temperature: 0 55°C Power supply: 6 x 1.5 V alkali-manganese IEC LR6 or 6 x 1.2 V re-chargeable batteries (uninterrupted operating time approx. 35 hours with alkali-manganese batteries) Charging: Connector for battery charging Thread for tripod: 3/8" Housing: Aluminium, side covers and handle: polyamide Weight: 1.2 kg with batteries Dime	Resolution:	1°C
Response time t_{gg} :1 ms (IS 8-GS plus: 0.5 s; IS 8-K plus: 0.1 s)Emissivity ε :adjustable from 20 100%Objective:Achromatic, adjustable from a = 500 mm to ∞ with close-up lens a = 250 mm to 500 mm Aperture D maximum Ø 30 mmSighting system:Optimized thru-lens view finder with dioptry correction -2.5 dpt +3 dpt, view magnification: 3 x, angle of view 10° indication circle for measuring spotMode switch:N : Normal temperature measurement κ : Emissivity indication and settingDisplay:LED, 4-digit additional built-in LED display in the view finderSerial interface:RS232 with 9600 baud, data format: 8 Bit, even parity, 1 stop bitProtection class:IP52 (housing, excluding handle), IP40 (RS 232 connection)Ambient temperature:0 50°CStorage temperature:-10 65°CPower supply:6 x 1.5 V alkali-manganese IEC LR6 or 6 x 1.2 V re-chargeable batteries (uninterrupted operating time approx. 35 hours with alkali-manganese batteries)Charging:Connector for battery chargingThread for tripod:3/8"Housing:Aluminium, side covers and handle: polyamideWeight:1.2 kg with batteries Dimensions:Dimensions:210 x 75 x 175 mm (L x W x H)	Temperature coefficient:	0.02 % / K (23°C) of measuring range
Emissivity ε :adjustable from 20 100%Objective:Achromatic, adjustable from a = 500 mm to ∞ with close-up lens a = 250 mm to 500 mm Aperture D maximum Ø 30 mmSighting system:Optimized thru-lens view finder with dioptry correction -2.5 dpt +3 dpt, view magnification: 3 x, angle of view 10° indication circle for measuring spotMode switch:N : Normal temperature measurement M : Maximum temperature measurement ε : Emissivity indication and settingDisplay:LED, 4-digit additional built-in LED display in the view finderSerial interface:RS232 with 9600 baud, data format: 8 Bit, even parity, 1 stop bit IP52 (housing, excluding handle), IP40 (RS 232 connection)Ambient temperature:0 50°CStorage temperature:-10 65°CPower supply:6 x 1.5 V alkali-manganese IEC LR6 or 6 x 1.2 V re-chargeable batteries (uninterrupted operating time approx. 35 hours with alkali-manganese batteries)Charging:Connector for battery charging 3/8"Housing:Aluminium, side covers and handle: polyamide Weight:Using:210 x 75 x 175 mm (L x W x H)	Repeatability:	0.5 % of measuring range
Objective: Achromatic, adjustable from a = 500 mm to ∞ with close-up lens a = 250 mm to 500 mm Aperture D maximum Ø 30 mm Sighting system: Optimized thru-lens view finder with dioptry correction -2.5 dpt +3 dpt, view magnification: 3 x, angle of view 10° indication circle for measuring spot Mode switch: N : Normal temperature measurement M : Maximum temperature measurement K : Maximum temperature measurement E : Emissivity indication and setting Display: Display: LED, 4-digit additional built-in LED display in the view finder Serial interface: RS232 with 9600 baud, data format: 8 Bit, even parity, 1 stop bit Protection class: IP52 (housing, excluding handle), IP40 (RS 232 connection) Ambient temperature: 0 50°C Storage temperature: -10 65°C Power supply: 6 x 1.5 V alkali-manganese IEC LR6 or 6 x 1.2 V re-chargeable batteries (uninterrupted operating time approx. 35 hours with alkali-manganese batteries) Charging: Connector for battery charging Thread for tripod: 3/8" Housing: Aluminium, side covers and handle: polyamide Weight: 1.2 kg with batteries Dimensions: 210 x 75 x 175 mm (L x W x H)	Response time t ₉₉ :	1 ms (IS 8-GS plus: 0.5 s; IS 8-K plus: 0.1 s)
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Aperture D maximum Ø 30 mmSighting system:Optimized thru-lens view finder with dioptry correction -2.5 dpt +3 dpt, view magnification: 3 x, angle of view 10° indication circle for measuring spotMode switch:N : Normal temperature measurement M : Maximum temperature measurement ε : Emissivity indication and settingDisplay:LED, 4-digit additional built-in LED display in the view finderSerial interface:RS232 with 9600 baud, data format: 8 Bit, even parity, 1 stop bitProtection class:IP52 (housing, excluding handle), IP40 (RS 232 connection)Ambient temperature:0 50°CStorage temperature:-10 65°CPower supply:6 x 1.5 V alkali-manganese IEC LR6 or 6 x 1.2 V re-chargeable batteries (uninterrupted operating time approx. 35 hours with alkali-manganese batteries)Charging:Connector for battery chargingThread for tripod:3/8"Housing:Aluminium, side covers and handle: polyamideWeight:1.2 kg with batteries Dimensions:210 x 75 x 175 mm (L x W x H)	Objective:	Achromatic, adjustable from a = 500 mm to ∞
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view magnification: 3 x, angle of view 10° indication circle for measuring spotMode switch:N : Normal temperature measurement M : Maximum temperature measurement ϵ : Emissivity indication and settingDisplay:LED, 4-digit additional built-in LED display in the view finderSerial interface:RS232 with 9600 baud, data format: 8 Bit, even parity, 1 stop bitProtection class:IP52 (housing, excluding handle), IP40 (RS 232 connection)Ambient temperature:0 50°CStorage temperature:-10 65°CPower supply:6 x 1.5 V alkali-manganese IEC LR6 or 6 x 1.2 V re-chargeable batteries (uninterrupted operating time approx. 35 hours with alkali-manganese batteries)Charging:Connector for battery chargingThread for tripod:3/8"Housing:Aluminium, side covers and handle: polyamide Weight:Using:210 x 75 x 175 mm (L x W x H)		Aperture D maximum ø 30 mm
Indication circle for measuring spotMode switch:N : Normal temperature measurement M : Maximum temperature measurement ϵ : Emissivity indication and settingDisplay:LED, 4-digit additional built-in LED display in the view finderSerial interface:RS232 with 9600 baud, data format: 8 Bit, even parity, 1 stop bitProtection class:IP52 (housing, excluding handle), IP40 (RS 232 connection)Ambient temperature:0 50°CStorage temperature:-10 65°CPower supply:6 s x 1.5 V alkali-manganese IEC LR6 or 6 x 1.2 V re-chargeable batteries (uninterrupted operating time approx. 35 hours with alkali-manganese batteries)Charging:Connector for battery chargingThread for tripod:3/8"Housing:Aluminium, side covers and handle: polyamideWeight:1.2 kg with batteries Dimensions:Dimensions:210 x 75 x 175 mm (L x W x H)	Sighting system:	Optimized thru-lens view finder with dioptry correction -2.5 dpt +3 dpt,
Mode switch:N : Normal temperature measurement M : Maximum temperature measurement ɛ : Emissivity indication and settingDisplay:LED, 4-digit additional built-in LED display in the view finderSerial interface:RS232 with 9600 baud, data format: 8 Bit, even parity, 1 stop bitProtection class:IP52 (housing, excluding handle), IP40 (RS 232 connection)Ambient temperature:0 50°CStorage temperature:-10 65°CPower supply:6 x 1.5 V alkali-manganese IEC LR6 or 6 x 1.2 V re-chargeable batteries (uninterrupted operating time approx. 35 hours with alkali-manganese batteries)Charging:Connector for battery chargingThread for tripod:3/8"Housing:Aluminium, side covers and handle: polyamideWeight:1.2 kg with batteries 210 x 75 x 175 mm (L x W x H)		view magnification: 3 x, angle of view 10°
M: Maximum temperature measurement ɛ: Emissivity indication and settingDisplay:LED, 4-digit additional built-in LED display in the view finderSerial interface:RS232 with 9600 baud, data format: 8 Bit, even parity, 1 stop bitProtection class:IP52 (housing, excluding handle), IP40 (RS 232 connection)Ambient temperature:0 50°CStorage temperature:-10 65°CPower supply:6 x 1.5 V alkali-manganese IEC LR6 or 6 x 1.2 V re-chargeable batteries (uninterrupted operating time approx. 35 hours with alkali-manganese batteries)Charging:Connector for battery chargingThread for tripod:3/8"Housing:Aluminium, side covers and handle: polyamideWeight:1.2 kg with batteries 210 x 75 x 175 mm (L x W x H)		indication circle for measuring spot
ε : Emissivity indication and settingDisplay:LED, 4-digit additional built-in LED display in the view finderSerial interface:RS232 with 9600 baud, data format: 8 Bit, even parity, 1 stop bitProtection class:IP52 (housing, excluding handle), IP40 (RS 232 connection)Ambient temperature:0 50°CStorage temperature:-10 65°CPower supply:6 x 1.5 V alkali-manganese IEC LR6 or 6 x 1.2 V re-chargeable batteries (uninterrupted operating time approx. 35 hours with alkali-manganese batteries)Charging:Connector for battery chargingThread for tripod:3/8"Housing:Aluminium, side covers and handle: polyamideWeight:1.2 kg with batteries Dimensions:210 x 75 x 175 mm (L x W x H)	Mode switch:	N : Normal temperature measurement
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Protection class:IP52 (housing, excluding handle), IP40 (RS 232 connection)Ambient temperature:0 50°CStorage temperature:-10 65°CPower supply:6 x 1.5 V alkali-manganese IEC LR6 or 6 x 1.2 V re-chargeable batteries (uninterrupted operating time approx. 35 hours with alkali-manganese batteries)Charging:Connector for battery chargingThread for tripod:3/8"Housing:Aluminium, side covers and handle: polyamideWeight:1.2 kg with batteriesDimensions:210 x 75 x 175 mm (L x W x H)		
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Storage temperature:-10 65°CPower supply:6 x 1.5 V alkali-manganese IEC LR6 or 6 x 1.2 V re-chargeable batteries (uninterrupted operating time approx. 35 hours with alkali-manganese batteries)Charging:Connector for battery chargingThread for tripod:3/8"Housing:Aluminium, side covers and handle: polyamideWeight:1.2 kg with batteriesDimensions:210 x 75 x 175 mm (L x W x H)	Protection class:	IP52 (housing, excluding handle), IP40 (RS 232 connection)
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Thread for tripod:3/8"Housing:Aluminium, side covers and handle: polyamideWeight:1.2 kg with batteriesDimensions:210 x 75 x 175 mm (L x W x H)		(uninterrupted operating time approx. 35 hours with alkali-manganese batteries)
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Dimensions: 210 x 75 x 175 mm (L x W x H)	Housing:	Aluminium, side covers and handle: polyamide
	Weight:	1.2 kg with batteries
	Dimensions:	210 x 75 x 175 mm (L x W x H)
CE label: According to EU directives about electromagnetic immunity	CE label:	According to EU directives about electromagnetic immunity

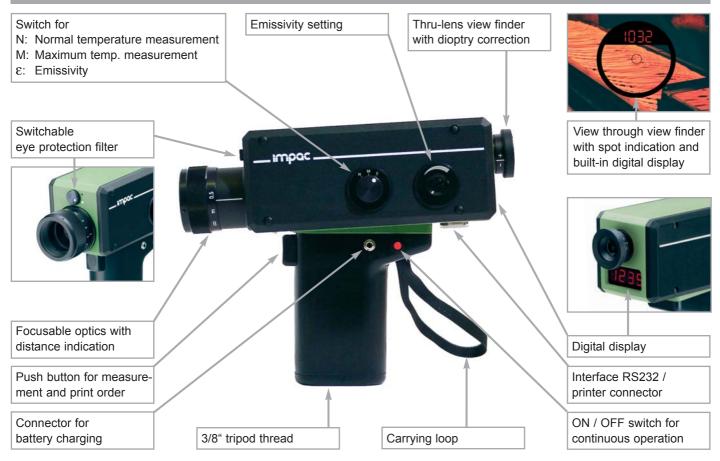
Spot size

Measuring- distance a [mm]	Spot size diameter M [mm]			
	IS 8 <i>plus</i> (MB 16)	IS 8 plus (MB 25) IS 8-GS plus IS 8-K plus	IGA 8 plus	
With focusable	e optics:			
500	2.8	1.6	4.3	
1000	5.6	3.2	8.5	
2000	11	6.4	17	
3000	17	9.6	25	
4000	22	13	34	
5000	28	16	42	
9000	51	29	85	
With additiona	al close-up lens:			
250	1.4	0.8	2.2	
500	2.8	1.6	4.3	



impac

Instrument's equipment



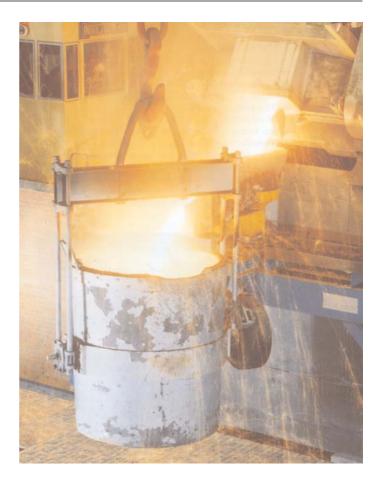
IS 8-GS *plus*: special pyrometer for foundries

IS 8-GS *plus* for measurement of molton metals:

The robust IS 8 *plus* was modified into the model **IS 8-GS** *plus* for the use in foundries. It is specially designed for non-contact temperature measurement of molton metals in the range of 1000 ... 2000°C. In casting processes the correct measurement can only be done on the pouring stream to avoid the influence of slag.

The specially selected wavelength in the near infrared facilitates this accurate temperature measurement as molton metals have their maximum emissivity in this spectral range. Additionally the influence of changing emissivity is reduced in this range as well as interference of the measurement by atmospherical absorption is avoided. A longer response time of 0.5 s prevents the possible influence of hot sparks.

Even for long measuring distances the easy focusable precision optics achieves small spot sizes (e.g. at a distance of 5 m the spot is only 16 mm) to allow larger safety distances between operator and pouring stream. The **IS 8-GS** *plus* is equipped with a switchable filter in the view finder to protect the eyes against the extremely bright radiation of the pouring stream.



IS 8-K plus: special pyrometer for coking plants

IS 8-K plus for measurement of nozzle brick temperature in coke ovens:

The robust IS 8 plus was modified into the model IS 8-GS plus for the use in coking plants. It is specially designed for measurement of nozzle bricks in coke ovens. The measurement can be done from the roof of the coke oven after removing the cover of the sighting hole. For this task especially the optical part of the instrument was modified to achieve very small spot sizes at long distances, here even the nozzle brick can be

measured exactly through the small sighting hole in a distance of up to 12 m.

(The older data logger DS 2000 of IMPAC can not be used in combination with the new IS 8-K plus)

Reference numbers

Pyrometers:	:			Accessories:	MA	
3 807 200	IS 8 plus,	MB 16	600 1600°C	3 858 100	Close-up lens	
3 807 210	IS 8 plus,	MB 25	900 2500°C	3 876 020	Spare battery set	
3 807 250	IGA 8 plus,	MB 13	300 1300°C	3 876 030	Set of recharcheable batteries	
3 807 280	IS 8-GS plus,	MB 20	1000 2000°C	3 858 110	Charging unit 230 V, 50 Hz	
3 807 270	IS 8-K plus,	MB 16	700 1600°C	3 858 090	Portable Citizen printer (the RS232 cable is	
					necessary for operation)	
Scope of delivery: Instrument with batteries, robust plastic			eries, robust plastic	3 858 450	Cable RS232 \rightarrow PC or Citizen printer	
				0.050.440		

case, works certificate, operating instructions

3 858	110
3 858	090
3 858	450
3 858	440
3 858	300

)	Close-up lens
)	Spare battery set
)	Set of recharcheable batteries
)	Charging unit 230 V, 50 Hz
)	Portable Citizen printer (the RS232 cable is
	necessary for operation)
)	Cable RS232 \rightarrow PC or Citizen printer
)	Cable RS232, incl. software PortaWin
)	Heat protection bag

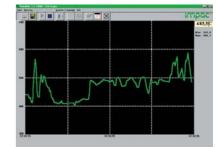
Accessories

Analysing software PortaWin:

PortaWin is the analysing software for all portable IMPAC pyrometers.

The pyrometer can be connected via serial interface RS232 with the PC. The software offers some helpful functions such as data logging or display of the temperature measurement as an online trend.

The software is a useful tool for supervision and recording of measurements.



Portable Citizen printer:

The RS232 cable connects the printer with the pyrometer. Pressing the push button into the print order position the printer prints the actual temperature reading or the maximum reading in °C in combination with emissivity.



Heat protection bag: Protects the pyrometer against radiation heat.



Close-up lens:

The close-up lens allows measuring distances between 250 and 500 mm.





Krifteler Strasse 32 D-60326 Frankfurt/Main

Telefon: +49(0)69-9 73 73-190 Telefax: +49(0)69-9 73 73-167

info@impacinfrared.com E-Mail: Internet: www.impacinfrared.com

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