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Rolleiflex SL 66

Belichtungsmesser-Aufsatz
Exposure meter attachment
Posemètre adaptable
Exposimetro adattabile
Exposímetro adaptable
Opzet-Belichtingsmeter

in der Praxis
in practical use
dans la pratique
nell'uso pratico
en la práctica
in de praktijk

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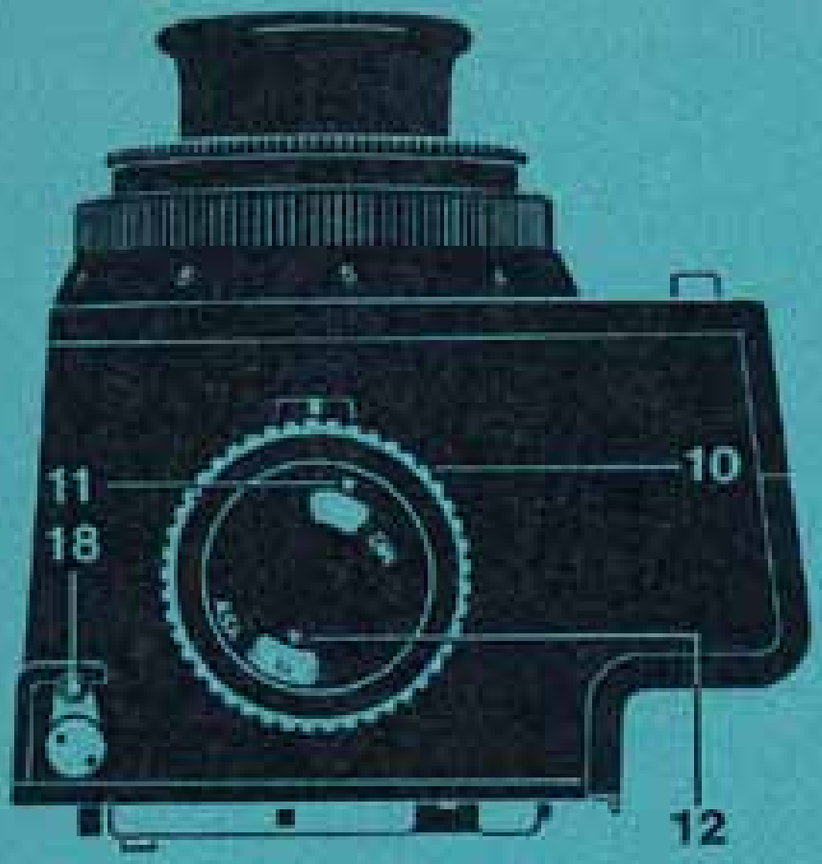

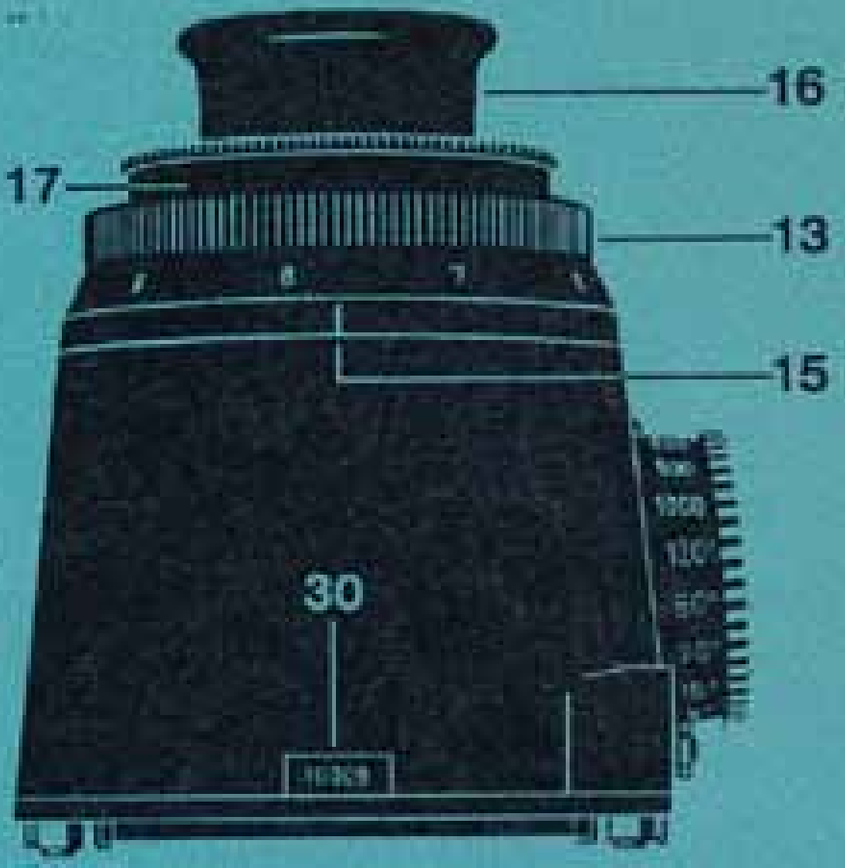

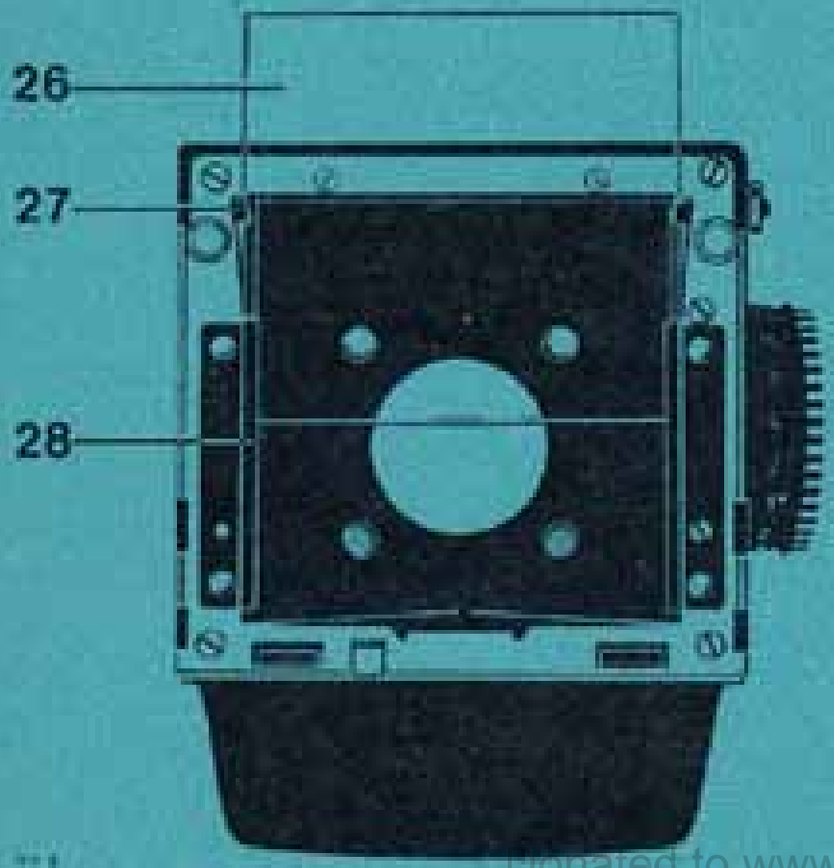

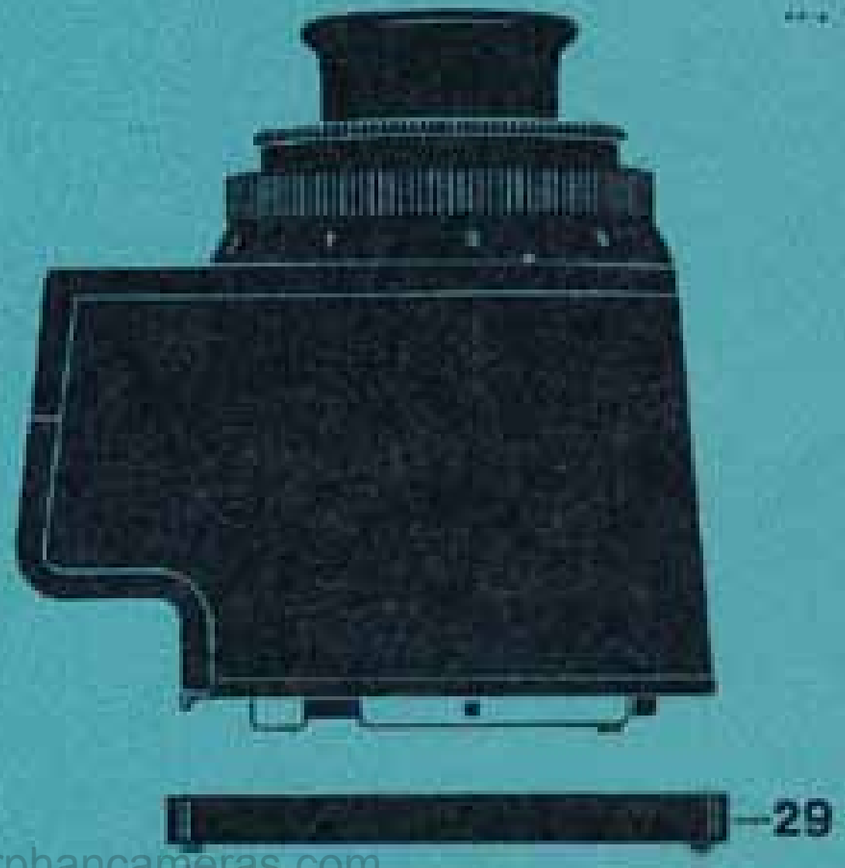

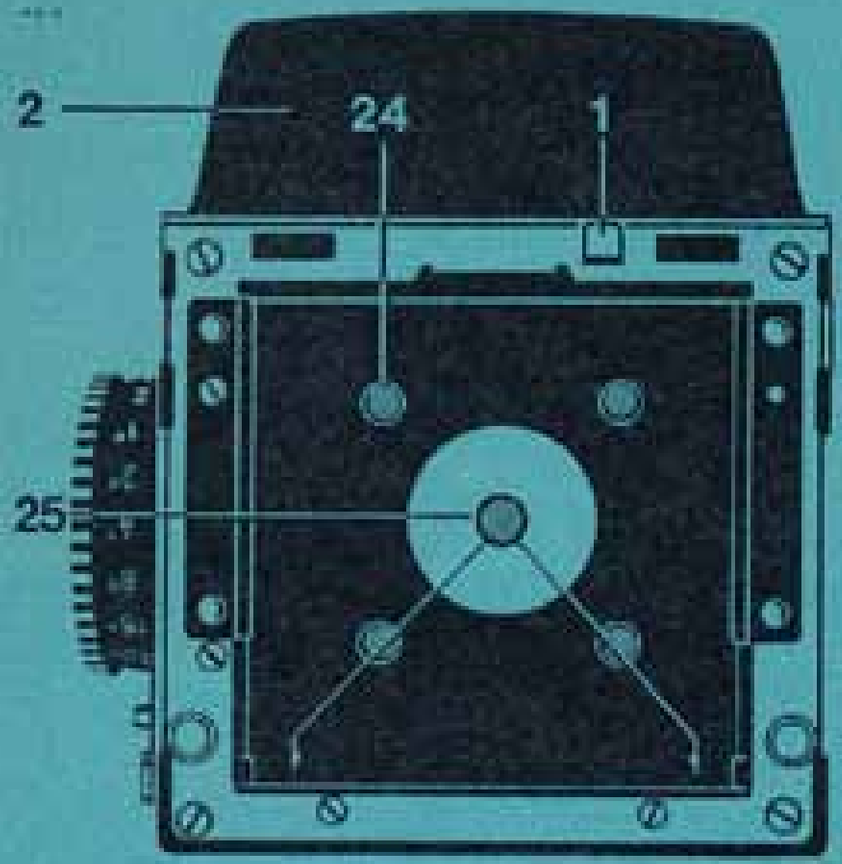

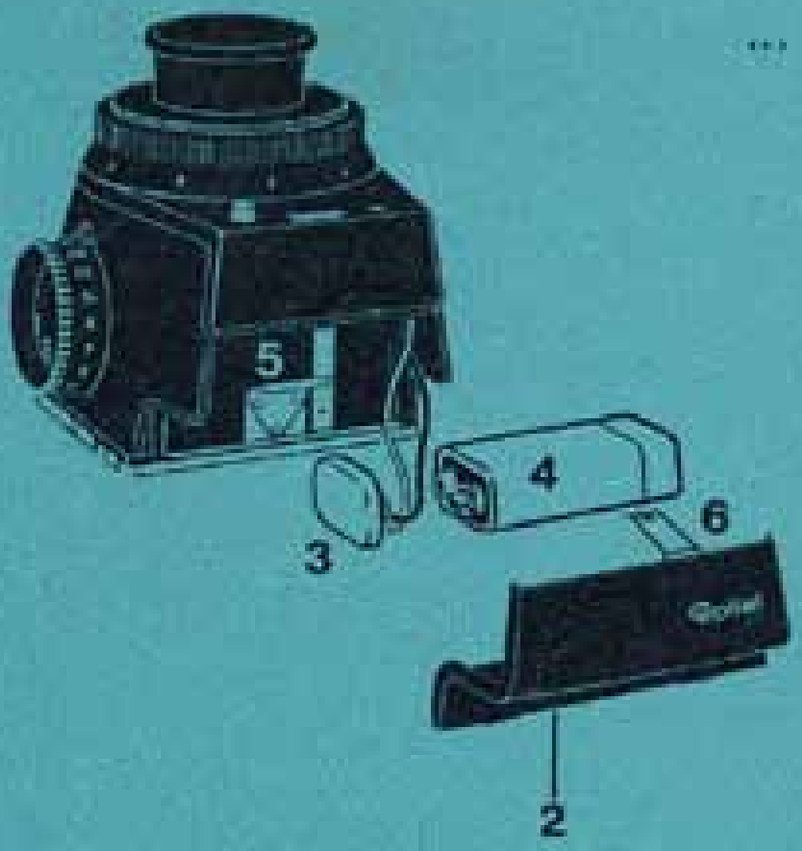

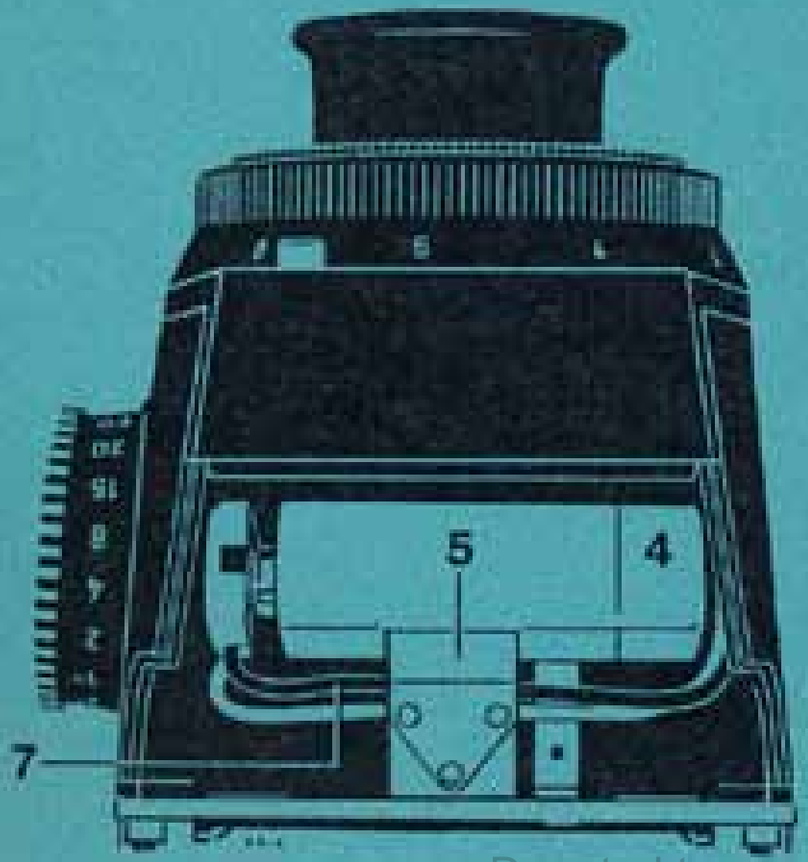

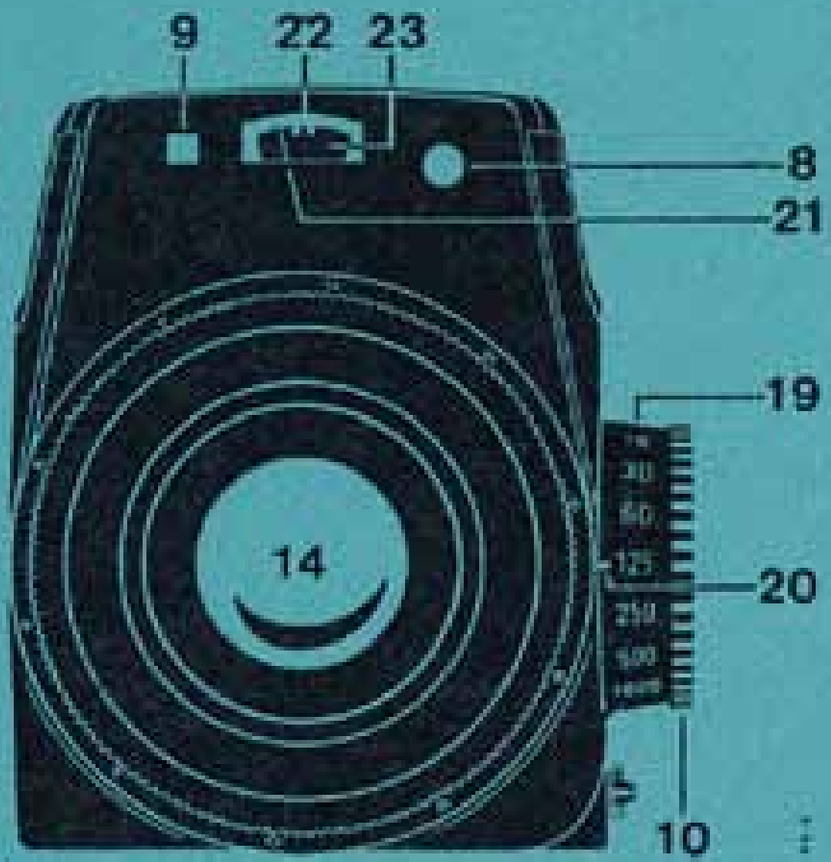

Component Parts and Function

1 Locking slide for battery compartment
2 Cover for battery compartment
3 Terminal strip
4 Battery
5 Battery retaining spring
6 Cover spring
7 Battery lead
8 Starting switch
9 Indicator light
10 Setting ring for film speed (DIN/ASA)
11 DIN index mark
12 ASA index mark
13 Eyepiece focusing ring
14 Eyepiece
15 Eyepiece index mark
16 Eye cup
17 Eyepiece blind
18 Selector switch for spot/ integral measurement
19 Speed scale
20 Speed index mark
21 Meter pointer
22 Meter pointer index mark
23 Measuring area
24 CdS resistor cell for integral measurement
25 CdS resistor cell for spot measurement
26 Cover plate
27 Catch for cover plate
28 Guide for cover plate
29 Cap
30 Serial number

Operating instructions

Inserting battery

Use 9 V dry batteries (e. g. Pertrix 438 etc.) available from radio stockists.

Press in locking slide **1**, remove cover **2**, press terminal strip **3** onto battery terminals, insert battery **4** in retaining spring **5** as shown, press battery lead **7** together with battery behind retaining spring **5**. Fit cover **2** correctly: engage bottom and clip cover spring **6** over battery. Check battery voltage: briefly depress switch **8** — the indicator light **9** coming on indicates that the meter unit is ready for use.

Fitting the unit

Detach existing hood from camera in usual way. Detach cap **29**. Place meter unit in position with speed scale **19** above camera shutter speed knob and press until engagement is felt.

Setting the film speed

Pull out setting ring **10** and rotate, engage index mark **11** or **12** against the DIN/ASA speed rating of the film being used.

Focusing the eyepiece

Remove lens from camera. Turn focusing ring **13** on eyepiece **14** until maximum sharpness of screen structure is obtained (focusing on the screen image is not advisable as it is not sufficiently accurate). Note numerical value against index mark **15** as the most suitable setting for subsequent pictures. Refit camera lens. Fold back eye cup **16** or pull up as required.

Selecting type of reading

Internal reading:
Turn eyepiece blind **17** to its fullest extent anti-clockwise: the eyepiece is now open and the viewing image visible.

External reading:
Turn eyepiece blind **17** to its fullest extent clockwise: the eyepiece is closed and the viewing image no longer visible.

Selecting method of measurement

Full area measurement
of the complete viewing image: push selector switch **18** up.
Spot measurement
of individual picture sections: push selector switch **18** down.
It is not possible to operate with intermediate settings of the selector switch.

Exposure measurement

Lock stopping-down key on camera. Focus on subject, briefly depress switch **8**. The measuring system is now switched on for approximately 25 seconds. It is switched off by an automatic time switch which prevents unnecessary current consumption. If necessary, depress switch **8** again; it will switch off again after another 25 seconds.

With pre-selected shutter speed
Engage selected shutter speed on scale **19** against index mark **20.** The white figures correspond to the settings on the shutter speed knob on the camera, green figures correspond to "B" on the shutter speed knob; intermediate settings are not possible. Set the shutter speed knob on the camera to the shutter speed thus selected. Rotate aperture ring on camera lens until meter pointer **21** lines up with the center of index mark **22.**

With pre-selected aperture

Set aperture selected on camera lens. Turn scale **19** from click stop to click stop until meter pointer **21** is against the center of index mark **22.** Read off shutter speed against index mark **20** and transfer to shutter speed knob on camera. Carry out fine adjustment with aperture ring on camera where exact meter pointer alignment cannot be obtained by turning the scale.

Practical hints

Battery

Correct polarity is automatically ensured by the nature of the connection. Sufficient battery voltage is indicated by the indicator light **9** coming on. To switch on the automatic time switch, only depress switch **8** momentarily as the indicator light coming on increases current consumption very considerably. A spare battery is strongly advised — as is the case with all battery operated equipment.

Film speed

Range of adjustment 6-6400 ASA = 9-39 DIN as shown in the following table:

ASA	DIN	ASA	DIN	ASA	DIN	ASA	DIN
6	**9**	40	17	250	25	**1600**	**33**
8	10	**50**	**18**	320	26	2000	34
10	11	64	19	**400**	**27**	2500	35
12	**12**	80	20	500	28	**3200**	**36**
16	13	**100**	**21**	640	29	4000	37
20	14	125	22	**800**	**30**	5000	38
25	**15**	160	23	1000	31	**6400**	**39**
32	16	**200**	**24**	1250	32		

Eyepiece

Adjustable from + 0.85 to — 1.85 dioptres. Spectacle wearers can shorten eye cup **16** by folding it back.

Meter reading

With internal reading
the measured area is reversed by 180° and can be illuminated by pressing the button. Internal reading is used primarily for pictures where the subject is continuously observed through the viewfinder and for spot measurement.

With external reading
the measured area is illuminated by depressing the button. External reading is used primarily for identical pictures with identical subject area and camera position but changing subject brightness (e. g. picture sequences from a tripod). The closed eyepiece blind prevents the entry of extraneous light. With very low subject brightness switch **8** should be held down: pointer alignment with the center of the index mark is then possible internally and externally (this will, however, result in increased current consumption).

Integral or spot measurement?

Each of the two methods of measurement has its own particular advantages. The common denominator of both, however, is the basic principle of through-the-lens measurement (TTL) whereby all changes in brightness resulting from filters, extension tubes, bellows, lens retro-mounting etc. are taken into account.

The exposure meter is calibrated for use with a standard focusing screen with microprism grid. Slight variations when using existing focusing screens with microprism grid or focusing screens of other types are possible under certain circumstances. These variations are of no importance with black

and white and colour negative material. With colour reversal material, we recommend taking test pictures and making the necessary correction in the film speed setting.

Differences between integral and spot measurement are of a physical nature and have been taken into account in calibrating the exposure meter.

Integral measurement of image brightness with four CdS cells **24**:
This method, also called full area measurement, gives an average value incorporating light and dark picture parts proportionately according to area and brightness.

It is used in general for subjects with low or medium contrast range (ratio of the brightest important picture area to the darkest important picture area), i. e. for normal, average subjects.

Spot measurement of individual picture areas with CdS cell **25** swung directly over the focusing screen (integrating measurement is now switched off): by this method picture sections are measured direct. Measurement takes place in the darkened circular measuring spot (diameter $^1/_{20}$ of image diagonal, angle of acceptance with 80 mm lens = 2.8°).

Used for subjects with wide contrast range (counter light, portraits not filling the picture format with light or dark surroundings, etc.) and in general when the contrast range is not known or cannot be estimated (see also page 20).

With colour reversal film the brightest important picture areas should be measured to obtain an exposure giving good colour rendition on the transparency (projection will give adequate detail even in shadow areas).

With colour and black and white negative material, however, a reading should be taken of the darkest picture areas so that they will still show sufficient detail.

Measurement with the Kodak grey card (noting the accompanying instructions) will give an average value for the best possible compromise, i. e. optimum reproduction of the average tones.

If the subject only contains bright picture areas and dark picture areas are absent, a

Combination of integral and spot measurement

is recommended. The important picture area is measured twice (integral and spot) and the average of the two values will give the optimum exposure.

Measuring range

With shooting aperture	f 2.8	=	0.4	to	12,500 asb
	f 8	=	3.2	to	100,000 asb
	f 22	=	25	to	800,000 asb.

Practical examples:

With 25 ASA film	f 2.8	30 sec	corresponding to	0.4 asb
	f 8	1/1000 sec	corresponding to	100 000 asb
with 100 ASA film	f 2.8	8 sec	corresponding to	0.4 asb
	f 16	1/1000 sec	corresponding to	100 000 asb.

The meter movement gives linear readings over the whole measuring range: thus identical aperture or shutter speed adjustments will always correspond to identical pointer deflection.

Range of adjustment

of the shutter speeds is dependent on the film speed. The table below shows combinations of film speed and shutter speeds in seconds:

Shutter speed within range of adjustment, can be used

Shutter speed outside range of adjustment, cannot be used (scale wheel is locked)

DIN	ASA	1/1000	1/500	1/250	1/125	1/60	1/30	1/15	1/8	1/2	1/4	1	2	4	8	15	30	60	120
6	6	■	■																
12	12	■																	■
15	25																	■	■
18	50																■	■	■
21	100															■	■	■	■
24	200														■	■	■	■	■
27	400													■	■	■	■	■	■
30	800												■	■	■	■	■	■	■
33	1600											■	■	■	■	■	■	■	■
36	3200										■	■	■	■	■	■	■	■	■
39	6400									■	■	■	■	■	■	■	■	■	■

Contrast range

A distinction should be drawn between contrast range of the subject (contrast value subject = CVS) and contrast range of the image (contrast value image = CVI). As a result of scatter CVI is usually smaller than CVS.

The contrast range of the image is determined by spot measurement and gives as numerical value the ratio of the brightest to the darkest area (in practice the important picture area) which should still show detail. Extremely bright or dark areas (direct light sources or completely dark areas) should be avoided when measuring as they will cause incorrect readings.

Example:
Spot measurement gives a reading of f 2.8 1/60 sec. for the darkest and f 16 $^{1}/_{60}$ sec. for the brightest picture area. Contrast range is f 2.8 to f 16 = 1 : 32.

According to material and application, the following ratios should not be exceeded:

B & W transparency	**1 : 500**	**Colour transparency**	**1 : 260**	**B & W negative**	**1 : 250**
Colour negative	**1 : 260**	**B & W positive**	**1 : 40**	**Colour positive**	**1 : 30**

For print reproduction in black and white or colour, **1 : 15 to 1 : 20.**
Excessive picture contrast can often be avoided by lightening the shadows, masking the highlights, additional illumination, changing direction or viewpoint, using a different film material, compensating development etc.

If the picture contrast is too high for the material or purpose in question, it will not be possible to satisfactorily reproduce the darkest and lightest picture areas: either the highlights or the shadows will be without modelling. In such cases the pictorial effect required will decide whether highlights or shadows are more important.

Cleaning

Withdraw the coverplate **26**: pull catches **27** outwards slightly, push plate out of guides **28**. Remove battery cover, detach battery from terminal strip. Dust inside and outside with camel hair brush and rubber blower. Clean exterior with a soft dry cloth, using lens tissues for glass components.

Storage

Always keep in ever-ready case with cap **29**. Where out of use for any length of time, keep battery separate from meter unit.
Note serial number **30**: this will help recovery or proof of ownership in case of loss.

Handling faults and remedies

Fault	Cause	Remedy	Remarks
Warning light does not come on	Battery voltage insufficient	Fit new battery	
Meter pointer does not respond	Battery voltage insufficient	Fit new battery	
	Shutter speed outside range of adjustment	Select faster or slower shutter speed	See table on page 19
Meter pointer will not center	Camera stop down key not locked	Lock camera stop down key	
	Shutter speed outside range of adjustment	Select faster or slower shutter speed	See table on page 19
	Aperture selected for lighting and/or film speed too large or too small	Select smaller or larger aperture, use film of suitable speed; if necessary intensify lighting	
Highlights and/or shadows lack detail	Picture contrast too high for film material	Determine picture contrast by spot measurement and reduce if possible	See page 20

Fault	Cause	Remedy	Remarks
Highlights and/or shadows lack detail	Integral measurement used with high picture contrast	Use spot measurement for high picture contrast, determining exposure either for highlights or shadows	See page 17 and 20
Picture under-exposed	Eyepiece not closed for external reading — penetration of extraneous light	Close eyepiece for external reading	See page 16
Picture over or under-exposed	Measured or selected shutter speed not transferred to camera	Set same shutter speed on shutter speed scale **19** and shutter speed knob on camera	See page 15
Required shutter speed cannot be set, scale wheel locks	Shutter speed outside range of adjustment	Select faster or slower shutter speed	See table on page 19

Rollei

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