


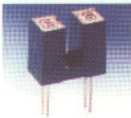




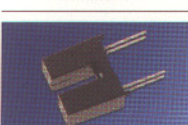
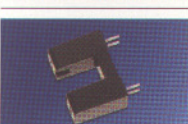
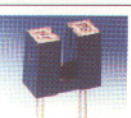

## 7. Optische Sensoren

## 7. Optical Sensors

Package	Type	Features	Slot width mm	Aperture slit width on emitter/sen- sor side mm	$I_{CE}$ ( $I_F = 20$ mA, $V_{CE} = 5$ V) mA	$I_{CEO}$ ( $I_F = 0$ , $V_{CE} = 20$ V) nA	$V_F$ ( $I_F = 20$ mA) V	Ordering code	Fig.
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## 7.1 Gabellichtschranken

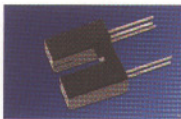
## 7.1 Slotted Interrupters

	SFH 9300	no aperture slits, high current transfer ratio	3.65	– / –	> 1	2 (≤ 50)	1.2 (≤ 1.4)	Q62702-P5019	54
	SFH 9301	with vertical aperture slits, high resolution	3.18	1.27 / 0.25	> 0.7	2 (≤ 50)	1.2 (≤ 1.4)	Q62702-P5083	55
	SFH 9302	with vertical aperture slits, two mounting tabs	3.18	1.27 / 0.25	> 0.7	2 (≤ 50)	1.2 (≤ 1.4)	Q62702-P5084	56
	SFH 9303	with vertical aperture slits, mounting tab on sensor side	3.18	1.27 / 0.25	> 0.7	2 (≤ 50)	1.2 (≤ 1.4)	Q62702-P5085	57
	SFH 9304	with vertical aperture slits, mounting tab on emitter side	3.18	1.27 / 0.25	> 0.7	2 (≤ 50)	1.2 (≤ 1.4)	Q62702-P5086	58
	SFH 9305	with vertical aperture slits, mounting tab on sensor side, locating pins	3.28	0.5 / 0.5	> 0.7	2 (≤ 50)	1.2 (≤ 1.4)	on request	59
	SFH 9306	with vertical aperture slits, locating pins	3.18	1.27 / 0.25	> 0.7	2 (≤ 50)	1.2 (≤ 1.4)	Q62702-P5130	60
	SFH 9310	horizontal slits	5.00	0.5 / 0.5	> 0.7	2 (≤ 50)	1.2 (≤ 1.4)	Q62702-P5214	61
	SFH 9330	with vertical aperture slits, photo darlington output	3.18	1.27 / 0.25	> 1 (at $I_F = 1$ mA)	< 1 $\mu$ A	1.2 (≤ 1.4)	Q62702-P5263	62
	SFH 9500	with vertical aperture slits, SMT version, suitable for reflow soldering, locating pins	5.00	0.5 / 0.5	> 1	2 (≤ 50)	1.2 (≤ 1.4)	Q62702-P5066	63

Package	Type	Features	Slot width	Aperture slit width on emitter/sensor side	$V_{CC}$	Threshold input current $I_{F,ON}$	Hysteresis $I_{F,OFF} / I_{F,ON}$	Propagation delay time $t_{PHL}, t_{PLH}$ ( $R_L = 280 \Omega$ , $V_{CC} = 5 V$ , $I_F = 4 mA$ ) $\mu s$	$V_F$ ( $I_F = 20 mA$ )	Ordering code	Fig.
			mm	mm	V	mA			V		

7.1 Gabellichtschranken


7.1 Slotted Interrupters (cont'd)


	SFH 9340	Schmitt-Trigger output, SFH 9340 active "low"	3.18	1.27 / 0.25	4 ... 18	0.6 (< 2)	0.6	2	1.2 ( $\leq 1.4$ )	Q62702-P5120	64
	SFH 9341	Schmitt-Trigger output, SFH 9341 active "high"	3.18	1.27 / 0.25	4 ... 18	0.6 (< 2)	0.6	2	1.2 ( $\leq 1.4$ )	Q62702-P5121	

Package	Type	$I_{CE}$ ( $I_F = 10 mA$ , $V_{CE} = 5 V$ , $d = 1 mm$ ) mA	$I_{CEO}$ ( $V_{CE} = 10 V$ ) nA	$V_{CE0}$ V	$V_F$ ( $I_F = 50 mA$ ) V	Ordering code	Fig.
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7.2 SMT-Reflexlichtschranken

7.2 SMT Reflective Sensors

	SFH 9201	0.25 ... 2.00	3 ( $\leq 200$ )	30	1.25 ( $\leq 1.65$ )	Q62702-P5038	65
	SFH 9201-2/3	0.40 ... 1.25				Q62702-P5056	
	SFH 9201-3/4	0.63 ... 2.00				Q62702-P5057	
	SFH 9202	0.063 ... 0.8	Q62702-P5039				
	SFH 9202-2/3	0.063 ... 0.2	Q62702-P5009				
	SFH 9202-3/4 SFH 9202-4/5 SFH 9202-5/6	0.10 ... 0.32 0.16 ... 0.50 0.25 ... 0.80	1 ( $\leq 50$ )			Q62702-P5010 Q62702-P5472 Q62702-P5435	

Package	Type	Features	$V_{CC}$	Threshold input current $I_{F,ON}$ ( $V_{CC} = 5 V$ , $d = 1 mm$ ) mA	Hysteresis $I_{F,OFF} / I_{F,ON}$	Propagation delay time $t_{PHL}, t_{PLH}$ ( $R_L = 280 \Omega$ , $V_{CC} = 5 V$ , $I_F = 20 mA$ ) ns	$V_F$ ( $I_F = 50 mA$ ) V	Ordering code	Fig.
			V	mA			V		
	SFH 9240	Schmitt-Trigger Output, active "low"	4 ... 18	3 (< 10)	0.6	2	1.25 ( $\leq 1.65$ )	Q62702-P5118	65
	SFH 9241	Schmitt-Trigger Output, active "high"						Q62702-P5119	