



## Technical data

<b>Part No</b>	5012.199	Optrel b020 Nordic	DIN 10
	5012.202	Optrel b020	DIN 10
	5012.300	Optrel b020	DIN 11
<b>Type description</b>	Automatic shade cartridge, fix shade DIN 3/11 or DIN 3/10		
<b>Cartridge dimensions</b>	50,8 x 108 x 5,3 mm / 2 x 4 <sup>1/4</sup> x 0,21" 92 x 35 mm / 3,62 x 1,38" (Viewing area)		
<b>Cartridge dimensions (b020 Nordic)</b>	60 x 108 x 5,3 mm / 2 <sup>1/3</sup> x 4 <sup>1/4</sup> x 0,21" 92 x 35 mm / 3,62 x 1,38" (Viewing area)		
<b>Power supply</b>	solar cells, no battery changes		
<b>Sensors</b>	one above the eyes		
<b>Light transmittance</b>	ultraviolet/infrared protection	maximum at any shade setting	
	visible range activated	shade level DIN 11 or DIN 10	
	visible range not activated	shade level 3	
<b>Switching time</b>	light to dark	0,0008 s (0,8 ms)	at room temperature
		0,0003 s (0,3 ms)	at 55°C / 131°F
	dark to light	0,2 - 0,3 s	
<b>Classification</b>	Optical class	= 1	
	Scattered light	= 1	
	Homogeneity	= 1	
	Angular dependence	= 3	
<b>Operating temperature</b>	-10°C to + 70°C / 14°F to 158°F		
<b>Storage temperature</b>	-20°C to + 80°C / -4°F to 176°F		
<b>Weight</b>	40 g / 1.286 oz		
<b>Application ranges</b>	all electric arc welding processes Electrode Welding (Stick Welding, SMAW) / MIG / MAG (GMAW) / GMAW High melting rate process / Flux Cored Wire Welding / TIG welding (GTAW) / Plasma Arc Welding / Micro Plasma Arc Welding / Plasmacutting <b>prohibited for laser welding!</b>		
<b>Scope of delivery</b>	Automatic darkening filter and instruction manual		
<b>Standards</b>	CE, DIN, ANSI, AS/NZS, GOST-R, complies with CSA Z94.3		
<b>Warranty</b>	2 years from date of sales for manufacturing and material defects		



Subject to change without prior notice  
Status 2012-06-05  
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